KaiDC

Force
transducer



Product applications

Mainly used in various electronic weighing apparatus, industrial control eld, on-line control, installation of overload alarm, material testing machine and other elds, 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 eld.



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Application

www.huoerxin.com

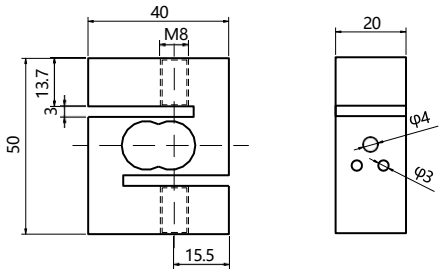


KDEV-C-A0R

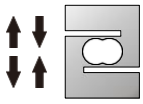
Product characteristics

- 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.

- Mounting dimensions



Force mode



Technical parameters

(Measuring range)	0.05/0.1/0.2/0.5/1/2/5/10 kg	(Sensitivity temperature effect)	±0.025%F.S/10℃
(Composite Error)	≤±0.03%	(Zero temperature effect)	±0.025%F.S/10℃
(Non-linear)	0.03%	(Temperature compensation range)	-10~40℃
(Sensitivity)	1.0/2.0±0.005%mV/V	(Operating temperature range)	-20~60℃
(Creep)	±0.03%F.S/30min	(Excitation voltage)	5~12V
(Zero output)	±2.0%F.S	(SAFE overload range)	150%F.S
(Input impedance)	350±5Ω	(Limit Overload Range)	200%F.S
(Output impedance)	350±3Ω	(Cable specifications)	Φ3mm×3m
(Insulation Resistance)	≥5000MΩ/100V DC	(Protection level)	Ip65

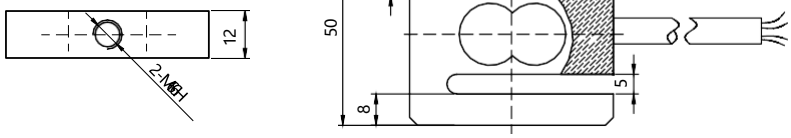


KDEV-C-A0T

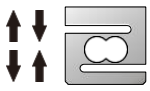
Product characteristics

- S-type parallel beam aluminum alloy structure sensor. Used in push-pull meters, industrial measurement systems.

- Mounting dimensions



- Force mode



Technical parameters

(Measuring range)	1/2/3/5/10/15/20/30/50/100 kg	(Sensitivity temperature effect)	±0.25%F.S/10℃
(Composite Error)	≤±0.02%	(Zero temperature effect)	±0.25%F.S/10℃
(Non-linear)	0.02%	(Temperature compensation range)	-10~60℃
(Sensitivity)	1.0/2.0±10%mV/V	(Operating temperature range)	-20~80℃
(Creep)	±0.03%F.S/30min	(Excitation voltage)	5~12V
(Zero output)	±2.0%F.S	(SAFE overload range)	150%F.S
(Input impedance)	410±10Ω	(Limit Overload Range)	200%F.S
(Output impedance)	350±5Ω	(Cable specifications)	Φ3mm×3m
(Insulation Resistance)	≥5000MΩ/100V DC	(Protection level)	Ip65

KDEV-C-B0

Customizable: high temperature waterproof

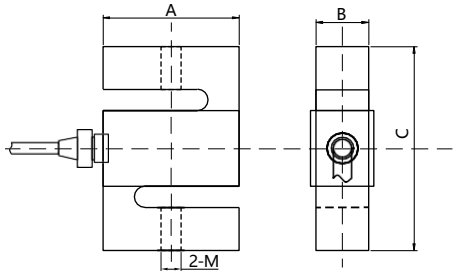


Product characteristics

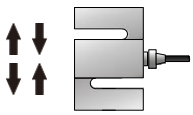
- Widely used in tensile testing machine, Hopper said, material testing machine, push-pull meter and other industrial automation equipment. The measuring precision is better than 0.05% , the long-term stability is good, the repeatability is high, the reliability is high. It is made of special aluminum alloy for sensor.

- Mounting dimensions

	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



Force mode



Technical parameters

(Measuring range)	100/150/200/250/300/500/1000/2000/5000 kg	(Sensitivity temperature effect)	±0.017%F.S/10℃
(Composite Error)	±0.03%F.S	(Zero temperature effect)	±0.023%F.S/10℃
(Non-linear)	0.03%	(Temperature compensation range)	-10~40℃
(Sensitivity)	2.0±0.004 mV/V	(Operating temperature range)	-20~55℃
(Creep)	±0.024%FS/30min	(Excitation voltage)	9~12V
(Zero output)	±1.0%F.S	(SAFE overload range)	150%F.S
(Input impedance)	350±5Ω	(Limit Overload Range)	200%F.S
(Output impedance)	350±3Ω	(Cable specifications)	Φ5mm×3m
(Insulation Resistance)	≥5000MΩ/100V DC	(Protection level)	Ip66



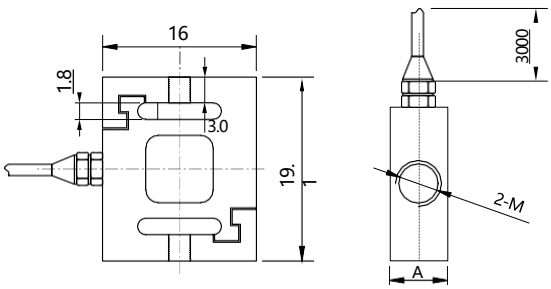
KDEV-C-C0

Product characteristics

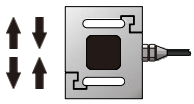
- Special stainless steel material for sensor, adopt metal foil strain gauge technology, with overload protection. Mainly used in push-pull meter, Hopper scale, industrial measurement system.

- Mounting dimensions

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



Force mode



Technical parameters

(Measuring range)	0.2/0.5/1/1.5/2/3/5/10/20/50/100 kg	(Sensitivity temperature effect)	±0.05%F.S/10℃
(Composite Error)	≤±0.1%	(Zero temperature effect)	±0.05%F.S/10℃
(Non-linear)	0.1%	(Temperature compensation range)	-10~60℃
(Sensitivity)	1.0/2.0±10%mV/V	(Operating temperature range)	-20~80℃
(Creep)	±0.05%F.S/30min	(Excitation voltage)	5~12V
(Zero output)	±2.0%F.S	(SAFE overload range)	150%F.S
(Input impedance)	350±30Ω	(Limit Overload Range)	300%F.S
(Output impedance)	350±5Ω	(Cable specifications)	Φ2mm×3m
(Insulation Resistance)	≥5000MΩ/100V DC	(Protection level)	Ip66

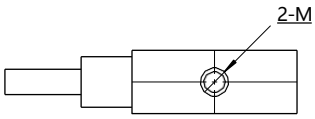


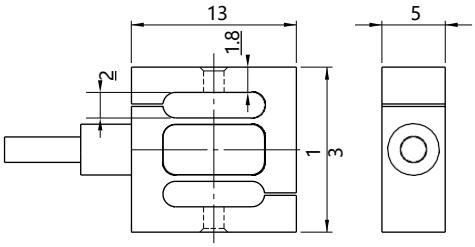
: KDEV-C-C02

Product characteristics

- 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.

- Mounting dimensions





(kg)	M
1/2/5	M2
10/20/30	M3

- Force mode



Technical parameters

(Measuring range)	0.5/1/2/3/5/10/20/30 kg	(Sensitivity temperature effect)	±0.05%F.S/10℃
(Composite Error)	≤±0.2%	(Zero temperature effect)	±0.05%F.S/10℃
(Non-linear)	0.2%	(Temperature compensation range)	-10~60℃
(Sensitivity)	1.0/2.0±10%mV/V	(Operating temperature range)	-20~80℃
(Creep)	±0.5%F.S/30min	(Excitation voltage)	5~12V
(Zero output)	±2.0%F.S	(SAFE overload range)	120%F.S
(Input impedance)	350±30Ω	(Limit Overload Range)	150%F.S
(Output impedance)	350±5Ω	(Cable specifications)	Φ2mm×3m
(Insulation Resistance)	≥5000MΩ/100V DC	(Protection level)	Ip65



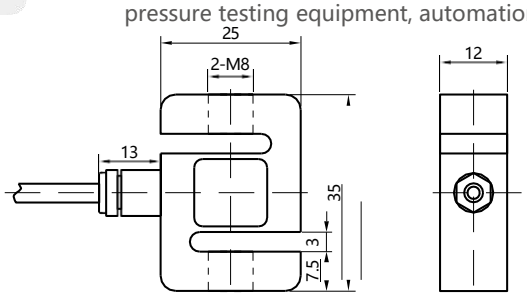
: KDEV-C-C04

Customizable: high temperature

Product characteristics

- 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.

Mounting dimensions



Force mode



Technical parameters

(Measuring range)	2/5/10/15/20/30/50/100/200 kg	(Sensitivity temperature effect)	±0.05%F.S/10℃
(Composite Error)	≤±0.1%	(Zero temperature effect)	±0.05%F.S/10℃
(Non-linear)	0.1%	(Temperature compensation range)	-10~60℃
(Sensitivity)	1.0/2.0±10%mV/V	(Operating temperature range)	-20~80℃
(Creep)	±0.05%F.S/30min	(Excitation voltage)	5~12V
(Zero output)	±2.0%F.S	(SAFE overload range)	120%F.S
(Input impedance)	410±10Ω	(Limit Overload Range)	150%F.S
(Output impedance)	350±5Ω	(Cable specifications)	Φ3mm×3m
(Insulation Resistance)	≥5000MΩ/100V DC	(Protection level)	Ip65

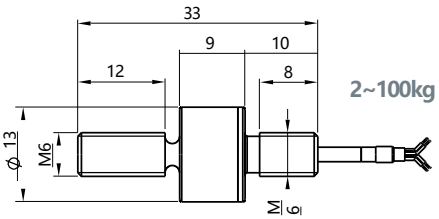


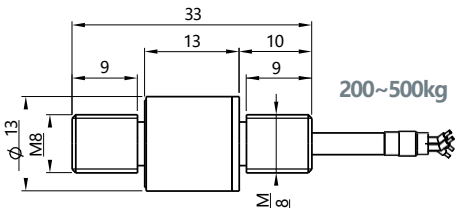
KDEV-C-D0

Customizable: high temperature waterproof

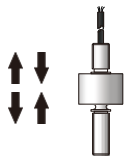
- Stainless steel or aluminum alloy material micro sensor, good sealing, can be customized waterproof; upper outlet, suitable for special installation requirements. Using metal foil strain gauge technology. It is widely used in the measurement and control of industry , r & D and other fields.

- **Mounting dimensions**





- **Force mode**



Technical parameters			
(Measuring range)	2/5/10/20/30/50/100 /200/300/500 kg	(Sensitivity temperature effect)	±0.05%F.S/10℃
(Composite Error)	≤±0.5%	(Zero temperature effect)	±0.05%F.S/10℃
(Non-linear)	0.5%	(Temperature compensation range)	-10~60℃
(Sensitivity)	1.0/2.0±20%mV/V	(Operating temperature range)	-20~80℃
(Creep)	±0.25%F.S/30min	(Excitation voltage)	5~10V
(Zero output)	±2.0%F.S	(SAFE overload range)	150%F.S
(Input impedance)	800±10Ω	(Limit Overload Range)	200%F.S
(Output impedance)	800±5Ω	(Cable specifications)	Φ2mm×3m
(Insulation Resistance)	≥5000MΩ/100V DC	(Protection level)	Ip66

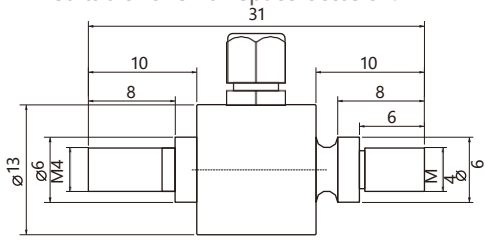


KDEV-C-D01

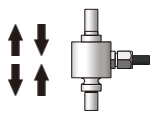
Customizable: high temperature waterproof

- KDEV-C-D01 is an ultra-small stud tension and pressure can be measured in both directions of the sensor, xed installation is convenient. It is often used in key touch test, fatigue test, push-pull force measurement. Small shape, especially suitable for small space occasion.

- **Mounting dimensions**



Force mode



Technical parameters			
(Measuring range)	50/10/20/50/100 kg	(Insulation resistance)	≥5000MΩ/100V DC
(Rated output)	1.0±20%mV/V	(Temperature sensitivity drift)	±0.2%F.S/10℃
(Zero output)	±0.05mV/V	(Temperature compensation range)	±0.2%F.S/10℃
(Product weight)	0.2kg	(Excitation voltage)	5~12V
(Non-linear)	≤0.5%F.S	(Maximum excitation voltage)	15V
(Lag behind)	≤0.5%F.S	(Temperature compensation range)	-10~60℃
(Repeatability)	≤0.1%F.S	(Operating temperature range)	-20~80℃
(Input Resistance)	800~1100Ω	(SAFE overload)	150%F.S
(Output Resistance)	800~1100Ω	(Ultimate overload)	200%F.S
(Cable specifications)	Φ2mm×3m	(Materials)	stainless steel

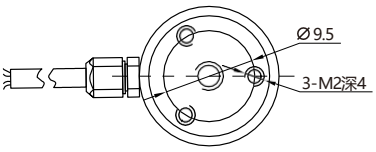


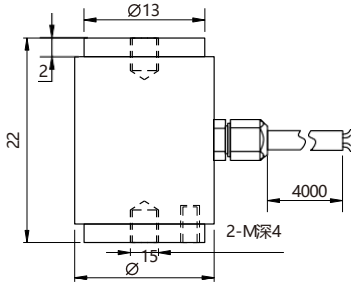
: KDEV-C-D1

Product characteristics

- 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.

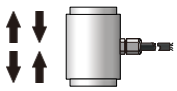
- Mounting dimensions





(N)	M
0-50	M3
0-50	M4
0-500	M4

- Force mode



Technical parameters

(Measuring range)	2/5/10/20/30/50 kg	(Sensitivity temperature effect)	±0.05%F.S/10℃
(Composite Error)	≤±0.3%	(Zero temperature effect)	±0.05%F.S/10℃
(Non-linear)	0.3%	(Temperature compensation range)	-10~60℃
(Sensitivity)	1.0/2.0±10%mV/V	(Operating temperature range)	-20~80℃
(Creep)	±0.05%F.S/30min	(Excitation voltage)	5~12V
(Zero output)	±2.0%F.S	(SAFE overload range)	150%F.S
(Input impedance)	350±20Ω	(Limit Overload Range)	200%F.S
(Output impedance)	350±5Ω	(Cable specifications)	Φ2mm×3m
(Insulation Resistance)	≥5000MΩ/100V DC	(Protection level)	Ip66

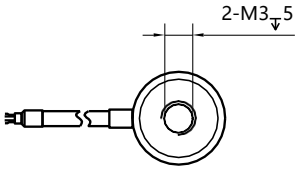


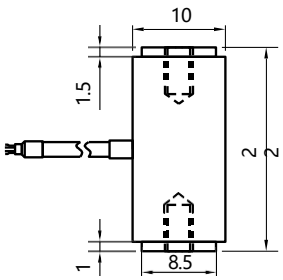
KDEV-C-D11

Product characteristics

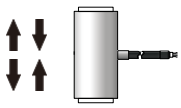
- Micro sensor, low height, small deformation, cylindrical shape, stainless steel material, tension and compression bidirectional mainly used for push, pull meter, various industrial force and weighing systems.

- Mounting dimensions





- Force mode



Technical parameters

(Measuring range)	1/2/3/5/10/20 kg	(Sensitivity temperature effect)	±0.05%F.S/10℃
(Composite Error)	≤±0.3%	(Zero temperature effect)	±0.05%F.S/10℃
(Non-linear)	0.3%	(Temperature compensation range)	-10~40℃
(Sensitivity)	1.0/2.0±10%mV/V	(Operating temperature range)	-20~60℃
(Creep)	±0.1%F.S/30min	(Excitation voltage)	5~12V
(Zero output)	±2.0%F.S	(SAFE overload range)	150%F.S
(Input impedance)	350±30Ω	(Limit Overload Range)	200%F.S
(Output impedance)	350±10Ω	(Cable specifications)	Φ2mm×3m
(Insulation Resistance)	≥5000MΩ/100V DC	(Protection level)	Ip66

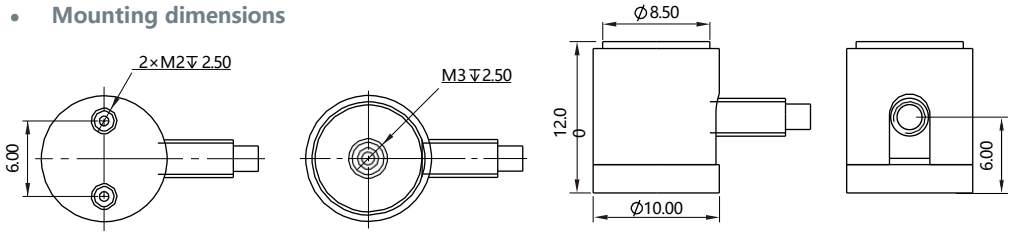


KDEV-C-D13

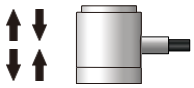
Product characteristics

- 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.

- **Mounting dimensions**



- **Force mode**



Note: The depth of the screw into the sensor threaded hole should not exceed 2.5mm to avoid damaging the internal circuit and structure.

Technical parameters

(Measuring range)	1/2/3/5/10/20/50 kg	(Sensitivity temperature effect)	±0.05%F.S/10℃
(Composite Error)	≤±0.3%	(Zero temperature effect)	±0.05%F.S/10℃
(Non-linear)	0.3%	(Temperature compensation range)	-10~40℃
(Sensitivity)	2.0±10%mV/V	(Operating temperature range)	-20~60℃
(Creep)	±0.1%F.S/30min	(Excitation voltage)	5~15V
(Zero output)	±2.0%F.S	(SAFE overload range)	150%F.S
(Input impedance)	350±20Ω	(Limit Overload Range)	200%F.S
(Output impedance)	350±5Ω	(Cable specifications)	Φ2mm×3m
(Insulation Resistance)	≥5000MΩ/100V DC	(Protection level)	Ip66

KDEV-C-E0

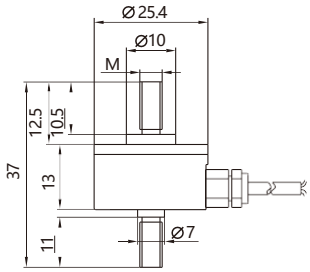


Product characteristics

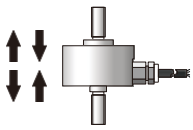
- Micro sensor, low height, small deformation, stainless steel section, tension and compression, it is mainly used in auto pressing, automatic assembly, 3C product test, New Energy Product Assembly, medical inspection, Robot, mould assembly and other industrial automation fields.

- **Mounting dimensions**

(kg)	M
5-50	M5
100	M6



- **Force mode**



Technical parameters

Measuring range	5/10/20/30/50/100 kg	Sensitivity temperature effect	±0.05%F.S/10℃
Composite Error	≤±0.1%	Zero temperature effect	±0.05%F.S/10℃
Non-linear	0.1%	Temperature compensation range	-10~60℃
Sensitivity	1.0/2.0±10%mV/V	Operating temperature range	-20~80℃
Creep	±0.05%F.S/30min	Excitation voltage	5~12V
Zero output	±2.0%F.S	SAFE overload range	150%F.S
Input impedance	700±10Ω	Limit Overload Range	200%F.S
Output impedance	700±10Ω	Cable specifications	Φ3mm×3m
Insulation Resistance	≥5000MΩ/100V DC	Protection level	Ip66

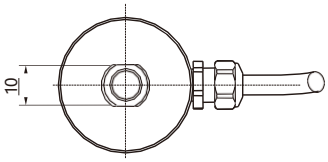


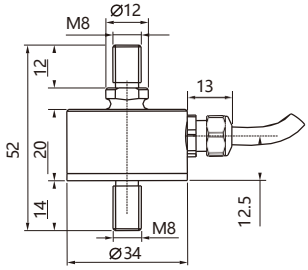
KDEV-C-E02

Customizable: high temperature waterproof

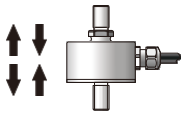
- Micro sensor, low height, small deformation, high dynamic frequency, stainless steel material, two-way tension and compression, mainly used in automobile pressing assembly, 3C product testing, new energy assembly, medical testing, robot field, mold assembly and other automated fields.

- **Mounting dimensions**





Force mode



Technical parameters			
Measuring range	50/100/150/200/300/500 kg	Sensitivity temperature effect)	±0.05%F.S/10℃
Composite Error	≤±0.2%	Zero temperature effect)	±0.05%F.S/10℃
Non-linear	0.2%	Temperature compensation range)	-10~60℃
Sensitivity	1.5±20%mV/V	(Operating temperature range)	-20~80℃
Creep	±0.1%F.S/30min	(Excitation voltage)	5~15V
Zero output	±2.0%F.S	(SAFE overload range)	150%F.S
Input impedance	700±10Ω	(Limit Overload Range)	200%F.S
Output impedance	700±10Ω	(Cable specifications)	Φ4mm×3m
Insulation Resistance	≥5000MΩ/100V DC	(Protection level)	Ip67



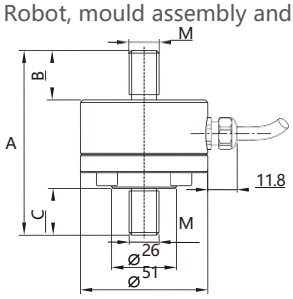
KDEV-C-F0

Customizable: high temperature waterproof

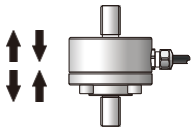
- Micro sensor, low height, small deformation, large range, stainless steel section, tension and compression, it is mainly used in auto pressing, automatic assembly, 3C product test, New Energy Product Assembly, medical inspection, Robot, mould assembly and other industrial automation fields.

- **Mounting dimensions**

(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



Force mode



Technical parameters			
Measuring range	0.1/0.2/0.3/0.5/1/2/3/5 T	Sensitivity temperature effect	±0.05%F.S/10℃
Composite Error	≤±0.2%	Zero temperature effect	±0.05%F.S/10℃
Non-linear	0.2%	Temperature compensation range	-10~60℃
Sensitivity	1.5±10%mV/V	Operating temperature range	-20~80℃
Creep	±0.05%F.S/30min	Excitation voltage	5~15V
Zero output	±2.0%F.S	SAFE overload range	150%F.S
Input impedance	700±10Ω	Limit Overload Range	200%F.S
Output impedance	700±10Ω	Cable specifications	Φ4mm×3m
Insulation Resistance	≥5000MΩ/100V DC	Protection level	Ip66

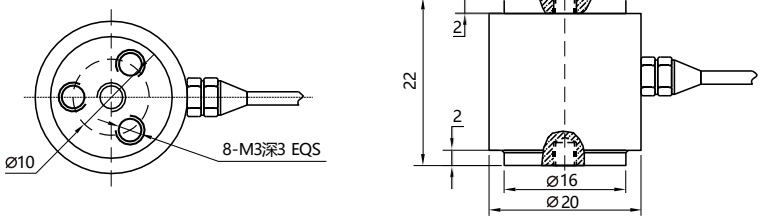


KDEV-C-G1

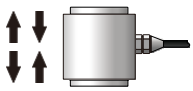
Product characteristics

- 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 indust , robot grasping, pressing and pulling pressure, automobile assembly force value testing and so on.

- **Mounting dimensions**



Force mode



Technical parameters

Measuring range	2/5/10/20/30/50/100/200 kg	Sensitivity temperature effect	±0.05%F.S/10℃
Composite Error	≤±0.1%	Zero temperature effect	±0.05%F.S/10℃
Non-linear	0.1%	Temperature compensation range	-10~60℃
Sensitivity	1.0/2.0±10%mV/V	Operating temperature range	-20~80℃
Creep	±0.1%F.S/30min	Excitation voltage	5~12V
Zero output	±2.0%F.S	SAFE overload range	150%F.S
Input impedance	650/350±10Ω	Limit Overload Range	200%F.S
Output impedance	650/350±10Ω	Cable specifications	Φ3mm×3m
Insulation Resistance	≥5000MΩ/100V DC	Protection level	Ip66

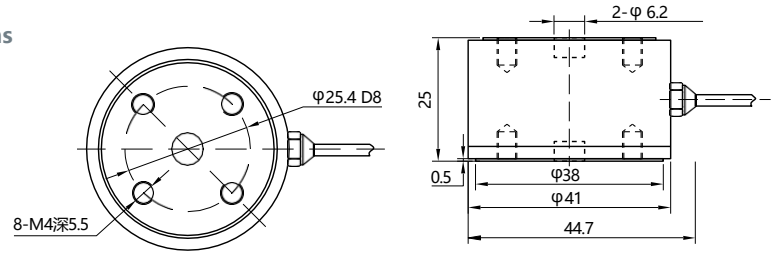


KDEV-C-G3

Customizable: high temperature

- 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.

- **Mounting dimensions**



Force mode



Technical parameters

Measuring range	5/10/20/50 kg，0.1/0.2/0.3/0.5/1/2/5 T （Tensile pressure：0~1T，pressure：5T）		
Composite Error	≤±0.1%	Sensitivity temperature effect	±0.05%F.S/10℃
Non-linear	0.1%	Zero temperature effect	±0.05%F.S/10℃
Sensitivity	1.0/2.0±10%mV/V	Temperature compensation range	-10~60℃
Creep	±0.1%F.S/30min	Operating temperature range	-20~80℃
Zero output	±2.0%F.S	Excitation voltage	5~15V
Input impedance	385±5Ω	SAFE overload range	150%F.S
Output impedance	350±3Ω	Limit Overload Range	300%F.S
Insulation Resistance	≥5000MΩ/100V DC	Protection level	Ip66
Cable specifications	Φ3mm×3m		

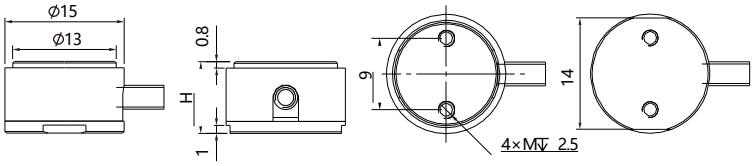


KDEV-C-G4

Product characteristics

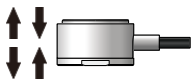
- Small deformation, high dynamic response frequency, stainless steel, bi- directional tension and compression, mainly used for push-pull meter, automatic assembly test, medical inspection, robotics and various industrial automation force measurement fields.

- Mounting dimensions



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

Force mode



Note: The depth of the screw into the sensor threaded hole should not exceed 2.5mm to avoid damaging the internal circuit and structure.

Technical parameters

Measuring range	1/2/5/10/20/50/100/200 kg	Sensitivity temperature effect	±0.1%F.S/10℃
Composite Error	±0.1%F.S.	Zero temperature effect	±0.1%F.S/10℃
Non-linear	0.1%F.S.	Temperature compensation range	-10~40℃
Sensitivity	1.0/2.0±10%mV/V	Operating temperature range	-20~60℃
Lag behind	0.05%F.S	Excitation voltage	5~10V
Service life	Over 1 million times	Maximum excitation voltage	12V
Materials	stainless steel	SAFE overload range	120%F.S
Cable specifications	Φ3mm×3m	Limit Overload Range	150%F.S
Insulation Resistance	≥5000MΩ/100V DC	Protection level	Ip66

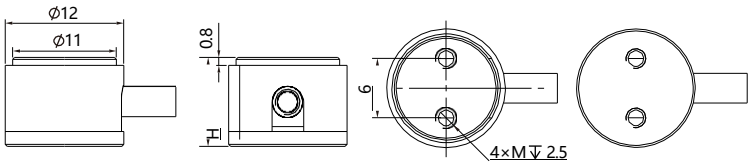


KDEV-C-G5

Product characteristics

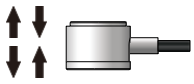
- Stainless steel material, with overload protection, small deformation, high dynamic response frequency, tension and compression, it is mainly used in the fields of push-pull force meter, push-button handle tester, cold and hot press pressure detection, robot and all kinds of industrial automation force measurement.

Mounting dimensions



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

Force mode



Note: The depth of the screw into the sensor threaded hole should not exceed 2.5mm to avoid damaging the internal circuit and structure

Technical parameters

Measuring range	1/2/5/10/20/50/100/200 kg	Sensitivity temperature effect	±0.1%F.S/10℃
Composite Error	±0.1%F.S.	Zero temperature effect	±0.1%F.S/10℃
Non-linear	0.1%F.S.	Temperature compensation range	-10~40℃
Sensitivity	1.0/2.0±10%mV/V	Operating temperature range	-20~60℃
Lag behind	0.05%F.S	Recommended excitation voltage	5~10V
Service life	100万次以上	Maximum excitation voltage	12V
Materials)	不锈钢	SAFE overload range	120%F.S
Cable specifications	Φ2mm×3m	Limit Overload Range	150%F.S
Insulation Resistance	≥5000MΩ/100V DC	Protection level	Ip66

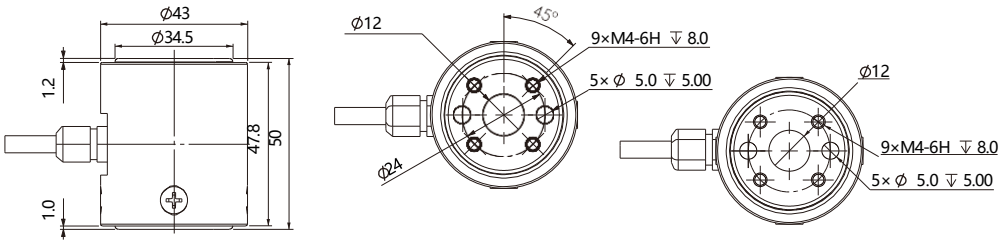


KDEV-C-G6

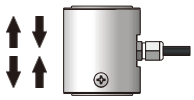
Product characteristics

- Stainless material, surface 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.

- **Mounting dimensions**



- **Force mode**



Technical parameters

Measuring range	50/100/200 kg	Sensitivity temperature effect	±0.3%F.S/10℃
Composite Error	±0.3%F.S.	Zero temperature effect	±0.3%F.S/10℃
Non-linear	0.3%F.S.	Temperature compensation range	-20~60℃
Sensitivity	1.0±0.02mV/V	Operating temperature range	-20~60℃
Lag behind	0.2%F.S	Recommended excitation voltage	5~12V
Service life	Over 1 million times	Maximum excitation voltage	12V
Materials	stainless steel	SAFE overload range	120%F.S
Cable specifications	Φ5mm×3m	Limit Overload Range	150%F.S
Insulation Resistance	≥5000MΩ/100V DC	Protection level	Ip66

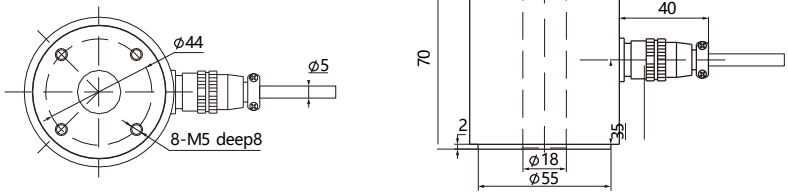


KDEV-C-G7

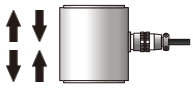
Product characteristics

- 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.

- **Mounting dimensions**



- **Force mode**



Technical parameters

Measuring range	0-0.5/1/2/3/5/10 T	Temperature sensitivity drift	± 0.05% F.S. / 10℃
Output sensitivity	1.0 ~ 1.5 mV/V	Zero temperature drift	± 0.05% F.S. / 10℃
Zero output	± 2 % F.S.	Use voltage	3 ~ 10V
Nonlinear	± 0.5% F.S.	Operating temperature range	- 20 ~ 80 ℃
Lag	± 0.5% F.S.	Compensation temperature range	- 10 ~ 60 ℃
Repeatability	± 0.5% F.S.	Safety overload	120%
Creep (30 min)	± 0.05% F.S.	Extreme overload	150%
Input impedance	750 ±10Ω	Cable specifications	Φ5mm×3m
Output impedance	700 ±5Ω	Material	Stainless Steel
Insulation Resistance	≥5000MΩ/100VDC	Protection level	Ip50