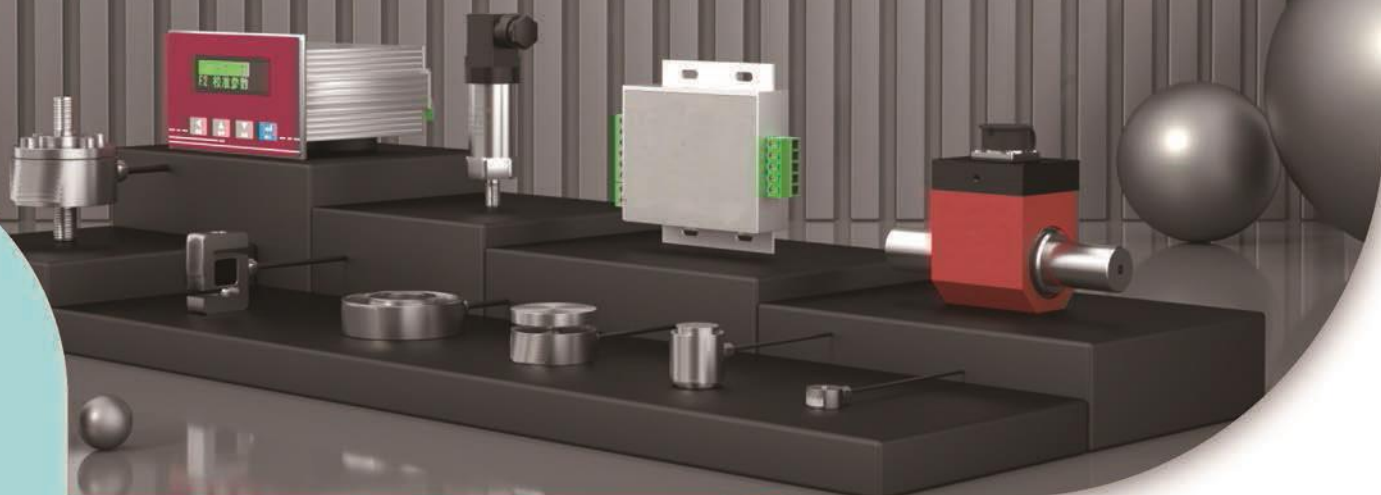




凯德昌

测力 称重 拉压力 扭矩 多维力
控制显示仪表 信号变送器 非标定制



PRODUCT SELECTION MANUAL

产品选型手册

你身边的传感器专家

2023

深圳市凯德昌电子科技有限公司

联系人：黄胜锦

电话：13265873957

电话：0755-28363280

地址：深圳市龙岗区龙岗街道南联社区碧新路（龙岗段）
2123 号 301 梧桐空间 309

会议室



荣誉墙



Nooks

测试车间

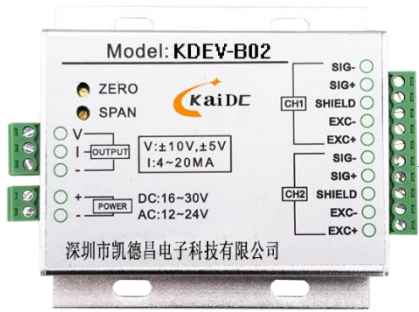


成品车间



主营产品

MAIN PRODUCT



测力传感器



显示控制仪表

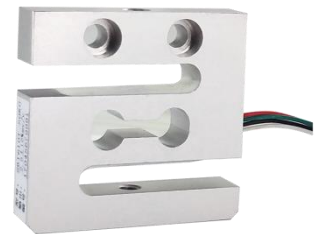
仪表

公司主营产品

传感器



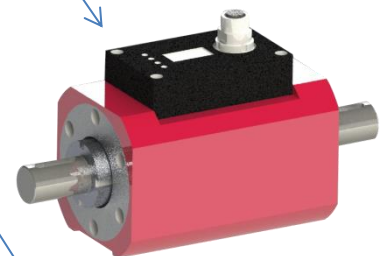
测力传感器



称重传感器



微型传感器



多维力传感器



撞击力传感器



液油气压传感器



扭矩传感器

应用场景



工业自动化



智能机器人



新能源



科研机构



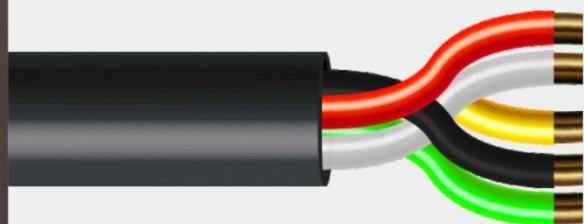
航天航空



医疗3C



● 接线方法/Wiring method



红 (Red) 激励+ (EXC+)

白 (White) 信号- (SIN-)

黄 (Yellow) 屏蔽线 (Shield)

黑 (Black) 激励- (EXC-)

绿 (Green) 信号+ (SIN+)

CONTENTS

目录

KDEV-L系列 轮辐式/ 微型压力传感器	01~16
KDEV-C系列 拉压力/ 微型传感器	17~27
KDEV-P系列 平板式压力传感器	28~32
KDEV-Z系列 横臂梁式传感器	33~41
KDEV-D系列 多维力及非标传感器	43~51
KDEV-N系列 动态/ 静态扭矩传感器	52~62
KDEV-B系列 变送器/ 控制显示仪表	63~81
非标定制/ 软件	82

Pressure pickup 压力传感器



主要应用



自动化设备



精密医疗



新能源锂电



机器人



半导体




航空铁路



高校



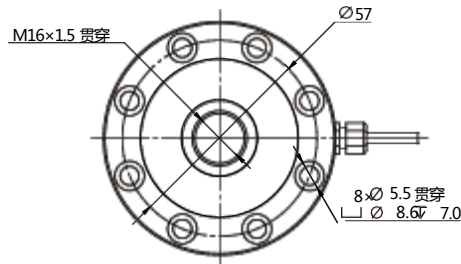
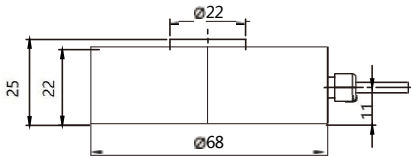
型号 : KDEV-L-09

可定做:  高温

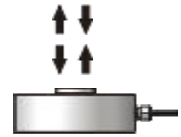
产品特点 / Product characteristics

- 传感器采用不锈钢外壳，圆形造型，结构结实经久耐用。具有良好的自然线性，抗偏载能力强，精度高，外形高度低，安装方便稳定。广泛应用料斗秤、汽车衡、轨道衡等电子秤中。
- The sensor adopts stainless steel shell, round shape, structure is strong and durable. It has good natural linearity, strong anti-eccentric load ability, high precision, low profile height, easy and stable installation. Widely used hopper scale, truck scale, track scale and other electronic scales.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	10/20/50/100/200/500 kg,1/2/3/5 T	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	±0.1%F.S.	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.1%F.S.	温度补偿范围 (Temperature compensation range)	-10~40°C
输出灵敏度 (Output sensitivity)	1.0/2.0±10%mV/V	使用温度范围 (Operating temperature range)	-20~60°C
滞后 (Lag behind)	0.1%F.S	推荐激励电压 (Recommended excitation voltage)	5~10V
使用寿命 (Service life)	100万次以上	最大激励电压 (Maximum excitation voltage)	12V
材料 (Materials)	不锈钢	安全过载范围 (SAFE overload range)	120%F.S
电缆线规格 (Cable specifications)	Φ5mm×3m	极限过载范围 (Limit Overload Range)	150%F.S
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

型号 : KDEV-L-A0

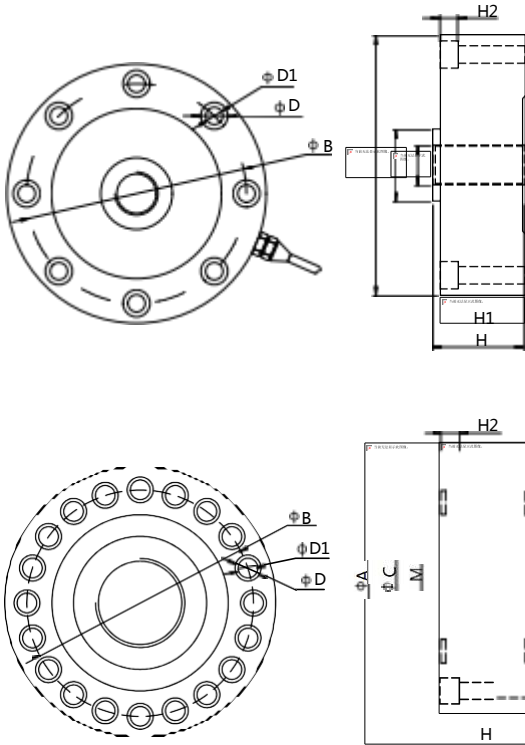
可定做:  高温



产品特点 / Product characteristics

- 采用传感器专用合金钢材料制造，胶密封处理，表面阳极氧化，适用于多种工况，结构简单，安装方便，拉压双向受力。适用于实验机，油压机，冷热压机，电子吊钩称，料斗称等。
- It is made of sensor special alloy steel, sealed with adhesive, anodized on the suDzace, suitable for various working conditions, simple structure, convenient installation and double-direction stress. It is suitable for testing machine, hydraulic press, cold and hot press, electronic hook scale, Hopper scale, etc. .

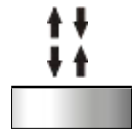
• 安装尺寸 / Mounting dimensions



量程	ΦA	ΦB	ΦC	M	H	H1	H2	ΦD	ΦD1
20-1000kg	74	63	24	M16*1.5	34	30	7.2	8-Φ9	8-Φ6
1-5T	105	89	29	M16*1.5	37	34	7.2	8-Φ11	8-Φ7
10-20T	120.6	101.8	39	M32*1.5	53.5	41	10.5	8-Φ14	8-Φ9
30T	141	116.8	50.4	M40*1.5	57.2	50.8	11	8-Φ18	8-Φ11

量程	ΦA	ΦB	ΦC	M	H	H2	ΦD	ΦD1
40-80T	208	174	95	M64*3	70	15	16-Φ20	16-Φ13
100-200T	280	230	136	M76*3	90	20	16-Φ26	16-Φ17
300-400T	360	300	190	M100*3	110	20	20-Φ40	20-Φ25
500-600T	420	370	266	M130*4	140	30	20-Φ42	20-Φ28
800-1000T	500	440	330	M200*4	170	30	12-Φ42	12-Φ28

• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	20/50/100/200/500/1000 kg, 1/2/3/5/10/20/30/50/100/200/300/400/500/600/800/1000 T			
综合误差 (Composite Error)	20kg-5T	≤±0.05%	电缆线规格 (Cable specifications)	Φ5mm×3m
	10-80T	≤±0.1%		
	100-400T	≤±0.2%		
	500-1000T	≤±0.5%		
非线性 (Non-linear)	≤0.05-0.5%	灵敏度温度影响 (Sensitivity temperature effect)	±0.03%F.S/10°C	
灵敏度 (Sensitivity)	2.0±10% mV/V	零点温度影响 (Zero temperature effect)	±0.03%F.S/10°C	
蠕变 (Creep)	±0.03%F.S/30min	温度补偿范围 (Temperature compensation range)	-20~60°C	
零点输出 (Zero output)	±1.0%F.S	使用温度范围 (Operating temperature range)	-20~80°C	
激励电压 (Excitation voltage)	5~15V	安全过载范围 (SAFE overload range)	150%F.S	
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	极限过载范围 (Limit Overload Range)	200%F.S	
阻抗 (Impedance)	20- 1000kg: 700/1400Ω	1-30T: 700Ω	50- 1000T:1400Ω	
防护等级 (Protection level)	Ip66			

型号 : KDEV-L-A1

可定做:  高温

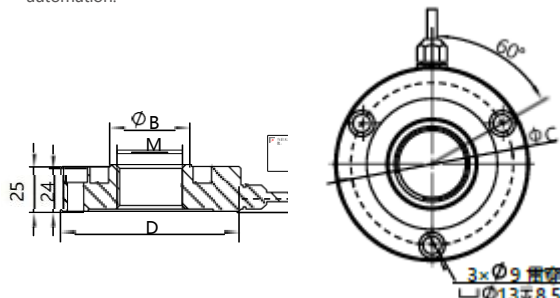


产品特点 / Product characteristics

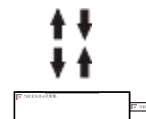
- 锂电池化成机专用传感器，具有精度高，密封性好，载重能力强等特点，也可应用于工业自动化的各种测力及称重系统。
- Using The special sensor for lithium battery is characterized by high precision, good tightness and strong load-carrying capacity. It can also be used in various force measuring and weighing systems of industrial automation.

安装尺寸 / Mounting dimensions

量程	D	M	ΦC	ΦB
2-3T	Φ98	M36*2	82	44
4-10T	Φ118	M42*2	98	56



■ 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	2/3/4/5/10 T	灵敏度温度影响 (Sensitivity temperature effect)	±0.1%F.S/10°C
综合误差 (Composite Error)	≤±0.3%	零点温度影响 (Zero temperature effect)	±0.1%F.S/10°C
非线性 (Non-linear)	0.3%	温度补偿范围 (Temperature compensation range)	-10~40°C
灵敏度 (Sensitivity)	2.0±0.1mV/V	使用温度范围 (Operating temperature range)	-20~65°C
蠕变 (Creep)	±0.05%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±1.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	760±5Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	700±5Ω	电缆线规格 (Cable specifications)	Φ6mm×2m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

型号 : KDEV-L-C0

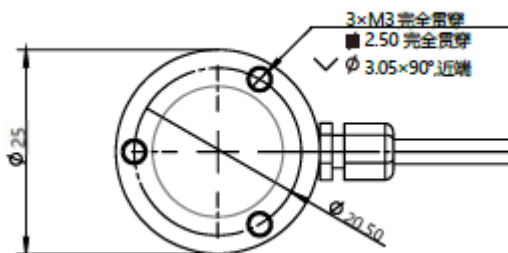
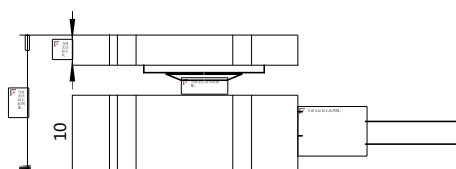
可定做:  高温  防水



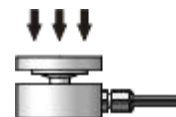
产品特点 / Product characteristics

- 外形小巧，受力面积大，不锈钢材质，适用于各种小空间的测力，广泛应用于工业研发等领域的测量和控制。
- Small shape, large stress area, stainless steel material, suitable for a variety of small space force measurement, widely used in industrial R & D and other fields of measurement and control.

安装尺寸 / Mounting dimensions



■ 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	5/10/20/50/100/200/500/1000/2000 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.1%F.S/10°C
综合误差 (Composite Error)	≤±0.3%	零点温度影响 (Zero temperature effect)	±0.1%F.S/10°C
非线性 (Non-linear)	0.3%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.5±20mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.1%F.S/30min	激励电压 (Excitation voltage)	5~15V
零点输出 (Zero output)	±1.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350±50Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350±5Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip67



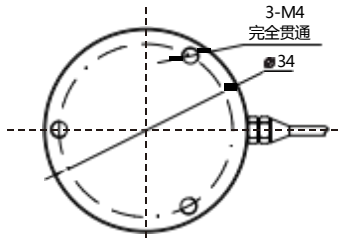
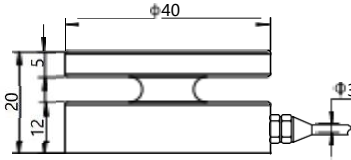
型号 : KDEV-L-C1

可定做: 高温 防水

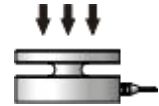
产品特点 / Product characteristics

- 外形小巧, 受力面积大, 上下法兰固定, 不锈钢材质, 适用于平面测力应用, 广泛应用于工业研发等领域的测量和控制。
- Small shape, large stress area, upper and lower flange fixed, stainless steel material, suitable for plane force measurement applications, widely used in industrial R & D and other fields of measurement and control.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	10/20/50/100/200/500/1000 kg	灵敏度温度影响 (Sensitivity temperature effect)	$\pm 0.05\%F.S/10^{\circ}C$
综合误差 (Composite Error)	$\leq \pm 0.2\%$	零点温度影响 (Zero temperature effect)	$\pm 0.05\%F.S/10^{\circ}C$
非线性 (Non-linear)	0.2%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.5 $\pm 20\%$ mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	$\pm 0.1\%F.S/30min$	激励电压 (Excitation voltage)	5~15V
零点输出 (Zero output)	$\pm 1.0\%F.S$	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	800~1000 Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	800~1000 Ω	电缆线规格 (Cable specifications)	$\Phi 3mm \times 3m$
绝缘电阻 (Insulation Resistance)	$\geq 5000M\Omega/100V DC$	防护等级 (Protection level)	Ip67



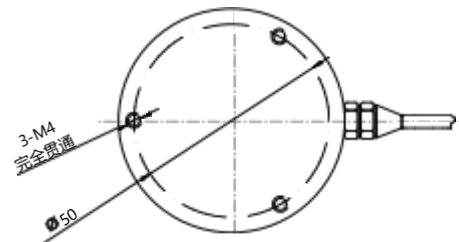
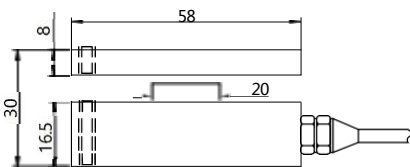
型号 : KDEV-L-C2

可定做: 高温 防水

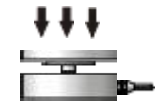
产品特点 / Product characteristics

- 受力面积大, 上下法兰固定, 不锈钢材质, 适用于各种小空间的测力, 称重广泛应用于工业研发等领域的测量和控制。
- Large stress area, upper and lower flange fixed, stainless steel material, suitable for a variety of small space force measurement, weighing is widely used in industrial R & D and other fields of measurement and control.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	20/30/50/100/200/300/500 kg, 1/2/3/5/10 T	灵敏度温度影响 (Sensitivity temperature effect)	$\pm 0.1\%F.S/10^{\circ}C$
综合误差 (Composite Error)	$\leq \pm 0.3\%$	零点温度影响 (Zero temperature effect)	$\pm 0.1\%F.S/10^{\circ}C$
非线性 (Non-linear)	0.3%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.5 $\pm 20\%$ mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	$\pm 0.1\%F.S/30min$	激励电压 (Excitation voltage)	5~15V
零点输出 (Zero output)	$\pm 1.0\%F.S$	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350 $\pm 50\Omega$	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350 $\pm 5\Omega$	电缆线规格 (Cable specifications)	$\Phi 5mm \times 3m$
绝缘电阻 (Insulation Resistance)	$\geq 5000M\Omega/100V DC$	防护等级 (Protection level)	Ip67

型号 : KDEV-L-C3

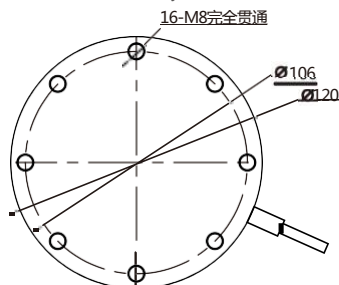
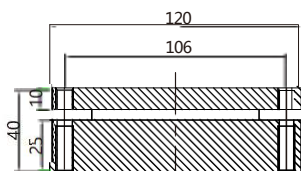
可定做:  高温  防水



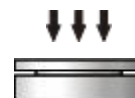
产品特点 / Product characteristics

- 高度低, 受力面积大, 不锈钢材质, 适用于各种小空间的测力, 广泛应用于工业研发等领域的大量程测量和控制。
- Low height, large stress area, stainless steel material, suitable for a variety of small space force measurement, widely used in industrial R & D and other fields of large range measurement and control.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0.5T/1T/2T/3T/5T/10T	绝缘电阻 (Insulation resistance)	≥5000MΩ/100V(DC)
输出灵敏度 (Output sensitivity)	2.0±10%	温度灵敏度漂移 (Temperature sensitivity drift)	0.1%F.S/10°C
零点输出 (Zero output)	0.05F.S	输出阻抗 (Output impedance)	0.1%F.S/10°C
供电电压 (Supply Voltage)	5~12VDC	灵敏度温度影响 (Sensitivity to temperature effects)	0.1%F.S/10°C
综合精度 (Comprehensive accuracy)	0.2%	零点温度漂移 (Zero temperature drift)	0.1%F.S/10°C
非线性 (Non-linearity)	0.2%F.S	温度补偿范围 (Temperature compensation range)	-10~60°C
重复性 (Repeatability)	0.2%F.S	工作温度范围 (Operating temperature range)	-20~80°C
输入电阻 (Input Resistance)	700±10Ω	安全过载 (SAFE overload)	150%F.S
输出电阻 (Output Resistance)	700±5Ω	极限过载 (Ultimate overload)	200%F.S
电缆线规格 (Cable specifications)	Φ5mm×3m		

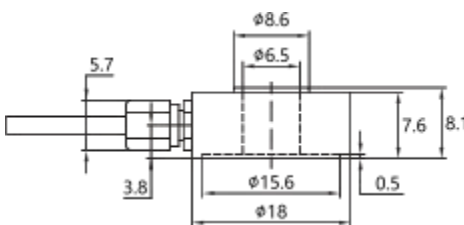
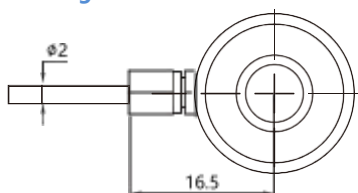
型号 : KDEV-L-D01

产品特点 / Product characteristics

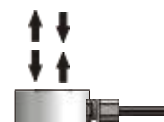
- 采用高精度电阻应变式原理, 不锈钢材料, 密封焊接防油、防水、耐腐蚀。圆型结构设计, 压式承载, 安装使用方便灵活, 主要应用于汽车、医疗、机器人、电子、机械设备、自动化设备等。
- Adopt high precision resistance strain type principle, stainless steel material, sealing welding oil-proof, waterproof, corrosion-resistant. Circular structure design, pressure bearing, easy to install and use, mainly used in automotive, medical, robotics, electronics, mechanical equipment, automation equipment.



安装尺寸 / Mounting dimensions

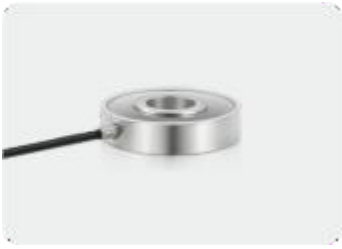


受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0-5/10/20/30/ 50 kg	温度灵敏度漂移 (Temperature sensitivity drift)	± 0.1% F.S. / 10°C
输出灵敏度 (Output sensitivity)	1.5 ± 10% mV/V	零点温度漂移 (Zero temperature drift)	± 0.1% F.S. / 10°C
零点输出 (Zero output)	± 2% F.S.	使用电压 (Use voltage)	3 ~ 5V
非线性 (Nonlinear)	± 0.5% F.S.	工作温度范围 (Operating temperature range)	- 20 ~ 80 °C
滞后 (Lag)	± 0.5% F.S.	补偿温度范围 (Compensation temperature range)	- 10 ~ 60 °C
重复性 (Repeatability)	± 0.5% F.S.	安全过载 (Safety overload)	120%
蠕变 (30分钟) (Creep (30 min))	± 0.05% F.S.	极限过载 (Extreme overload)	150%
输入阻抗 (Input impedance)	350(700) ±10Ω	电缆线规格 (Cable specifications)	Φ2mm×3m
输出阻抗 (Output impedance)	350(700) ±5Ω	材质 (Material)	不锈钢 Stainless Steel
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100VDC	防护等级 (Protection level)	IP65



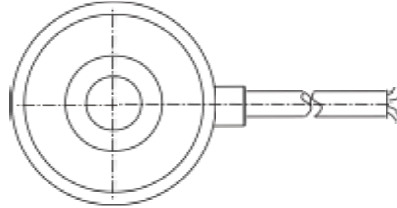
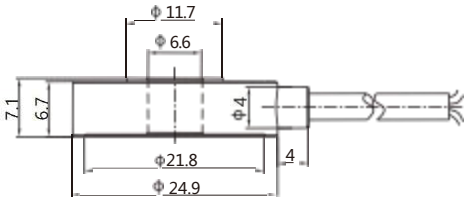
型号 : KDEV-L-D0

可定做: 高温

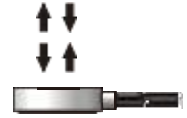
产品特点 / Product characteristics

- 高度低, 变形量小, 外形尺寸小, 环形设计, 不锈钢材质, 动态响应频率高。适用于零件压装, 自动化组装, 3C产品测试, 新能源产品组装, 医疗检测, 机器人领域。
- Low height, small deformation, small size, ring design, stainless steel material, high dynamic response frequency. Suitable for pressing paDzs, automatic assembly, 3C product test, New Energy Product Assembly, medical inspection, robotics field.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	5/10/20/50/100 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.5%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.5%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.5±20% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.5%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	700±20Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	700±10Ω	电缆线规格 (Cable specifications)	Φ2mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

型号 : KDEV-L-D1

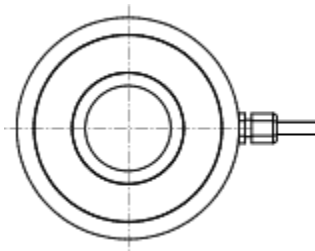
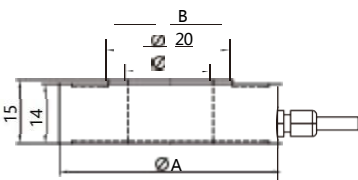
可定做: 高温



产品特点 / Product characteristics

- 专用不锈钢材质, 动态响应频率高。适用于汽车压装, 自动化组装, 3C产品测试, 新能源产品组装, 医疗检测, 机器人领域, 模具组装及其它工业测试, 测量及控制系统。
- Special stainless steel material, high dynamic response frequency. Suitable for automobile press assembly, automatic assembly, 3C product testing, new energy product assembly, medical testing, robotics, mold assembly and other industrial testing, measurement and control systems.

安装尺寸 / Mounting dimensions



受力方式/Force mode



量程	ΦA	ΦB
10/20/50/100/200/500 kg 1/2/3/5T	52	29
10/15/20T	62	34

技术参数 / Technical parameters

量程 (Measuring range)	10/20/50/100/200/500 kg, 1/2/3/5/10/15/20 T	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.5%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.5%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.5±20% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.1%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	780±20Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	700±10Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

型号 : KDEV-L-D2

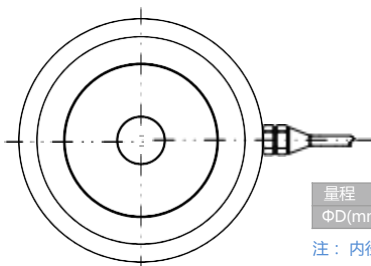
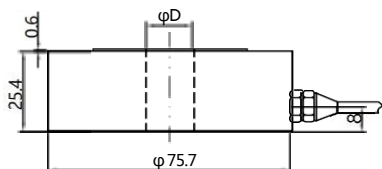
可定做:  高温



产品特点 / Product characteristics

- 外形尺寸小, 大量程, 传感器专用不锈钢。适用于各种小空间测力, 螺纹力的监测, 广泛应用于工业, 研发等领域的测量的控制。
- Small size, large range, sensor special stainless steel. Suitable for all kinds of small space force measurement, thread force monitoring, widely used in industry, research and development and other fields of measurement control.

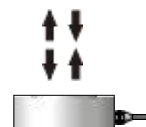
安装尺寸 / Mounting dimensions



量程	1/2/3/5/10/20 T
ΦD(mm)	7/9/11/15/17/19/21/25/32

注: 内径和量程可自由匹配及定制

受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	1/2/3/5/10/20 T	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤ ±0.5%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.5%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.5±0.05mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.5%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	780±20Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	700±10Ω	电缆线规格 (Cable specifications)	Φ5mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

型号 : KDEV-L-D4

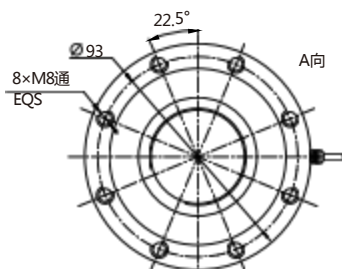
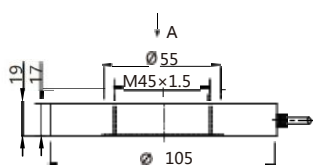
可定做:  高温



产品特点 / Product characteristics

- 该传感器采用膜盒式弹性体结构, 具有低外形、抗偏载、精度高、强度高、安装方便、拉压输出对称性好等特点。应用范围: 广泛用于工业系统中力的测量和天车秤、轨道衡、料斗秤等各种称重、测力的工业自动化测量控制系统。
- The sensor has the advantages of low profile, anti-eccentric load, high precision, good strength, easy installation and good symmetry of tension and compression output. Application: widely used in industrial system of force measurement and crane scale, rail scale, hopper scale and other weighing, force measurement of industrial automation measurement and control system.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	50/100/200/500 kg, 1/2/5 T	灵敏度温度影响 (Sensitivity temperature effect)	±0.1%F.S/10°C
综合误差 (Composite Error)	±0.3%F.S.	零点温度影响 (Zero temperature effect)	±0.1%F.S/10°C
非线性 (Non-linear)	0.2%F.S.	温度补偿范围 (Temperature compensation range)	-10~40°C
输出灵敏度 (Output sensitivity)	1.0/2.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~60°C
滞后 (Lag behind)	0.15%F.S	推荐激励电压 (Recommended excitation voltage)	5~10V
使用寿命 (Service life)	100万次以上	最大激励电压 (Maximum excitation voltage)	12V
材料 (Materials)	合金钢	安全过载范围 (SAFE overload range)	120%F.S
电缆线规格 (Cable specifications)	Φ5mm×3m	极限过载范围 (Limit Overload Range)	150%F.S
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66



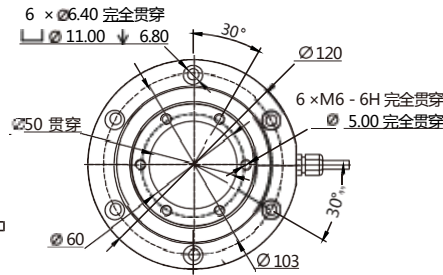
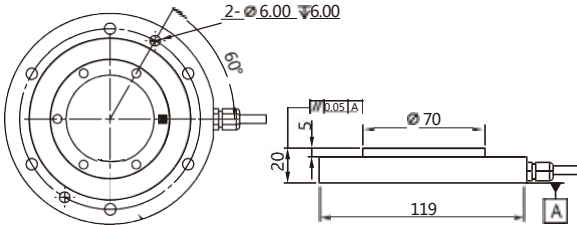
型号 : KDEV-L-D5

可定做: 高温

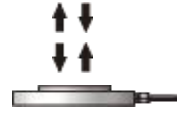
产品特点 / Product characteristics

- 该产品采用优质的合金钢材料，先进的弹性体加工技术，体积小，安装台面低，性能稳定可靠。适用于特殊温度环境下进行力值的测量或与计算机控制系统配合测试及数据采集。
- This product adopts high-quality alloy steel, advanced elastomer processing technology, small size, low mounting table, stable and reliable performance. It is suitable for measuring force value under special temperature environment or cooperating with computer control system to test and collect data.

■ 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	50/100/200/500 kg, 1/2/3/5 T	灵敏度温度影响 (Sensitivity temperature effect)	±0.15%F.S/10°C
综合误差 (Composite Error)	±0.3%F.S.	零点温度影响 (Zero temperature effect)	±0.15%F.S/10°C
非线性 (Non-linear)	0.3%F.S.	温度补偿范围 (Temperature compensation range)	-10~40°C
输出灵敏度 (Output sensitivity)	1.0/2.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~60°C
滞后 (Lag behind)	0.1%F.S.	推荐激励电压 (Recommended excitation voltage)	5~10V
使用寿命 (Service life)	200万次以上	最大激励电压 (Maximum excitation voltage)	12V
材料 (Materials)	合金钢	安全过载范围 (SAFE overload range)	120%F.S.
电缆线规格 (Cable specifications)	∅5mm×3m	极限过载范围 (Limit Overload Range)	150%F.S.
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66



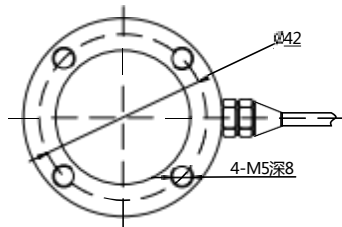
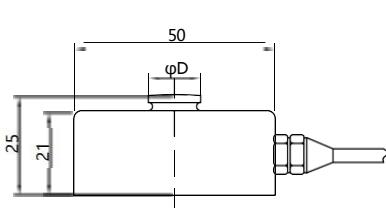
型号 : KDEV-L-E11

可定做: 高温 防水

产品特点 / Product characteristics

- 采用传感器专用不锈钢材质，重复性、可靠性高，长期稳定性好，小身材大量程。广泛应用于压力试验机，工件压装，材料试验机等各种工业自动化设备。
- Adopt sensor special stainless steel material, repeatability, high reliability, long-term stability, small figure large range. Widely used in pressure testing machine, workpiece pressing, material testing machine and other industrial automation equipment.

■ 安装尺寸 / Mounting dimensions



量程 (T)	D	重量
0.05/0.1/0.2/0.5/1/2	13	0.4kg
5	16	0.4kg
10/15	20	0.4kg

• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0.05/0.1/0.2/0.5/1/2/5/10/15 T	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.2%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.2%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	2.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.1%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S.	安全过载范围 (SAFE overload range)	120%F.S.
输入阻抗 (Input impedance)	750±10Ω	极限过载范围 (Limit Overload Range)	150%F.S.
输出阻抗 (Output impedance)	700±5Ω	电缆线规格 (Cable specifications)	∅5mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66



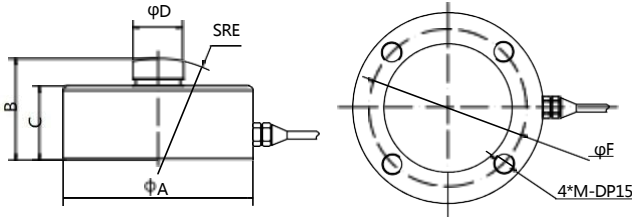
型号 : KDEV-L-E12

可定做: 高温 防水

产品特点 / Product characteristics

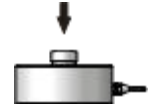
- 采用不锈钢材质, 精度优, 长期稳定性好, 重复性, 可靠性高, 广泛应用于压力试验机, 料斗称, 材料试验机, 皮带称等各种自动化设备。
- Stainless steel material, high precision, long-term stability, good repeatability, high reliability, widely used in pressure testing machine, Hopper said, material testing machine, Belt said and other automation equipment.

• 安装尺寸 / Mounting dimensions



量程 (T)	A	B	C	D	E	F	M
0.5/1/2/3/5/10	82	44	32	22	50	68	M8
15/20	100	48	36	28	100	80	M8
30	126	54	40	35	100	101	M10
50/100	165	80	62	60	150	144	M10

• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0.5/1/2/3/5/10/15/20/30/50/100 T	灵敏度温度影响 (Sensitivity temperature effect)	±0.03%F.S/10°C
综合误差 (Composite Error)	≤±0.2%	零点温度影响 (Zero temperature effect)	±0.03%F.S/10°C
非线性 (Non-linear)	0.2%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	2.0±0.01% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.1%F.S/30min	激励电压 (Excitation voltage)	5~15V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	120%F.S
输入阻抗 (Input impedance)	750±10Ω	极限过载范围 (Limit Overload Range)	150%F.S
输出阻抗 (Output impedance)	700±5Ω	电缆线规格 (Cable specifications)	Φ5mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66



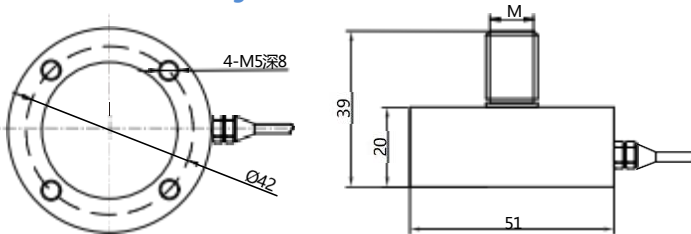
型号 : KDEV-L-E3

可定做: 高温 防水

产品特点 / Product characteristics

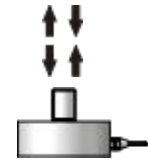
- 结构紧凑, 综合精度高, 长期稳定性好, 动态响应频率高, 优质不锈钢材料。用途: 汽车压装、自动化组装、3C产品测试、新能源产品组装、医疗检测、机器人领域, 模具组装及其他工业测试、自动化设备领域和测试领域。
- Compact structure, high comprehensive precision, good long-term stability, high dynamic response frequency, high-quality stainless steel material. Application: Auto Pressing, automatic assembly, 3C product test, New Energy Product Assembly, medical inspection, Robot Field, die assembly and other industrial testing, automation equipment and testing fields.

• 安装尺寸 / Mounting dimensions



量程	M
0.05-2T	M12
2.5-5T	M16

• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0.05/0.1/0.2/0.3/0.5/1/2/3/5 T	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.3%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.3%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	2.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±1%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	750±20Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	700±10Ω	电缆线规格 (Cable specifications)	Φ4mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66



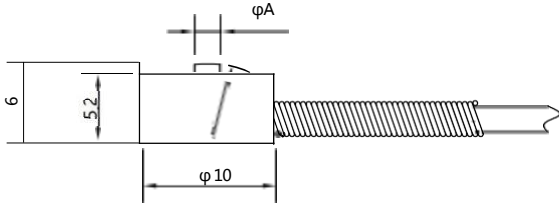
型号 : KDEV-L-F0

可定做: 高温

产品特点 / Product characteristics

- 采用传感器专用材质打造的微型传感器。适用于各种小空间测力，广泛应用于工业研发等领域的测量和控制。
- A miniature sensor made of special materials for sensors. It is widely used in industrial R & D and other fields of measurement and control.

安装尺寸 / Mounting dimensions



量程	A
5-30kg	1.5
5-100kg	2.5

■ 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	5/10/20/30/50/100 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.1%F.S/10°C
综合误差 (Composite Error)	≤±0.3%	零点温度影响 (Zero temperature effect)	±0.1%F.S/10°C
非线性 (Non-linear)	0.3%	温度补偿范围 (Temperature compensation range)	-10~60°C/-20~120°C
灵敏度 (Sensitivity)	1.0/2.0±10%mV/V	使用温度范围 (Operating temperature range)	-20~80°C/-40~160°C
蠕变 (Creep)	±0.5%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350±10/800~1100Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350±5/800~1100Ω	电缆线规格 (Cable specifications)	Φ2mm×1.5m
绝缘电阻 (Insulation Resistance)	≥2000MΩ/100V DC	防护等级 (Protection level)	Ip66



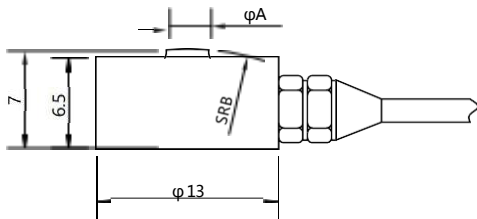
型号 : KDEV-L-F01

可定做: 高温 防水

产品特点 / Product characteristics

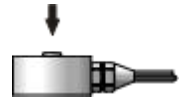
- 采用传感器专用材质打造的微型传感器，具有体积小量程大的特点。适用于各种小空间测力，广泛应用于工业研发等领域的测量和控制。
- The micro-sensor made of special materials for sensors has the characteristics of small volume and large range. It is widely used in the measurement and control of Industrial R & D and other fields.

安装尺寸 / Mounting dimensions



量程 (kg)	A	B
2/5/10/20	2	10
30/50/100/200	3	18

■ 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	2/5/10/20/30/50/100/200 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.1%F.S/10°C
综合误差 (Composite Error)	≤±0.3%	零点温度影响 (Zero temperature effect)	±0.1%F.S/10°C
非线性 (Non-linear)	0.3%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0/2.0±10%mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.5%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350±10/800~1100Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350±5/800~1100Ω	电缆线规格 (Cable specifications)	Φ2mm×2m
绝缘电阻 (Insulation Resistance)	≥2000MΩ/100V DC	防护等级 (Protection level)	Ip66



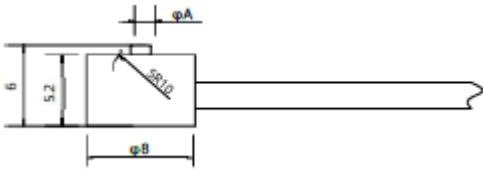
型号 : KDEV-L-F02

可定做： 高温

产品特点 / Product characteristics

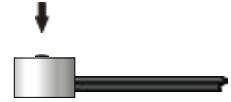
- 采用传感器专用材质打造的微型传感器。高度低，直径小，适用于各路小空间测力，广泛应用于工业研发等领域的测量和控制。
- A miniature sensor made of special materials for sensors. Low height, small diameter, suitable for all small space force measurement, widely used in industrial, R & D and other fields of measurement and control.

安装尺寸 / Mounting dimensions



量程(kg)	A
1/2/3/5/10/20	1.6
50/100	2.3

受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	1/2/3/5/10/20/50/100 kg	灵敏度温度影响 (Sensitivity temperature effect)	$\pm 0.25\%F.S./10^{\circ}C$
综合误差 (Composite Error)	$\leq \pm 1\%$	零点温度影响 (Zero temperature effect)	$\pm 0.25\%F.S./10^{\circ}C$
非线性 (Non-linear)	1%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0/2.0 $\pm 10\%$ mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	$\pm 0.5\%F.S./30min$	激励电压 (Excitation voltage)	5~10V
零点输出 (Zero output)	$\pm 2.0\%$ F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350 $\pm 5/800\sim 1100\Omega$	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350 $\pm 3/800\sim 1100\Omega$	电缆线规格 (Cable specifications)	$\Phi 2mm \times 2m$
绝缘电阻 (Insulation Resistance)	$\geq 5000M\Omega/100V$ DC	防护等级 (Protection level)	Ip66



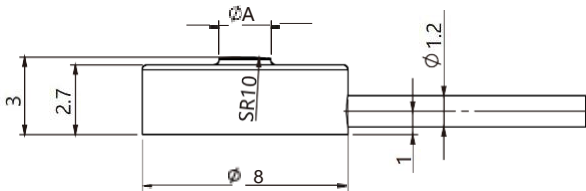
型号 : KDEV-L-F05

可定做： 高温

产品特点 / Product characteristics

- 采用传感器专用材质打造的微型传感器，拥有超薄的厚度。适用于各路小空间测力，广泛应用于工业研发等领域的测量和控制。
- The micro-sensor is made of special materials for sensors and has an ultra-thin thickness. It is widely used in industrial, R & D and other fields of measurement and control.

安装尺寸 / Mounting dimensions



量程(kg)	ϕA
2/5/10/20	2
30/50/100	2.3

受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	2/5/10/20/30/50/100 kg	灵敏度温度影响 (Sensitivity temperature effect)	$\pm 0.15\%F.S./10^{\circ}C$
综合误差 (Composite Error)	$\pm 1\%F.S.$	零点温度影响 (Zero temperature effect)	$\pm 0.15\%F.S./10^{\circ}C$
非线性 (Non-linear)	1%F.S.	温度补偿范围 (Temperature compensation range)	-10~40°C
灵敏度 (Sensitivity)	1.0/2.0 $\pm 10\%$ mV/V	使用温度范围 (Operating temperature range)	-20~60°C
滞后 (Lag behind)	0.2%F.S	激励电压 (Excitation voltage)	5~10V
使用寿命 (Service life)	100万次以上	最大激励电压 (Maximum excitation voltage)	12V
材料 (Materials)	不锈钢	安全过载范围 (SAFE overload range)	120%F.S
电缆线规格 (Cable specifications)	$\Phi 1.2mm \times 3m$	极限过载范围 (Limit Overload Range)	150%F.S
绝缘电阻 (Insulation Resistance)	$\geq 5000M\Omega/100V$ DC	防护等级 (Protection level)	Ip66



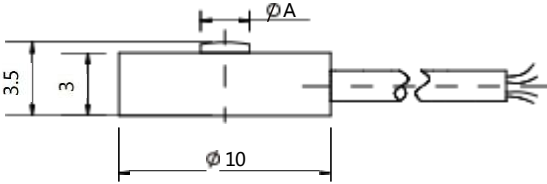
型号 : KDEV-L-F06

可定做: 高温

产品特点 / Product characteristics

- 采用优质的不锈钢打造，体积小，精度高，结构稳固。方便安装在狭小的空间内，广泛应用于自动化装备等领域测力。
- Made of high-quality stainless steel, small size, high precision, stable structure. It is convenient to be installed in narrow space and widely used in automatic equipment and other fields.

• 安装尺寸 / Mounting dimensions



量程(kg)	ΦA
2/5/10/20	2
30/50/100	2.3

• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	2/5/10/20/50/100 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.25%F.S/10°C
综合误差 (Composite Error)	≤±1%	零点温度影响 (Zero temperature effect)	±0.25%F.S/10°C
非线性 (Non-linear)	1%	温度补偿范围 (Temperature compensation range)	-10~60°C/-20~120°C
灵敏度 (Sensitivity)	1.0/2.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~80°C/-40~160°C
蠕变 (Creep)	±0.25%F.S/30min	激励电压 (Excitation voltage)	5~10V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	120%F.S
输入阻抗 (Input impedance)	350±5/800~1100Ω	极限过载范围 (Limit Overload Range)	150%F.S
输出阻抗 (Output impedance)	350±3/800~1100Ω	电缆线规格 (Cable specifications)	Φ1.2mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66



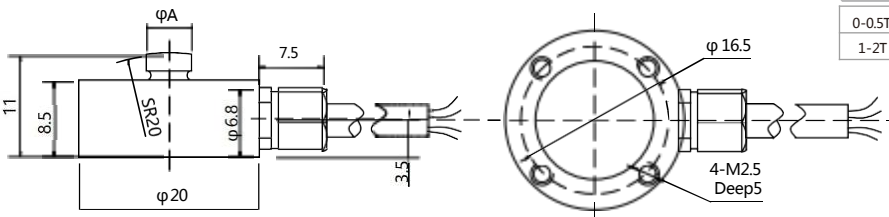
型号 : KDEV-L-F11

可定做: 高温 防水

产品特点 / Product characteristics

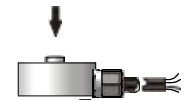
- 传感器由应变结构，小尺寸、低高度、全不锈钢材质。可定制高温性能，适用于汽车压装，自动化组装，3C产品测试，新能源产品组装，医疗检测，机器人领域，等其它工业测试控制系统。
- The sensor is made of strain structure, small size, low height and all stainless steel. Customizable high-temperature performance, suitable for auto press assembly, automatic assembly, 3C product test, New Energy Product Assembly, medical inspection, robotics, and other industrial test and control systems.

• 安装尺寸 / Mounting dimensions



量程	A(mm)
0-0.5T	5
1-2T	7

• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	2/5/10/20/50 kg, 0.1/0.2/0.5/1/2T	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.3%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.3%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0/2.0±20% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.5%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350±5/800~1100Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350±10/800~1100Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66



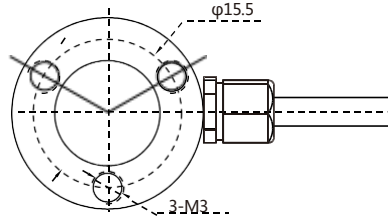
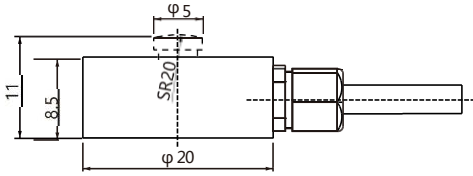
型号 : KDEV-L-F12

可定做: 高温 防水

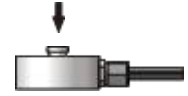
产品特点 / Product characteristics

- 可定制高温性能，用于注塑，挤压等制造工艺，适用于汽车压装，自动化组装，3C产品测试，新能源产品组装，医疗检测，机器人领域，等其它工业测试控制系统。
- Customizable high-temperature performance, for injection molding, extrusion and other manufacturing processes, for automotive assembly, automated assembly, 3C product testing, New Energy Product Assembly, medical testing, robotics, other industrial test control systems.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	3/5/10/20/30/50/100 kg	绝缘电阻 (Insulation resistance)	≥2000MΩ/50V DC
输出灵敏度 (Output sensitivity)	1.0/1.5mV/V	温度灵敏度漂移 (Temperature sensitivity drift)	±0.05%F.S/10°C
零点输出 (Zero output)	±2.0%F.S	零点温度漂移 (Temperature compensation range)	±0.05%F.S/10°C
蠕变 (Creep)	0.1%F.S	激励电压 (Excitation voltage)	5~10V
非线性 (Non-linear)	0.3%F.S	最大激励电压 (Maximum excitation voltage)	15V
滞后 (Lag behind)	0.3%F.S	温度补偿范围 (Temperature compensation range)	-10~60°C
重复性 (Repeatability)	0.05%F.S	工作温度范围 (Operating temperature range)	-20~80°C
输入电阻 (Input Resistance)	350±5Ω	安全过载 (SAFE overload)	120%F.S
输出电阻 (Output Resistance)	350±5Ω	极限过载 (Ultimate overload)	200%F.S
电缆线规格 (Cable specifications)	Φ3mm×3m	防护等级 (Protection level)	Ip66



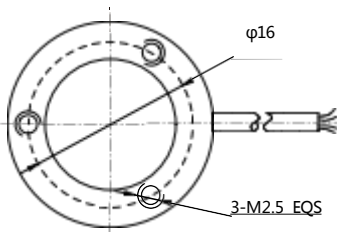
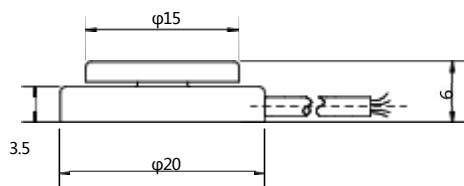
型号 : KDEV-L-F14

可定做: 高温

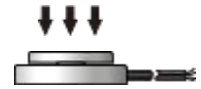
产品特点 / Product characteristics

- 高度低，变形量小，外形尺寸小，动态响应频率高，受力面积大，可定制高温性能。用于注塑，积压等制造工艺，适用于汽车压装，自动化组装，3C产品测试。
- Low height, small deformation, small size, high dynamic response frequency, large stress area, customizable high temperature performance. For injection molding, backlogs and other manufacturing processes, suitable for automotive press assembly, automatic assembly, 3C product testing.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	2/5/10/20/30/50 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.5%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.5%	温度补偿范围 (Temperature compensation range)	-10~60°C/-20~120°C
灵敏度 (Sensitivity)	1.0/2.0±20% mV/V	使用温度范围 (Operating temperature range)	-20~80°C/-40~160°C
蠕变 (Creep)	±0.5%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0% F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350±5/800~1100Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350±10/800~1100Ω	电缆线规格 (Cable specifications)	Φ1.2mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66



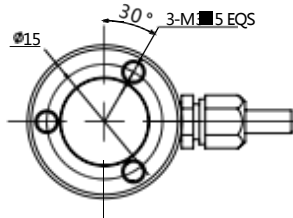
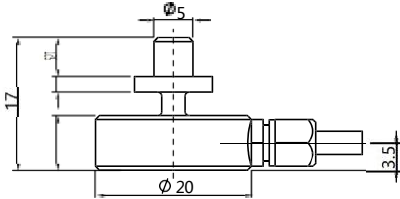
型号 : KDEV-L-F16

可定做:  高温  防水

产品特点 / Product characteristics

- 体积小, 重量轻, 全不锈钢材质, 耐腐蚀。适用于空间有限的场合。主要应用汽车压装, 自动化组装, 3C产品测试, 新能源产品组装, 医疗检测, 机器人领域等安装空间小的力值检测领域。
- Small size, light weight, all stainless steel material, corrosion resistance. Suitable for the occasion of limited space. It is mainly used in automobile pressing assembly, automatic assembly, 3C product test, New Energy Product Assembly, medical inspection, robot field, etc. .

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0-5/10/20/30/50/100 kg	绝缘电阻 (Insulation resistance)	≥5000MΩ/100V DC
输出灵敏度 (Output sensitivity)	1.5±10%mV/V	温度灵敏度漂移 (Temperature sensitivity drift)	±0.1%F.S/10°C
零点输出 (Zero output)	±1%mV/V	零点温度漂移 (Temperature compensation range)	±0.1%F.S/10°C
蠕变 (Creep)	≤0.1%F.S	激励电压 (Excitation voltage)	5~12V
非线性 (Non-linear)	≤0.3%F.S	最大激励电压 (Maximum excitation voltage)	15V
滞后 (Lag behind)	≤0.3%F.S	温度补偿范围 (Temperature compensation range)	-10~40°C
重复性 (Repeatability)	≤0.1%F.S	工作温度范围 (Operating temperature range)	-20~60°C
输入电阻 (Input Resistance)	800~1100Ω	安全过载 (SAFE overload)	150%F.S
输出电阻 (Output Resistance)	800~1100Ω	极限过载 (Ultimate overload)	200%F.S
电缆线规格 (Cable specifications)	Φ3mm×3m	材料 (Materials)	不锈钢

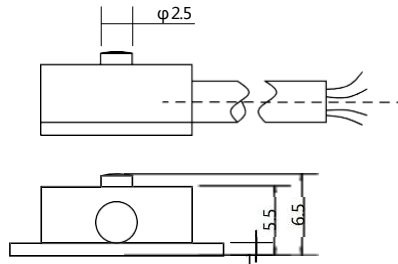
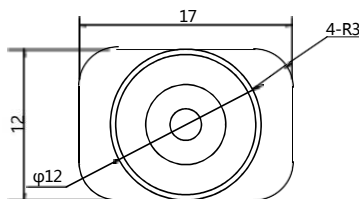


型号 : KDEV-L-F2

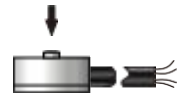
产品特点 / Product characteristics

- 采用高精度电阻应变式原理, 不锈钢材料, 密封焊接, 防油, 防水, 耐腐蚀。安全防爆型产品, 可用于恶劣环境及危险场合。体积小, 动态响应频率高。
- Using high-precision resistance strain type principle, stainless steel materials, sealed welding, oil-proof, waterproof, corrosion-resistant. Safe explosion-proof products, can be used in harsh environment and dangerous occasions. Small size, high dynamic response frequency.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	20-50 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.3%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.3%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0/2.0±15%mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.5%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350±10/800~1100Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350±10/800~1100Ω	电缆线规格 (Cable specifications)	Φ2mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

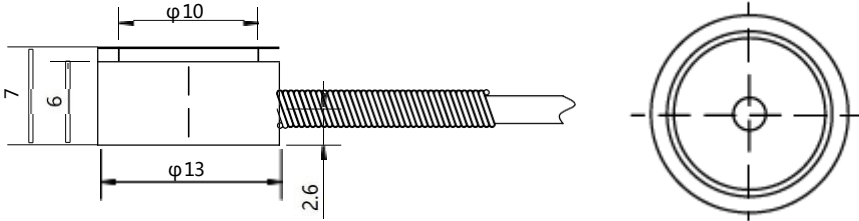


型号 : KDEV-L-F4

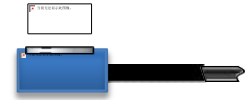
产品特点 / Product characteristics

- 微型传感器、高度低、变形量小，不锈钢材料，动态响应频率高，主要用于自动化行业、机器人抓取、压入、拉压力的检测与控制、汽车装配力值检测等。
- Micro sensor, low height, small deformation, stainless steel material, high dynamic response frequency, mainly used in automation industry, robot grasping, pressing, tension pressure detection and control, automobile assembly force value detection.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	10/20 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.5%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.5%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.2±10%mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.5%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±0.5%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350±10Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350±10Ω	电缆线规格 (Cable specifications)	Φ2mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66



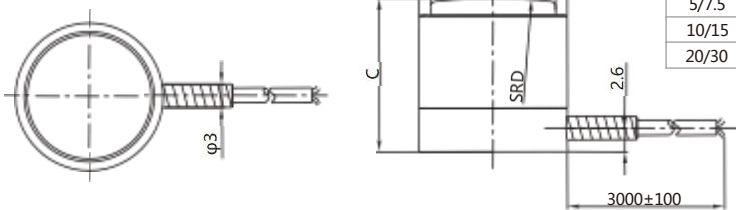
型号 : KDEV-L-G1

可定做： 高温

产品特点 / Product characteristics

- 外形尺寸小，量程大，变形量小，传感器专用不锈钢材料。适用于各种小空间的大量程测力，广泛应用于工业，研发，自动化制造等领域的测量和控制。
- Small size, large range, small deformation, special stainless steel material for sensor. It is widely used in many fields such as industry, R & D, automatic manufacture and so on.

安装尺寸 / Mounting dimensions



量程 (T)	A	B	C	D
1/2	15.9	13.4	16.5	100
5/7.5	22.4	20.4	22.4	100
10/15	31.8	28.9	28.7	125
20/30	40	37	35	150

受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	1/2/5/7.5/10/15/20/30 T	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.5%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.5%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0/2.0±10%mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.5%F.S/30min	激励电压 (Excitation voltage)	5~15V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	200%F.S
输入阻抗 (Input impedance)	380±20Ω	极限过载范围 (Limit Overload Range)	300%F.S
输出阻抗 (Output impedance)	350±10Ω	电缆线规格 (Cable specifications)	Φ2mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip65

Force transducer

测力传感器



Product applications

Mainly used in various electronic weighing apparatus, industrial control field, on-line control, installation of overload alarm, material testing machine and other fields, such as automotive, medical, robotics, electronics, mechanical equipment, automation equipment, such as: key handle tester, hot and cold press pressure detection, robot hand grip and other small installation space force detection field.

产品应用

主要应用在各种电子衡器、工业控制领域、在线控制、安装过载报警、材料试验机等领域，如汽车、医疗、机器人、电子、机械设备、自动化设备等，例如：按键手感度测试仪，冷热压机压力检测，机器人手抓力等安装空间小的力值检测领域。

Application



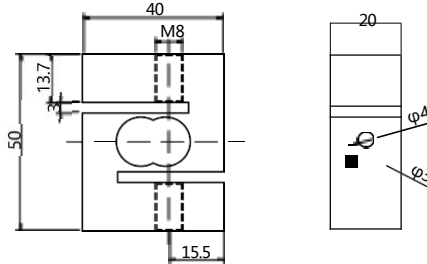


型号：KDEV-C-A0R

产品特点 / Product characteristics

- 广泛应用于拉力试验机，料斗称，材料试验机，推拉力计等各种工业自动化设备。测量精度优于0.05%，长期稳定性好，重复性高，可靠性高。采用传感器专用铝合金材质。
- Widely used in tensile testing machine, Hopper said, material testing machine, push-pull meter and other industrial automation equipment. The measuring precision is better than 0.05%, the long-term stability is good, the repeatability is high, the reliability is high. It is made of special aluminum alloy for sensor.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0.05/0.1/0.2/0.5/1/2/5/10 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.025%F.S/10°C
综合误差 (Composite Error)	≤±0.03%	零点温度影响 (Zero temperature effect)	±0.025%F.S/10°C
非线性 (Non-linear)	0.03%	温度补偿范围 (Temperature compensation range)	-10~40°C
灵敏度 (Sensitivity)	1.0/2.0±0.005mV/V	使用温度范围 (Operating temperature range)	-20~60°C
蠕变 (Creep)	±0.03%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0% F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350±5Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350±3Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip65

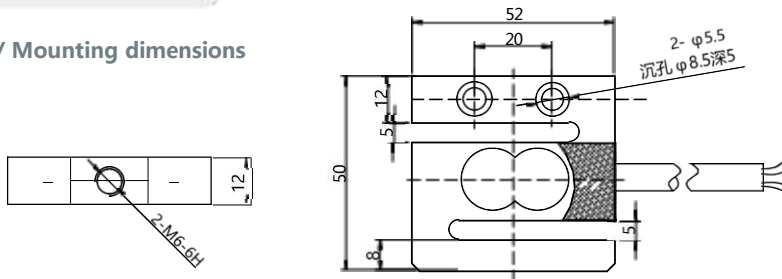


型号：KDEV-C-A0T

产品特点 / Product characteristics

- S型平行梁式铝合金结构传感器。用于推拉力计、工业测量系统。
- S-type parallel beam aluminum alloy structure sensor. Used in push-pull meters, industrial measurement systems.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	1/2/3/5/10/15/20/30/50/100 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.25%F.S/10°C
综合误差 (Composite Error)	≤±0.02%	零点温度影响 (Zero temperature effect)	±0.25%F.S/10°C
非线性 (Non-linear)	0.02%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0/2.0±10mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.03%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0% F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	410±10Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350±5Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip65

型号 : KDEV-C-B0

可定做:  高温  防水

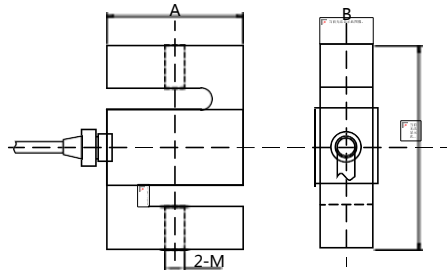


产品特点 / Product characteristics

- 本产品采用合金钢材质制造。胶密封处理，表面镀镍，防水，防腐蚀，适用于多种工作环境。该产品适用于电子吊钩秤、配料秤、机改秤等其它电子称重设备。
- Widely used in tensile testing machine, Hopper said, material testing machine, push-pull meter and other industrial automation equipment. The measuring precision is better than 0.05% , the long-term stability is good, the repeatability is high, the reliability is high. It is made of special aluminum alloy for sensor.

• 安装尺寸 / Mounting dimensions

量程	A	B	C	M
10-50kg	51	12.7	64	M8
100-500kg	51	19	76	M12
750-1500kg	50.8	25.4	76	M12x1.75
2000-5000kg	76.2	25.4	108	M18x1.5



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	100/150/200/250/300/500/1000/2000/5000 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.017%F.S/10°C
综合误差 (Composite Error)	±0.03%F.S	零点温度影响 (Zero temperature effect)	±0.023%F.S/10°C
非线性 (Non-linear)	0.03%	温度补偿范围 (Temperature compensation range)	-10~40°C
灵敏度 (Sensitivity)	2.0±0.004 mV/V	使用温度范围 (Operating temperature range)	-20~55°C
蠕变 (Creep)	±0.024%FS/30min	激励电压 (Excitation voltage)	9~12V
零点输出 (Zero output)	±1.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350±5Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350±3Ω	电缆线规格 (Cable specifications)	Φ5mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66



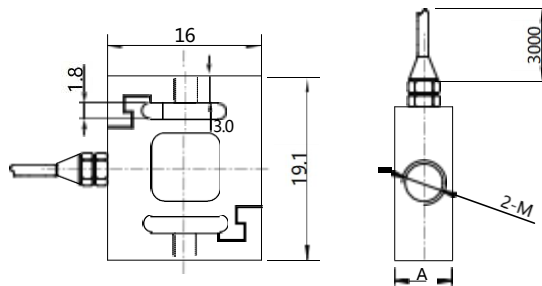
型号 : KDEV-C-C0

产品特点 / Product characteristics

- 传感器专用不锈钢材料，采用金属箔式应变片技术，带过载保护。主要用于推拉计，料斗秤，工业测量系统。
- Special stainless steel material for sensor, adopt metal foil strain gauge technology, with overload protection. Mainly used in push-pull meter, Hopper scale, industrial measurement system.

• 安装尺寸 / Mounting dimensions

量程 (kg)	A	M
0-2	5	3
0-2	6	4
0-50	6	4
100	9	4



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0.2/0.5/1/1.5/2/3/5/10/20/50/100 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.1%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.1%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0/2.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.05%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350±30Ω	极限过载范围 (Limit Overload Range)	300%F.S
输出阻抗 (Output impedance)	350±5Ω	电缆线规格 (Cable specifications)	Φ2mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

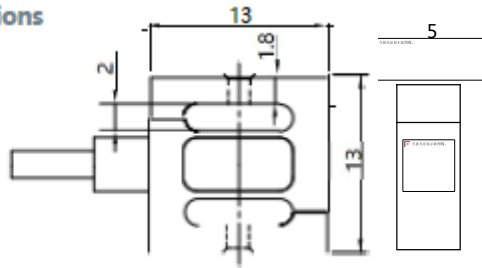
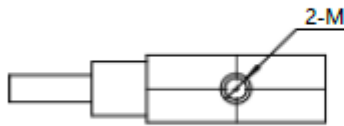


型号：KDEV-C-C02

产品特点 / Product characteristics

- 广泛应用于小空间拉力测试、张力测试等各种工业自动化设备。键盘手感，按键测力等，测量精度优于±0.15%，长期稳定性好，重复性可靠性高，采用不锈钢材质。
- Widely used in small space tension test, tension test and other industrial automation equipment. Keyboard feel, key force measurement, the measurement accuracy is better than soil 0.15%, long-term stability, high reliability, the use of stainless steel.

• 安装尺寸 / Mounting dimensions



量程 (kg)	M
1/2/5	M2
10/20/30	M3

• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0.5/1/2/3/5/10/20/30 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.2%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.2%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0/2.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.5%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	120%F.S
输入阻抗 (Input impedance)	350±30Ω	极限过载范围 (Limit Overload Range)	150%F.S
输出阻抗 (Output impedance)	350±5Ω	电缆线规格 (Cable specifications)	Φ2mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip65



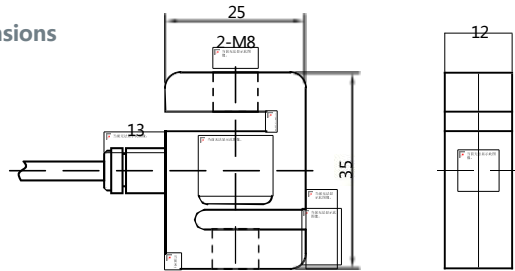
型号：KDEV-C-C04

可定做： 高温

产品特点 / Product characteristics

- 体积小巧，安装简单方便，集高精度和高动态频率于一身，主要应用：插拔力测试，铆钉机，焊接机，冷热压贴膜机，键盘按钮手感测试等拉压力测试仪器，自动化设备领域，测试领域。
- Small size, easy to install, high precision and high dynamic frequency in one, the main applications: Pulling Force Test, Rivet Machine, welding machine, cold and hot press laminating machine, keyboard button feel test and other tension and pressure testing equipment, automation Equipment Field, test field.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	2/5/10/15/20/30/50/100/200 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.1%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.1%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0/2.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.05%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	120%F.S
输入阻抗 (Input impedance)	410±10Ω	极限过载范围 (Limit Overload Range)	150%F.S
输出阻抗 (Output impedance)	350±5Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip65



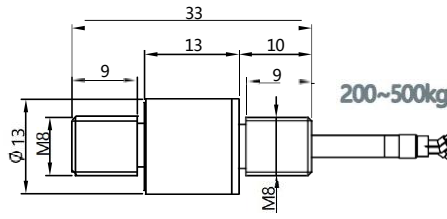
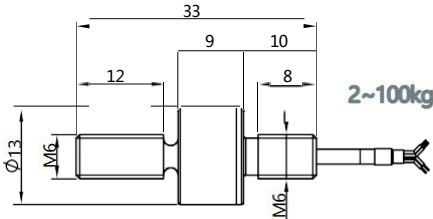
型号 : KDEV-C-D0

可定做: 高温 防水

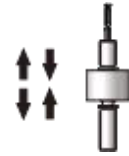
产品特点 / Product characteristics

- 不锈钢或铝合金材料微型传感器，密封性好，可定做防水；上端出线，适合特殊安装要求。采用金属箔式应变片技术。适用于各种小空间的测力，广泛应用于工业、研发等领域的测量和控制。
- Stainless steel or aluminum alloy material micro sensor, good sealing, can be customized waterproof; upper outlet, suitable for special installation requirements. Using metal foil strain gauge technology. It is widely used in the measurement and control of industrial, R & D and other fields.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	2/5/10/20/30/50/100 /200/300/500 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.5%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.5%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0/2.0±20% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.25%F.S/30min	激励电压 (Excitation voltage)	5~10V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	800±10Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	800±5Ω	电缆线规格 (Cable specifications)	Φ2mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66



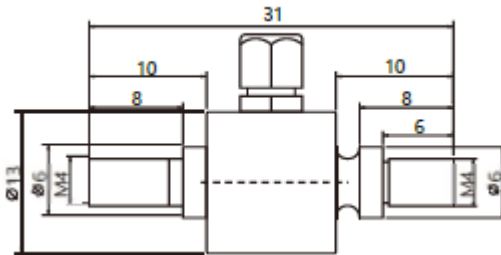
型号 : KDEV-C-D01

可定做: 高温 防水

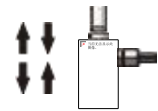
产品特点 / Product characteristics

- KDEV-C-D01是一款超小型双头螺柱拉压双向都可以测量的传感器，固定安装便捷。常被用于按键手感测试，疲劳测试，推拉力测量。外形小巧，对于空间狭小场合尤其合适。
- KDEV-C-D01 is an ultra- small stud tension and pressure can be measured in both directions of the sensor, fixed installation is convenient. It is often used in key touch test, fatigue test, push- pull force measurement. Small size, especially suitable for small space occasion.

安装尺寸 / Mounting dimension



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	50/10/20/50/100 kg	绝缘电阻 (Insulation resistance)	≥5000MΩ/100V DC
额定输出 (Rated output)	1.0±20% mV/V	温度灵敏度漂移 (Temperature sensitivity drift)	±0.2%F.S/10°C
零点输出 (Zero output)	±0.05 mV/V	零点温度漂移 (Temperature compensation range)	±0.2%F.S/10°C
产品重量 (Product weight)	0.2kg	激励电压 (Excitation voltage)	5~12V
非线性 (Non-linear)	≤0.5%F.S	最大激励电压 (Maximum excitation voltage)	15V
滞后 (Lag behind)	≤0.5%F.S	温度补偿范围 (Temperature compensation range)	-10~60°C
重复性 (Repeatability)	≤0.1%F.S	工作温度范围 (Operating temperature range)	-20~80°C
输入电阻 (Input Resistance)	800~1100Ω	安全过载 (SAFE overload)	150%F.S
输出电阻 (Output Resistance)	800~1100Ω	极限过载 (Ultimate overload)	200%F.S
电缆线规格 (Cable specifications)	Φ2mm×3m	材料 (Materials)	不锈钢

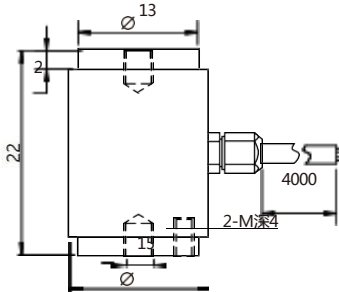
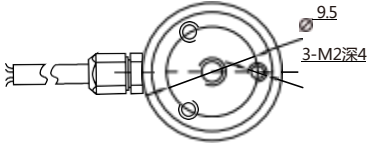
型号 : KDEV-C-D1



产品特点 / Product characteristics

- 微型传感器，高度低，变形量小，圆柱外形，不锈钢材料，拉压双向，主要用于推、拉力计，各种工业测力及称重系统等。
- Micro sensor, low height, small deformation, cylindrical shape, stainless steel material, tension and compression two-way, mainly used for push, pull meter, various industrial force and weighing systems.

安装尺寸 / Mounting dimensions



受力方式/Force mode



量程(N)	
0-50	M3
0-50	M4
0-500	M4

量程 (Measuring range)	2/5/10/20/30/50 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.3%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.3%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0/2.0±10%mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.05%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350±20Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350±5Ω	电缆线规格 (Cable specifications)	Φ2mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

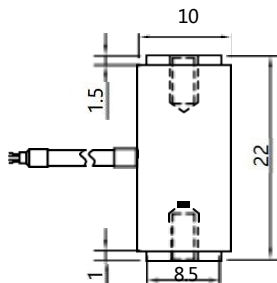
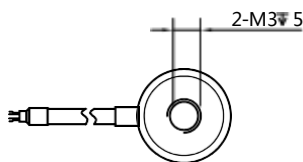
型号 : KDEV-C-D11



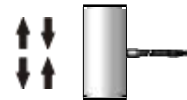
产品特点 / Product characteristics

- 微型传感器，高度低，变形量小，圆柱外形，不锈钢材料，拉压双向主要用于推、拉力计，各种工业测力及称重系统等。
- Micro sensor, low height, small deformation, cylindrical shape, stainless steel material, tension and compression bidirectional mainly used for push, pull meter, various industrial force and weighing systems.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters			
量程 (Measuring range)	1/2/3/5/10/20 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.3%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.3%	温度补偿范围 (Temperature compensation range)	-10~40°C
灵敏度 (Sensitivity)	1.0/2.0±10%mV/V	使用温度范围 (Operating temperature range)	-20~60°C
蠕变 (Creep)	±0.1%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350±30Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350±10Ω	电缆线规格 (Cable specifications)	Φ2mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

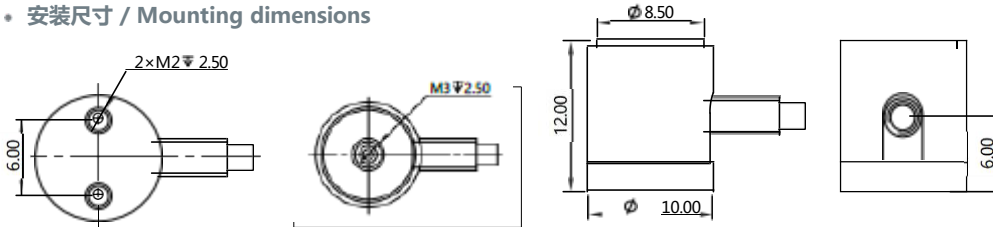
型号 : KDEV-C-D13



产品特点 / Product characteristics

- 微型传感器，高度低，变形量小，圆柱外形，不锈钢材料，拉压双向主要用于推、拉力计，各种工业测力及称重系统等。
- Micro sensor, low height, small deformation, cylindrical shape, stainless steel material, tension and compression bidirectional mainly used for push, pull meter, various industrial force and weighing systems.

• 安装尺寸 / Mounting dimensions



注：螺丝拧进传感器螺纹孔深度不要超2.5mm，以免损坏内部线路及结构。

• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	1/2/3/5/10/20/50 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.3%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.3%	温度补偿范围 (Temperature compensation range)	-10~40°C
灵敏度 (Sensitivity)	2.0±10%mV/V	使用温度范围 (Operating temperature range)	-20~60°C
蠕变 (Creep)	±0.1%F.S/30min	激励电压 (Excitation voltage)	5~15V
零点输出 (Zero output)	±2.0% F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350±20Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350±5Ω	电缆线规格 (Cable specifications)	Φ2mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

型号 : KDEV-C-E0

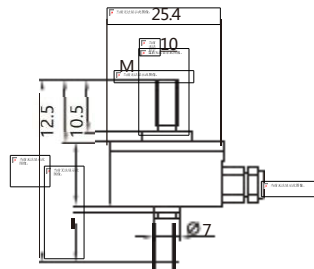


产品特点 / Product characteristics

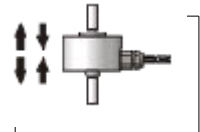
- 微型传感器，高度低，变形量小，不锈钢材料，拉压双向，主要用于汽车压装、自动化组装、3C产品测试、新能源产品组装、医疗检测、机器人领域、模具组装等工业自动化领域。
- Micro sensor, low height, small deformation, stainless steel section, tension and compression, it is mainly used in auto pressing, automatic assembly, 3C product test, New Energy Product Assembly, medical inspection, Robot, mould assembly and other industrial automation fields.

• 安装尺寸 / Mounting dimensions

量程 (kg)	M
5-50	M5
100	M6



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	5/10/20/30/50/100 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.1%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.1%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0/2.0±10%mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.05%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0% F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	700±10Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	700±10Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66



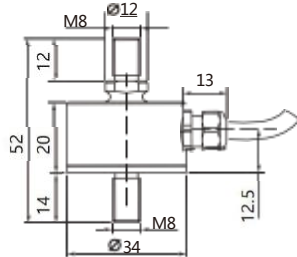
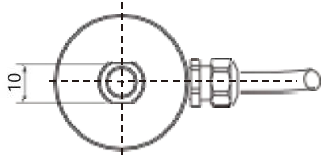
型号 : KDEV-C-E02

可定做: 高温 防水

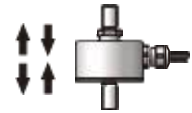
产品特点 / Product characteristics

- 微型传感器, 高度低, 变形量小, 动态响应频率高, 不锈钢材料, 拉压双向, 主要用于汽车压装、3C产品测试、新能源组装、医疗检测、机器人领域、模具组装等自动化领域。
- Micro sensor, low height, small deformation, high dynamic frequency, stainless steel material, two-way tension and compression, mainly used in automobile pressing assembly, 3C product testing, new energy assembly, medical testing, robot field, mold assembly and other automated fields.

• 安装尺寸 / Mounting dimensions



▪ 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	50/100/150/200/300/500 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.2%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.2%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.5±20% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.1%F.S/30min	激励电压 (Excitation voltage)	5~15V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	700±10Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	700±10Ω	电缆线规格 (Cable specifications)	Φ4mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip67



型号 : KDEV-C-G1

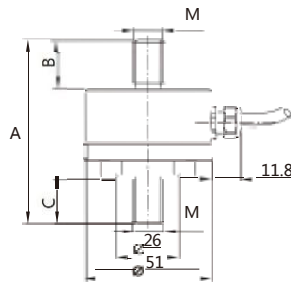
可定做: 高温 防水

产品特点 / Product characteristics

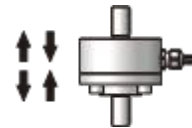
- 微型传感器, 高度低, 变形量小, 量程大, 不锈钢材料, 拉压双向, 主要用于汽车压装、自动化组装、3C产品测试、新能源产品组装、医疗检测、机器人领域、模具组装等工业自动化领域。
- Micro sensor, low height, small deformation, large range, stainless steel section, tension and compression, it is mainly used in auto pressing, automatic assembly, 3C product test, New Energy Product Assembly, medical inspection, Robot, mould assembly and other industrial automation fields.

• 安装尺寸 / Mounting dimensions

量程 (T)	A	B	C	M
0.1/0.2/0.3/0.5/1/2	70	19	18	M12
3/5	86	25	25	M16



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0.1/0.2/0.3/0.5/1/2/3/5 T	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.2%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.2%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.5±10% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.05%F.S/30min	激励电压 (Excitation voltage)	5~15V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	700±10Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	700±10Ω	电缆线规格 (Cable specifications)	Φ4mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

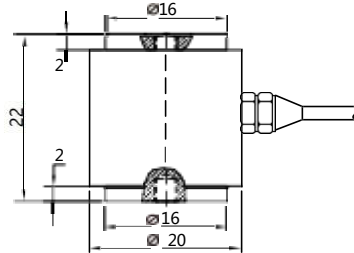
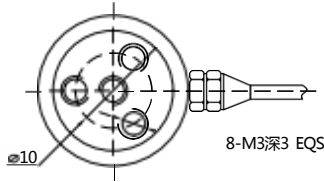


型号 : KDEV-C-G1

产品特点 / Product characteristics

- 微型传感器、高度低、变形量小，不锈钢材料，拉压双向、动态响应频率高防过载，主要用于推拉力计、注塑和模具行业、机器人抓取、压入、拉压力的检测与控制、汽车装配力值检测等。
- Micro sensor, low height, small deformation, stainless steel material, bi-directional tension and compression, high dynamic response frequency anti-overload, it is mainly used for testing and controlling of push-pull force meter, injection molding and mould industry, robot grasping, pressing and pulling pressure, automobile assembly force value testing and so on.

• 安装尺寸 / Mounting dimensions



▪ 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	2/5/10/20/30/50/100/200 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.1%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.1%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0/2.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.1%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	650/350±10Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	650/350±10Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66



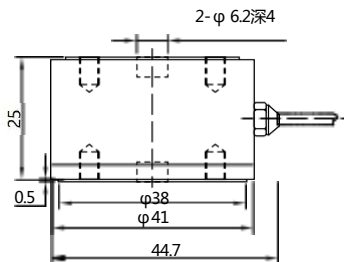
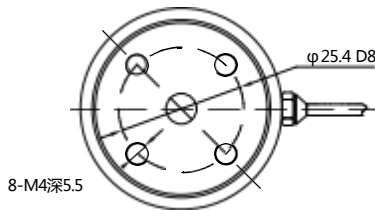
型号 : KDEV-C-G3

可定做: 高温

产品特点 / Product characteristics

- 主要用于汽车生产，医疗器械，机器人，自动化设备等方面。例如：按键手感检测，冷热压机压力检测，机器人手抓力等。
- It is mainly used in automobile production, medical apparatus, robot, automation equipment and so on. For example: key touch detection, hot and cold press pressure detection, robot hand grip and so on.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	5/10/20/50 kg, 0.1/0.2/0.3/0.5/1/2/5 T (拉压力: 0~1T, 压力: 5T)	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.1%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.1%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0/2.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.1%F.S/30min	激励电压 (Excitation voltage)	5~15V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	385±5Ω	极限过载范围 (Limit Overload Range)	300%F.S
输出阻抗 (Output impedance)	350±3Ω	防护等级 (Protection level)	Ip66
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC		
电缆线规格 (Cable specifications)	Φ3mm×3m		

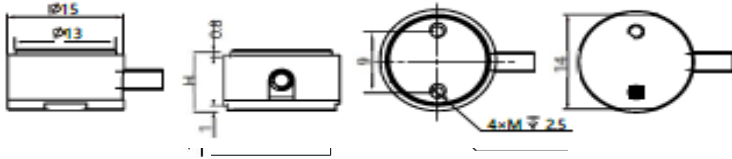


型号：KDEV-C-G4

产品特点 / Product characteristics

- ▣ 变形量小，动态响应频率高，不锈钢材质，拉压双向，主要用于推拉力计、自动化组装测试、医疗检测、机器人领域及各种工业自动化测力领域。
- Small deformation, high dynamic response frequency, stainless steel, bi-directional tension and compression, mainly used for push-pull meter, automatic assembly test, medical inspection, robotics and various industrial automation force measurement fields.

• 安装尺寸 / Mounting dimensions



量程 (kg)	H(mm)	M
1/2/5/10/20	9	M2
50	12	M2.5
100/200	15	M3

▣ 受力方式/Force mode



注：螺丝拧进传感器螺纹孔深度不要超2.5mm，以免损坏内部线路及结构。

技术参数 / Technical parameters

量程 (Measuring range)	1/2/5/10/20/50/100/200 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.1%F.S/10°C
综合误差 (Composite Error)	±0.1%F.S.	零点温度影响 (Zero temperature effect)	±0.1%F.S/10°C
非线性 (Non-linear)	0.1%F.S.	温度补偿范围 (Temperature compensation range)	-10~40°C
灵敏度 (Sensitivity)	1.0/2.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~60°C
滞后 (Lag behind)	0.05%F.S	激励电压 (Excitation voltage)	5~10V
使用寿命 (Sedzice life)	100万次以上	最大激励电压 (Maximum excitation voltage)	12V
材料 (Materials)	不锈钢	安全过载范围 (SAFE overload range)	120%F.S
电缆线规格 (Cable specifications)	Φ3mm×3m	极限过载范围 (Limit Overload Range)	150%F.S
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

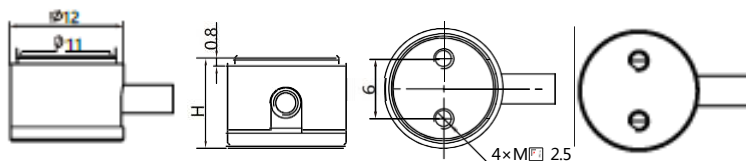


型号：KDEV-C-G5

产品特点 / Product characteristics

- ▣ 不锈钢材质，带过载保护，变形量小，动态响应频率高，拉压双向，主要用于推拉力计、按键手感度测试仪、冷热压机压力检测、机器人领域及各种工业自动化测力领域。
- ▣ Stainless steel material, with overload protection, small deformation, high dynamic response frequency, tension and compression, it is mainly used in the fields of push-pull force meter, push-button handle tester, cold and hot press pressure detection, robot and all kinds of industrial automation force measurement.

• 安装尺寸 / Mounting dimensions



量程 (KG)	H(mm)	M
1/2/5/10/20	9	M2
50	12	M2.5
100/200	20	M3

▣ 受力方式/Force mode



注：螺丝拧进传感器螺纹孔深度不要超2.5mm，以免损坏内部线路及结构。

技术参数 / Technical parameters

量程 (Measuring range)	1/2/5/10/20/50/100/200 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.1%F.S/10°C
综合误差 (Composite Error)	±0.1%F.S.	零点温度影响 (Zero temperature effect)	±0.1%F.S/10°C
非线性 (Non-linear)	0.1%F.S.	温度补偿范围 (Temperature compensation range)	-10~40°C
灵敏度 (Sensitivity)	1.0/2.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~60°C
滞后 (Lag behind)	0.05%F.S	推荐激励电压 (Recommended excitation voltage)	5~10V
使用寿命 (Sedzice life)	100万次以上	最大激励电压 (Maximum excitation voltage)	12V
材料 (Materials)	不锈钢	安全过载范围 (SAFE overload range)	120%F.S
电缆线规格 (Cable specifications)	Φ2mm×3m	极限过载范围 (Limit Overload Range)	150%F.S
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

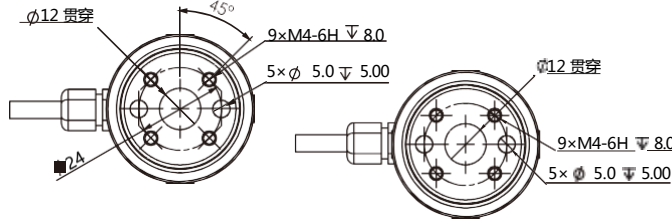
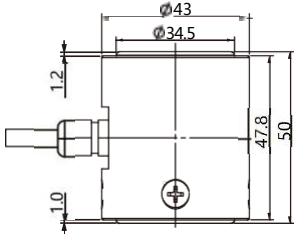


型号 : KDEV-C-G6

产品特点 / Product characteristics

- 不锈钢材料，表面阳极化，而腐蚀性佳，整体结构，安装使用方便。适用于拉压力电子测力系统，高精度。用于小力值试验机、料斗秤、吊钩秤、插拔力测试仪等拉压力测试仪器以及自动化设备领域和测试领域。
- Stainless material, suDžace anodized, and corrosive, the overall structure, easy to install and use. Suitable for tension and pressure electronic force measurement system, high accuracy. Used for small force testing machine, Hopper scale, Hook scale, plug and pull force tester and other tension and pressure testing equipment and automation equipment and testing fields.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	50/100/200 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.3%F.S./10°C
综合误差 (Composite Error)	±0.3%F.S.	零点温度影响 (Zero temperature effect)	±0.3%F.S./10°C
非线性 (Non-linear)	0.3%F.S.	温度补偿范围 (Temperature compensation range)	-20~60°C
灵敏度 (Sensitivity)	1.0±0.02mV/V	使用温度范围 (Operating temperature range)	-20~60°C
滞后 (Lag behind)	0.2%F.S	推荐激励电压 (Recommended excitation voltage)	5~12V
使用寿命 (Service life)	100万次以上	最大激励电压 (Maximum excitation voltage)	12V
材料 (Materials)	不锈钢	安全过载范围 (SAFE overload range)	120%F.S
电缆线规格 (Cable specifications)	Φ5mm×3m	极限过载范围 (Limit Overload Range)	150%F.S
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

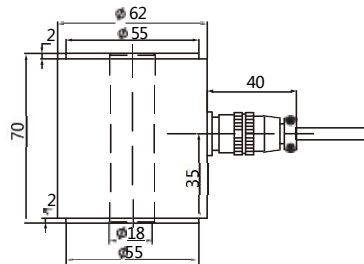
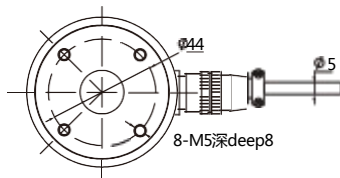


型号 : KDEV-C-G7

产品特点 / Product characteristics

- 采用高精度电阻应变式原理，不锈钢材料，密封焊接，防水、防油、耐腐蚀。圆式结构设计。压式承载，安装使用方便灵活。动态响应频率高，高精度。
- Using high-precision resistance strain type principle, stainless steel materials, sealed welding, waterproof, oil, corrosion resistance. Circular structure design. Pressure bearing, easy to install and use. High dynamic response frequency, high accuracy.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

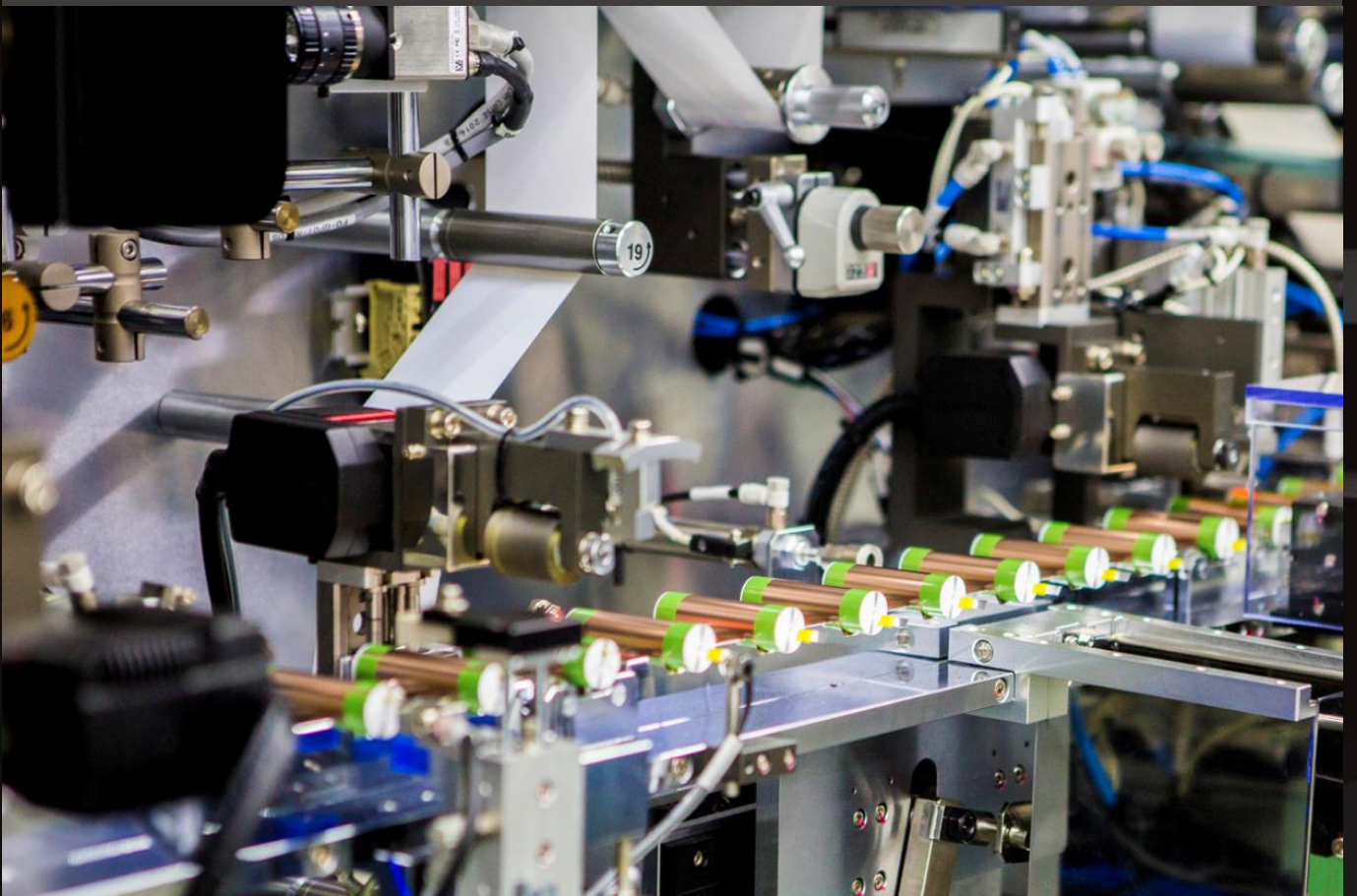
量程 (Measuring range)	0-0.5/1/2/3/5/10 T	温度灵敏度漂移 (Temperature sensitivity drift)	± 0.05% F.S. / 10°C
输出灵敏度 (Output sensitivity)	1.0 ~ 1.5 mV/V	零点温度漂移 (Zero temperature drift)	± 0.05% F.S. / 10°C
零点输出 (Zero output)	± 2 % F.S.	使用电压 (Use voltage)	3 ~ 10V
非线性 (Nonlinear)	± 0.5% F.S.	工作温度范围 (Operating temperature range)	- 20 ~ 80 °C
滞后 (Lag)	± 0.5% F.S.	补偿温度范围 (Compensation temperature range)	- 10 ~ 60 °C
重复性 (Repeatability)	± 0.5% F.S.	安全过载 (Safety overload)	120%
蠕变 (30分钟) (Creep (30 min))	± 0.05% F.S.	极限过载 (Extreme overload)	150%
输入阻抗 (Input impedance)	750 ±10Ω	电缆线规格 (Cable specifications)	Φ5mm×3m
输出阻抗 (Output impedance)	700 ±5Ω	材质 (Material)	不锈钢 Stainless Steel
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100VDC	防护等级 (Protection level)	Ip50

平板式压力传感器

平板式压力传感器拥有大范围的受力面积。测量精度高、稳定性好、输出对称性好，抗偏载能力强；广泛应用于动力电池压力检测，锂电池化成机分容柜，新能源项目及各种工程装置的测力系统；抗机械疲劳性能强，淬透性好。

The flat plate pressure sensor has a large range of force area. It is widely used in pressure measurement of power battery, pressure measurement of lithium battery, force measurement system of new energy project and all kinds of engineering devices. Good mechanical fatigue resistance and hardenability.

Flat plate pressure sensor



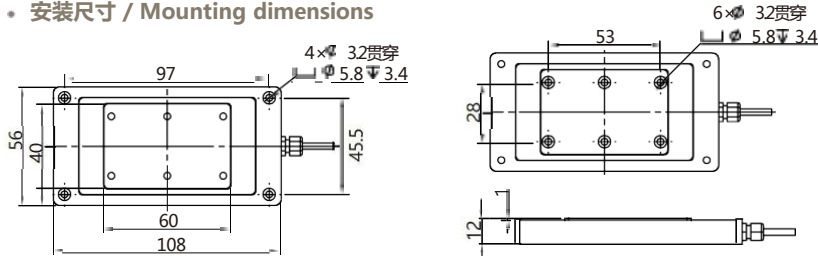


型号：KDEV-P-0A0

产品特点 / Product characteristics

- 平板式压力传感器，受力面积大，高度低，四角偏差小，用于需要大面积测力或称重的特殊场合。
- Flat plate pressure sensor, large force area, low height, small square deviation, for the need of large force measurement or weighing of special occasions.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	50/100kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.5%F.S/10°C
综合误差 (Composite Error)	≤±0.5%	零点温度影响 (Zero temperature effect)	±0.5%F.S/10°C
非线性 (Non-linear)	0.5%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0±10%mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.1%F.S/30min	激励电压 (Excitation voltage)	3~10V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	700±20Ω	极限过载范围 (Limit Overload Range)	300%F.S
输出阻抗 (Output impedance)	700±10Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation Resistance)	≥3000MΩ/100V DC	防护等级 (Protection level)	Ip66

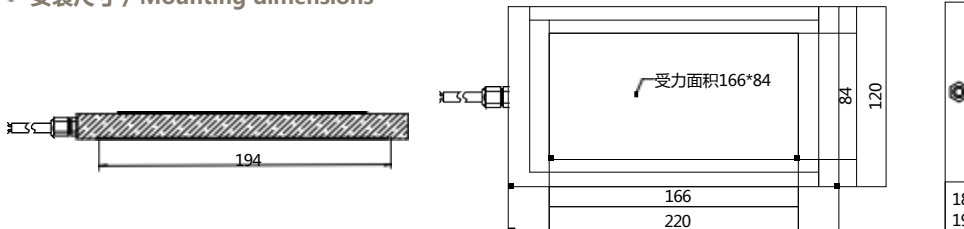


型号：KDEV-P-0A5

产品特点 / Product characteristics

- 超大受力面积，用于有这方面特殊要求的应用场合，化成机压力传感器的效正等。
- Large Force area, for the application of special requirements in this area, the effect of the pressure sensor into the machine, etc.

• 安装尺寸 / Mounting dimensions

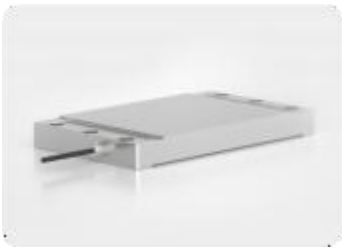


• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	1/2/4/5 T	灵敏度温度影响 (Sensitivity temperature effect)	±0.5%F.S/10°C
综合误差 (Composite Error)	≤±0.1%	零点温度影响 (Zero temperature effect)	±0.5%F.S/10°C
非线性 (Non-linear)	0.1%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	2.0±10%mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.5%F.S/30min	激励电压 (Excitation voltage)	3~10V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	120%F.S
输入阻抗 (Input impedance)	402±10Ω	极限过载范围 (Limit Overload Range)	150%F.S
输出阻抗 (Output impedance)	350±3Ω	电缆线规格 (Cable specifications)	Φ5mm×3m
绝缘电阻 (Insulation Resistance)	≥3000MΩ/100V DC	防护等级 (Protection level)	Ip66

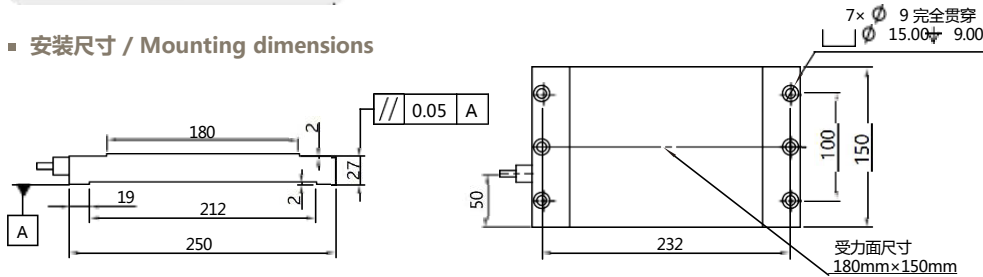


型号：KDEV-P-0B2

产品特点 / Product characteristics

- 受力面积大，精度高，长期稳定性好。用于有这方面特殊要求的应用场合，如电池压装等领域。
- Large stress area, high precision, good long-term stability. It is used for applications with special requirements in this field, such as battery pressing.

■ 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	2/5 T		
综合误差 (Composite Error)	±1%F.S	灵敏度温度影响 (Sensitivity temperature effect)	±0.2%F.S/10°C
灵敏度 (Sensitivity)	1.0±10%mV/V	零点温度影响 (Zero temperature effect)	±0.2%F.S/10°C
输入阻抗 (Input impedance)	350±10Ω	温度补偿范围 (Temperature compensation range)	-10~40°C
输出阻抗 (Output impedance)	350±10Ω	使用温度范围 (Operating temperature range)	-20~60°C
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	安全过载范围 (SAFE overload range)	120%F.S
材料 (Materials)	40rMo	极限过载范围 (Limit Overload Range)	150%F.S
电缆线规格 (Cable specifications)	Φ5mm×3m	推荐激励电压 (Recommended excitation voltage)	5~10V
防护等级 (Protection level)	Ip66	最大激励电压 (Maximum excitation voltage)	12V

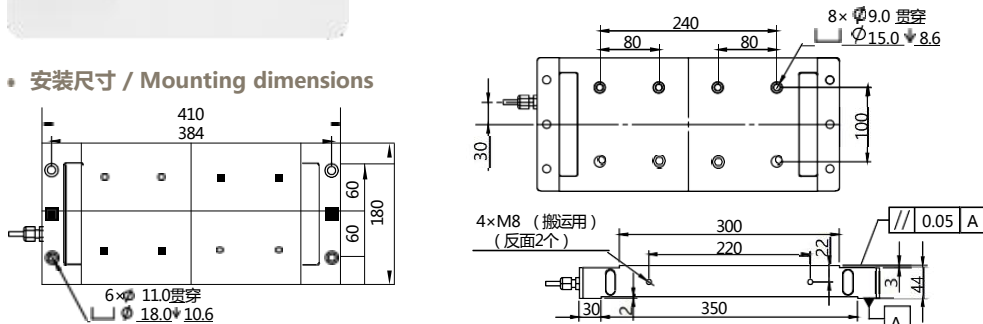


型号：KDEV-P-0B4

产品特点 / Product characteristics

- 平板式压力传感器，受力面积大，结构高度低，可测量电池压装等力值。
- Flat plate pressure sensor, large stress area, low structure height, can measure the battery pressure.

■ 安装尺寸 / Mounting dimensions

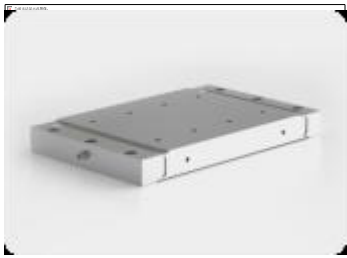


• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	10/20/30 T		
综合误差 (Composite Error)	±0.3%F.S	灵敏度温度影响 (Sensitivity temperature effect)	±0.2%F.S/10°C
灵敏度 (Sensitivity)	1.8±10%mV/V	零点温度影响 (Zero temperature effect)	±0.2%F.S/10°C
输入阻抗 (Input impedance)	350±10Ω	温度补偿范围 (Temperature compensation range)	-10~40°C
输出阻抗 (Output impedance)	350±10Ω	使用温度范围 (Operating temperature range)	-20~60°C
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	安全过载范围 (SAFE overload range)	120%F.S
材料 (Materials)	40Cr	极限过载范围 (Limit Overload Range)	150%F.S
电缆线规格 (Cable specifications)	Φ5mm×3m	推荐激励电压 (Recommended excitation voltage)	5~10V
防护等级 (Protection level)	Ip66	最大激励电压 (Maximum excitation voltage)	12V

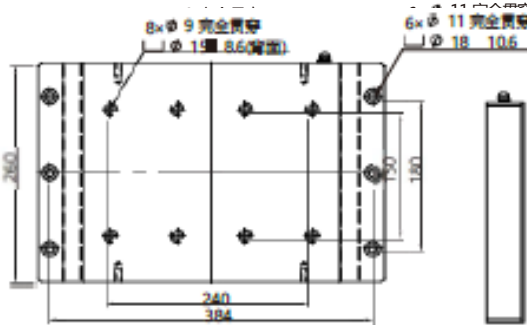
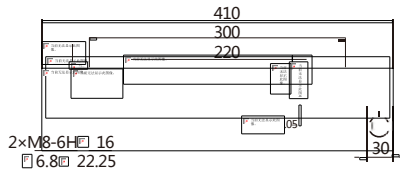


型号：KDEV-P025

产品特点 / Product characteristics

- 拥有大范围的受力面积，广泛应用于电池设备测力，新能源项目及各种工程装置的测力系统。
- Has a large range of force area, widely used in battery equipment, new energy projects and a variety of engineering devices of the force measurement system.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	10/20/30 T		
综合误差 (Composite Error)	±0.3%F.S	灵敏度温度影响 (Sensitivity temperature effect)	±0.2%F.S/10°C
灵敏度 (Sensitivity)	1.0/1.5±10% mV/V	零点温度影响 (Zero temperature effect)	±0.2%F.S/10°C
输入阻抗 (Input impedance)	/	温度补偿范围 (Temperature compensation range)	-10~40°C
输出阻抗 (Output impedance)	/	使用温度范围 (Operating temperature range)	-20~60°C
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	安全过载范围 (SAFE overload range)	150%F.S
材料 (Materials)	42Cr Mo	极限过载范围 (Limit Overload Range)	200%F.S
电缆线规格 (Cable specifications)	Φ5mm×3m	推荐激励电压 (Recommended excitation voltage)	5~10V
防护等级 (Protection level)	Ip66	最大激励电压 (Maximum excitation voltage)	12V

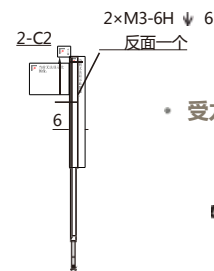
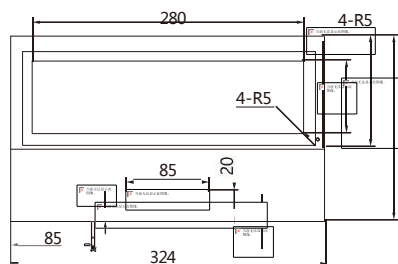
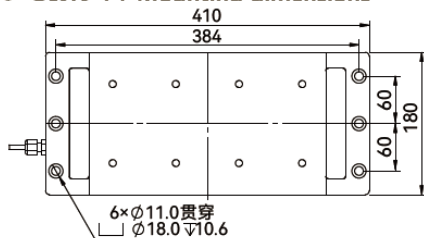


型号：KDEV-P030

产品特点 / Product characteristics

- 产品受力面积大，性能稳定可靠，1.6cm超薄外形结构，主要应用于锂电池化成、冷压点检。
- The product has large stress area, stable and reliable performance, 1.6 cm ultra-thin outline structure, and is mainly used in lithium battery forming, cold pressure spot inspection.

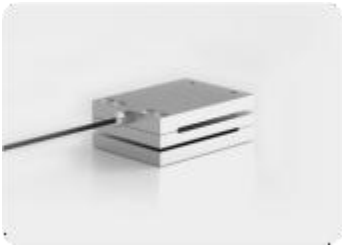
• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode

技术参数 / Technical parameters

量程 (Measuring range)	1.5T		
综合误差 (Composite Error)	±0.25%F.S	灵敏度温度影响 (Sensitivity temperature effect)	±0.2%F.S/10°C
灵敏度 (Sensitivity)	2.0±10% mV/V	零点温度影响 (Zero temperature effect)	±0.2%F.S/10°C
输入电阻 (Input Resistance)	350±10Ω	温度补偿范围 (Temperature compensation range)	-10~40°C
输出电阻 (Output resistance)	350±10Ω	使用温度范围 (Operating temperature range)	-20~60°C
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	安全过载范围 (SAFE overload range)	120%F.S
材料 (Materials)	不锈钢	极限过载范围 (Limit Overload Range)	150%F.S
电缆线规格 (Cable specifications)	Φ3mm×3m	推荐激励电压 (Recommended excitation voltage)	5~10V
防护等级 (Protection level)	Ip66	最大激励电压 (Maximum excitation voltage)	12V

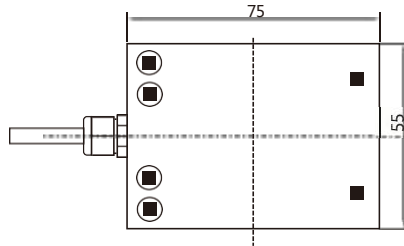
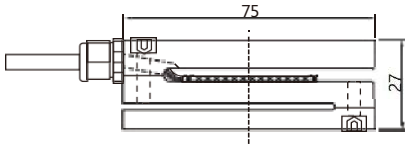


型号：KDEV-P-A40

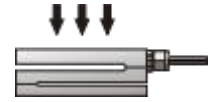
产品特点 / Product characteristics

- 测量精度高，稳定性好，输出对称性好，广泛应用于电池生产、自动化设备测试领域。
- High precision, good stability and output symmetry are widely used in battery production and automatic equipment testing.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	20/50/100/200 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	±0.1%F.S.	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.1%F.S.	温度补偿范围 (Temperature compensation range)	-10~40°C
输出灵敏度 (Output sensitivity)	2.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~60°C
滞后 (Lag behind)	0.05%F.S.	推荐激励电压 (Recommended excitation voltage)	5~10V
使用寿命 (Service life)	100万次以上	最大激励电压 (Maximum excitation voltage)	12V
材料 (Materials)	铝合金	安全过载范围 (SAFE overload range)	120%F.S.
电缆线规格 (Cable specifications)	Φ3mm×3m	极限过载范围 (Limit Overload Range)	150%F.S.
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

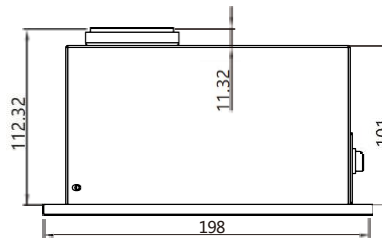
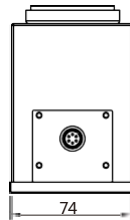
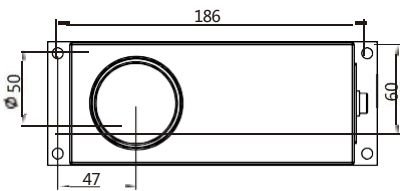


型号：KDEV-P-9A0

产品特点 / Product characteristics

- **KDEV-P-9A0** **KDEV-P-9A1**是磁悬浮原理制造的高精度称重模块，精度可达0.0001克，读数稳定速度快至2秒；结合本公司技术工程开发的软件，还可对客户的使用环境（如：震动，磁场，风量等）进行优化。
- **KDEV-P-9A0** and **KDEV-P-9A1** are high-precision weighing modules manufactured on the principle of magnetic levitation. The precision can reach 0.0001 grams, and the steady speed of reading is up to 2 seconds, can also be used on the customer's environment (such as: vibration, magnetic field, wind, etc.) to optimize.

• 安装尺寸 / Mounting dimensions



注:该传感器有多种尺寸，具体请联系本公司了解或定制。

技术参数 / Technical parameters

量程 (Measuring range)	10/50/100/200/500/1000 g	测量时间 (Measuring time)	2s
读数精度 (Reading accuracy)	0.01/0.001g	数据输出速率 (Data output rate)	15Hz
重复性 (Repeatability)	≤±0.02/0.002g	传感器与变送器线缆 (Sensor and transmitter cable)	0.1m
线性 (Linearity)	≤±0.03/0.003g	工作温度范围 (Operating temperature range)	+5~+40°C
温漂系数 (Coefficient of thermal drift)	5×10 ⁻⁶ /K	推荐电压 (Recommended voltage)	+5VDC
响应时间 (Response time)	0.1s (优于加载重量的0.1%)	功率 (Power)	约1.5W



Tension sensor

张力传感器

张力传感器是张力控制过程中，用于测量卷材张力值大小的仪器，根据其外型结构上又分为：轴台式、穿轴式、悬臂式等，适用于各种光纤、纱线、化纤、金属丝、电线、电缆等场所。满足各类需要进行张力测量的行业：木材生产、建筑材料、薄膜分切、真空镀膜、涂布机、吹膜机、轮胎成型机、钢丝帘布裁断机、纵剪生产线、铝箔涂布生产线、合卷生产线、彩涂板生产线、光纤设备、石膏板生产线、帘布帆布浸胶机、地毯生产线、电池叠片机、锂电分条机、锂电轧模机等行业。

Tension sensor is used to measure the tension value of coiled material in the process of tension control. According to its conll guration, it can be divided into three types: axle -table type, through- axle type, cantilever type, etc . , suitable for all kinds of optical llber, yarn, chemical llber, metal wire, wire, cable and other places. To meet the needs of various industries tension measurement: wood production, construction materials, llm cutting, vacuum coating, coater, llm blowing machine, tire molding machine, steel cord cutting machine, slitting production line, aluminum foil coating production line, coiling production line, color coated plate production line, optical llber equipment , plasterboard production line, cord canvas impregnation machine, carpet production line, battelj stacking machine, lithium electric slitting machine, lithium electric rolling die machine and other industries.

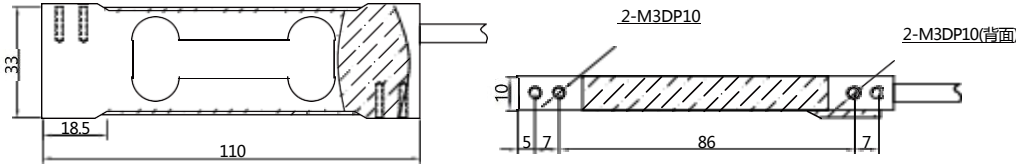


型号 : KDEV-Z-30

产品特点 / Product characteristics

- 测量精度优于0.02%,天平级,长期稳定性好,重复性高,体积小,安装空间小。广泛应用于商业,民用等高精度称重仪表,商用天平,中小空间的高精度测力工业自动化设备。
- The measurement accuracy is better than 0.02%, balance level, good long-term stability, high repeatability, small size, small installation space. Widely used in commercial, civil and other high-precision weighing instruments, commercial scales, small and medium-sized space of high-precision force measurement industrial automation equipment.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0.3/0.6/1/2/3/5/10 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.025%F.S/10°C
综合误差 (Composite Error)	≤±0.02%	零点温度影响 (Zero temperature effect)	±0.025%F.S/10°C
非线性 (Non-linear)	0.02%	温度补偿范围 (Temperature compensation range)	-10~40°C
灵敏度 (Sensitivity)	1.0/2.0±0.15mV/V	使用温度范围 (Operating temperature range)	-20~60°C
蠕变 (Creep)	±0.03%F.S/30min	激励电压 (Excitation voltage)	5~125V
零点输出 (Zero output)	±1.0% F.S	安全过载范围 (SAFE overload range)	120%F.S
输入阻抗 (Input impedance)	400±10Ω	极限过载范围 (Limit Overload Range)	150%F.S
输出阻抗 (Output impedance)	350±10Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip65

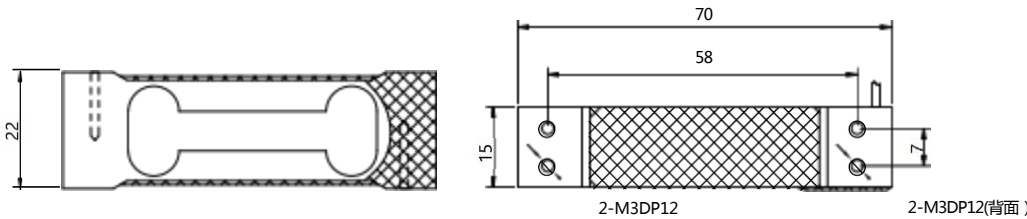


型号 : KDEV-Z-3A

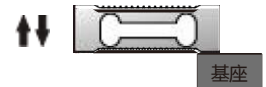
产品特点 / Product characteristics

- 测量精度优于±0.02%,长期稳定性好,重复一致性高,体积小便于小空间安装。广泛应用于商业,民用等高精度称重仪器,及工业自动化中小空间高精度测力,称重设备。
- The measuring precision is better than ±0.02%, the long-term stability is good, the repetition consistency is high, the volume is small and the small space installation is convenient. Widely used in commercial, civil and other high-precision weighing instruments, and industrial automation in small space high-precision force measurement, weighing equipment.

安装尺寸 / Mounting dimensions

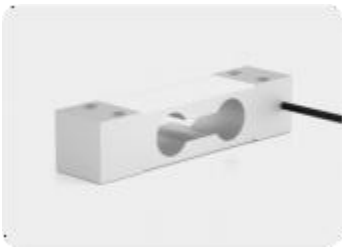


受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0.3/0.5/1/2/3/5/10/15/20 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.025%F.S/10°C
综合误差 (Composite Error)	≤±0.02%	零点温度影响 (Zero temperature effect)	±0.025%F.S/10°C
非线性 (Non-linear)	0.02%	温度补偿范围 (Temperature compensation range)	-10~40°C
灵敏度 (Sensitivity)	1.0/2.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~60°C
蠕变 (Creep)	±0.03%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±1.0% F.S	安全过载范围 (SAFE overload range)	120%F.S
输入阻抗 (Input impedance)	410±10Ω	极限过载范围 (Limit Overload Range)	150%F.S
输出阻抗 (Output impedance)	350±10Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip65

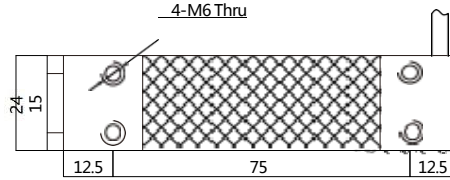
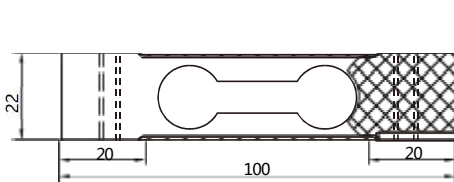


型号 : KDEV-Z-3B

产品特点 / Product characteristics

- 防尘密封、量程范围广、精度高、稳定可靠结构强度高、安装使用方便。适用于各种测力称重工业自动化测量控制系统。
- Dust-proof seal, wide range, high precision, stable and reliable structure, high strength, easy to install and use. It is suitable for all kinds of automatic measurement and control system of force measurement and weighing industry.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	3/6/ 10/ 15/20/30/40 kg	输出温度影响 (Output temperature effect)	±0.03% F.S./ 10°C
额定输出 (Rated output)	2.0±10% mV/V	零点温度影响 (Zero temperature effect)	±0.05% F.S./ 10°C
零点输出 (Zero output)	±5% R.O.	激励电压 (Excitation voltage)	5~ 12VDC
30分钟蠕变 (30-minute creep)	±0.03% R.O.	最大激励电压 (Maximum excitation voltage)	18VDC
非线性 (Non-linear)	±0.02% R.O.	温度补偿范围 (Temperature compensation range)	- 10~+40°C
滞后 (Lag behind)	±0.015% R.O.	工作温度范围 (Operating temperature range)	-20~+60°C
重复性 (Repeatability)	±0.015% R.O.	安全过载 (SAFE overload)	150% F.S
输入电阻 (Input Resistance)	1130±20Ω	极限过载 (Ultimate overload)	200% F.S
输出电阻 (Output Resistance)	1000±10Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation resistance)	≥2000MΩ/50V DC	防护等级 (Protection level)	Ip65

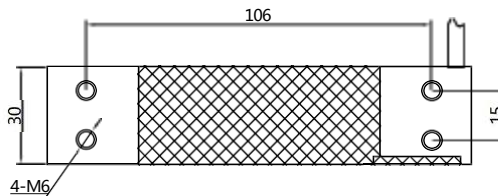
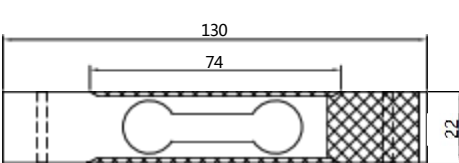


型号 : KDEV-Z-4

产品特点 / Product characteristics

- 本产品采用铝合金材质制造，胶密封处理，防护等级达到IP65，表面无色阳极氧化处理，防腐蚀，易于安装和使用。该产品适用于高精度的小量程测力设备。
- The product is made of aluminum alloy material, adhesive seal treatment, protection level to IP65, the surface of colorless anodic oxidation treatment, anti-corrosion, easy to install and use. The product is suitable for high-precision small-range force measuring equipment.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	3/ 5/ 10/ 15/20/30/40/ 50 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.025% F.S./ 10°C
综合误差 (Composite Error)	≤±0.02%	零点温度影响 (Zero temperature effect)	±0.025% F.S./ 10°C
非线性 (Non-linear)	0.02%	温度补偿范围 (Temperature compensation range)	- 10~40°C
灵敏度 (Sensitivity)	2.0±0.2% mV/V	使用温度范围 (Operating temperature range)	-20~60°C
蠕变 (Creep)	±0.03% F.S./30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±20% F.S	安全过载范围 (SAFE overload range)	120% F.S
输入阻抗 (Input impedance)	410±10Ω	极限过载范围 (Limit Overload Range)	150% F.S
输出阻抗 (Output impedance)	350±10Ω	电缆线规格 (Cable specifications)	Φ4mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip65

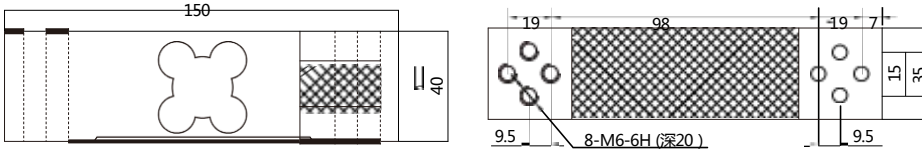


型号 : KDEV-Z-50

产品特点 / Product characteristics

- **KDEV-Z-50** 是一款高精度箱式结构单点称重测力传感器，精度高，安装方便常用于电子台秤，力学试验机，电子称重平台，料罐反应称量系统等是台秤应用最多的传感器结构。在抗偏载的测试中应用广泛。
- **KDEV-Z-50** is a high precision box structure single point load cell, high precision, easy to install commonly used in electronic platform scales, mechanical testing machines, electronic weighing platform, tank reactor weighing system is the most widely used platform scale sensor structure. It is widely used in the test of anti- eccentric load.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	50/100/200/300/500 kg	供电电压 (Supply Voltage)	5~12VDC
输出灵敏度 (Output sensitivity)	2.0±0.2mV/V	温度对零点影响 (Temperature affects the zero point)	±0.025%F.S/10°C
零点输出 (Zero output)	±0.2%F.S	温度对灵敏度影响 (Temperature effect on sensitivity)	±0.025%F.S/10°C
30分钟蠕变 (30-minute creep)	±0.03% F.S	材料 (Materials)	铝合金
非线性 (Non-linear)	±0.02% F.S	封装方式 (Package mode)	胶封
滞后 (Lag behind)	±0.02% F.S	额定温度范围 (Rated temperature range)	-10~40°C
重复性 (Repeatability)	±0.02% F.S	使用温度范围 (Temperature range for use)	-10~60°C
输入电阻 (Input Resistance)	410±10Ω	安全过载 (SAFE overload)	120%F.S
输出电阻 (Output Resistance)	350±10Ω	极限过载 (Ultimate overload)	150%F.S
绝缘电阻 (Insulation resistance)	≥5000MΩ/50V DC	防护等级 (Protection level)	Ip65
电缆线规格 (Cable specifications)	Φ5mm×3m	外形尺寸 (长×宽×高) (Dimensions (length x width x height))	150×40×35 mm

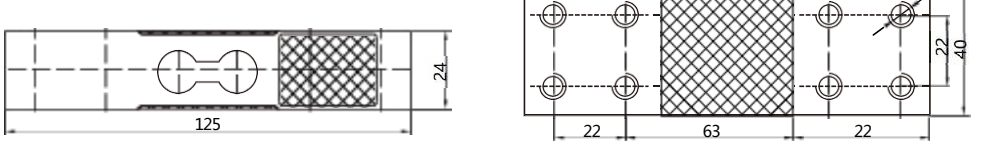


型号 : KDEV-Z-5A

产品特点 / Product characteristics

- 广泛应用商业、民用等高精度称重仪器，及工业自动化中小空间高精度测力、称重设备。测量精度优于±0.02%，长期稳定性好，重复一致性高。
- Widely used commercial, civil and other high-precision weighing instruments, and industrial automation in small and medium-sized space high-precision force measurement, weighing equipment. The measurement accuracy is better than ± 0.02%, the long-term stability is good, the repetition consistency is high.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	20/30/50/100/200/300 kg	供电电压 (Supply Voltage)	5~12VDC
输出灵敏度 (Output sensitivity)	2.0±0.2mV/V	温度对零点影响 (Temperature affects the zero point)	±0.025%F.S/10°C
零点输出 (Zero output)	±0.2%F.S	温度对灵敏度影响 (Temperature effect on sensitivity)	±0.025%F.S/10°C
30分钟蠕变 (30-minute creep)	±0.03% F.S	材料 (Materials)	铝合金
非线性 (Non-linear)	±0.02% F.S	封装方式 (Package mode)	胶封
滞后 (Lag behind)	±0.02% F.S	额定温度范围 (Rated temperature range)	-10~40°C
重复性 (Repeatability)	±0.02% F.S	使用温度范围 (Temperature range for use)	-10~60°C
输入电阻 (Input Resistance)	410±10Ω	安全过载 (SAFE overload)	120%F.S
输出电阻 (Output Resistance)	350±10Ω	极限过载 (Ultimate overload)	150%F.S
绝缘电阻 (Insulation resistance)	≥5000MΩ/50V DC	防护等级 (Protection level)	Ip65
电缆线规格 (Cable specifications)	Φ5mm×3m	外形尺寸 (长×宽×高) (Dimensions (length x width x height))	125×40×24 mm

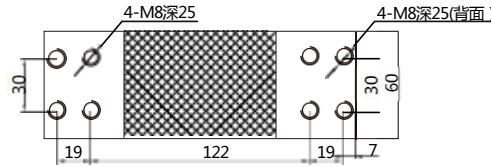
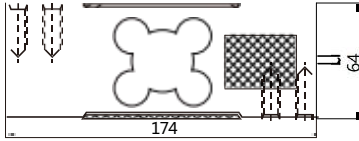


型号 : KDEV-Z-5C

产品特点 / Product characteristics

- 防尘密封、量程范围广、精度高、稳定可靠。结构强度高、安装使用方便等特点。安装使用方便，适用于电子配料系统、包装秤、配料仓料仓秤等各种称重的工业自动化测量控制系统。
- Dust-proof seal, wide range, high precision, stable and reliable. High structural strength, easy installation and use. Easy to install and use, suitable for electronic batching system, packaging scale, batching bin bin scale and other weighing of industrial automation measurement and control system.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	100/200/300/500/750/1000 kg	供电电压 (Supply Voltage)	5~ 12VDC
输出灵敏度 (Output sensitivity)	2.0±0.2mV/V	温度对零点影响 (Temperature affects the zero point)	±0.025%F.S/10°C
零点输出 (Zero output)	±0.2%F.S	温度对灵敏度影响 (Temperature effect on sensitivity)	±0.025%F.S/10°C
30分钟蠕变 (30-minute creep)	±0.03% F.S	材料 (Materials)	铝合金
非线性 (Non-linear)	±0.02% F.S	封装方式 (Package mode)	胶封
滞后 (Lag behind)	±0.02% F.S	额定温度范围 (Rated temperature range)	- 10~40°C
重复性 (Repeatability)	±0.02% F.S	使用温度范围 (Temperature range for use)	- 10~60°C
输入电阻 (Input Resistance)	410±10Ω	安全过载 (SAFE overload)	120%F.S
输出电阻 (Output Resistance)	350±10Ω	极限过载 (Ultimate overload)	150%F.S
绝缘电阻 (Insulation resistance)	≥5000MΩ/50V DC	防护等级 (Protection level)	Ip65
电缆线规格 (Cable specifications)	Φ5mm×3m	外形尺寸 (长×宽×高) (Dimensions (length x width x height))	174×60×64 mm

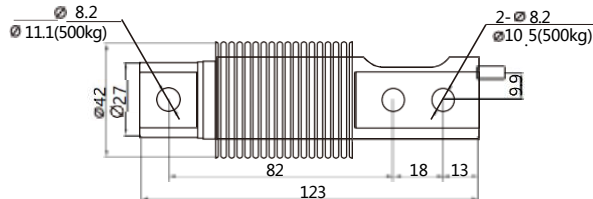
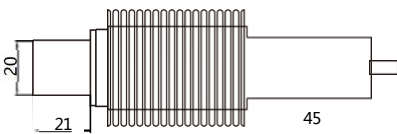


型号 : KDEV-Z-60

产品特点 / Product characteristics

- 精度高，安装方便，常用于电子平台秤，力学试验机，电子称重平台，料罐反应釜称重系统等。是平台秤应用最多的传感器结构。适用于环境比较恶劣的高精度称重测力场。
- High precision, easy installation, commonly used in electronic platform scale, mechanical testing machine, electronic weighing platform, tank reactor weighing system. Platform scale is the most widely used sensor structure. It is suitable for measuring force field of high precision weighing in bad environment.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	10/20/50/100/200/500 kg	绝缘电阻 (Insulation resistance)	≥5000MΩ/100V DC
输出灵敏度 (Output sensitivity)	2.0±0.05mV/V	温度灵敏度漂移 (Temperature sensitivity drift)	±0.008%F.S/10°C
零点输出 (Zero output)	±0.02%F.S	零点温度漂移 (Temperature compensation range)	±0.0125%F.S/10°C
蠕变 (Creep)	≤0.0166%F.S	激励电压 (Excitation voltage)	5~15V
非线性 (Non-linear)	≤0.018%F.S	最大激励电压 (Maximum excitation voltage)	20V
滞后 (Lag behind)	≤0.017%F.S	温度补偿范围 (Temperature compensation range)	- 10~40°C
重复性 (Repeatability)	≤0.018%F.S	工作温度范围 (Operating temperature range)	-30~70°C
输入电阻 (Input Resistance)	390±5Ω	安全过载 (SAFE overload)	150%F.S
输出电阻 (Output Resistance)	350±5Ω	极限过载 (Ultimate overload)	200%F.S
产品材料 (Product material)	0.5kg	材料 (Materials)	不锈钢
电缆线规格 (Cable specifications)	Φ5mm×3m		

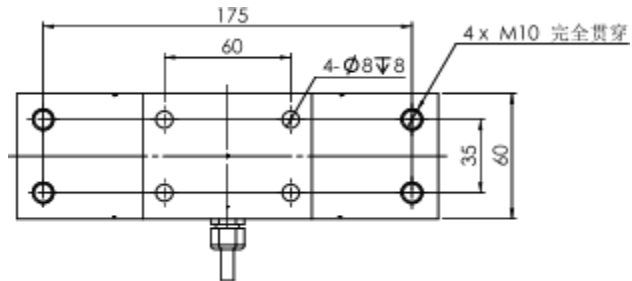
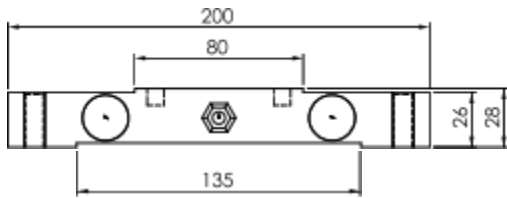


型号：KDEV-Z-70A

产品特点 / Product characteristics

- 采用高精度电阻应变式原理，悬臂型结构设计，压式承载，安装使用方便灵活，高精度高稳定性。合金钢材料，体积小巧，外型美观，动态响应频率高。
- Adopt high precision resistance strain type principle, cantilever type structure design, pressure bearing, easy to install and use, high precision and high stability. Alloy steel material, compact size, beautiful appearance, high dynamic response frequency.

安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

量程 (Measuring range)	1/2/5/10/20 T	灵敏度温度影响 (Sensitivity temperature effect)	±0.1%F.S/10°C
综合误差 (Composite Error)	±0.15%F.S.	零点温度影响 (Zero temperature effect)	±0.1%F.S/10°C
非线性 (Non-linear)	0.15%F.S.	温度补偿范围 (Temperature compensation range)	-10~40°C
输出灵敏度 (Output sensitivity)	1.6±0.01mV/V	使用温度范围 (Operating temperature range)	-20~60°C
滞后 (Lag behind)	0.15%F.S.	推荐激励电压 (Recommended excitation voltage)	5~10V
使用寿命 (Service life)	100万次以上	最大激励电压 (Maximum excitation voltage)	15V
材料 (Materials)	合金钢	安全过载范围 (SAFE overload range)	150%F.S
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	极限过载范围 (Limit Overload Range)	200%F.S
电缆线规格 (Cable specifications)	Φ5mm×3m	防护等级 (Protection level)	Ip66



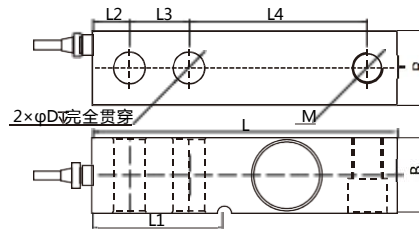
型号：KDEV-Z-7F

产品特点 / Product characteristics

- 广泛应用于电子台秤、汽车衡、地磅秤、皮带秤等各种称重测力设备。测量精度优于±0.03%，长期稳定性好，重复性、可靠性高，采用合金钢材质。
- Widely used in electronic platform scales, car scales, scales, belt scales and other weighing equipment. The measuring precision is better than ±0.03%, the long-term stability is good, the repeatability is high, the reliability is high, the alloy steel material is used.

安装尺寸 / Mounting dimensions

量程 (T)	L	L1	L2	L3	L4	φD	B	M
0.5-2	130	56.5	15.8	25.4	76.2	13.5	31.8	M16×2
2.5-5	171.5	77.2	19.1	38.1	95.3	20	38.1	M20×2.5
10	222.3	101.6	25.4	50.8	120.7	26.2	50.8	M24×2



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0.5/1/2/3/5/10 T	供电电压 (Supply Voltage)	5~12VDC
输出灵敏度 (Output sensitivity)	2.0±0.003mV/V	温度对零点影响 (Temperature affects the zero point)	±0.025%F.S/10°C
零点输出 (Zero output)	±0.2%F.S	温度对灵敏度影响 (Temperature effect on sensitivity)	±0.025%F.S/10°C
30分钟蠕变 (30-minute creep)	±0.03% F.S	材料 (Materials)	合金钢
非线性 (Non-linear)	±0.03% F.S	封装方式 (Package mode)	胶封/激光焊接
滞后 (Lag behind)	±0.03% F.S	额定温度范围 (Rated temperature range)	-10~40°C
重复性 (Repeatability)	±0.03% F.S	使用温度范围 (Temperature range for use)	-10~60°C
输入电阻 (Input Resistance)	350±5Ω	安全过载 (SAFE overload)	120%F.S
输出电阻 (Output Resistance)	350±3Ω	极限过载 (Ultimate overload)	150%F.S
绝缘电阻 (Insulation resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	IP67/IP68
电缆线规格 (Cable specifications)	Φ5mm×3m	外形尺寸 (长×宽×高) (Dimensions (length x width x height))	详细尺寸见附件图纸

型号:KDEV-Z- 8E(钢) /KDEV-Z-8F(铝)

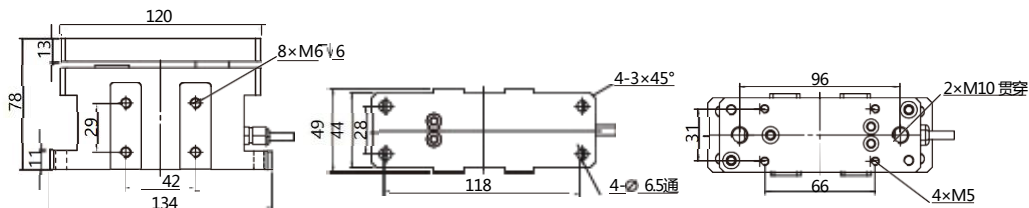


(钢)



(铝)

• 安装尺寸 / Mounting dimensions



注：受力计算在P42页

不锈钢 铝合金

KDEV-Z-8E

KDEV-Z-8F

技术参数 / Technical parameters

量程 (Measuring range)	5/10/20/30/50/100/200/500 kg	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	±0.1%F.S.	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.1%F.S.	温度补偿范围 (Temperature compensation range)	-10~40°C
输出信号 (Output signal)	1.0±1% ^m V/V, RS485/RS232, 4-20mA, 0~5V 0~10V 可选	使用温度范围 (Operating temperature range)	-20~60°C
滞后 (Lag behind)	0.05%F.S	推荐激励电压 (Recommended excitation voltage)	5~10V
使用寿命 (Service life)	100万次以上	最大激励电压 (Maximum excitation voltage)	12V
材料 (Materials)	合金钢/不锈钢/铝合金	安全过载范围 (SAFE overload range)	120%F.S
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	极限过载范围 (Limit Overload Range)	150%F.S
电缆线规格 (Cable specifications)	Φ5mm×3m	防护等级 (Protection level)	Ip66

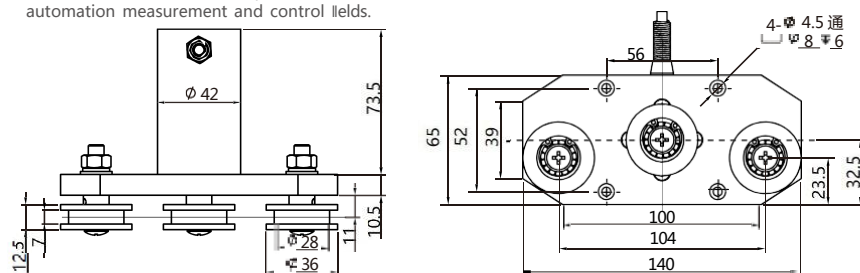


• 安装尺寸 / Mounting dimensions

型号 : KDEV-Z-8H

产品特点 / Product characteristics

- 结构结实，使用寿命长，安装简单，性能稳定。适用于各种光纤、纱线、化纤、金属、电线、电缆、胶带、钢带的张力测量，广泛应用于电子、化工、纺织、造纸、机械及工业自动化测控领域。 The utility model has the advantages of strong structure, long service life, simple installation and stable performance. Applicable to all kinds of optical fiber, yarn, chemical fiber, metal, wire, cable, tape, steel belt tension measurement, widely used in electronic, chemical, textile, paper, machine and industrial automation measurement and control fields.



注：受力计算在P42页

技术参数 / Technical parameters

量程 (Measuring range)	0.5/1/2/5/10/20/50/100 kg	输入阻抗 (Input impedance)	350±50Ω
材质 (Material)	钢和铝合金	输出阻抗 (Output impedance)	350±10Ω
输出灵敏度 (Output sensitivity)	1.5-2.0mV/V	绝缘阻抗 (Insulation impedance)	≥2000MΩ/50VDC
零点 (Zero)	±0.04mV/V	工作温度 (Operating temperature)	-20~+60°C
非线性 (Nonlinear)	0.03%F.S.	安全过载 (Safety overload)	150%F.S
滞后 (Lag)	0.03%F.S.	极限过载 (Extreme overload)	200%F.S
重复性 (Repeatability)	0.03%F.S.	使用电压 (Use voltage)	5-10V
蠕变 (Creep)	0.03%F.S.	最大电压 (Maximum voltage)	15V
灵敏度漂移 (Sensitivity drift)	0.03%F.S./10°C	电缆线规格 (Cable specifications)	Φ5mm×2m
零点温度漂移 (Zero temperature drift)	0.03%F.S./10°C	防护等级 (Protection level)	Ip65

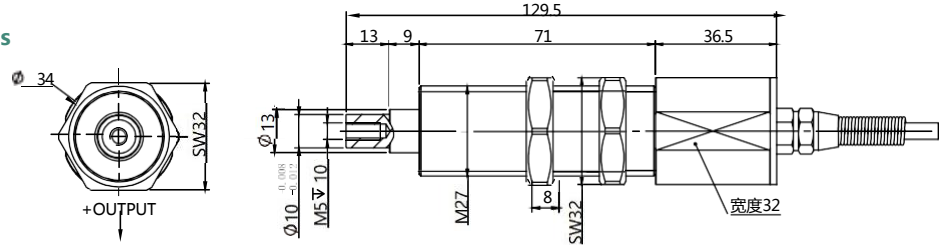


型号 : KDEV-Z-89

产品特点 / Product characteristics

- 安装简单方便，测量精度高，低张力的情况也能准确测量。内置新型机械式10倍防过载保护结构，温度漂移小，具有良好的线性误差和重复性误差。外形尺寸小，安装所需空间小。
- Easy to install, high accuracy, low tension can also accurately measure the situation. Built-in new mechanical 10 times anti-overload protection structure, small temperature drift, with good linear error and repeatability error. Small size, small installation space.

• 安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

量程 (Measuring range)	20 kg	温度灵敏度漂移 (Temperature sensitivity drift)	$\pm 0.05\%$ F.S. / 10°C
输出灵敏度 (Output sensitivity)	$1.5 \pm 0.2\text{mV/V}$	零点温度漂移 (Zero temperature drift)	$\pm 0.05\%$ F.S. / 10°C
零点输出 (Zero output)	$\pm 0.04\text{mV/V}$	使用电压 (Use voltage)	5 ~ 10V
非线性 (Nonlinear)	0.05% F.S.	最大电压 (Maximum voltage)	15V
滞后 (Lag)	0.05% F.S.	工作温度范围 (Operating temperature range)	$-20 \sim +60^\circ\text{C}$
重复性 (Repeatability)	0.05% F.S.	安全过载 (Safety overload)	120%
蠕变 (10分钟) (Creep (10 min))	0.05% F.S.	极限过载 (Extreme overload)	150%
输入阻抗 (Input impedance)	$350 \pm 50\Omega$	电缆线规格 (Cable specifications)	$\phi 5\text{mm} \times 3\text{m}$
输出阻抗 (Output impedance)	$300 \pm 10\Omega$	材质 (Material)	不锈钢
绝缘电阻 (Insulation Resistance)	$\geq 2000\text{M}\Omega/50\text{VDC}$	防护等级 (Protection level)	Ip65

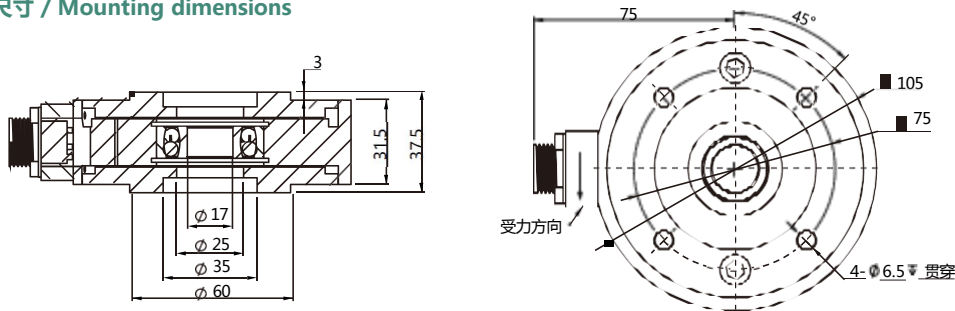


型号 : KDEV-Z-90

产品特点 / Product characteristics

- KDEV-Z-90系列穿轴张力传感器是一种非常精确的测量卷筒纸张张力的传感器，采用电阻应变式原理，具有信号准确且稳定，结构紧凑，受力形变小等特点。
- KDEV-Z-90 series through-shaft tension sensor is a kind of veLj accurate sensor for measuring web tension. It adopts the principle of resistance strain type and has the characteristics of accurate and stable signal, compact structure and small deformation.

• 安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

量程 (Measuring range)	5/10/15/25/50/75/100/150/300 kg	工作温度范围 (Operating temperature range)	$-20 \sim 80^\circ\text{C}$
输出信号 (Output signal)	$1.5 \pm 0.2\text{mV/V}$	补偿温度范围 (Compensation temperature range)	$-10 \sim 40^\circ\text{C}$
非线性 (Non-linear)	$\leq \pm 0.3\%$	零点温度漂移 (Zero temperature drift)	0.02% F.S. / $^\circ\text{C}$
重复性 (Repeatability)	$\leq \pm 0.15\%$ F.S.	推荐激励电压 (Recommended excitation voltage)	5 ~ 10VDC
零点输出 (Zero output)	$\pm 2\%$ F.S.	极限过载 (Extreme overload)	1000% F.S.
绝缘电阻 (Insulation Resistance)	$\geq 2000\text{M}\Omega$	防护等级 (Protection level)	Ip65
电缆尺寸 (Cable size)	$\phi 6\text{mm} \times 3\text{m}$		

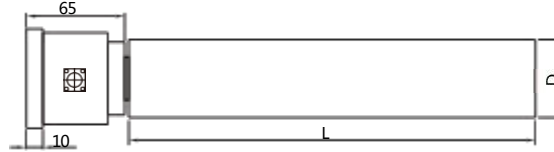
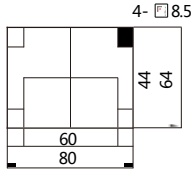


型号：KDEV-H9A

产品特点 / Product characteristics

- 结构紧凑、综合精度高、长期稳定性好。高硬度铝合金壳体，稳定输出，高灵敏应变测量元器件，适用精密级测量应用场合，良好的稳定可靠性，精度高，氧化外壳，工艺严苛。
- Compact structure, high comprehensive precision, good long-term stability. High-hardness aluminum alloy shell, stable output, high-sensitive strain measurement components, suitable for precision level measurement application platform, good stability and reliability, high accuracy, oxidation shell, strict process.

安装尺寸 / Mounting dimensions



D (托辊直径): 40-65mm
L (托辊长度): 50-400mm

技术参数 / Technical parameters

量程 (Measuring range)	2/5/7.5/10/20/30 kg	温度灵敏度漂移 (Temperature sensitivity drift)	±0.05%F.S/10°C
输出灵敏度 (Output sensitivity)	±0.1%F.S.	零点温度漂移 (Zero temperature drift)	±0.05%F.S/10°C
零点输出 (Zero output)	±0.1%F.S.	工作温度范围 (Operating temperature range)	-20~80°C
非线性 (Non-linear)	0.1%F.S.	使用电压 (Use voltage)	5~15V
滞后 (Lag behind)	0.1%F.S.	安全过载范围 (SAFE overload range)	150%F.S
重复性 (Repeatability)	0.1%F.S.	极限过载范围 (Limit Overload Range)	200%F.S
30分钟蠕变 (30-minute creep)	0.1%F.S.	电缆线极限拉力 (Ultimate tensile strength of cable)	10kg
阻抗 (Impedance)	350Ω	电缆线规格 (Cable specifications)	Φ5mm×3m
绝缘电阻 (Insulation resistance)	≥5000MΩ/100V DC	材质 (Material)	合金钢
响应频率 (Response Frequency)	10kHz	TEDS可选	



型号：KDEV-Z-9B

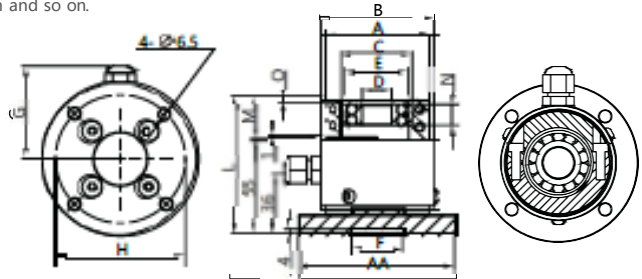
产品特点 / Product characteristics

- 可以精确地检测包裹角度拉动材料所产生的合力，设计外形轮廓很低，可以对机架内的空间要求降低到最小程度，采用电阻应变式原理，具有信号准确且稳定，结构紧凑，受力变形小等特点。
- It can accurately detect the resultant force produced by the wrapped angle pulling material, the design outline is very low, and the space requirement in the frame can be reduced to the minimum, compact structure, small deformation and so on.

安装尺寸 / Mounting dimensions

单位：mm

量程 (kg)	A	AA	B	C	D	E	F	G	H	L	M	N	O
5	58	88	64	40	17	36	30	52.9	75	78	22	12	3
15	58	88	64	40	17	36	30	52.9	75	78	22	12	3
25	58	88	64	40	17	36	30	52.9	75	78	22	12	3
50	58	88	64	40	17	36	30	52.9	75	78	22	12	3
75	80	120	88	52	25	46	45	65.2	104	82	26	15	4
100	80	120	88	52	25	46	45	65.2	104	82	26	15	4

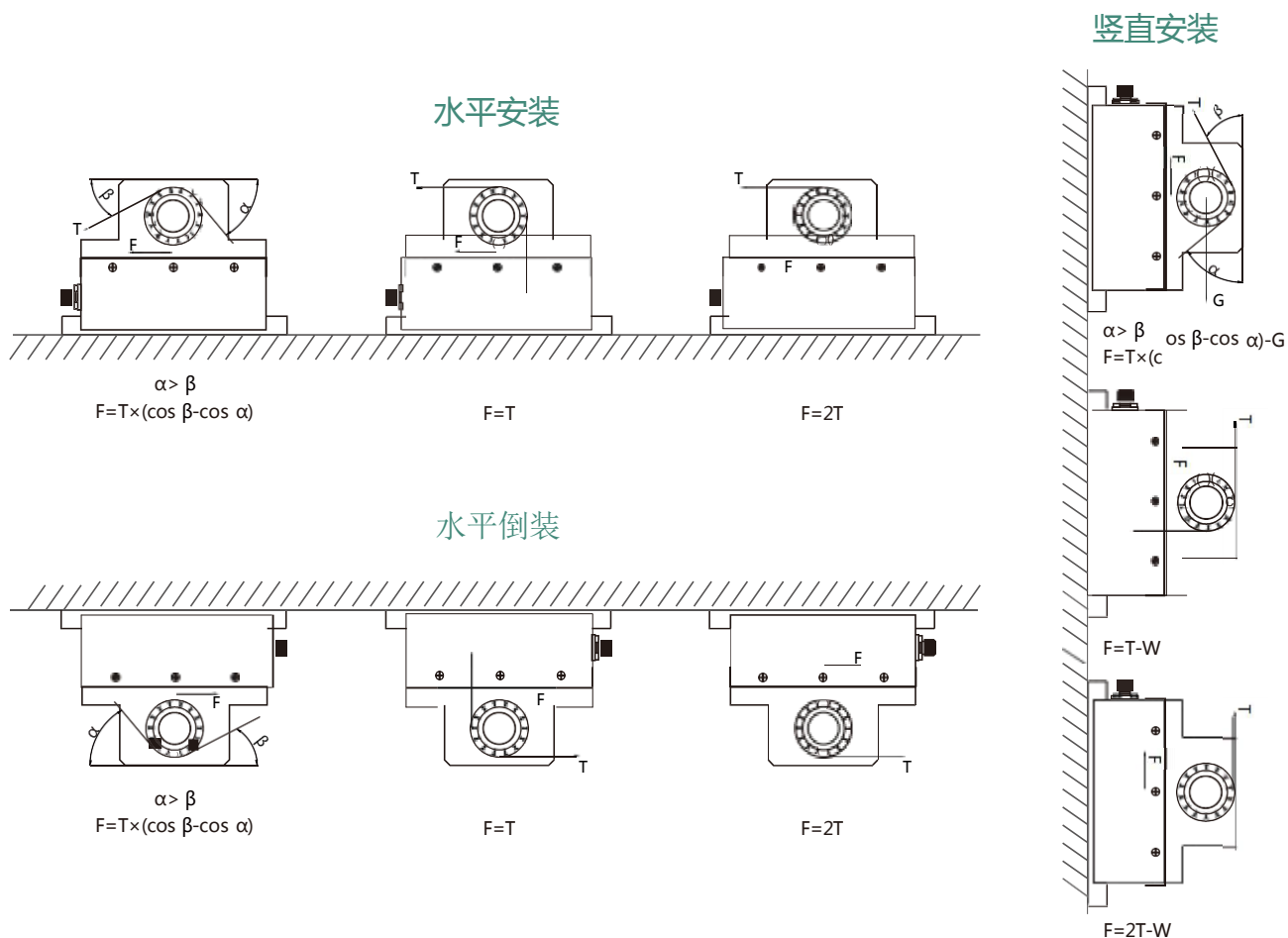


技术参数 / Technical parameters

量程 (Measuring range)	5/15/25/50/75/100 kg	绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC
输出灵敏度 (Output sensitivity)	2.0±10% mV/V	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
零点输出 (Zero output)	±0.03% mV/V	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	≤0.5%F.S.	工作温度范围 (Operating temperature range)	0~50°C
滞后 (Lag behind)	≤0.5%F.S.	激励电压 (Excitation voltage)	5~12V
重复性 (Repeatability)	≤0.25%F.S.	最大激励电压 (Maximum excitation voltage)	15V
蠕变 (Creep)	≤0.1%F.S.	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350±10Ω	极限过载范围 (Limit Overload Range)	500%F.S
输出阻抗 (Output impedance)	350±5Ω	电缆线规格 (Cable specifications)	Φ5mm×3m
接线方式 (Connection mode)	红：电源+，绿：信号+，黄：屏蔽线，白：信号-，黑：电源-		

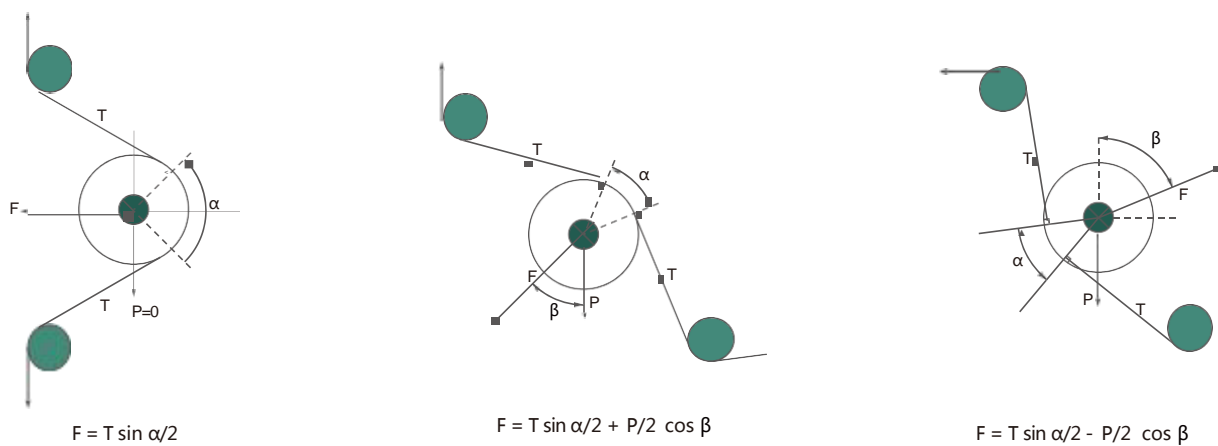
轴台式张力传感器

受力计算 / Force calculation



穿轴式张力传感器

受力计算 / Force calculation



*T-张力 α -包络夹角($30^\circ \leq \alpha \leq 180^\circ$)

F-传感器检测受力 P-滑轮自重 β -传感器检测受力方向和滑轮自重方向的夹角

Multi-dimensional force sensor

多维力传感器

多维力传感器广泛应用于机器人手指、手爪研究；机器人外科手术研究；指力研究；牙齿研究；力反馈；刹车检测；精密装配、切削；复原研究；整形外科研究；产品测试；触觉反馈；示教学习。行业覆盖了机器人、汽车制造、自动化流水线装配、生物力学、航空航天、轻纺工业等领域。

Multi-dimensional force sensor is widely used in the research of robot finger and claw; robot surgery; finger force; tooth force; force feedback; brake detection; precision assembly, cutting; restoration; Plastic surgery research; product testing; tactile feedback; teaching learning. Industry covers robotics, automotive manufacturing, automated assembly line, biomechanics, Aerospace, textile industry and other fields.





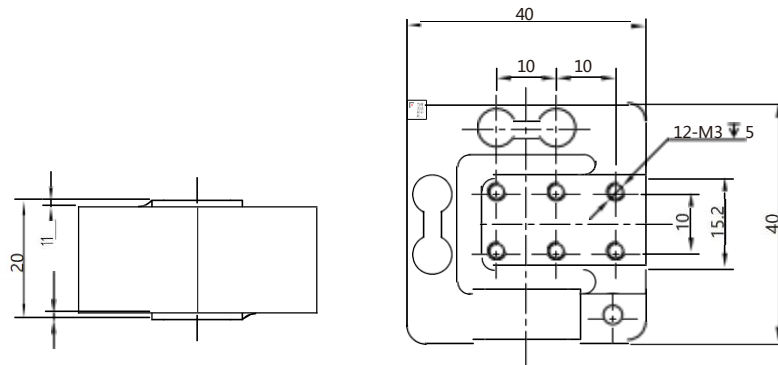
型号：KDEV-D-0A

产品特点 / Product characteristics

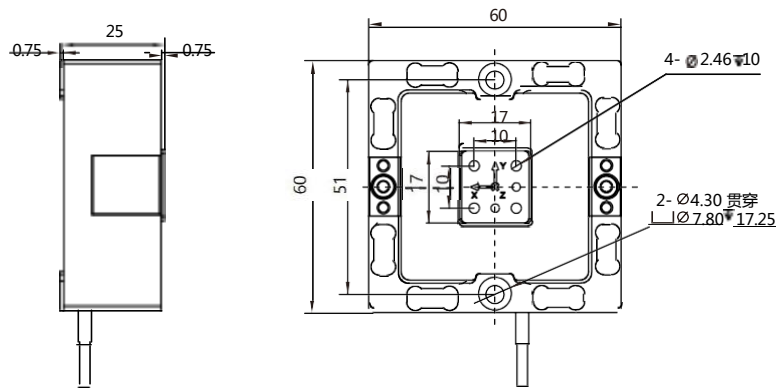
- 本产品可以分别测出空间多个方向的受力，具有高灵敏度，相互干扰小等优点。可应用于铣床磨床加工过程中刀具多个方向受力检测，机器人抛光多轴力的检测。以及各种三维力检测场合。
- This product can be measured in different directions of the force in space, with high sensitivity, small mutual interference and so on. It can be used to detect multi-axis force of cutting tool and multi-axis force of robot polishing in the process of milling and grinding machine. As well as a variety of three-dimensional force detection occasions.

• 安装尺寸 / Mounting dimensions

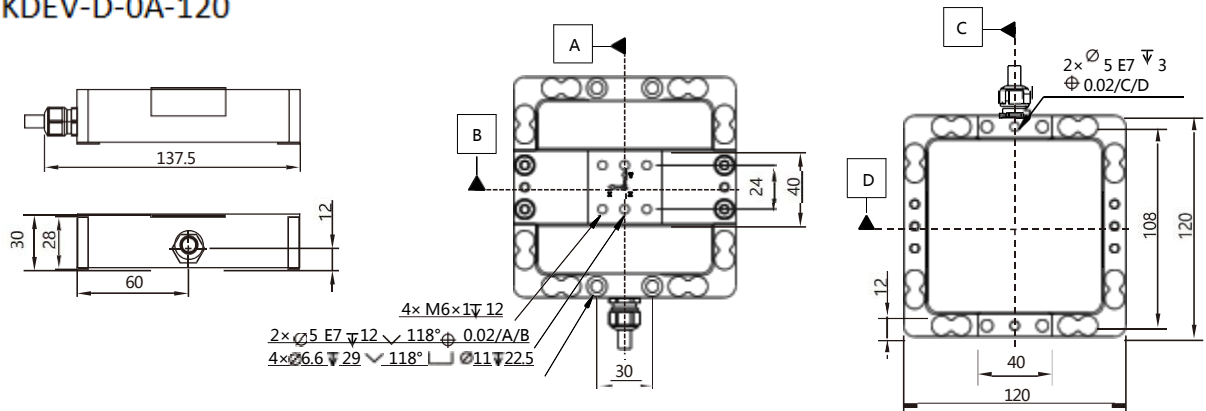
KDEV-D-0A-40



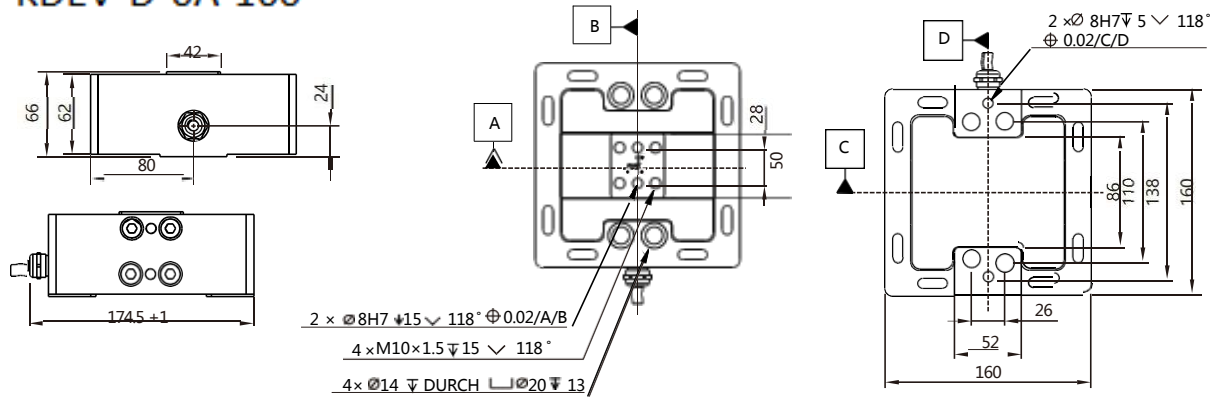
KDEV-D-0A-60



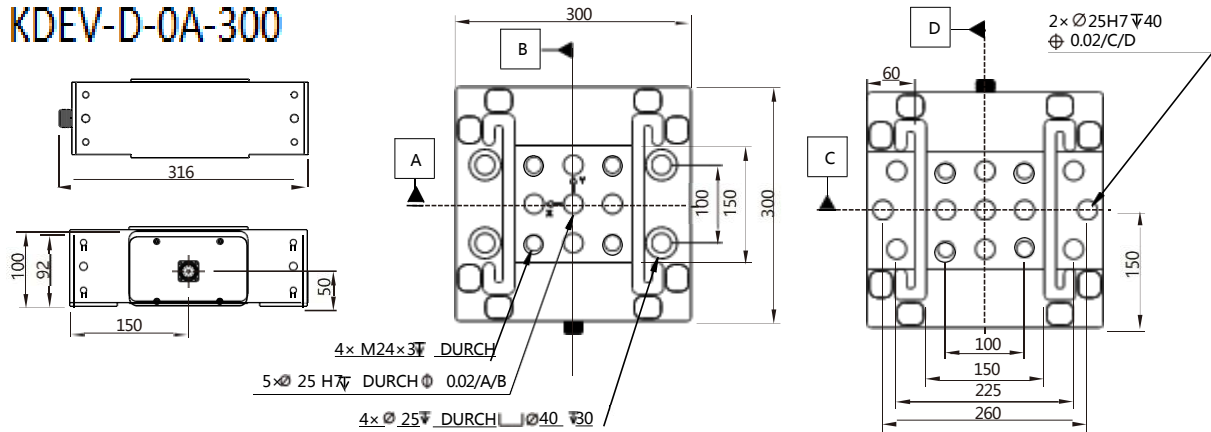
KDEV-D-0A-120



KDEV-D-0A-160



KDEV-D-0A-300



技术参数 / Technical parameters

型号	量程 : (X Y Z轴相同)	外形尺寸	材料
KDEV-D01-40	±10/20/50/100 kg	40×40×20	不锈钢
KDEV-D01-40A	±0.2/0.5/1/2/5/10 kg		铝合金
KDEV-D01-60	±20/50 /100/200 kg	60×60×25	不锈钢
KDEV-D01-60A	±5/10/20 kg		铝合金
KDEV-D01-120	±20/ 50 /100/200/500 kg	120×120×30	不锈钢或合金钢
KDEV-D01-160	±0.2/0.5/1/2/5 T	160×160×66	不锈钢或合金钢
KDEV-D01-300	±5/10/20 T	300×300×100	不锈钢或合金钢
输出灵敏度 (Output sensitivity)	0.5~2.0mv/V	灵敏度温度影响 (Sensitivity temperature effect)	0.1%F.S
零位输出 (Zero-bit output)	±2%	零点温度影响 (Zero temperature effect)	0.1%F.S
非线性 (Nonlinear)	0.2%F.S (耦合)	温度补偿范围 (Temperature compensation range)	-10~40°C
滞后 (Lag)	0.2%F.S	使用温度范围 (Operating temperature range)	-20~70°C
重复性 (Repeatability)	0.2%F.S	激励电压 (Excitation voltage)	5~12V
输入电阻 (Input Resistance)	750/385±5Ω	安全过载范围 (SAFE overload range)	120%F.S
输出电阻 (Output resistance)	700/350±3Ω	极限过载范围 (Limit Overload Range)	150%F.S
三轴互扰误差 (Three-axis mutual disturbance error)	1%F.S	电缆线规格 (Cable specifications)	Φ5mm×3m

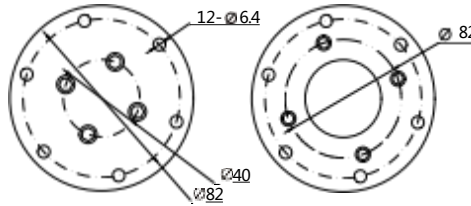
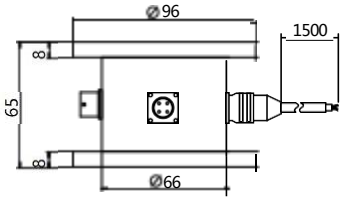


型号：KDEV-D-0G

产品特点 / Product characteristics

- 三维力的测量，不锈钢结构，坚固耐用。采用金箔式应变片技术，相互干扰误差小广泛应用于工业，研发等领域的测量和控制。
- Three-dimensional force measurement, stainless steel structure, strong and durable. Using gold foil strain gauge technology, small mutual interference error is widely used in industrial, R & D and other fields of measurement and control.

安装尺寸 / Mounting dimensions



量程kg	
X:20/30/50/100/150/200/300/500	三个方向的力相互干扰误差小于5%
Y:20/30/50/100/150/200/300/500	
Z:30/50/100/200/300/500/1000	

技术参数 / Technical parameters

量程 (Measuring range)	量程见上表	灵敏度温度影响 (Sensitivity temperature effect)	±0.5%F.S/10°C
综合误差 (Composite Error)	≤±3.0%	零点温度影响 (Zero temperature effect)	±0.5%F.S/10°C
非线性 (Non-linear)	1.0%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.05%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	120%F.S
输入阻抗 (Input impedance)	385±30Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350±5Ω	电缆线规格 (Cable specifications)	Φ5mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip65

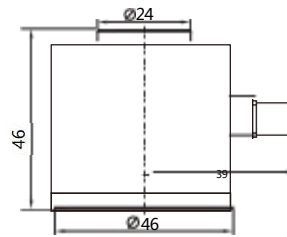
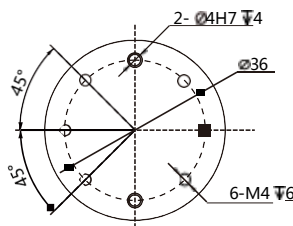
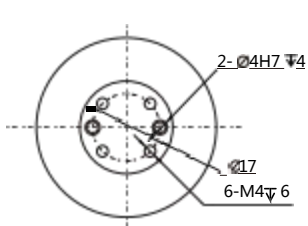


型号：KDEV-D-0H

产品特点 / Product characteristics

- 本产品可以分别测出空间多个方向的受力，具有高灵敏度，相互干扰小等优点。可应用于铣床磨床加工过程中刀具多个方向受力检测，机器人抛光多轴力的检测。
- This product can be measured in different directions of the force in space, with high sensitivity, small mutual interference and so on. It can be used to detect multi-axis force of cutting tool and multi-axis force of robot polishing in the process of milling and grinding machine.

安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

量程 (Measuring range)	X: 5/10/20/50/100 kg, Y: 5/10/20/50/100 kg, Z: 5/10/20/50/100/200 kg		
综合误差 (Composite Error)	≤±2.0%	灵敏度温度影响 (Sensitivity temperature effect)	±0.1%F.S/10°C
非线性 (Non-linear)	0.3% F.S.	零点温度影响 (Zero temperature effect)	±0.1%F.S/10°C
输出灵敏度 (Output sensitivity)	≈1.0mV/V	温度补偿范围 (Temperature compensation range)	-10~40°C
蠕变 (Creep)	±0.05%F.S/30min	使用温度范围 (Operating temperature range)	-20~75°C
零点输出 (Zero output)	±2.0%F.S.	激励电压 (Excitation voltage)	5~12V
输入阻抗 (Input impedance)	350±10Ω	安全过载范围 (SAFE overload range)	150%F.S
输出阻抗 (Output impedance)	350±10Ω	极限过载范围 (Limit Overload Range)	300%F.S
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip65

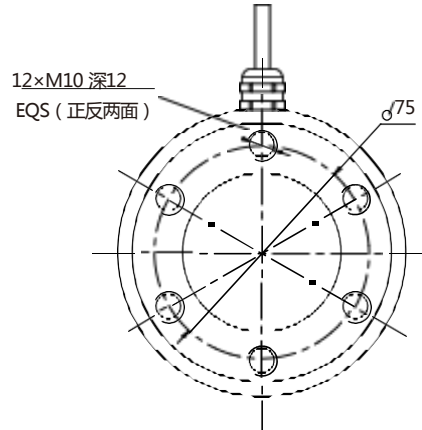
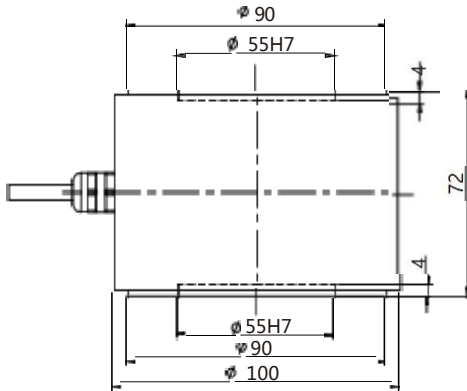


型号 : KDEV-D-09

产品特点 / Product characteristics

- 响应速度快，传感器量程范围大，采用电阻应变式原理，精度高，上下法兰面安装，结构稳定，刚度大，串扰误差小，长期稳定性强，经过高低温补偿，温度特性好。
- High response speed, wide range of sensor, resistance strain type principle, high precision, upper and lower flange mounting, stable structure, high stiffness, small crosstalk error, strong long-term stability, after high and low temperature compensation, good temperature characteristics.

安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

量程 (Measuring range)	Fx	1T	2.5T	5T
	Fy	1T	2.5T	5T
	Fz	1T	2.5T	5T
输出灵敏度 (Output sensitivity)	1.0±10% mV/V	长期串扰误差 (Long-term crosstalk error)		≤1% F.S.
非线性 (Nonlinear)	≤1% F.S.	安全超载 (Safety overload)		150% F.S.
重复性 (Repeatability)	≤0.2% F.S.	绝缘电阻 (Insulation resistance)		≥2000MΩ/50V DC
零点输出 (Zero output)	±2% F.S.	电缆线规格 (Cable specifications)		Φ5mm×3m
工作温度范围 (Operating temperature range)	-20~80°C	防护等级 (Protection level)		Ip65
温度补偿范围 (Temperature Compensation Range)	-10~40°C	推荐激励电压 (Recommended excitation voltage)		5~10VDC
温度灵敏度漂移 (Temperature sensitivity drift)	≤0.1% F.S./10°C	材质 (Material)		不锈钢
零点温度漂移 (Zero temperature drift)	≤0.1% F.S./10°C	接线方式 (Connection mode)	电压/Voltage	Exc+:红 Red Exc-:黑 Black
			Fx	Sig+:灰 Gray Sig-:绿 Green
			Fy	Sig+:棕 Brown Sig-:黄 Yellow
			Fz	Sig+:白 White Sig-:蓝 Blue

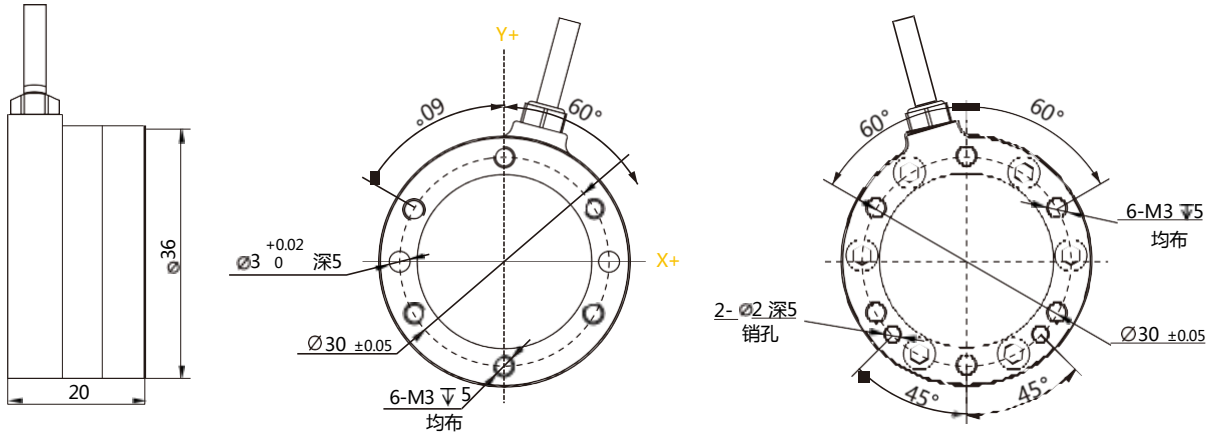


型号：KDEV-D-F0A

产品特点 / Product characteristics

- 六轴联合标定，充分抑制串扰，微型高精度六轴力觉传感器，采用航空合金，高过载，兼具高刚性和高灵敏度。
- Six-axis joint calibration, fully suppress crosstalk, miniature high-precision six-axis force sensor, using aviation alloy, high overload, both high stiffness and high sensitivity.

安装尺寸 / Mounting dimensions



		产品型号 (Model)		
		KDEV-D-F0A1	KDEV-D-F0A2	KDEV-D-F0A3
Fx, Fy	N	30	50	80
Fz	N	30	50	80
Mx, My	Nm	1.5	2	3
Mz	Nm	1.5	2	3
直径 (Diameter)	mm	36	36	36
高度 (Height)	mm	20	20	20
材质 (Material)	/	铝合金/Aluminum alloy	铝合金/Aluminum alloy	铝合金/Aluminum alloy
表面处理 (Surface treatment)	/	阳极化/Anodization	阳极化/Anodization	阳极化/Anodization
过载水平 (Overload level)	% FS	300	300	300
分辨率 (Resolution)	% FS	0.03	0.03	0.03
重复精度 (Repetition accuracy)	% FS	0.1	0.1	0.1
准度 (Accuracy)	% FS	0.5	0.5	0.5
重量 (Weight)	kg	0.04	0.05	0.06
防护等级 (Protection level)	/	Ip64	Ip64	Ip64
工作温度 (Operating temperature)	°C	5~80	5~80	5~80
采样频率 (sampling rate)	Hz	1000	1000	1000
供电电压 (Supply voltage)	VDC	12~48	12~48	12~48
通信接口 (Communication interface)	/	RS422/RS485/MODBUS/TCP/UDP/工业以太网/USB等		
电缆线规格 (Cable specifications)	/	Φ7.5mm×5m		

- 部分参数为配套信号采集模块参数
- 默认支持9-24VDC，48VDC请联系销售人员
- 准度包含了串扰、滞后、非线性等因素导致的测量误差

Note: Used together with high precision data acquisition system

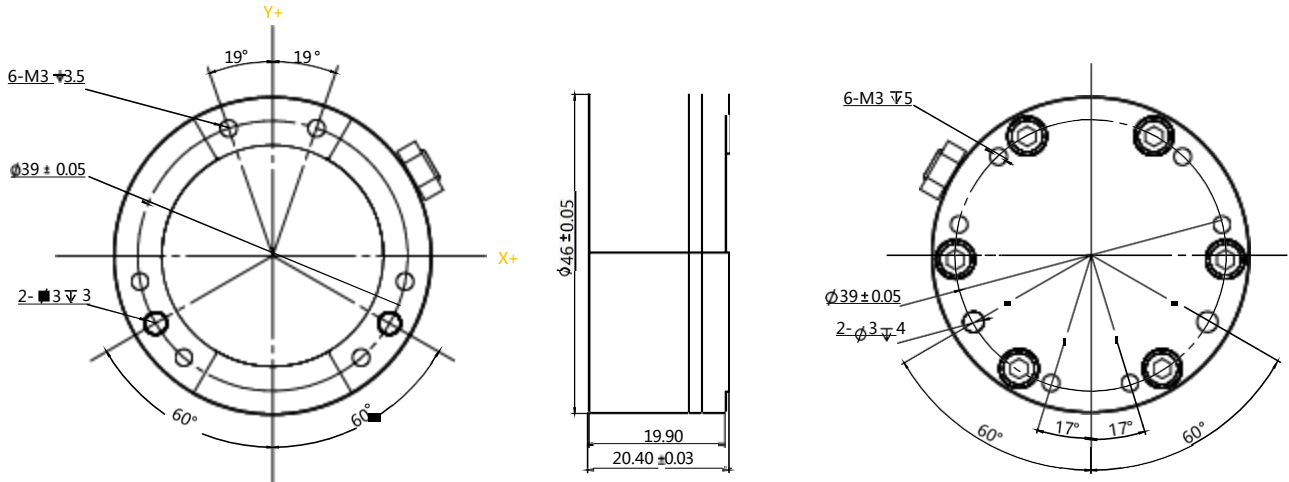


型号 : KDEV-D-F0B

产品特点 / Product characteristics

- 六轴联合标定，充分抑制串扰，小型高精度六轴力觉传感器。
- Six-axis joint calibration, fully suppress crosstalk, small high-precision six-axis force sensor.

• 安装尺寸 / Mounting dimensions



性能参数 (Performance parameters)		产品型号 (Model)		
		KDEV-D-F0B1	KDEV-D-F0B2	KDEV-D-F0B3
Fx, Fy	N	50	150	200
Fz	N	50	150	200
Mx, My	Nm	2	5	7
Mz	Nm	2	5	7
直径 (Diameter)	mm	46	46	46
高度 (Height)	mm	20.4	20.4	20.4
材质 (Material)	/	铝合金/Aluminum alloy	铝合金/Aluminum alloy	铝合金/Aluminum alloy
表面处理 (Surface treatment)	/	阳极化/Anodization	阳极化/Anodization	阳极化/Anodization
过载水平 (Overload level)	%FS	300	300	300
分辨率 (Resolution)	%FS	0.03	0.03	0.03
重复精度 (Repetition accuracy)	%FS	0.1	0.1	0.1
准度 (Accuracy)	%FS	0.5	0.5	0.5
重量 (Weight)	kg	0.06	0.07	0.07
防护等级 (Protection level)	/	Ip64	Ip64	Ip64
工作温度 (Operating temperature)	°C	5~80	5~80	5~80
采样频率 (Sampling rate)	Hz	1000	1000	1000
供电电压 (Supply voltage)	VDC	12~48	12~48	12~48
通信接口 (Communication interface)	/	RS422/RS485/MODBUS/TCP/UDP/工业以太网/USB等		
电缆线规格 (Cable specifications)	/	Φ7.5mm×5m		

- 部分参数为配套信号采集模块参数
- 默认支持9-24VDC，48VDC请联系销售人员
- 准度包含了串扰、滞后、非线性等因素导致的测量误差

Note: Used together with high precision data acquisition system

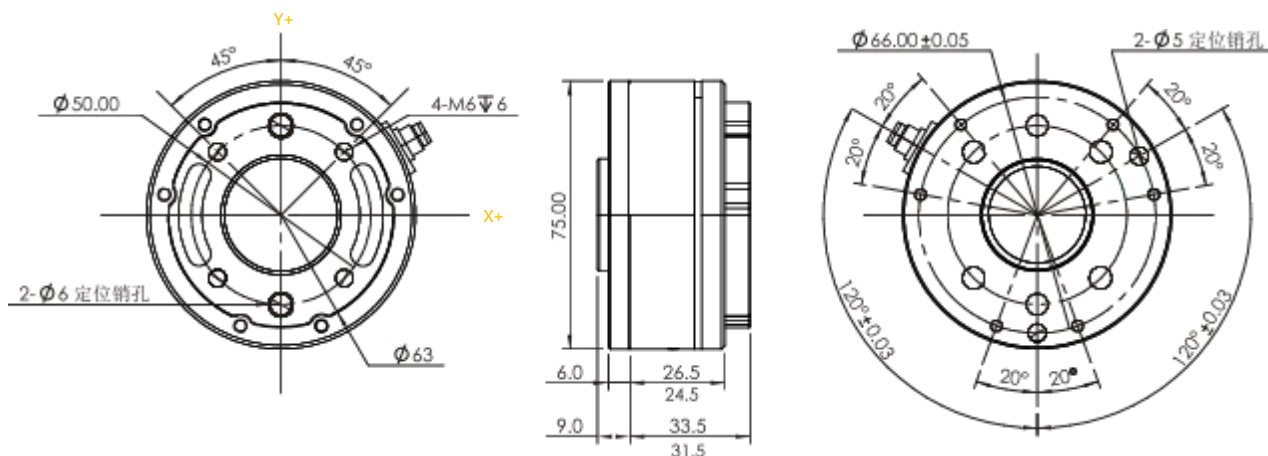


型号：KDEV-D-F0C

产品特点 / Product characteristics

- 六轴联合标定，充分抑制串扰，内置高精度嵌入式数据采集计算系统，采用航空合金，高过载，兼具高刚性和高灵敏度。
- Six-axis joint calibration, fully suppress crosstalk, built-in high-precision embedded data acquisition and calculation system, using aviation alloy, high overload, both high stiffness and high sensitivity.

安装尺寸 / Mounting dimensions



性能参数 (Performance parameters)		产品型号 (Model)					
		KDEV-D-F0C1	KDEV-D-F0C2	KDEV-D-F0C3	KDEV-D-F0C4	KDEV-D-F0C5	KDEV-D-F0C6
Fx, Fy	N	50	200	400	500	30	100
Fz	N	50	200	500	700	30	100
Mx, My	Nm	2	8	12	18	1.5	4
Mz	Nm	2	8	12	18	1.5	4
直径 (Diameter)	mm	75	75	75	75	75	75
高度 (Height)	mm	31.5	31.5	33.5	33.5	31.5	31.5
材质 (Material)	/	铝合金 Aluminum alloy	铝合金 Aluminum alloy	铝合金 Aluminum alloy	铝合金 Aluminum alloy	铝合金 Aluminum alloy	铝合金 Aluminum alloy
表面处理 (Surface treatment)	/	阳极化 Anodization	阳极化 Anodization	阳极化 Anodization	阳极化 Anodization	阳极化 Anodization	阳极化 Anodization
过载水平 (Overload level)	% FS	300	300	300	300	300	300
分辨率 (Resolution)	% FS	0.03	0.03	0.03	0.03	0.03	0.03
重复精度 (Repetition accuracy)	% FS	0.1	0.1	0.1	0.1	0.1	0.1
准确度 (Accuracy)	% FS	0.5	0.5	0.5	0.5	0.5	0.5
重量 (Weight)	kg	0.26	0.28	0.32	0.36	0.26	0.28
防护等级 (Protection level)	/	Ip64	Ip64	Ip64	Ip64	Ip64	Ip64
工作温度 (Operating temperature)	°C	0~80	0~80	0~80	0~80	0~80	0~80
采样频率 (sampling rate)	Hz	1000	1000	1000	1000	1000	1000
供电电压 (Supply voltage)	VDC	12~48	12~48	12~48	12~48	12~48	12~48
通信接口 (Communication interface)	/	RS422/RS485/MODBUS/TCP/UDP/工业以太网/USB等					
电缆线规格 (Cable specifications)	/	Φ7.5mm×5m					

- 默认支持9-24VDC，48VDC请联系销售人员
- 准确度包含了串扰、滞后、非线性等因素导致的测量误差

Note: Used together with high precision data acquisition system

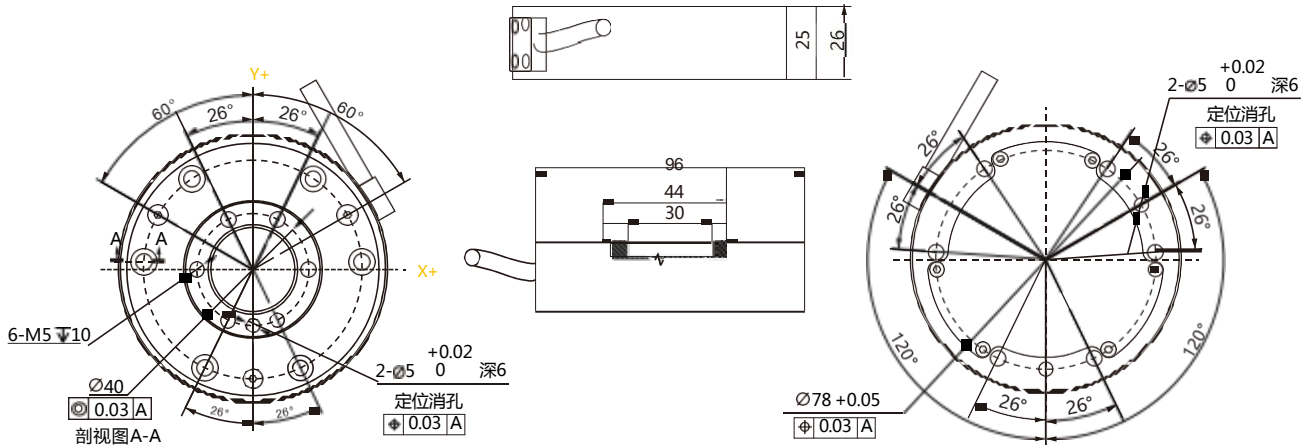


型号：KDEV-D-F0D

产品特点 / Product characteristics

- 弯矩量程大，六轴联合标定，充分抑制串扰，内置高精度嵌入式数据采集计算系统，采用航空合金，高过载，兼具高刚性和高灵敏度。
- Large bending moment range, six-axis joint calibration, fully suppress crosstalk, built-in high-precision embedded data acquisition and calculation system, using aviation alloy, high overload, both high stiffness and high sensitivity.

安装尺寸 / Mounting dimensions



性能参数 (Performance parameters)		产品型号 (Model)				
		KDEV-D-F0D1	KDEV-D-F0D2	KDEV-D-F0D3	KDEV-D-F0D4	KDEV-D-F0D5
Fx, Fy	N	100	200	300	400	2000
Fz	N	200	400	600	800	2000
Mx, My	Nm	10	18	24	36	100
Mz	Nm	10	18	24	36	100
直径 (Diameter)	mm	96	96	96	96	96
高度 (Height)	mm	26	26	26	26	26
材质 (Material)	/	铝合金 Aluminum alloy	铝合金 Aluminum alloy	铝合金 Aluminum alloy	铝合金 Aluminum alloy	铝合金 Aluminum alloy
表面处理 (Surface treatment)	/	阳极化 Anodization	阳极化 Anodization	阳极化 Anodization	阳极化 Anodization	阳极化 Anodization
过载水平 (Overload level)	%FS	300	300	300	300	200
分辨率 (Resolution)	%FS	0.03	0.03	0.03	0.03	0.05
重复精度 (Repetition accuracy)	%FS	0.1	0.1	0.1	0.1	0.3
准度 (Accuracy)	%FS	0.5	0.5	0.5	0.5	3
重量 (Weight)	kg	0.32	0.32	0.36	0.36	1.6
防护等级 (Protection level)	/	Ip64	Ip64	Ip64	Ip64	Ip64
工作温度 (Operating temperature)	°C	0~80	0~80	0~80	0~80	0~80
采样频率 (sampling rate)	Hz	1000	1000	1000	1000	1000
供电电压 (Supply voltage)	VDC	12~48	12~48	12~48	12~48	12~48
通信接口 (Communication interface)	/	RS422/RS485/MODBUS/TCP/UDP/工业以太网/USB等				
电缆线规格 (Cable specifications)	/	Φ7.5mm×5m				

- 默认支持9-24VDC，48VDC请联系销售人员
- 准度包含了串扰、滞后、非线性等因素导致的测量误差

Note: Used together with high precision data acquisition system



Torque sensor

扭矩传感器

产品应用

扭矩传感器作为一种测量各种扭矩、转速及机械功率的精密测量仪器，目前主要应用在电动机、发动机等旋转动力设备检测；机车、汽车、飞机、矿上机械中的扭矩及功率检测等等。无论是工程制造业或者运输业或者科研院所等等地方都有扭矩传感器的身影。

Torque sensor is a kind of precision measuring instrument for measuring various torque, rotational speed and mechanical power. It is mainly used in the detection of motor, engine and other rotating power equipment Locomotive, automobile, aircraft, mining machine Lj in the torque and power detection and so on . Whether it is engineering manufacturing or transpoDžation industLj or scientillc research institutes and other places have torque sensors.



工业制造业



运输业



科研院所

Application

型号 : KDEV-N-11A

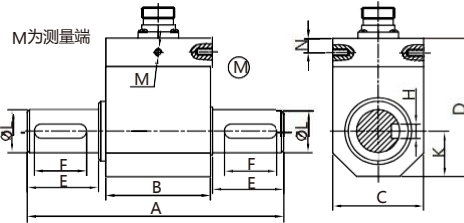


产品特点 / Product characteristics

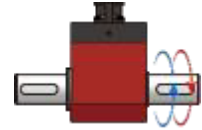
- 中大量程扭矩测量，可测正反两方向扭矩值，进口芯片与零件，广泛用于各种扭矩测量与控制，转速可达1800转/分钟。
- Large range torque measurement, can be measured positive and negative torque values, imported chips and components, widely used in various torque measurement and control, speed up to 1800 rpm.

• 安装尺寸 / Mounting dimensions

量程	A	ΦL	B	C	D	E	F	K	N	M	H
0-100 NM	108	18	44	38	58	30	22	19	6	3-M3	6
200-500NM	143	28	56	53	73.5	40	30	27	6	3-M3	8
800-1000NM	221	50	97	90	125	60	55	45	33	4-M4	16



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0-10/20/30/50/100/200/500/1000 NM		
灵敏度 (Sensitivity)	1.5±10% mV/V	灵敏度温度影响 (Sensitivity temperature effect)	±0.03%F.S./10°C
零点输出 (Zero output)	±2%F.S	零点温度影响 (Zero temperature effect)	±0.03%F.S./10°C
非线性 (Non-linear)	0.2% F.S.	温度补偿范围 (Temperature compensation range)	-10~60°C
滞后 (Lag behind)	≤±0.05%F.S.	工作温度范围 (Operating temperature range)	-20~80°C
重复性 (Repeatability)	≤±0.05%F.S.	激励电压 (Excitation voltage)	10~12VDC
蠕变 (Creep)	±0.03%F.S./30min	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	750±10Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	700±5Ω	电缆线规格 (Cable specifications)	Φ5mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	电气连接 (Electrical connection)	红/E+，黑/E-，绿/S+，白/S-

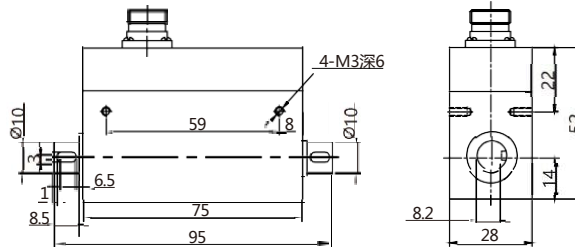
型号 : KDEV-N-11B



产品特点 / Product characteristics

- 电阻应变片为敏感元件和集成电路构成的一体产品，精度高，性能稳定可靠。输出正反扭矩信号，两端为键连接，转速不超1800转/分钟。
- The Resistance Strain Gage is an integrated product composed of sensitive element and integrated circuit, with high precision and stable and reliable performance. Output positive and negative torque signals, the two ends of the key connection, speed not more than 1800 rpm.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0-0.1/0.2/0.3/0.5/1/2/3/5 NM		
输出灵敏度 (Output sensitivity)	1.0~1.5 mV/V	灵敏度温度影响 (Sensitivity temperature effect)	±0.1%F.S./10°C
零点输出 (Zero output)	±1%F.S	零点温度影响 (Zero temperature effect)	±0.1%F.S./10°C
非线性 (Non-linear)	0.2% F.S.	温度补偿范围 (Temperature compensation range)	-10~60°C
滞后 (Lag behind)	0.2%F.S.	工作温度范围 (Operating temperature range)	-30~60°C
重复性 (Repeatability)	0.1%F.S.	激励电压 (Excitation voltage)	12VDC
蠕变 (Creep)	±0.03%F.S./30min	安全过载范围 (SAFE overload range)	120%F.S
输入阻抗 (Input impedance)	350±10Ω	极限过载范围 (Limit Overload Range)	150%F.S
输出阻抗 (Output impedance)	350±10Ω	电缆线规格 (Cable specifications)	Φ5mm×3m
绝缘电阻 (Insulation Resistance)	≥2000MΩ/100V DC	电气连接 (Electrical connection)	红/E+，黑/E-，绿/S+，白/S-

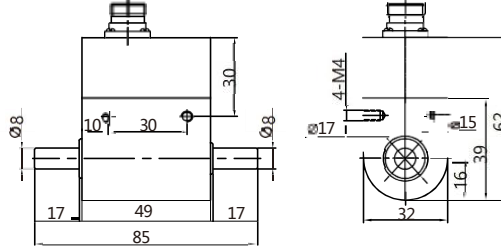
型号：KDEV-N-1A



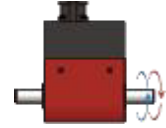
产品特点 / Product characteristics

- 电阻应变片为敏感元件和集成电路构成的一体产品，精度高，性能稳定可靠。没有集流环等磨损件，可高速长时间运转，输出正反转扭矩信号。转速可达1800转/分钟。
- The Resistance Strain Gage is an integrated product composed of sensitive element and integrated circuit, with high precision and stable and reliable performance. No collector ring and other wear parts, can be high-speed long-time operation, output positive and negative torque signal. Up to 1800 rpm.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0-0.1/0.2/0.3/0.5/1/2/3/5 NM		
灵敏度 (Sensitivity)	1.5±10% mV/V	灵敏度温度影响 (Sensitivity temperature effect)	±0.03%F.S./10°C
零点输出 (Zero output)	±2%F.S	零点温度影响 (Zero temperature effect)	±0.03%F.S./10°C
非线性 (Non-linear)	0.2% F.S.	温度补偿范围 (Temperature compensation range)	-10~60°C
滞后 (Lag behind)	≤±0.05%F.S.	工作温度范围 (Operating temperature range)	-20~65°C
重复性 (Repeatability)	≤±0.05%F.S.	激励电压 (Excitation voltage)	10~12VDC
蠕变 (Creep)	±0.03%F.S./30min	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	750±10Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	700±5Ω	电缆线规格 (Cable specifications)	Φ5mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	电气连接 (Electrical connection)	红/E+, 黑/E-, 绿/S+, 白/S-

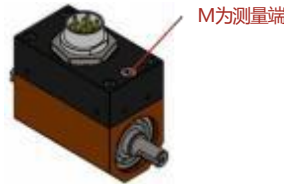
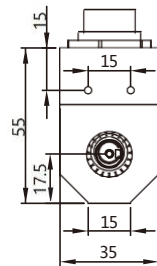
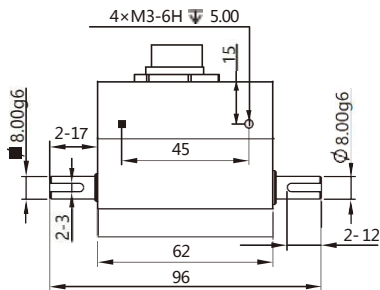
型号：KDEV-N-12A



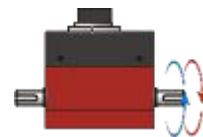
产品特点 / Product characteristics

- 线圈电磁耦合，实现电源与测量信号无线传输，10针航空插头，集扭矩信号频率信号，模拟量信号，转速信号，RS485数字信号整体输出。进口轴承，寿命较长，极限转速较高，耐负荷较高，摩擦力更小。一体成型外壳，更高的硬度，更小的变形，更稳定的性能，更长的寿命。
- Electromagnetic coupling coil to achieve power and measurement signal wireless transmission, 10-pin aviation plug, set torque signal frequency signal, analog signal, speed signal, RS485 digital signal output. Imported bearings, longer life, higher limit speed, higher load resistance, less friction. One-piece shell, higher hardness, less deformation, more stable performance, longer life.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0.1/0.2/0.5/1/2/5 NM		
转速范围 (Speed Range)	≤8000转/分钟	运行温度 (Operating Temperature)	-20~80°C
扭矩信号 (Torque signal)	RS485/±10V/±5V/0-10V/0-5V/5-15KHz	零点温度漂移 (Temperature drift on zero)	0.15%F.S./10°C
转速信号 (Speed signal)	RS485/60脉冲信号	温度灵敏度漂移 (Temperature drift on output)	0.15%F.S./10°C
精度 (Precision)	±0.2%F.S	供电电源 (Power supply)	24VDC±15%
过载能力 (Overload capacity)	150%	材质 (Material Quality)	外壳：铝；轴芯：17-4
响应频率 (Frequency response)	1ms	电缆线尺寸 (Cable size)	Φ6×3000mm

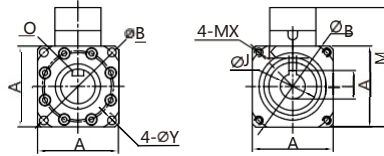
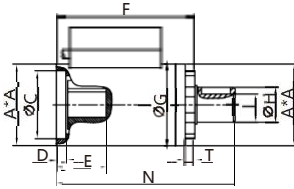
型号 : KDEV-N-1E



产品特点 / Product characteristics

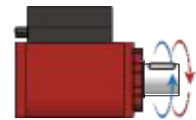
- 电阻应变片为敏感元件和集成电路构成的一体产品，精度高，性能稳定可靠。输出正反扭矩信号，两端为键连接，转速可达1800转/分钟。
- The Resistance Strain Gage is an integrated product composed of sensitive element and integrated circuit, with high precision and stable and reliable performance. Output positive and negative torque signals, the two ends of the key connection, speed up to 1800 rpm.

■ 安装尺寸 / Mounting dimensions



量程NM	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	T	X	Y
0-50	42	50	35	5	26	73	42	18	14.5	13	4	14.8	63	93	40×40	5	M4	4.5
100	62	70	50	7	39	91	62	18	14.5	16	6	18.3	77	122	60×60	7	M7	5.5

● 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0-5/10/20/30/50/100 NM		
灵敏度 (Sensitivity)	1.5mV/V±10%F.S.	灵敏度温度影响 (Sensitivity temperature effect)	±0.03%F.S./10°C
零点输出 (Zero output)	±2%F.S.	零点温度影响 (Zero temperature effect)	±0.03%F.S./10°C
非线性 (Non-linear)	±0.1, ±0.2%F.S.	温度补偿范围 (Temperature compensation range)	-10~60°C
滞后 (Lag behind)	≤±0.05%F.S.	工作温度范围 (Operating temperature range)	-20~75°C
重复性 (Repeatability)	≤±0.05%F.S.	激励电压 (Excitation voltage)	5-10VDC
蠕变 (Creep)	±0.03%F.S./30min	安全过载范围 (SAFE overload range)	150%F.S.
输入阻抗 (Input impedance)	350±20Ω	极限过载范围 (Limit Overload Range)	200%F.S.
输出阻抗 (Output impedance)	350±10Ω	电缆线规格 (Cable specifications)	Φ5mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	电气连接 (Electrical connection)	红/E+, 黑/E-, 绿/S+, 白/S-

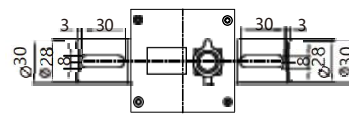
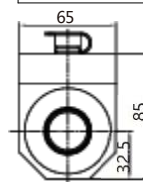
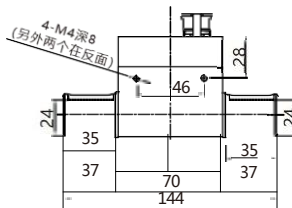
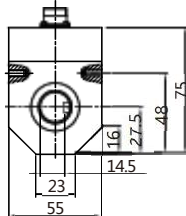
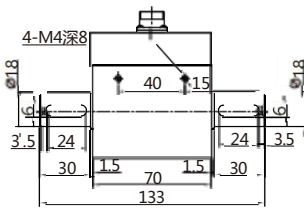
型号 : KDEV-N-4A



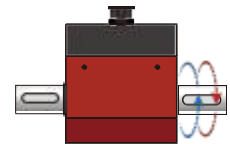
产品特点 / Product characteristics

- 非接触型动态扭矩传感器，转速可达8000转/分钟，可测转速及功率;超低磨损，常用于长期运转的测量。
- Non-contact dynamic torque sensor, rotating speed up to 8000 rpm, measuring speed and power; ultra-low wear, often used for long-term operation of the measurement.

■ 安装尺寸 / Mounting dimensions



● 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0~5/10/20/50/100NM	年稳定性 (Annual stability)	0.25%/年
供电电源 (Power supply)	±24VDC±15%	绝缘电阻 (Insulation resistance)	≥2000MΩ (100VDC)
扭矩信号 (Torque signal)	±5VDC;±10V;4-20mA	环境温度 (Ambient temperature)	-10~50°C
转速范围 (Speed range)	≤8000转/分钟	相对湿度 (Relative temperature)	0~90%RH
转速信号 (Speed signal)	随机带	过载能力 (Overload capacity)	200%
精度 (Precision)	±0.2%F.S.	频率响应 (Frequency response)	1ms
电缆线规格 (Cable specifications)	Φ5mm×3m		

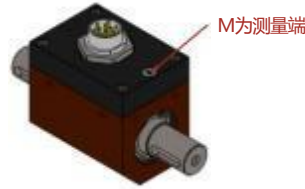
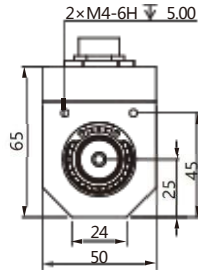
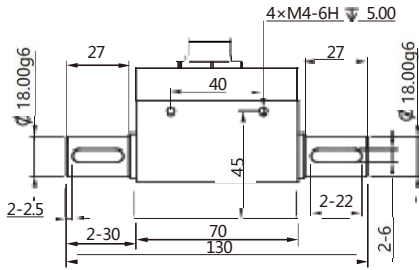


型号：KDEV-N-41A

产品特点 / Product characteristics

- 线圈电磁耦合，实现电源与测量信号无线传输，10针航空插头，集扭矩信号频率信号，模拟量信号，转速信号，RS485数字信号整体输出。进口轴承，寿命较长，极限转速较高，耐负荷较高，摩擦力更小。一体成型外壳，更高的硬度，体积小，精度性能高、稳定性可靠。
- Electromagnetic coupling coil to achieve power and measurement signal wireless transmission, 10-pin aviation plug, set torque signal frequency signal, analog signal, speed signal, RS485 digital signal output. Imported bearings, longer life, higher limit speed, higher load resistance, less friction. One-piece forming shell, higher hardness, small size, high precision performance, reliable stability.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	5/10/20/50/100 NM		
转速范围 (Speed Range)	\leq 8000转/分钟	运行温度 (Operating Temperature)	-20~80°C
扭矩信号 (Torque signal)	RS485/ \pm 10V/ \pm 5V/0-10V/0-5V/5-15KHz	零点温度漂移 (Temp. effect on zero)	0.15%F.S./10°C
转速信号 (Speed signal)	RS485/60脉冲信号	温度灵敏度漂移 (Temp. effect on output)	0.15%F.S./10°C
精度 (Precision)	\pm 0.2%F.S	供电电源 (Power supply)	24VDC \pm 15%
过载能力 (Overload capacity)	150%	材质 (Material Quality)	外壳：铝；轴芯：17-4
响应频率 (Frequency response)	1ms	电缆线尺寸 (Cable size)	ϕ 6 \times 3000mm

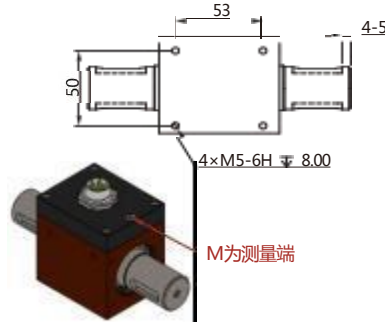
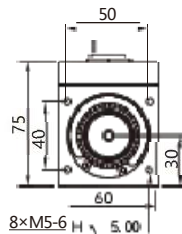
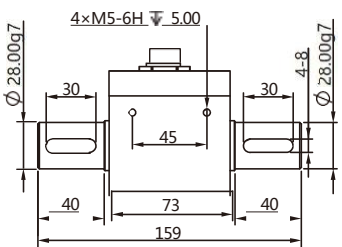


型号：KDEV-N-41B

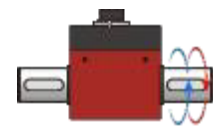
产品特点 / Product characteristics

- 线圈电磁耦合，实现电源与测量信号无线传输。10针航空插头，集扭矩信号频率信号，模拟量信号，转速信号，RS485数字信号整体输出。进口轴承，寿命较长，极限转速较高，耐负荷较高，摩擦力更小。产品尺寸小易于安装，超大量程既可以测扭矩，又可以测转速。
- Electromagnetic coupling coil to achieve power and measurement signal wireless transmission, 10-pin aviation plug, set torque signal frequency signal, analog signal, speed signal, RS485 digital signal output. Imported bearings, longer life, higher limit speed, higher load resistance, less friction. One-piece shell, higher hardness, less deformation, more stable performance, longer life.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	200/500 NM		
转速范围 (Speed Range)	\leq 8000转/分钟	运行温度 (Operating Temperature)	-20~80°C
扭矩信号 (Torque signal)	RS485/ \pm 10V/ \pm 5V/0-10V/0-5V/5-15KHz	零点温度漂移 (Temp. effect on zero)	0.15%F.S./10°C
转速信号 (Speed signal)	RS485/60脉冲信号	温度灵敏度漂移 (Temp. effect on output)	0.15%F.S./10°C
精度 (Precision)	\pm 0.2%F.S	供电电源 (Power supply)	24VDC \pm 15%
过载能力 (Overload capacity)	150%	材质 (Material Quality)	外壳：铝；轴芯：17-4
响应频率 (Frequency response)	1ms	电缆线尺寸 (Cable size)	ϕ 6 \times 3000mm

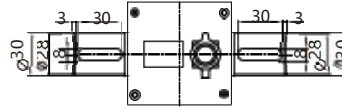
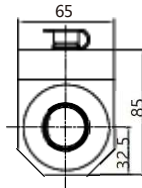
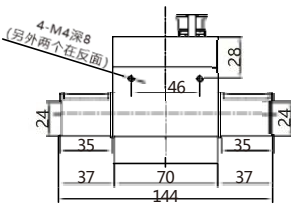


型号 : KDEV-N-4A2

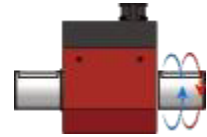
产品特点 / Product characteristics

- 较大量程的非接触式动态扭矩传感器，超低磨损，转速快，可提供转速信号及功率信号。
- Large range non-contact dynamic torque sensor, ultra-low wear, high speed, can provide speed signals and power signals.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	200/300/500Nm	年稳定性 (Annual stability)	0.25%/年
供电电源 (Power supply)	±24VDC±15%	绝缘电阻 (Insulation resistance)	≥2000MΩ (100VDC)
扭矩信号 (Torque signal)	±5VDC; ±10V; 4-20mA	环境温度 (Ambient temperature)	-10~50°C
转速范围 (Speed range)	≤8000转/分钟	相对湿度 (Relative temperature)	0~90%RH
转速信号 (Speed signal)	随机带	过载能力 (Overload capacity)	200%
精度 (Precision)	±0.2%F.S.	频率响应 (Frequency response)	1ms
电缆线规格 (Cable specifications)	Φ5mm×3m		



型号 : KDEV-N-43A/KDEV-N-43B

产品特点 / Product characteristics

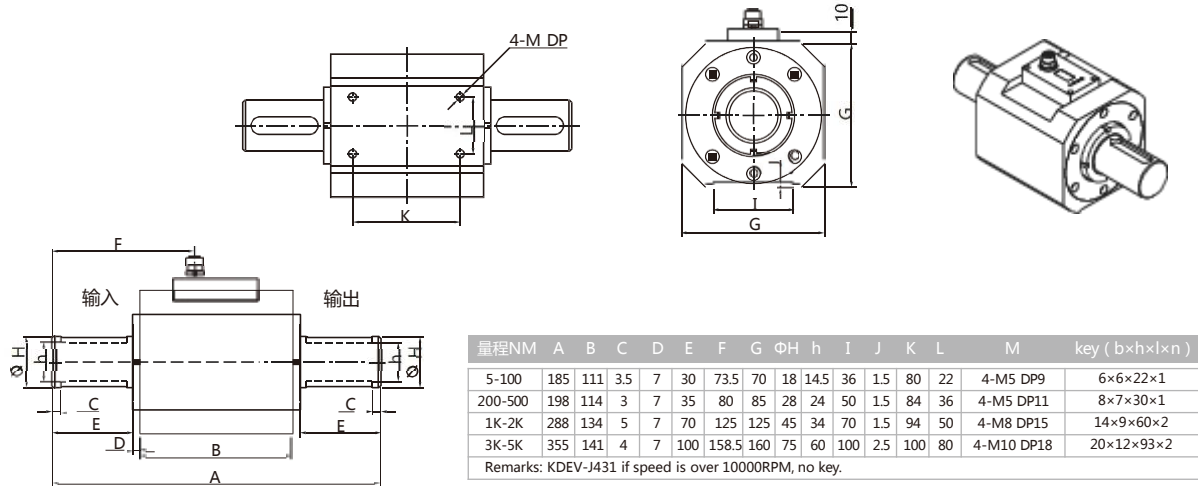
- 大量程非接触式动态扭矩传感器，有多种量程可选，带机身显示，显示内容：扭矩、转速、功率，常用于各种较大扭矩的测量。
- Large range non-contact dynamic torque sensor, with a variety of range options, with body display, display content. Including: torque, speed, power; often used in a variety of larger torque measurement.

• 受力方式/Force mode

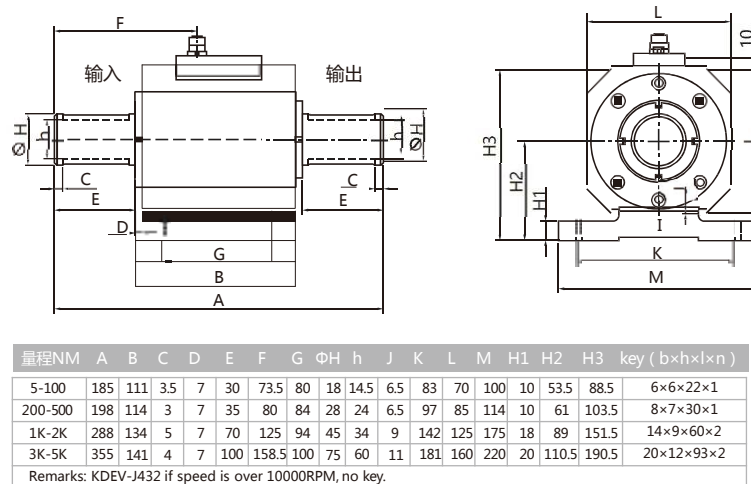


• 安装尺寸 / Mounting dimensions

KDEV-N-43A



KDEV-N-43B



技术参数 / Technical parameters

量程 (Measuring range)	5-5000NM	补偿温度范围 (Compensation Temperature range)	-10~+60°C
扭矩输出 (Torque output)	10±5KHZ, 4-20mA 0±5/10VDC 0-5/10VDC, RS485	工作温度 (Operating TEMPERATURE)	20~80°C
精度 (Precision)	±0.1, 0.2% FS	电气连接 (Electrical connection)	6-pin 或 8-pin
供电 (Power supply)	12-30VDC	安全过载 (Safety overload)	200% RO
零点温度影响 (Zero temperature effect)	±0.02%RO/°C	轴材料 (Shaft material)	不锈钢
量程温度影响 (Range temperature effect)	±0.02%RO/°C	外壳材料 (Shell material)	铝

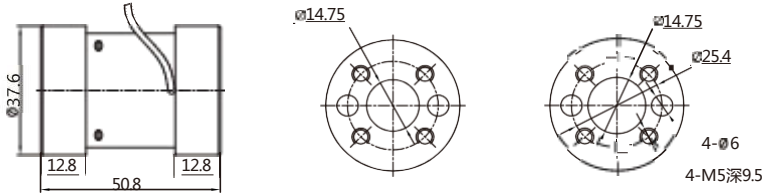


型号 : KDEV-N-50

产品特点 / Product characteristics

- 体积小，法兰式结构安装方便，不锈钢或者铝合金结构，精度高，稳定性好，静态扭力测试仪器，扭力扳手等扭力测试设备。
- Small size, easy to install flange structure, stainless steel or aluminum alloy structure, high accuracy, good stability, static torque testing equipment, torque wrench and other torque testing equipment.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	1/2/3/5/6/10/20/30/50/100/150 NM	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.1%, ≤±0.3%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.2%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.5±10% mV/V	使用温度范围 (Operating temperature range)	-20~80°C
蠕变 (Creep)	±0.03%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	120%F.S
输入阻抗 (Input impedance)	410±20 Ω	极限过载范围 (Limit Overload Range)	150%F.S
输出阻抗 (Output impedance)	350±100 Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation Resistance)	≥5000M Ω /100V DC	防护等级 (Protection level)	Ip65

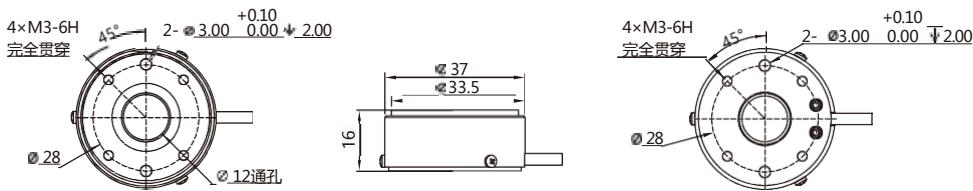


型号 : KDEV-N-501

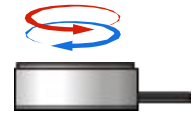
产品特点 / Product characteristics

- 静态扭矩传感器结构紧凑便于安装，精度高，性能稳定可靠，防护等级IP66，用于静态，非连续旋转的扭矩值测量。
- Static torque sensor is compact and easy to install, high precision, stable and reliable performance, protection class: IP66, for static, noncontinuous rotation torque value measurement.

• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0.2/0.5/1/2/5/10 NM	灵敏度温度影响 (Sensitivity temperature effect)	±0.15%F.S/10°C
综合误差 (Composite Error)	±0.1/0.3%F.S.	零点温度影响 (Zero temperature effect)	±0.15%F.S/10°C
非线性 (Non-linear)	0.1/0.3%F.S.	温度补偿范围 (Temperature compensation range)	-10~40°C
灵敏度 (Sensitivity)	1.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~60°C
蠕变 (Creep)	±0.03%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	120%F.S
输入阻抗 (Input impedance)	350/750±10 Ω	极限过载范围 (Limit Overload Range)	150%F.S
输出阻抗 (Output impedance)	350/700±5 Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation Resistance)	≥5000M Ω /100V DC	材质 (Material)	铝/17-4

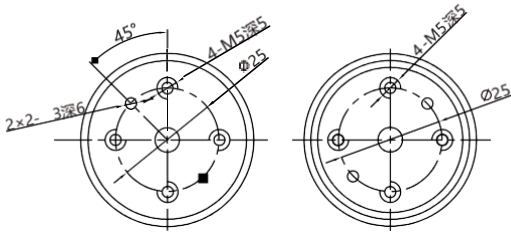


型号 : KDEV-N-50A

产品特点 / Product characteristics

- 精度高，性能稳定可靠，低量程扭矩测量，双法兰盘安装使用方便，采用德国技术和生产设备 & 先进的检测设备。
- High precision, stable performance, reliable, low range torque measurement, easy to install double Flange, using German technology and production equipment and advanced testing equipment.

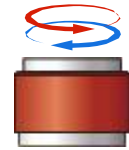
• 安装尺寸 / Mounting dimensions



• 受力方式/Force mode

量程 材质

0-5NM	铝
10-50NM	钢



技术参数 / Technical parameters

量程 (Measuring range)	0-0.1/0.2/0.5/1/2/3/5/10/20/30/50 NM	灵敏度温度影响 (Sensitivity temperature effect)	±0.03%F.S/10°C
综合误差 (Composite Error)	≤±0.1%, ≤±0.3%	零点温度影响 (Zero temperature effect)	±0.03%F.S/10°C
非线性 (Non-linear)	0.2%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.5±10% mV/V	使用温度范围 (Operating temperature range)	-20~65°C
蠕变 (Creep)	±0.03%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350/750±10Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350/700±5Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip65

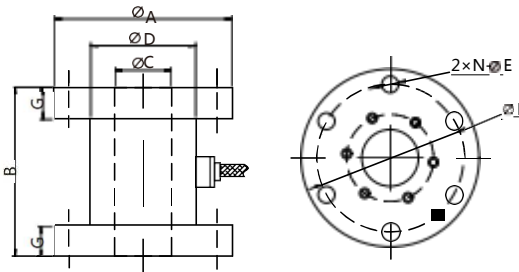
型号 : KDEV-N-5A

产品特点 / Product characteristics

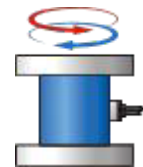
- 电阻应变为敏感元件，集成电路构成的一体化产品，精度高，性能稳定，中低量程扭矩测量，安装使用方便，两端均为法兰盘连接。
- Resistance strain as a sensitive element, integrated circuit products, high precision, stable performance, low-range torque measurement, easy to install and use, both ends are flange connection.

• 安装尺寸 / Mounting dimensions

量程NM	A	B	C	D	E	F	N	G
5-50	69	65	/	41	6.5	57	6	12
100-300	69	65	22	41	6.5	57	6	12
500-1000	98	80	30	60	8.5	80	8	15
2000-5000	125	96	45	79	13	105	8	20



• 受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	10/20/50/100/200/300/500/1000/2000/5000 NM	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.1%, ≤±0.3%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.2%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.5±10% mV/V	使用温度范围 (Operating temperature range)	-20~65°C
蠕变 (Creep)	±0.03%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±1.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	750±10Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	700±5Ω	电缆线规格 (Cable specifications)	Φ5mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip65

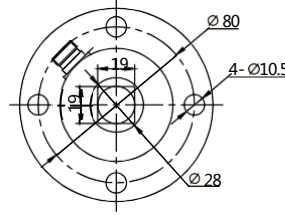
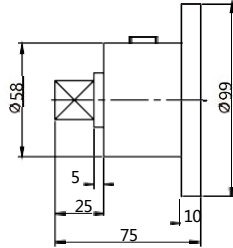


型号 : KDEV-N-5B

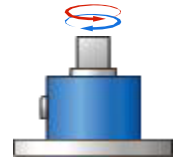
产品特点 / Product characteristics

- 电阻应变为敏感元件和集成电路构成一体产品，精度高，性能稳定，一端为四方键连接，一端为法兰盘连接，安装使用方便。
- The resistance strain is made up of sensitive element and integrated circuit, with high precision and stable performance. One end is connected by square key, the other end is connected by flange, so it is easy to install and use.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0-20/50/100/200/300/500 NM	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S/10°C
综合误差 (Composite Error)	≤±0.1%, ≤±0.3%	零点温度影响 (Zero temperature effect)	±0.05%F.S/10°C
非线性 (Non-linear)	0.2%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.5±10% mV/V	使用温度范围 (Operating temperature range)	-20~65°C
蠕变 (Creep)	±0.03%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±1.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	350/750±10Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	350/700±5Ω	电缆线规格 (Cable specifications)	Φ5mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip65

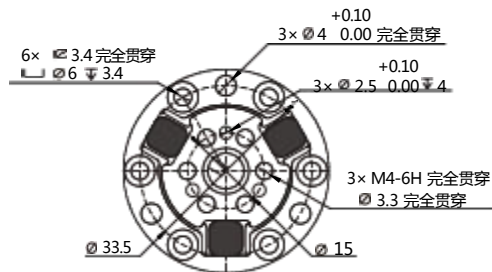
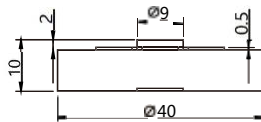


型号 : KDEV-N-5C

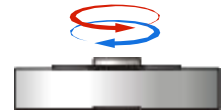
产品特点 / Product characteristics

- 采用优质不锈钢材质、圆盘结构，具有结构设计合理、精度高、稳定性好、体积小、高度低、安装便捷等特点。适用于盘类连接、钻机及工业自动化各种静态、非连续旋转的扭力值测量领域。
- Adopt high-quality stainless steel material, disc structure, with reasonable structure design, high precision, good stability, small size, low height, easy installation and so on. It is suitable for measuring the torque value of various static and discontinuous rotation in disc connection, drilling rig and industrial automation.

安装尺寸 / Mounting dimensions

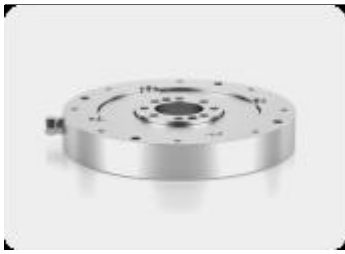


受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	20/50/80/100 NM	灵敏度温度影响 (Sensitivity temperature effect)	±0.1%F.S/10°C
综合误差 (Composite Error)	±0.5%F.S.	零点温度影响 (Zero temperature effect)	±0.1%F.S/10°C
非线性 (Non-linear)	0.3%F.S.	温度补偿范围 (Temperature compensation range)	-10~40°C
输出灵敏度 (Output sensitivity)	1.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~60°C
滞后 (Lag behind)	0.05%F.S	推荐激励电压 (Recommended excitation voltage)	5~10V
使用寿命 (Service life)	100万次以上	最大激励电压 (Maximum excitation voltage)	12V
材料 (Materials)	不锈钢	安全过载范围 (SAFE overload range)	120%F.S
电缆线规格 (Cable specifications)	Φ3mm×3m	极限过载范围 (Limit Overload Range)	150%F.S
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip66

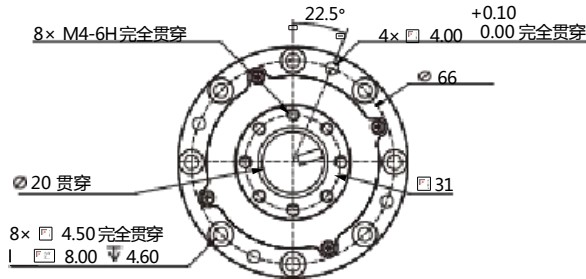
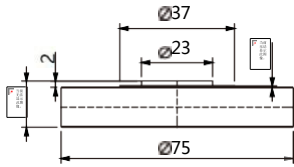


型号 : KDEV-N-5D

产品特点 / Product characteristics

- 电阻应变为敏感元件和集成电路构成的一体产品，精度高，性能稳定可靠，测量范围广，静态扭矩测量，双法兰连接，安装使用方便。扭矩传感器采用德国技术和生产设备先进的检测设备。
- The resistance strain is an integral product composed of sensitive element and integrated circuit, with high precision, stable and reliable performance, wide measurement range, static torque measurement, double flange connection, easy installation and use. Torque sensor adopts German technology and production equipment and advanced testing equipment.

安装尺寸 / Mounting dimensions



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	50/100/150 NM	灵敏度温度影响 (Sensitivity temperature effect)	±0.05%F.S./10°C
综合误差 (Composite Error)	±0.5%F.S.	零点温度影响 (Zero temperature effect)	±0.05%F.S./10°C
非线性 (Non-linear)	0.5%F.S.	温度补偿范围 (Temperature compensation range)	-10~85°C
输出灵敏度 (Output sensitivity)	1.0±10% mV/V	使用温度范围 (Operating temperature range)	-20~85°C
滞后 (Lag behind)	0.3%F.S.	推荐激励电压 (Recommended excitation voltage)	10VDC
使用寿命 (Service life)	200万次以上	最大激励电压 (Maximum excitation voltage)	12VDC
材料 (Materials)	17-4	安全过载范围 (SAFE overload range)	150%F.S.
电缆线规格 (Cable specifications)	Φ3mm×3m	极限过载范围 (Limit Overload Range)	200%F.S.
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip56



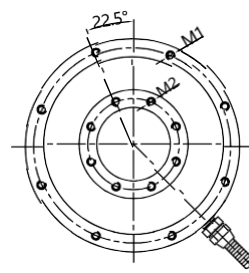
型号 : KDEV-N-5G

产品特点 / Product characteristics

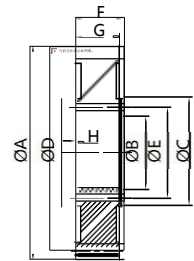
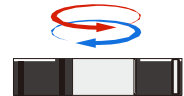
- 高度低，量程大，法兰式结构安装方便。不锈钢结构，精度高，稳定性好，静态扭力测试设备，扭力扳手等扭力测试设备。 Low height, large measuring range, convenient installation of large structure. Stainless steel structure, high precision, good stability, static torque testing equipment, torque wrench and other torque testing equipment.
- height, large measuring range, convenient installation of large structure. Stainless steel structure, high precision, good stability, static torque testing equipment, torque wrench and other torque testing equipment.

安装尺寸 / Mounting dimensions

量程(NM)	ΦA	ΦB	ΦC	ΦD	ΦE	F	G	H	N1	M2
50/100/200	146	50	74	134	62	32	30	2	8-M6	8-M6
300/500	196	80	110	178	95	42	40	2	8-M10	8-M8
1000	214	100	130	196	116	43	40	2	8-M10	8-M10



受力方式/Force mode



技术参数 / Technical parameters

量程 (Measuring range)	0-50/100/200/500/1000 NM	灵敏度温度影响 (Sensitivity temperature effect)	±0.03%F.S./10°C
综合误差 (Composite Error)	≤±0.1%, ≤±0.3%	零点温度影响 (Zero temperature effect)	±0.03%F.S./10°C
非线性 (Non-linear)	0.2%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.5±10% mV/V	使用温度范围 (Operating temperature range)	-20~65°C
蠕变 (Creep)	±0.03%F.S./30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S.	安全过载范围 (SAFE overload range)	150%F.S.
输入阻抗 (Input impedance)	750±10Ω	极限过载范围 (Limit Overload Range)	200%F.S.
输出阻抗 (Output impedance)	700±50Ω	电缆线规格 (Cable specifications)	Φ3mm×3m
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	防护等级 (Protection level)	Ip65

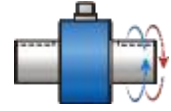


型号 : KDEV-N-6A

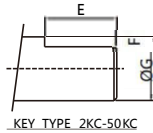
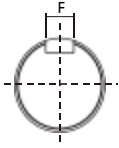
产品特点 / Product characteristics

- 电阻应变式原理，精度高，性能稳定可靠，中低量程扭矩测量，轴连接，安装使用方便。
- Resistance strain gauge principle, high precision, stable and reliable performance, low-range torque measurement, shaft connection, easy installation and use.

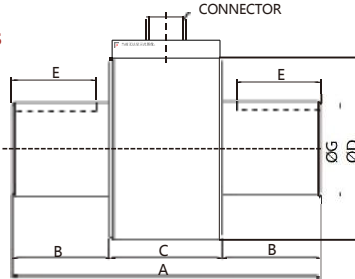
• 受力方式/Force mode



• 安装尺寸 / Mounting dimensions



KEY TYPE 2KC-50KC



Capacity	A	B	C	ΦD	E	F	G
2kgf-cm(0.196N-m)	75	20	35	34	15	1	8
5kgf-cm(0.490N-m)	75	20	35	34	15	1	8
10kgf-cm(0.981N-m)	75	20	35	34	15	1	8
20kgf-cm(1.96N-m)	75	20	35	34	15	1	8
30kgf-cm(2.942N-m)	75	20	35	34	15	1	12
50kgf-cm(4.903N-m)	75	20	35	34	15	1	12
1kgf-m(9.807N-m)	82	21	40	40	16	5*5	18
2kgf-m(19.61N-m)	82	21	40	40	16	5*5	18
2kgf-m(29.42N-m)	82	21	40	43	16	5*5	18
2kgf-m(49.03N-m)	82	21	40	43	16	5*5	18
2kgf-m(98.07N-m)	110	35	40	62	30	10*8	32
2kgf-m(196.1N-m)	110	35	40	62	30	10*8	32
2kgf-m(490.3N-m)	155	55	45	84	50	12*8	47
2kgf-m(980N-m)	155	55	45	84	50	12*8	47

技术参数 / Technical parameters

量程 (Measuring range)	0-0.2/0.5/1/2/3/5/10/20/30/50/100/200/500/1000 NM	灵敏度温度影响 (Sensitivity temperature effect)	±0.03%F.S/10°C
综合误差 (Composite Error)	≤±0.3%	零点温度影响 (Zero temperature effect)	±0.03%F.S/10°C
非线性 (Non-linear)	0.2%	温度补偿范围 (Temperature compensation range)	-10~60°C
灵敏度 (Sensitivity)	1.5±10mV/V	使用温度范围 (Operating temperature range)	-20~65°C
蠕变 (Creep)	±0.03%F.S/30min	激励电压 (Excitation voltage)	5~12V
零点输出 (Zero output)	±2.0%F.S	安全过载范围 (SAFE overload range)	150%F.S
输入阻抗 (Input impedance)	750±10Ω	极限过载范围 (Limit Overload Range)	200%F.S
输出阻抗 (Output impedance)	700±50Ω	防护等级 (Protection level)	Ip65
绝缘电阻 (Insulation Resistance)	≥5000MΩ/100V DC	电缆线规格 (Cable specifications)	Φ4mm×3m

Transmitter

control display instrument

变送器、控制显示仪表



快速采集



滤波



非线性修正



标度变换



上电清零



自动归零



手动清零 (按键/通信)



蠕变跟踪



传感器超限记录



开入加料



开入卸料



触摸按键带按键锁

产品应用

- 高速模拟量高速频率输出
- 支持modbus-RUT协议
- 可设置上、中、下限值报警功能
- 具备有开关量输入输出功能
- RS232/ RS485可选或同时输出
- 可以锁定峰值，设置谷值回差

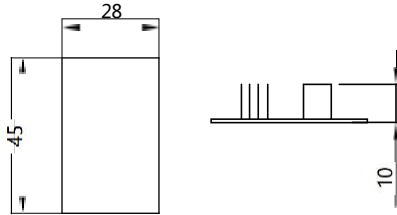


型号：KDEV-B-049A

产品特点 / Product characteristics

- **KDEV-B-049A**为传感器信号变送电路，分辨率1/3000。可定制输出模拟信号：0~5V、0~10V、0~20 mA、4~20mA，数字信号：RS232。体积小，功能全面，安装简单。
- **KDEV-B-049A** is a sensor signal transmission circuit, the resolution is 1/3000, the output analog signal can be customized: 0 ~ 5V, 0 ~ 10V, 0 ~ 20mA, 4 ~ 20mA, digital signal: RS232. Small size, full function, easy installation.

• 安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC:10V~30V	A/D分辨率 (A/D resolution)	24位, Delta-Sigma方法
功耗 (Power consumption)	< 3W	开关量输出 (Switching output)	2路
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	10, 40, 640, 1280 次/秒
激励电压 (Excitation voltage)	5VDC±2%	工作温度 (Operating temperature)	-30~60°C
综合精度 (Comprehensive accuracy)	1/10000	驱动能力 (Driving capacity)	100mA (最多6只350Ω传感器)
通讯协议 (Communication Protocol)	Modbus RTU协议和自由协议	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	显示精度 (Display accuracy)	1/10000
材质 (Material)	铝合金	防护等级 (Protection level)	Ip65
额定输出 (Rated output)	0±10V, 4~20mA, 0~20mA, RS232接口; 支持 Modbus RTU协议和自由协议。RS485接口; 最多并列32个节点; 支持 Modbus RTU协议和自由协议。		

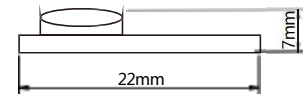


型号：KDEV-B-049E

产品特点 / Product characteristics

- 高速，高精度，多种数字滤波。RS485串口，体积小，稳定性好，抗干扰性强。
- High-speed, high-precision, a variety of digital filtering. RS485 serial port, small size, good stability, strong anti-interference.

• 安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC8~30V	驱动能力 (Driving capacity)	Drives 1pc load cells 350Ω (驱动1个350欧传感器)
信号输入 (Signal input)	0.3~6mV/V	外形尺寸 (External dimensions)	φ22mm, height 7mm (直径22, 高度7mm)
激励电压 (Excitation voltage)	5VDC±2%, 100mA	工作温度 (Operating temperature)	-30~60°C
A/D分辨率 (A/D resolution)	24bit (binary) (24位)	A/D转换率 (A/D conversion rate)	7.5/15/30/60/120(默认)/240/480/960/1920/S
输出端口 (Output port)	RS485	显示精度 (Display accuracy)	1/50000
通讯协议 (Communication Protocol)	Modbus RTU/FREE (自由协议)	功耗 (Power consumption)	About 0.68W
波特率 (Baud rate)	1200/2400/4800/9600(默认)/19200/38400/57600/115200/230400		

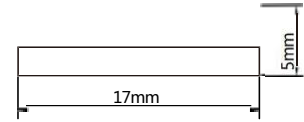


型号：KDEV-B-049F

产品特点 / Product characteristics

- 多种滤波方式，RS485串口，体积小，稳定性好，抗干扰性强。
- A variety of filtering methods, RS485 serial port, small size, good stability, strong anti-interference.

• 安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC6~12V	驱动能力 (Driving capacity)	Drives 1pc load cells 350Ω (驱动1个350欧传感器)
信号输入 (Signal input)	0.3~6mV/V	外形尺寸 (External dimensions)	φ17mm, height 5mm (直径17, 高度5mm)
激励电压 (Excitation voltage)	5VDC±2%, 100mA	工作温度 (Operating temperature)	-30~60°C
A/D分辨率 (A/D resolution)	24bit (binary) (24位)	A/D转换率 (A/D conversion rate)	10/40/S
输出端口 (Output port)	RS485	显示精度 (Display accuracy)	1/10000
通讯协议 (Communication Protocol)	Modbus RTU/FREE (自由协议)	功耗 (Power consumption)	About 0.336W
波特率 (Baud rate)	1200/2400/4800/9600(默认)/19200/38400/57600		

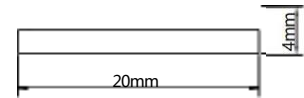


型号：KDEV-B-049G

产品特点 / Product characteristics

- 高速，高精度，多种数字滤波，RS485串口和4~20mA，体积小，稳定性好，抗干扰性强。
- High speed, high precision, multi-digital filter, RS485 serial port and 4~20mA, small size, good stability, strong anti-interference.

• 安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC8~30V	驱动能力 (Driving capacity)	Drives 1pc load cells 350Ω (驱动1个350欧传感器)
信号输入 (Signal input)	0.4~6mV/V	外形尺寸 (External dimensions)	φ20mm, height 4mm (直径20, 高度4mm)
激励电压 (Excitation voltage)	5VDC±2%, 100mA	工作温度 (Operating temperature)	-30~60°C
A/D分辨率 (A/D resolution)	24bit (binary) (24位)	A/D转换率 (A/D conversion rate)	4/20/40/90/180/350/660/1200/S
输出端口 (Output port)	RS485/4~20mA	显示精度 (Display accuracy)	1/3000
通讯协议 (Communication Protocol)	Modbus RTU/FREE (自由协议)	功耗 (Power consumption)	About 0.6W
波特率 (Baud rate)	1200/2400/4800/9600/19200/38400/57600/115200		

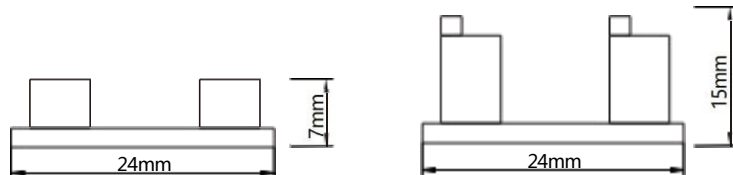


型号：KDEV-B-049H

产品特点 / Product characteristics

- 可选采样频率100HZ或者5000HZ。多种信号可输出0~20mA、4~20mA、0~±10V、0~±5V。零点、满度可调整，稳定性好，抗干扰性强。
- Optional sampling frequency 100HZ or 5000HZ. Many kinds of signals can output 0~20mA, 4~20mA, 0~±10V, 0~±5V. Zero, full degree can be adjusted, good stability, strong anti-interference.

• 安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC15~30V	驱动能力 (Driving capacity)	Drives 1pc load cells 350Ω (驱动1个350欧传感器)
信号输入 (Signal input)	0.4~6mV/V	外形尺寸 (External dimensions)	φ24mm, height 7 or 15mm (直径24, 高度7或15mm)
激励电压 (Excitation voltage)	5VDC±2%, 100mA	工作温度 (Operating temperature)	-30~60°C
精度 (Precision)	< 0.05%FS	响应频率 (Response Frequency)	100HZ/5KHZ (option可选)
电流输出 (Current output)	0~20mA/4~20mA	功耗 (Power consumption)	About 1.06W
电压输出 (Voltage output)	0~±5V/0~±10V		

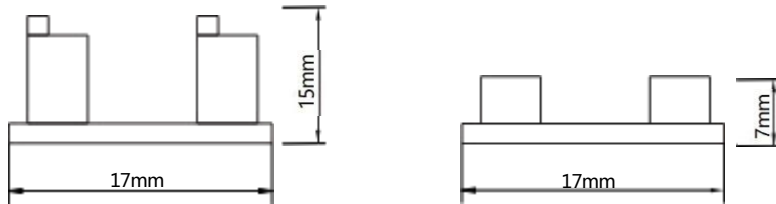


型号 : KDEV-B-049I

产品特点 / Product characteristics

- 多种信号可输出0~5V、0~10V，零点、满度可调整，稳定性好，抗干扰性强。
- A variety of signals can output 0 ~ 5V, 0 ~ 10V, zero, full degree can be adjusted, good stability, strong anti-interference.

• 安装尺寸 / Mounting dimensions



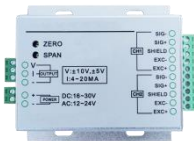
技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC15~24V	驱动能力 (Driving capacity)	Drives 1pc load cells 350Ω (驱动1个350欧传感器)
信号输入 (Signal input)	0.4~6mV/V	外形尺寸 (External dimensions)	φ 17mm, height 15 or 7mm (直径17, 高度7 或15mm)
激励电压 (Excitation voltage)	5VDC±2%, 100mA	工作温度 (Operating temperature)	-30~60°C
精度 (Precision)	< 0.05%FS	响应频率 (Response Frequency)	100HZ
电流输出 (Current output)	0~5V/0~10V	功耗 (Power consumption)	About 0.7W

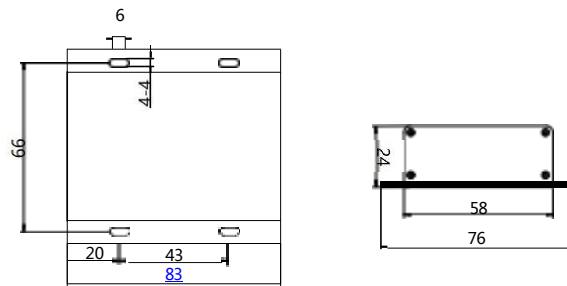
型号 : KDEV-B-0B

产品特点 / Product characteristics

- 将力学量转换成标准电流、电压信号输出，可切换 0-10mA、0-20mA、4-20mA，0±5v、0±10v。可直接与自动控制设备PLC、单片机、上位机终端等接口或者计算机联网。
- The mechanical quantity can be converted into standard current and voltage signal output, which can be switched to 0-10mA, 0-20mA, 4-20mA, 0±5v, 0±10v. It can be connected with PLC, MCU, PC terminal or computer directly.



• 安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

供电电压 (Supply Voltage)	16~30VDC或12~24VAC	A/D分辨率 (A/D resolution)	1280Hz
功耗 (Power consumption)	< 3W	开关量输出 (Switching output)	/
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	/
激励电压 (Excitation voltage)	默认5VDC (或12VDC可选)	工作温度 (Operating temperature)	-30~85°C
综合精度 (Comprehensive accuracy)	≤0.05%F.S.	驱动能力 (Driving capacity)	(最多4只350欧传感器)
通讯协议 (Communication Protocol)	/	外形尺寸 (Contour dimension)	(见上述尺寸图)
传输速率 (Transmission rate)	5KHz	显示精度 (Display accuracy)	/
材质 (Material)	铝合金	防护等级 (Protection level)	Ip64
额定输出 (Rated output)	0~10mA, 0~20mA, 4~20mA, 0~±5V, 0~±10V		

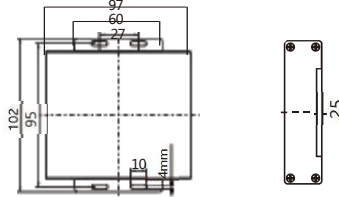
型号：KDEV-B-1B



产品特点 / Product characteristics

- 采用铝合金外壳，内部采用原装进口高性能器件，将传感器输出信号进行精密放大，内部进行稳压、恒流供桥、电压电流转换、阻抗适配、线性补偿、温度补偿等。将力学量转换成标准电流、电压信号输出，可切换：0-10mA、0-20mA、4-20mA、0~±5V、0~±10V。可直接与自动控制设备 PLC、单片机、上位机终端等接口或者计算机联网。具备标准信号外调零、外调增益功能，输入过压保护，输出短路保护。
- Using aluminum alloy shell, the internal use of original imported high-performance devices, the sensor output signal for precision amplification, internal voltage stabilization, constant current bridge, voltage and current conversion, impedance adaptation, linear compensation, temperature compensation, etc. The mechanical quantity can be converted into the output signal of standard current and voltage, which can be switched to 0-10mA, 0-20mA, 4-20mA, 0~±5V, 0~±10V. It can be connected with PLC, MCU, PC terminal or computer directly. It has the function of standard signal external zero adjustment, external gain adjustment, input overvoltage protection, output short circuit protection.

安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC:10V~30V	A/D分辨率 (A/D resolution)	/
功耗 (Power consumption)	< 3W	开关量输出 (Switching output)	/
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	/
激励电压 (Excitation voltage)	5VDC±2%	工作温度 (Operating temperature)	-30~60°C
综合精度 (Comprehensive accuracy)	1/10000	驱动能力 (Driving capacity)	单独两路传感器
通讯协议 (Communication Protocol)	/	外形尺寸 (Contour dimension)	(见上述尺寸图)
传输速率 (Transmission rate)	/	显示精度 (Display accuracy)	1/10000
材质 (Material)	铝合金	防护等级 (Protection level)	Ip65
额定输出 (Rated output)	0-10mA、0-20mA、4-20mA、0~±5V、0~±10V		

型号：KDEV-B-1D



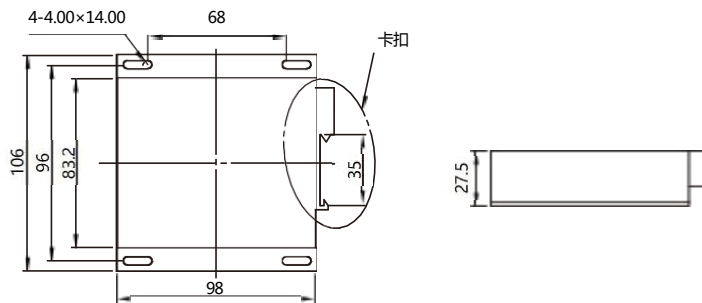
产品特点 / Product characteristics

- 四通道模拟量变送器，将传感器输出信号进行精密放大，内部进行稳压、恒流供桥、电压电流转换、阻抗适配、线性补偿、温度补偿等。将力学量转换成标准电流、电压信号输出。
- A four-channel analog transmitter amplifies the output signal of the sensor, regulates the internal voltage, constant-current bridge, voltage-current conversion, impedance adaptation, linear compensation, temperature compensation and so on. The mechanical quantity is converted into the standard current and voltage signal output.

安装尺寸 / Mounting dimensions

选型参考图

KDEV-B-1DI	电流输出
KDEV-B-1DV	电压输出



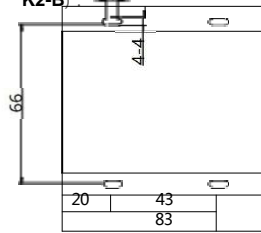
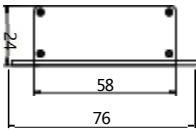
技术参数 / Technical parameters

供电电压 (Supply Voltage)	18V~30VDC或15~22VDC	A/D分辨率 (A/D resolution)	/
功耗 (Power consumption)	< 4W	开关量输出 (Switching output)	/
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	≥5KHZ
激励电压 (Excitation voltage)	默认5VDC (或12VDC可选)	工作温度 (Operating temperature)	-30~60°C
综合精度 (Comprehensive accuracy)	≤±0.05%FS	驱动能力 (Driving capacity)	四路独立通道，可接 16只350Ω传感器
通讯协议 (Communication Protocol)	/	外形尺寸 (Contour dimension)	(见上述尺寸图)
传输速率 (Transmission rate)	/	显示精度 (Display accuracy)	/
材质 (Material)	铝合金	防护等级 (Protection level)	Ip64
额定输出 (Rated output)	0~5V、0~10V、0~±5V、0~±10V、0~20mA、0~10mA、4~20mA。		

型号 : KDEV-B-04



• 安装尺寸 / Mounting dimensions



产品特点 / Product characteristics

- **KDEV-B-04**变送器在同等价位的产品中，速度更快，可达1280次/秒。分辨率1/3000，RS232接口；支持Modbus RTU协议和自由协议。RS485接口；最多并列32个节点；支持Modbus RTU协议和自由协议。可选两路开关量输出(**KDEV-B-04 -K2-B**)。
- **KDEV-B-04** transmitter in the same price products, faster, up to 1280 times/second. Resolution 1/3000, RS232 interface; support Modbus RTU protocol and free protocol. RS485 interface; up to 32 nodes in parallel; support Modbus RTU protocol and free protocol. Optional two-way switch output (**KDEV-B-04 -K2-B**).

KDEV-B-04	RS485
KDEV-B-04-S4	RS485
KDEV-B-04-S4-M	RS485+模拟量
KDEV-B-04-S4-M-K	RS485+模拟量+开关量
KDEV-B-04-S4-Y	RS485+以太网
KDEV-B-04-S2	RS232
KDEV-B-04-S2-M	RS232+模拟量
KDEV-B-04-S2-M-K	RS232+模拟量+开关量

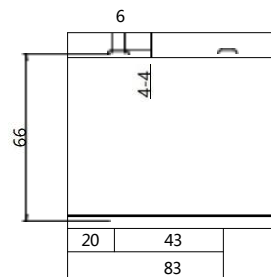
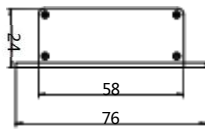
技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC:10V~30V	A/D分辨率 (A/D resolution)	24位, Delta-Sigma方法
功耗 (Power consumption)	< 3W	开关量输出 (Switching output)	/
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	10, 40, 640, 1280 次/秒
激励电压 (Excitation voltage)	5VDC±2%	工作温度 (Operating temperature)	-30~60°C
综合精度 (Comprehensive accuracy)	1/10000	驱动能力 (Driving capacity)	100mA (最多6只350Ω传感器)
通讯协议 (Communication Protocol)	Modbus RTU协议和自由协议	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	显示精度 (Display accuracy)	1/10000
材质 (Material)	铝合金	防护等级 (Protection level)	Ip65
额定输出 (Rated output)	0±10V, 4~20mA, 0~20mA, RS232; 接口支持 Modbus RTU协议和自由协议。RS485接口; 最多并列32个节点; 支持 Modbus RTU协议和自由协议。		

型号 : KDEV-B-05



• 安装尺寸 / Mounting dimensions



产品特点 / Product characteristics

- 高频变送器，同时支持RS232和RS485，波特率最高到921600，模拟量：0~±10V、4~20mA、0~20mA，分辨率1/6000，模拟量和RS232通讯为二选一。
- High frequency transmitter, support both RS232 and RS485, baud rate up to 921600, analog: 0 ~ ± 10V, 4 ~ 20mA, 0 ~ 20mA, Resolution 16000, analog and RS232 communication for one or the other.

选型参考图

KDEV-B-05	RS232+RS485
KDEV-B-05-S4-M	RS485+模拟量

技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC:9V~30V	A/D分辨率 (A/D resolution)	24bit (二进制)
功耗 (Power consumption)	< 3W	开关量输出 (Switching output)	/
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	10~4800次/秒
激励电压 (Excitation voltage)	默认5VDC	工作温度 (Operating temperature)	-30~60°C
综合精度 (Comprehensive accuracy)	≤0.05%F.S.	驱动能力 (Driving capacity)	100mA (最多6只350Ω传感器)
通讯协议 (Communication Protocol)	Modbus RTU协议和自由协议	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 921600	显示精度 (Display accuracy)	1/100000
材质 (Material)	铝合金	防护等级 (Protection level)	Ip65
额定输出 (Rated output)	0±10V, 4~20mA, 0~20mA, RS232接口; 支持 Modbus RTU协议和自由协议。RS485接口; 支持 Modbus RTU协议和自由协议。		

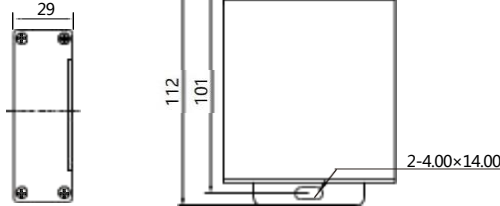


型号 : KDEV-B-1442

产品特点 / Product characteristics

- **KDEV-B-1442**变送器, 拥有2路独立通道, 同时具有TEDS功能。RS232, RS485通讯接口二选一; 给需要二路传感器独立数据, 提供了更好的, 更便捷解决方案。
- **KDEV-B-1442** transmitter, with 2 independent channels, at the same time with Teds function. RS232, RS485 communication interface one of two options; to need two independent sensor data, provides a better, more convenient solution.

安装尺寸 / Mounting dimensions

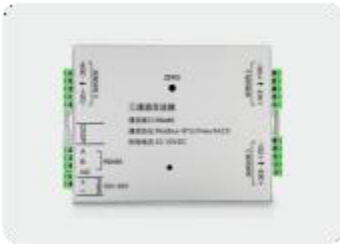


选型参考图

KDEV-B-1142-S2	RS232
KDEV-B-1442-S4	RS485
KDEV-B-1442-S4-Y	RS485+以太网

技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC:10V~30V	A/D分辨率 (A/D resolution)	24bit (二进制)
功耗 (Power consumption)	< 3W	开关量输出 (Switching output)	/
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	1280次/秒
激励电压 (Excitation voltage)	5VDC±2%	工作温度 (Operating temperature)	-30~60°C
综合精度 (Comprehensive accuracy)	1/10000	驱动能力 (Driving capacity)	每个通道驱动2个350欧传感器
通讯协议 (Communication Protocol)	Modbus RTU/ASCII/ FREE(自由协议)	外形尺寸 (Contour dimension)	器 (见上述尺寸图)
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	显示精度 (Display accuracy)	1/10000
材质 (Material)	铝合金	防护等级 (Protection level)	Ip64
额定输出 (Rated output)	RS232, RS485二选一; 支持Modbus RTU/ASCII/FREE(自由协议)。		

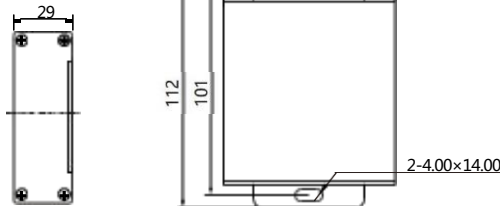


型号 : KDEV-B-1443

产品特点 / Product characteristics

- **KDEV-B-1443**变送器拥有三路独立通道, 可连接三路传感器, 而且尺寸小, 精度高。为多点测量提供便捷。
- **KDEV-B-1443** transmitter has three independent channels, can be connected to three-way sensors, and small size, high accuracy. For the convenience of multi-point measurement.

安装尺寸 / Mounting dimensions



选型参考图

KDEV-B-1443-S2	RS232
KDEV-B-1443-S4	RS485
KDEV-B-1443-S4-Y	RS485+以太网

技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC:10V~30V	A/D分辨率 (A/D resolution)	24bit (二进制)
功耗 (Power consumption)	< 3W	开关量输出 (Switching output)	/
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	1280次/秒
激励电压 (Excitation voltage)	5VDC±2%	工作温度 (Operating temperature)	-30~60°C
综合精度 (Comprehensive accuracy)	1/10000	驱动能力 (Driving capacity)	每个通道驱动2个350欧传感器
通讯协议 (Communication Protocol)	Modbus RTU/ASCII/ FREE(自由协议)	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	显示精度 (Display accuracy)	1/10000
材质 (Material)	铝合金	防护等级 (Protection level)	Ip64
额定输出 (Rated output)	RS232, RS485二选一; 支持Modbus RTU/ASCII/FREE(自由协议)。		

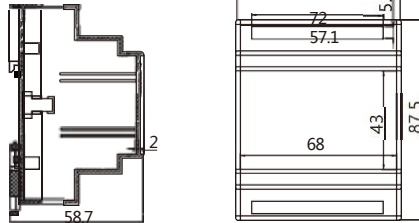
型号：KDEV-B-044



产品特点 / Product characteristics

- **KDEV-B-044** 四通道变送器增加了TEDS功能，放大器需要接智能传感器，智能传感器自带数字存储器，存储器内包含有传感器型号、序列号、灵敏度、最后校准日期等信息。具有即插即用和自校准能力。
- **KDEV-B-044** four-channel transmitter adds the TEDS function, the amplifier needs to be connected to the smaDz sensor, the smaDz sensor has its own digital memory, the memory contains information such as sensor model number, serial number, sensitivity, last calibration date and so on. Plug and play and self-calibration capability.

• 安装尺寸 / Mounting dimensions



选型参考图

KDEV-B-044	RS485
KDEV-B-044-S2	RS232
KDEV-B-044-S4-Y	RS485+以太网

技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC:10V~30V	A/D分辨率 (A/D resolution)	24位, Delta-Sigma方法
功耗 (Power consumption)	< 4W	开关量输出 (Switching output)	/
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	10, 40, 640, 1280 次/秒
激励电压 (Excitation voltage)	5VDC±2%, 100mA	工作温度 (Operating temperature)	-30~60°C
综合精度 (Comprehensive accuracy)	1/10000	驱动能力 (Driving capacity)	5VDC±2%, 100mA
通讯协议 (Communication Protocol)	Modbus RTU协议和自由协议	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	显示精度 (Display accuracy)	1/10000
材质 (Material)	塑料	防护等级 (Protection level)	Ip65
额定输出 (Rated output)	RS232接口;支持Modbus RTU协议和自由协议。RS485 接口;最多并列32个节点;支持Modbus RTU协议和自由协议。		

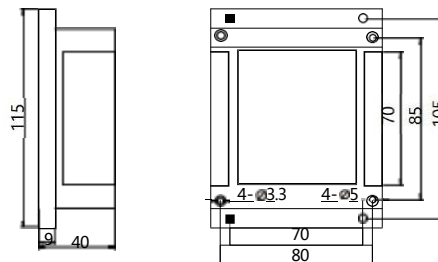
型号：KDEV-B-064



产品特点 / Product characteristics

- **KDEV-B-064**, 6通道卡轨式数字输出变送器, 采样频率达1280次/秒, 6路独立通道, 具有操作简单, 安装方便等优点。
- **KDEV-B-064** 6-channel rail digital output transmitter, sampling frequency up to 1280/s, 6 independent channels, with simple operation, easy installation and so on.

• 安装尺寸 / Mounting dimensions



选型参考图

KDEV-B-064-S2	Rs232
KDEV-B-064-S42	Rs485
KDEV-B-064-S4-Y	RS485+以太网

技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC:10V~30V	A/D分辨率 (A/D resolution)	24bit (binaLj)
功耗 (Power consumption)	< 5W	开关量输出 (Switching output)	/
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	10, 40, 640, 1280Hz
激励电压 (Excitation voltage)	5VDC±2%, 100mA	工作温度 (Operating temperature)	-30~60°C
综合精度 (Comprehensive accuracy)	1/10000	驱动能力 (Driving capacity)	6路传感器
通讯协议 (Communication Protocol)	Modbus RTU协议和自由协议	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	显示精度 (Display accuracy)	1/10000
材质 (Material)	塑料	防护等级 (Protection level)	Ip64
额定输出 (Rated output)	RS232或RS485二选一(自由协议, Modbus RTU和ASCII协议)。		

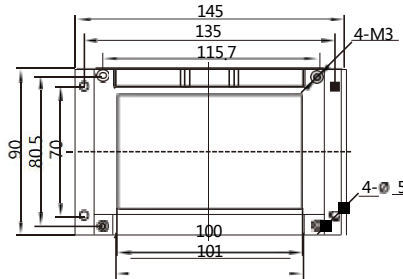
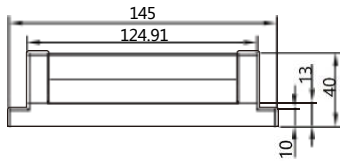


型号 : KDEV-B-084

产品特点 / Product characteristics

- **KDEV-B-084**八通道数字变送器是为各类工业应用场合设计的高品质产品，通过对称重传感器(组)输出的弱重量信号进行数字处理，通过RS232、RS485串口通信输出至用户的上位系统。
- **KDEV-B-084** eight-channel digital transmitter is a high-quality product designed for various industrial applications. It processes the weak weight signal of the weighing sensor (group), through RS232, RS485 serial communication output to the user's upper system.

安装尺寸 / Mounting dimensions



选型参考图

KDEV-B-084Y	数字量485+232
KDEV-B-084-S4-Y	RS485+以太网

技术参数 / Technical parameters

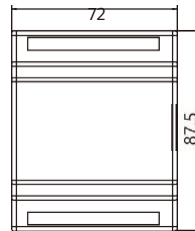
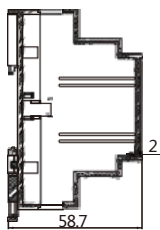
供电电压 (Supply Voltage)	DC:10V~30V	A/D分辨率 (A/D resolution)	24位, Delta-Sigma方法
功耗 (Power consumption)	< 6W	开关量输出 (Switching output)	/
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	10, 40, 640, 1280次/秒
激励电压 (Excitation voltage)	5VDC±2%	工作温度 (Operating temperature)	-30~85°C
综合精度 (Comprehensive accuracy)	1/10000	驱动能力 (Driving capacity)	8路传感器
通讯协议 (Communication Protocol)	Modbus RTU协议和自由协议	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	显示精度 (Display accuracy)	1/10000
材质 (Material)	塑料	防护等级 (Protection level)	Ip64
额定输出 (Rated output)	同时支持RS232和RS485(Modbus RTU、FREE、ASCII协议)。		

型号 : KDEV-B-326

产品特点 / Product characteristics

- **KDEV-B-326**卡轨式力值显示控制仪，速度可达1280次/秒。同时支持RS232和RS485通讯。客户在选型过程中，可在基本款基础上选择添加TEDS、模拟量等功能。此控制仪的比较器也比较灵活，比较方式多样，用户可自己搭建比较模式。
- **KDEV-B-326** rail force display controller, speed up to 1280 times/second. Support RS232 and RS485 communication. In the selection process, customers can choose to add the basic section based on TEDS, analog volume and other functions. This controller's comparator is also more flexible, compares the way to be diverse, the user may build the comparison pattern by oneself.

安装尺寸 / Mounting dimensions



选型参考图

KDEV-B-326	RS232+RS485
KDEV-B-326-S2-S4-Y	1 RS232+RS485+模拟量

技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC:10V-30V	通信输出 (Communication output)	同时支持RS232和RS485
输入灵敏度 (Input sensitivity)	0.4mV/V~6mV/V	协议类型 (Protocol type)	Mod bus RS232和自由协议
显示窗口 (Display Window)	单排六位LED	工作温度 (Operating temperature)	-30~60°C
激励电压 (Excitation voltage)	5VDC±2%, 100mA (最多6只350Ω的传感器)	耐电压 (Withstand voltage)	在2000VAC50/60Hz下1分钟
A/D性能 (A/D performance)	24位, Delta-Sigma方法	防护等级 (Protection level)	Ip64
显示精度 (Display accuracy)	1/10000	周围环境 (Surrounding Environment)	温度: -10~55°C; 存储: 25~65°C 湿度: 35~85% RH; 存储: 35~85% RH
输出速率 (Output rate)	10, 40, 640, 1280次/秒	开关量 (Switching quantity)	3点晶体管输出, 24V/1A带载能力, 2路输入
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	模拟量输出 (Analog output)	0~±10V, 0~20mA 4~20mA:分辨率1/3000

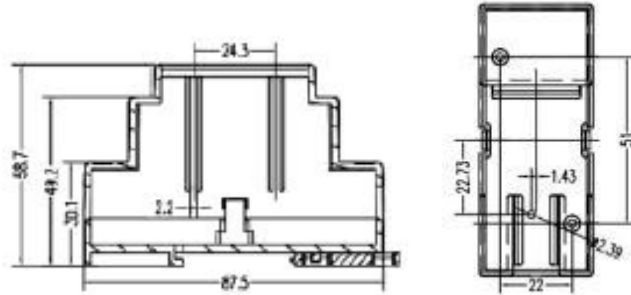


型号：KDEV-B-35

产品特点 / Product characteristics

- 卡轨式信号放大显示器，卡轨式设计，体积小，易于安装。整机EMC设计，抗干扰能力强，适用于工业环境。
- Track-type signal amplifier display, track-type design, small size, easy to install. The whole machine EMC design, anti-interference ability, suitable for industrial environment.

安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC12~30V	A/D分辨率 (A/D resolution)	24位, Delta-Sigma方法
功耗 (Power consumption)	< 3W	开关量输出 (Switching output)	2点晶体管开关
输入灵敏度 (Non-linear)	0~4mV/V	采样频率 (sampling rate)	10、40、640、1280次/秒
激励电压 (Excitation voltage)	5VDC±2%	工作温度 (Operating temperature)	-30~60°C
综合精度 (Comprehensive accuracy)	1/10000	驱动能力 (Driving capacity)	6只350Ω传感器
通讯协议 (Communication Protocol)	Modbus RTU和 自由协议	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600	显示精度 (Display accuracy)	1/10000
材质 (Material)	塑料	防护等级 (Protection level)	Ip65
额定输出 (Rated output)	Rs485		



3通道



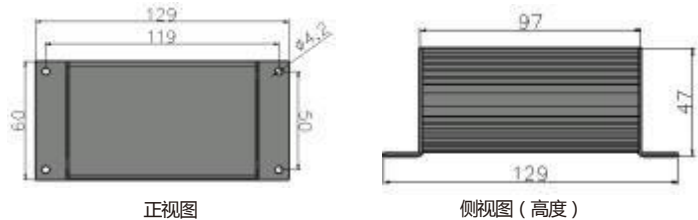
6通道

型号：KDEV-B-36-3T /KDEV-B-36-6T

产品特点 / Product characteristics

- 本采集器为多通道高速重量数据采集器，采用CAN，RS-485通讯，支持标准的ModBus-RTU通讯协议，支持外接操作面板标定操作。
- This data collector is a multi-channel high-speed weight data collector. It adopts CAN, RS-485 communication, supports standard ModBus-RTU communication protocol and external operation panel calibration.

安装尺寸 / Mounting dimensions



正视图

侧视图 (高度)

技术参数 / Technical parameters

显示窗口 (Show the window)	定制双排LED显示	激励电压 (Excitation voltage)	5VDC
传感器通道数 (Number of sensor channels)	6通道	电源供给 (Power supply)	24±5VDC
可读性 (Readability)	1/900000	整机功耗 (Power consumption of the whole machine)	≤10W
输出线性 (The output is linear)	< 0.002%	工作温度范围 (Operating temperature range)	-20 ~ 70°C
综合精度 (Comprehensive accuracy)	优于0.01%	单件重量 (Weight per piece)	0.5kg
A/D转换速度 (A/d conversion speed)	≤1280次/秒	材料 (Materials)	Aluminum ally (铝合金)
接受灵敏度 (Accept sensitivity)	-7.2~+7.2 m V/V	防护等级 (Protection level)	Ip65
输入负载 (Input load)	1~4只350Ω传感器	输入接口 (Input interface)	不支持
输出规格 (Output specifications)	±10V / 0 ~ 10V / 4 ~ 20mA	输出接口 (Output interface)	不支持
满量程温度漂移 (Full range temperature drift)	≤10ppm/°C	模拟量 (Analog quantities)	不支持
零点温度漂移 (Zero temperature drift)	≤10μV/°C	通讯接口 (Communication interface)	CAN与RS-485

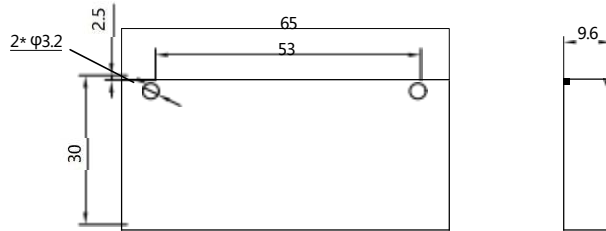


型号：KDEV-B-39

产品特点 / Product characteristics

- 超小体积，OLED液晶屏显示，速率可达1760次/秒，可输出数字信号或模拟信号，适用于安装空间有限的各种场合。
- Ultra-small volume, OLED LCD display, speed up to 1760 times/second, can output digital or analog signals, suitable for installation space is limited in a variety of occasions.

• 安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

供电电压 (Supply Voltage)	13~17V AC50/60Hz 18~32V DC	A/D分辨率 (A/D resolution)	24bit (binary)
功耗 (Power consumption)	< 5W	开关量输出 (Switching output)	/
输入灵敏度 (Non-linear)	1.0~7.0mV/V	采样频率 (sampling rate)	≥1760Hz
激励电压 (Excitation voltage)	DC5V,100mA	工作温度 (Operating temperature)	-10~50°C
综合精度 (Comprehensive accuracy)	5/100000	驱动能力 (Driving capacity)	6只350Ω传感器
通讯协议 (Communication Protocol)	Modbus RTU和 自由协议	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400, 336K, 500K, 1M, 1.5M, 2M, 3M	显示精度 (Display accuracy)	OLED液晶屏显示
材质 (Material)	塑料	防护等级 (Protection level)	Ip65
额定输出 (Rated output)	电压：0~10V，±10VRS485接口，Modbus-RTU和TC ASCLL协议		



型号：KDEV-B-40

产品特点 / Product characteristics

- 本控制器体积小，精度高，速度快，适用于各类需要进行称重测力的工业现场。拥有三/四个传感器输入入口，适用于三维测力等场合。
- The controller has the advantages of small volume, high precision and high speed, and is suitable for various industrial fields which need to be weighed and force-measured. With three or four sensor inputs, suitable for three-dimensional force measurement and other occasions.

• 安装尺寸 / Mounting dimensions



选型参考图

KDEV-B-40	晶体管、数字量
KDEV-B-40-J-S-M	晶体管、数字量、模拟量
KDEV-B-40-J-S-V	晶体管、数字量、电压
KDEV-B-40-J-S-Y	晶体管、数字量、以太网

技术参数 / Technical parameters

显示窗口 (Show the window)	4路6位LED显示	零点漂移 (Zero Drift)	≤10μV/°C
分度值 (The graduation value)	1、2、5、10、20、50	量程温度系数 (Range temperature coescient)	≤0.02%FS/°C
最大秤量显示范围 (Maximum scale display range)	999999	传感器类型 (Sensor type)	3路或4路电阻应变式传感器
小数点位数 (The number of decimal places)	0、0.0、0.00、0.000、0.0000、0.00000	传感器激励电压 (Sensor excitation voltage)	DC5V，可并联4只 350Ω传感器
静态准确度等级 (Static accuracy rating)	分辨率900000	开关量输出 (触点) 容量 (Switch output (contact) capacity)	3 路晶体管输出容量：DC24V 0.5A
最大信号输入范围 (Maximum signal input range)	-30 mV ~ +30 mV (-6mV/V~+6mV/V)	开关量输入电压 (Switching quantity input voltage)	DC24V
零点漂移 (Zero Drift)	≤0.05μV (@ 0.02mV/V)	开关量输入电流 (Switch quantity input current)	4~6mA
量程温度系数 (Range temperature coescient)	≤10ppm/°C	电源范围 (Power Range)	DC24V (±5V)
传感器接口输入阻抗 (Input impedance of sensor inteDzace)	≥20MΩ	产品功率 Product power)	≤10W
非线性误差 (Nonlinear error)	≤0.002%FS	工作温度 (Operating temperature)	-10°C~50°C
A/D转换速度 (A/d conversion speed)	≤ 3200 次/秒	湿度范围 (Humidity range)	≤90% 相对湿度 (无凝结水)
模拟量 (Analog quantities)	最多支持4路模拟量同时输出	通讯接口 (Communication inteDzace)	RS-485与RS-232，标准Modbus RTU协议支持、选配网口

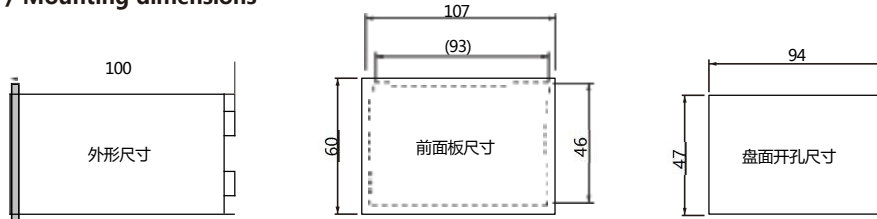


型号：KDEV-B-491

产品特点 / Product characteristics

- 三维力仪表，输入信号可选：mV、V、mA，可选配RS232与RS485通信口外接上位机IPC/PLC与LED远程显示器。
- Three-dimensional force meter, input signal optional: MV, V, MA, optional RS232 and RS485 interface external PC IPC/PLC and LED remote display.

安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC24V~20%	A/D分辨率 (A/D resolution)	/
功耗 (Power consumption)	< 5W	开关量输出 (Switching output)	晶体管:2路
输入灵敏度 (Non-linear)	±35mV	采样频率 (sampling rate)	≤1760Hz
激励电压 (Excitation voltage)	DC5V,100mA	工作温度 (Operating temperature)	-10~50°C
综合精度 (Comprehensive accuracy)	0.005%FS	驱动能力 (Driving capacity)	单个三维力传感器
通讯协议 (Communication Protocol)	RS485&RS232, 通过内部拨码开关任意选用其中之一	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	显示精度 (Display accuracy)	1/5000
材质 (Material)	铝合金	防护等级 (Protection level)	Ip65
额定输出 (Rated output)	电压: 0~10V, ±10V; RS485接口, Modbus-RTU和TC ASCLL协议		

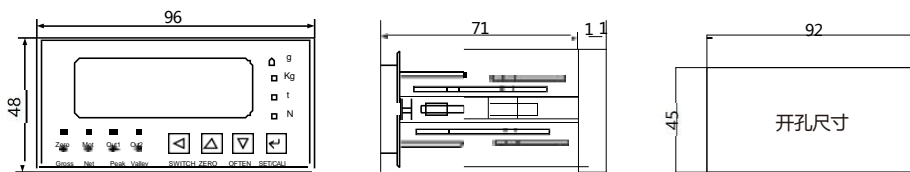


型号：KEDV-B-51

产品特点 / Product characteristics

- 速度更快，可达1280次/秒。可在基本款基础上选择添加以下功能：1. 带TEDS；2. 带模拟量输出0~20mA、4~20mA、0~±10V；3. 带通信，可操作协议里面的所有功能。
- Faster, up to 1,280 times per second. You can choose to add the following features to the basic section: 1. With Teds; 2. With analog output 0 ~ 20mA, 4 ~ 20mA, 0 ~ ± 10V; 3. Band communication, operable protocol inside all functions.

安装尺寸 / Mounting dimensions



选型参考图

KDEV-B-51-J	晶体管
KDEV-B-51-J-M	晶体管+模拟量
KDEV-B-51-J-S2	晶体管+RS232
KDEV-B-51-J-S4	晶体管+RS485
KDEV-B-51-R1	继电器
KDEV-B-51-R1-M	继电器+模拟量
KDEV-B-51-R1-S2	1 继电器+RS232
KDEV-B-51-R1-S4	2 继电器+RS485

技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC: 9V~30V	A/D分辨率 (A/D resolution)	24位, Delta-Sigma方法
功耗 (Power consumption)	< 5W	开关量输出 (Switching output)	晶体管: 3路; 继电器: 2路
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	10、40、640次/秒
激励电压 (Excitation voltage)	默认5VDC (或12VDC可选)	工作温度 (Operating temperature)	-30~60°C
综合精度 (Comprehensive accuracy)	≤±0.05%FS	驱动能力 (Driving capacity)	最多6只350Ω的传感器
通讯协议 (Communication Protocol)	/	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	显示精度 (Display accuracy)	1/10000
材质 (Material)	塑料	防护等级 (Protection level)	Ip65
显示窗口 (Display Window)	单排五位LED高亮显示 (0.56寸)		
额定输出 (Rated output)	0~±10V、0~20mA、4~20mA; 分辨率1/3000, RS232接口: 支持Modbus RTU协议和自由协议, RS485接口, 最多并列32个节点: 支持Modbus RTU协议和自由协议。		

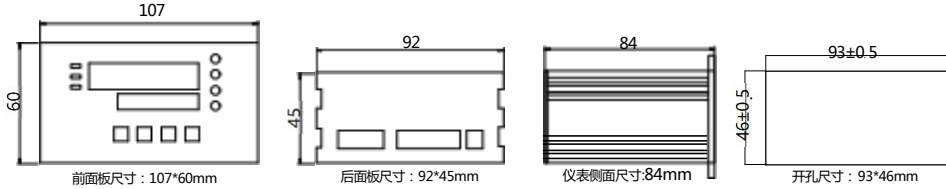
型号：KDEV-B-52



产品特点 / Product characteristics

- KDEV-B-52力值显示控制仪，速度可达3200次/秒，同时客户在选型过程中，可以选择添加TEDS，模拟量等功能，此控制仪的比较器也比较灵活，比较方式多样。
- KDEV-B-52 force value display controller, speed up to 3200 times/ second, at the same time in the selection process, customers can choose to add TEDS, analog and other functions, this controller is more flexible comparator, comparison mode.

■ 安装尺寸 / Mounting dimensions



KDEV-B-52	RS232+RS485
KDEV-B-52-S2-S4-M	RS232+RS485+模拟量

技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC : 12V~30V	A/D分辨率 (A/D resolution)	24位, Delta-Sigma方法
功耗 (Power consumption)	< 5W	开关量输出 (Switching output)	晶体管:3路,继电器2点
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	10、40、640、1280次/秒
激励电压 (Excitation voltage)	5VDC±2%	工作温度 (Operating temperature)	-10~55°C
综合精度 (Comprehensive accuracy)	≤±0.05%FS	驱动能力 (Driving capacity)	100mA (6只350Ω传感器)
通讯协议 (Communication Protocol)	Modbus RTU协议和自由协议	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	显示精度 (Display accuracy)	1/10000
材质 (Material)	铝合金	防护等级 (Protection level)	Ip65 (产品前面部分)
显示窗口 (Display Window)	双排六位LED		
额定输出 (Rated output)	支持Modbus RTU, ASCII和自由协议,同时支持RS232和485。		

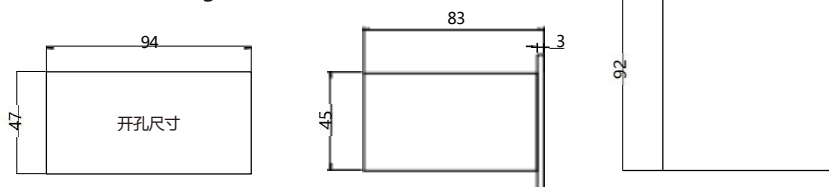
型号：KDEV-B-53



产品特点 / Product characteristics

- KDEV-B-53力值显示控制仪，拥有更稳定性能，128×32全点阵的OLED显示屏，可以显示更多内容；并且增加的中文界面，让设置更为简单和直观。
- KDEV-B-53 force display controller, with more stable performance, 128 × 32 full-lattice OLED display screen, can display more content; and the addition of Chinese interface, making the setting more simple and intuitive.

■ 安装尺寸 / Mounting dimensions



KDEV-B53	RS232+RS485
KDEV-B-53-S2-S4-M	RS232+RS485+模拟量

技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC : 12V~30V	A/D分辨率 (A/D resolution)	24位, Delta-Sigma方法
功耗 (Power consumption)	< 5W	开关量输出 (Switching output)	晶体管:3路,继电器:2路
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	10、40、640、1280次/秒
激励电压 (Excitation voltage)	5VDC±2%	工作温度 (Operating temperature)	-10~55°C
综合精度 (Comprehensive accuracy)	≤±0.05%FS	驱动能力 (Driving capacity)	100mA (6只350Ω传感器)
通讯协议 (Communication Protocol)	Modbus RTU协议和自由协议	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	显示精度 (Display accuracy)	1/10000
材质 (Material)	铝合金	防护等级 (Protection level)	Ip65 (产品前面部分)
显示窗口 (Display Window)	128×32全点阵的OLED显示屏		
额定输出 (Rated output)	支持Modbus RTU, ASCII和自由协议,同时支持RS232和485。		

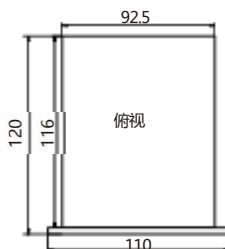
型号：KDEV-B-61



产品特点 / Product characteristics

- 模拟输出信号可选择0-20mA、4-20mA、0-10V、1-5V，数字通讯接口可选择RS485或RS232，均带隔离。双排6位LED数码管分别显示实时测量值、峰值、输出电流值、I/O状态信。
- Analog output signal can choose 0-20mA, 4-20mA, 0-10V, 1-5V, digital communication interface can choose RS485 or RS232, all band isolation. The double-row 6-bit LED digital tube displays real-time measurement value, peak value, output current value and I/O status signal respectively.

■ 安装尺寸 / Mounting dimensions



选型参考图

KDEV-B-61-R1-S	继电器、数字量
KDEV-B-61-R1-S-L	继电器、数字量、电流
KDEV-B-61-R1-S-V	继电器、数字量、电压
KDEV-B-61-J-S	晶体管、数字量
KDEV-B-61-J-S-L	晶体管、数字量、电流
KDEV-B-61-J-S-V	晶体管、数字量、电压

技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC24V (±5V)	A/D分辨率 (A/D resolution)	1600次/秒
功耗 (Power consumption)	10W	开关量输出 (Switching output)	晶体管:6路;继电器:6路
输入灵敏度 (Non-linear)	-3.6 mV/V ~ 3.6 mV/V	采样频率 (sampling rate)	10,40,640, 1280次/秒
激励电压 (Excitation voltage)	DC5V	工作温度 (Operating temperature)	-30~50°C
综合精度 (Comprehensive accuracy)	≤±0.002%FS	驱动能力 (Driving capacity)	可并联8只350Ω传感器
通讯协议 (Communication Protocol)	Modbus RTU协议和自由协议	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	显示精度 (Display accuracy)	1/100000
材质 (Material)	铝合金	防护等级 (Protection level)	Ip64
显示窗口 (Display Window)	双排6位LED显示		
额定输出 (Rated output)	模拟信号：0-20mA、4-20mA、0-10V、1-5V，数字通讯：RS485或RS232,均带隔离。		

型号：KDEV-B-611

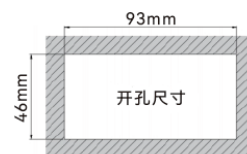
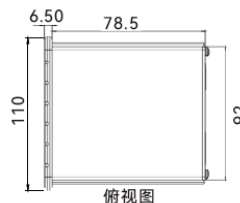
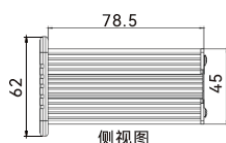
产品特点 / Product characteristics



- 本控制器体积小，双排6位显示，精度高，速度快，适用于各类需要进行称重、测力的工业现场。
- 模拟输出信号包括4-20mA与±10V。
- 通讯接口支持RS-485与RS-232，标准Modbus协议支持。
- 支持TEDS智能传感器功能。
- 控制器带有上限、中限、下界限判断功能。
- The controller has small volume, double-row 6-bit display, high precision and high speed, and is suitable for all kinds of industrial fields that need to be weighed and force measured.
- The analog output signals include 4-20mA and 10V.
- Communication interface supports RS-485 and RS-232, Standard Modbus protocol support.
- Supports TEDS sma sensor function.
- The Controller has the function of judging upper limit, middle limit and lower limit.

■ 安装尺寸 / Mounting dimensions

KDEV-B-611-S-M	数字量、模拟量
KDEV-B-611-S	数字量



技术参数 / Technical parameters

显示窗口 (Display Window)	双排LED显示	零点漂移 (Zero Drift)	≤10μV/°C
分度值 (Graduation value)	1、2、5、10、20、50	量程温度系数 (Range temperature coefficient)	≤0.02%FS/°C
最大秤量显示范围 (Maximum scale display range)	999999	传感器类型 (Sensor type)	电阻应变式传感器
小数点位数 (Number of decimal places)	0、0.0、0.00、0.000、0.0000、0.00000	传感器激励电压 (Sensor excitation voltage)	DC5V，可并联4只350Ω传感器
静态准确度等级 (Static accuracy rating)	分辨率900000	开关量输出 (触点) 容量 (Switch output (contact) capacity)	3路 继电器输出容量：AC220V 1A 4路 晶体管输出容量：DC24V 0.5A
最大信号输入范围 (Maximum signal input range)	-30 mV ~ +30 mV(-6mV/V~+6mV/V)	开关量输入电压 (Switching quantity input voltage)	DC24V
零点漂移 (Zero Drift)	≤0.05μV (@ 0.02mV/V)	开关量输入电流 (Switch quantity input current)	4-6mA
量程温度系数 (Range temperature coefficient)	≤10ppm/°C	电源范围 (Power Range)	DC24V (±5V)
传感器接口输入阻抗 (Input impedance)	≥20MΩ	产品功率 (Product power)	≤10W
非线性误差 (Nonlinear error)	≤0.002%FS	工作温度 (Operating temperature)	-10°C~50°C
A/D转换速度 (A/d conversion speed)	≤3200次/秒	湿度范围 (Humidity range)	≤90%相对湿度 (无凝结水)

型号：KDEV-B-612

产品特点 / Product characteristics



- 本控制器体积更小，功能齐全，双排6位显示，精度高，速度快，适用于各类需要进行称重、测力的工业现场。
- 模拟输出信号包括4-20mA与±10V。
- 通讯接口支持RS-485与RS-232，标准Modbus协议支持。
- 支持TEDS智能传感器功能。
- 控制器带有上限、中限、下限界限判断功能。
- The controller is smaller, full-featured, double-row 6-bit display, high precision, high speed, suitable for various needs of weighing, force measurement of industrial sites.
- The analog output signals include 4-20mA and 10V.
- Communication interface supports RS-485 and RS-232, Standard Modbus protocol support.
- Support TEDS smart sensor function.
- The Controller has the function of judging upper limit, middle limit and lower limit.

型号	晶体管数量
KDEV-B-612-J-S	晶体管、数字量、模拟量
KDEV-B-612-J-S-M	晶体管、数字量、模拟量
KDEV-B-612-R1-S	继电器、数字量
KDEV-B-612-R1-S-M	继电器、数字量、模拟量
KDEV-B-612-Y	以太网



技术参数 / Technical parameters

显示窗口 (Display Window)	双排LED显示	零点漂移 (Zero Drift)	≤10μV/°C
分度值 (Graduation value)	1、2、5、10、20、50	量程温度系数 (Range temperature coefficient)	≤0.02%FS/°C
最大秤量显示范围 (Maximum scale display range)	999999	传感器类型 (Sensor type)	电阻应变式传感器
小数点位数 (Number of decimal places)	0、0.0、0.00、0.000、0.0000、0.00000	传感器激励电压 (Sensor excitation voltage)	DC5V，可并联4只 350Ω传感器
静态准确度等级 (Static accuracy rating)	分辨率900000	开关量输出 (触点) 容量 (Switch output (contact) capacity)	继电器输出容量：AC220V 1A 共3路/晶体管输出容量：DC24V 0.5A
最大信号输入范围 (Maximum signal input range)	-30 mV ~ +30 mV(-6mV/V~+6mV/V)	开关量输入电压 (Switching quantity input voltage)	DC24V
零点漂移 (Zero Drift)	≤0.05μV (@ 0.02mV/V)	开关量输入电流 (Switch quantity input current)	4-6mA
量程温度系数 (Range temperature coefficient)	≤10ppm/°C	电源范围 (Power Range)	DC24V (±5V)
传感器接口输入阻抗 (Input impedance)	≥20MΩ	产品功率 (Product power)	≤10W
非线性误差 (Nonlinear error)	≤0.002%FS	工作温度 (Operating temperature)	-10°C~50°C
A/D转换速度 (A/d conversion speed)	≤3200次/秒	湿度范围 (Humidity range)	≤90%相对湿度 (无凝结水)

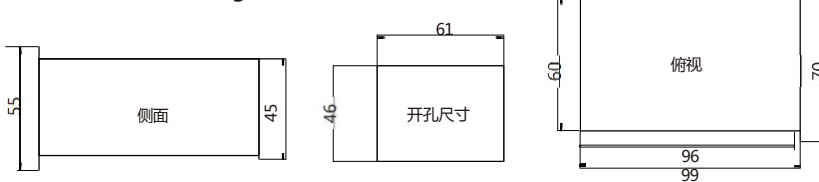
型号：KDEV-B-619

产品特点 / Product characteristics



- 双排LED数码管分别显示实时测量值、峰值、输出电流值、I/O状态信息。面板面积仅70mm(宽)×55mm(高)。
- Double-row LED digital display real-time measurement value, peak value, output current value, I/O status information. The panel area is only 70mm (width) × 55mm (height).

• 安装尺寸 / Mounting dimensions



选型参考图

KDEV-B-619-S2-J	RS232+晶体管
KDEV-B-619-S2-J-L	RS232+晶体管+电流
KDEV-B-619-S2-J-V	RS232+晶体管+电压
KDEV-B-619-S4-J	RS485+晶体管
KDEV-B-619-S4-J-L	RS485+晶体管+电流
KDEV-B-619-S4-J-V	RS485+晶体管+电压

技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC24V (±5V)	A/D分辨率 (A/D resolution)	1600次/秒
功耗 (Power consumption)	10W	开关量输出 (Switching output)	晶体管:3路;继电器:3路
输入灵敏度 (Non-linear)	-3.6 mV/V ~ 3.6 mV/V	采样频率 (sampling rate)	1280次/秒
激励电压 (Excitation voltage)	DC5V	工作温度 (Operating temperature)	-30~50°C
综合精度 (Comprehensive accuracy)	≤±0.002%FS	驱动能力 (Driving capacity)	可并联4只350Ω传感器
通讯协议 (Communication Protocol)	Modbus RTU协议和自由协议	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	显示精度 (Display accuracy)	1/100000
材质 (Material)	铝合金	防护等级 (Protection level)	Ip64
显示窗口 (Display Window)	双排6位LED显示		
额定输出 (Rated output)	模拟信号：4-20mA、0-10V、1-5V，数字通讯：RS485或RS232,均带隔离。		

型号：KDEV-B-62

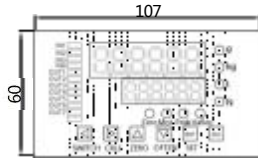


产品特点 / Product characteristics

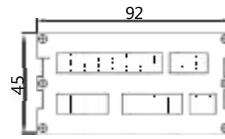
- 高频显示控制仪，同时支持RS232和RS485，波特率最高到921600，开关量：5点晶体管输出，2点继电器输出，模拟量：0~±10V，4~20mA，0~20mA；分辨率1/60000。
- High-frequency display controller, supports RS232 and RS485, baud rate up to 921600, switching: 5-point transistor output, 2-point relay output, analog: 0 ~ ± 10 V, 4 ~ 20 ma, 0 ~ 20 ma, Resolution 160000.

• 安装尺寸 / Mounting dimensions

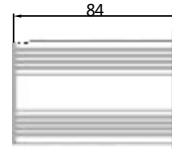
KDEV-B-63	RS232+RS485
KDEV-B-63-S2-S4-M	RS232+RS485+模拟量



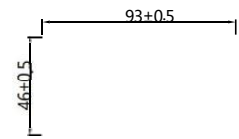
前面板尺寸 (mm) : 107×60



后面板尺寸 (mm) : 92×45



仪表侧面尺寸 (mm) : 84



开孔尺寸 (mm) : 93×46

技术参数 / Technical parameters

供电电压 (Supply Voltage)	DC:12V~30V	A/D分辨率 (A/D resolution)	24位, Delta-Sigma方法
功耗 (Power consumption)	< 5W	开关量输出 (Switching output)	晶体管:5路;继电器:2路;4输入
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	1280次/秒
激励电压 (Excitation voltage)	5VDC±2%	工作温度 (Operating temperature)	-30~60°C
综合精度 (Comprehensive accuracy)	≤±0.05%FS	驱动能力 (Driving capacity)	100mA (最多6只350Ω的传感器)
通讯协议 (Communication Protocol)	Modbus RTU、ASCII和自由协议	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	10、40、80、120、200、400、600、800、1200、1600、2400、4800次/秒	显示精度 (Display accuracy)	双排6位LED
材质 (Material)	铝合金	防护等级 (Protection level)	Ip64
显示窗口 (Display Window)	双排六位LED		
额定输出 (Rated output)	0~±10V、0~20mA、4~20 mA;分辨率1/60000,同时支持RS232和RS485,波特率最高到921600。 开关量:5点晶体管输出 (最大1A),2点继电器输出,4点输入		

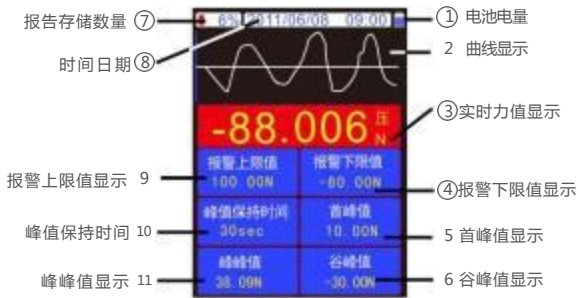
型号：KDEV-B-70

产品特点 / Product characteristics



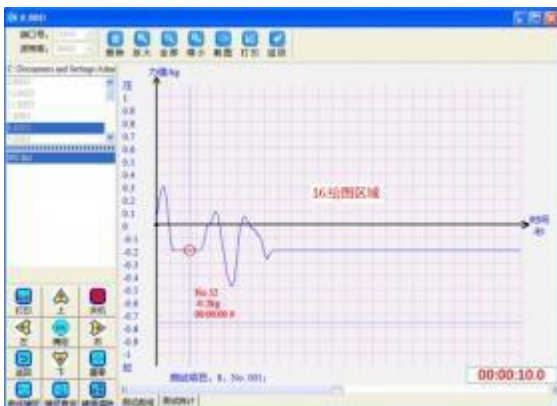
- 本推拉力计是小型便携式推力、拉力测试仪器，具有高精度高分辨率；2.8寸真彩色显示屏；曲线监控全测试过程；拉断即停；上下限值设定；两路开关量输出一路输入；可存储100组测试报告，1组测试曲线；三种单位kg、N、lb可切换；测试材料强度功能；峰值保持功能；峰值自动解除功能及解除时间可设定。
- The push-pull force meter is a small portable instrument for measuring thrust and pull force, with high precision and high resolution; 2.8-inch true color display; curve monitoring of the whole test process; pull-off and stop; upper and lower limit setting; It can store 100 sets of test reports and 1 set of test curves; three kinds of units (kg, n, lb) can be switched; test material strength function; peak holding function; The peak value auto-deactivation function and deactivation time can be set.

• 安装尺寸 / Mounting dimensions



1	2.8寸TFT真彩色显示屏；方向按键、显示屏幕可180°翻转。
2	内置实时时钟，能显示实时时间和日期；USB数据接口，支持热插拔。
3	峰值、实时值、和测试过程曲线同屏显示，可监控和追溯测试全过程。
4	断裂报警值、断裂报警死区/上下限偏差值自由设定；断裂/限内/限外报警任意选择；达到报警值后，蜂鸣器、显示屏同时提示报警，标配两路集电极开路式电平输出，可以直接驱动直流12V继电器或电磁阀等执行机构，每路驱动电流50mA，使用输出口时，请连接电源适配器使用。
5	三种单位N、kg、lb自动换算，并可自动换算强度单位Mpa。
6	具有峰值保持功能、峰值自动解除及解除时间可设定。
7	可永久保存100组测试报告，测试报告内容有测试时间、峰值、谷值平均值等，还可保存1组曲线，追溯测试全过程。
8	通过输入材料截面积测试材料强度。
9	可任意设置无操作自动关机、自动背光等省电功能。
10	中/英切换；内置图文说明、各种操作直观明了。
11	通过PC配套专用的测试软件，可无限存储、传递、追溯测试曲线数据。
12	可选配各类测试机台、实现各种测试。

技术参数 / Technical parameters



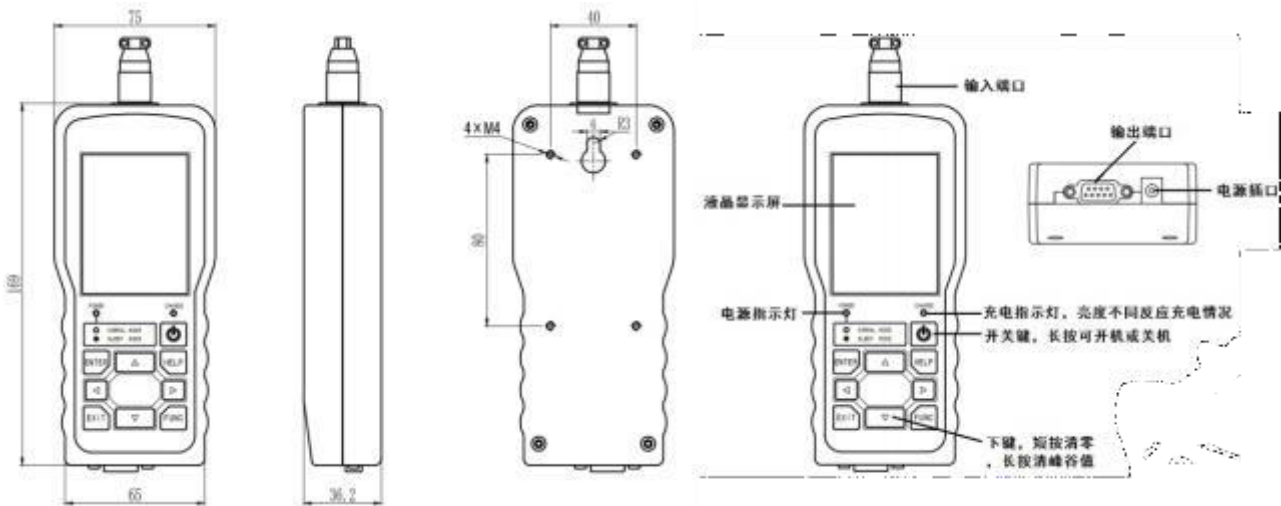
型号：KDEV-B-7A

产品特点 / Product characteristics



- 请勿使用在易燃、易爆气体的场所。
- 仪表内部有大容量锂电池，切勿敲击，切勿自行更换内部电池。
- 本说明书如有变动，恕不通知，随时更新，查阅时请以最新版本为准。如有疑问，请与本公司联系。
- 本公司不承担除产品本身以外的任何直接或间接损失。
- 请使用配套的电源适配器供电，否则会引起电路故障，甚至引起自燃。
- Please do not use in flammable, explosive gas places.
- There is a large capacity lithium battery inside the instrument. Do not tap it. Do not replace the internal battery by yourself.
- This manual is subject to change without notice and will be updated at any time. Please refer to the latest version. In case of doubt, please contact our company.
- The company shall not be liable for any direct or indirect loss other than the products themselves.
- Please use the matching power supply adapter power supply, otherwise it will cause circuit failure, and even cause spontaneous combustion.

安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

外部电源适配器 (External power adapter)	输入：Ac 90~260V，50Hz 或60Hz 输出：DC 12V/2A，接口内正外负 注意：请勿使用非本机配套的电源适配器	内置电池 (Built-in battery)	持续使用时间约18~36小时，与使用方式有关 充电时间约4~8小时 寿命不低于1000次完全充电、放电循环	
零点调整范围 (Zero Adjustment Range)	-10~10 mV	转换方式 (Conversion mode)	Sigma-Delta	
增益输入范围 (Gain input range)	1~12 mV	测控速度 (Speed)	15、120、240、480、960、1920次/秒（通过参数设置）	
绝缘电阻 (Insulation Resistance)	≥100MΩ（500V DC MEGA基准）内置电池供电时不适用	非线性 (Non-linearity)	±0.01%F·S（测量速度15次/秒）	
绝缘强度 (Insulation strength)	2000VAC（测试条件：50/60Hz，1分钟） 内置电池供电时不适用	增益漂移 (Gain Drift)	< 10ppm / °C（连接传感器时须使用配套端子接插件，否则会恶化温漂特性）	
抗干扰 (Anti-interference)	IEC61000-4-2（静电放电），Ⅲ级 IEC61000-4-4（电快速瞬变脉冲群），Ⅲ级 IEC61000-4-5（浪涌），Ⅲ级。 内置电池供电时不适用	接点输入 (Contact Input)	1点外部开关量输入，可用于清零、去皮、允许报警、显示锁定、清除峰值等（可通过参数选择）	
防护等级 (Protection level)	IP65（产品前面板防护）（GB/T42-2008）	最高显示精度 (Display accuracy)	1 / 100000	
运行环境 (Running environment)	环境温度	-30~60°C（保存：-40~65°C）	DIDO 外部供电电压 (Supply Voltage)	PD+与PD-间：+9V~+30V
	环境湿度	35~85 % R·H，无凝露	传感器电源 (Sensor power)	DC 5v±2%，100mA (MAX)
	安装位置	室内，高度<2000m	报警输出 (Alarm output)	2点OC门输出，≤35mA
输入信号 (Input Signal)	比例测量，配4线制应变传感器 - 14 ~14mV	报警输出 (Alarm output)	2点OC门输出，≤35mA	
输入灵敏度 (Input sensitivity)	0.1uV/d	通讯接口 (Interface)	MS1 RS232接口，TC-ASCII 和MODBUS/RTU 协议	应答时间:500 μS（测量值）
报警输出 (Alarm output)	V0	无内置电池		
	V1	有内置电池		

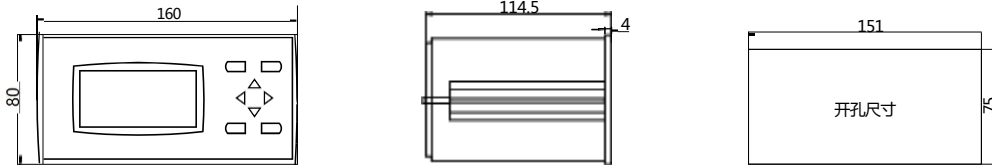
型号 : KDEV-B-9C



产品特点 / Product characteristics

- KDEV-B-9C 是集扭矩，转速，功率为一体的检测控制仪，正向和反向最大扭矩值记录，4点继电器输出，64M历史数据记录和U盘转存记录功能。
- KDEV-B-9C is a set of torque, speed, power as one of the detection controller, forward and reverse maximum torque value recording, 4-point relay output, 64M historical data recording and U disk transfer recording function.

• 安装尺寸 / Mounting dimensions



技术参数 / Technical parameters

供电电压 (Supply Voltage)	220AC	A/D分辨率 (A/D resolution)	/
功耗 (Power consumption)	< 5W	开关量输出 (Switching output)	4路或带232打印一路输出
输入灵敏度 (Non-linear)	0.4~6mV/V	采样频率 (sampling rate)	10, 20, 50次/秒
激励电压 (Excitation voltage)	/	工作温度 (Operating temperature)	-10~55°C
综合精度 (Comprehensive accuracy)	≤±0.05%FS	驱动能力 (Driving capacity)	单个扭矩传感器
通讯协议 (Communication Protocol)	Modbus-RTU协议	外形尺寸 (Contour dimension)	(见上述尺寸图)
波特率 (Baud rate)	2400, 4800, 9600, 19200, 38400, 57600, 115200	显示精度 (Display accuracy)	/
材质 (Material)	铝合金	防护等级 (Protection level)	Ip64
显示窗口 (Display Window)	时间日期, 扭矩, 转速, 功率		
额定输出 (Rated output)	RS232, RS485, 4~20mA, 0~20mA, 0~±5V, 0~±10V, 4报警点		

型号 : KDEV-B-9D



产品特点 / Product characteristics

- 7"/10.2" TFT触摸屏与测力/控制模块一体化，超轻超薄机身。CoDex-A8处理器，600MHz主频，128M内存，128M存储空间。
- 7"/10.2" TFT touch screen and force/control module integration, ultra-thin and light body. CORTEX-A8 processor, 600MHz main frequency, 128MB of memory, 128MB of storage space.

• 安装尺寸 / Mounting dimensions

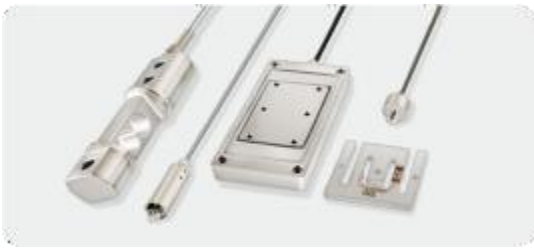
产品	外形尺寸 W×H×D[mm]	盘面尺寸 W×H[mm]	箱体尺寸 W×H[mm]	盘面开孔尺寸 W1×H1[mm]
7"屏	226.5×163×36	226.5×163	213×150	215×152
10.2"屏	274×193×40	274×193	259×178	261×180



背面接口

技术参数 / Technical parameters

供电电压 (Supply Voltage)	DV24±20%V	A/D分辨率 (A/D resolution)	/
功耗 (Power consumption)	< 6W	开关量输出 (Switching output)	晶体管18路输出
输入灵敏度 (Non-linear)	1.0~2.5mV/V	采样频率 (sampling rate)	≤3200次/秒
激励电压 (Excitation voltage)	5VDC, 250mA	工作温度 (Operating temperature)	-30~60°C
综合精度 (Comprehensive accuracy)	≤±0.02%FS	驱动能力 (Driving capacity)	4个测力信号接口, 每个接口最大可连接4个350Ω测力传感器。
通讯协议 (Communication Protocol)	Modbus RTU协议和自由协议	外形尺寸 (Contour dimension)	(见上述尺寸图)
传输速率 (Transmission rate)	9600bps; 19200bps; 115200bps	显示精度 (Display accuracy)	-99,999~+999,999
材质 (Material)	塑料	防护等级 (Protection level)	Ip64
显示窗口 (Display Window)	16位彩屏, 800×480[7"]或1024×600[10.2"]分辨率		
额定输出 (Rated output)	7路可定义的常开开关输入, 4路可定义的模拟量信号输出[AO]: 18路可定义的常开晶体管开关输出, 可外接上位机IPC/PLC与LED远程显示器。0~10V/Max.50mA可用于连接USB鼠标, 从U盘下载操作界面软件与备份数据至U盘。		

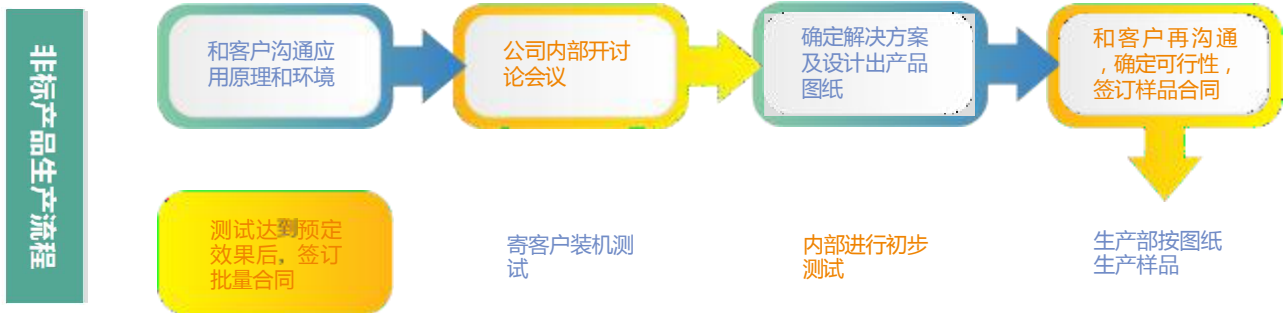


型号：非标定制

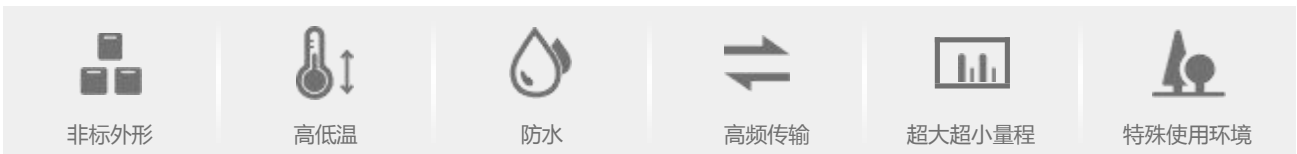
产品特点 / Product characteristics

- 凯德昌拥有强大的设计团队， 可以针对客户的特殊要求研发出相应产品； 研发周期短， 自主生产线相配合， 短期内便可出产品。
- The company has a strong design team, which can develop products according to the special requirements of customers; the development cycle is short, and the self-production line can be combined to produce products in a short time.

生产流程 / Production process



可行性 / Feasibility

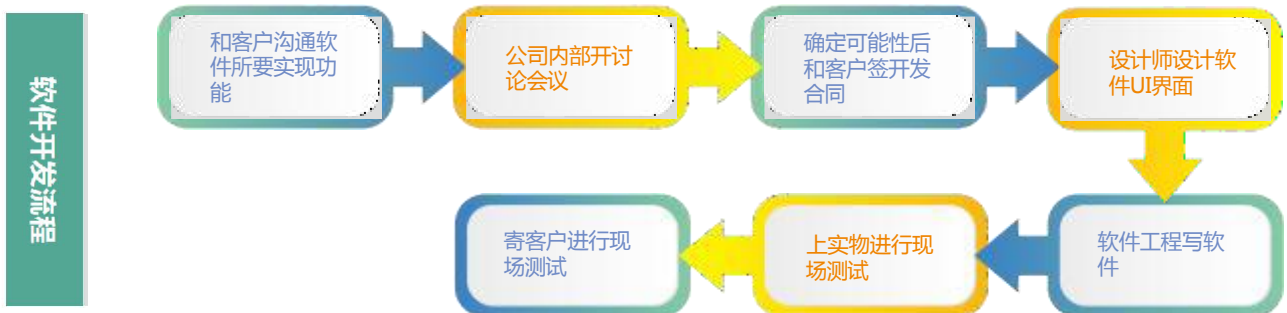


型号：软件

产品特点 / Product characteristics

- 公司有成熟的软件开发能力， 可根据客户需求， 开发出专用软件； 其中包括软件各种功能， 界面设计， 数据分析及保存， 无线传输， 手机APP等。 经常合作的单位包括： 研究院、 大学科研、 实验室、 特殊数据要求等。
- The company has mature software development capabilities, according to customer needs, the development of special software, including software functions, interface design, data analysis and preservation, wireless transmission, mobile applications. Regular cooperation units include: Research Institutes, university research, laboratories, special data requirements.

生产流程 / Production process



可行性 / Feasibility

