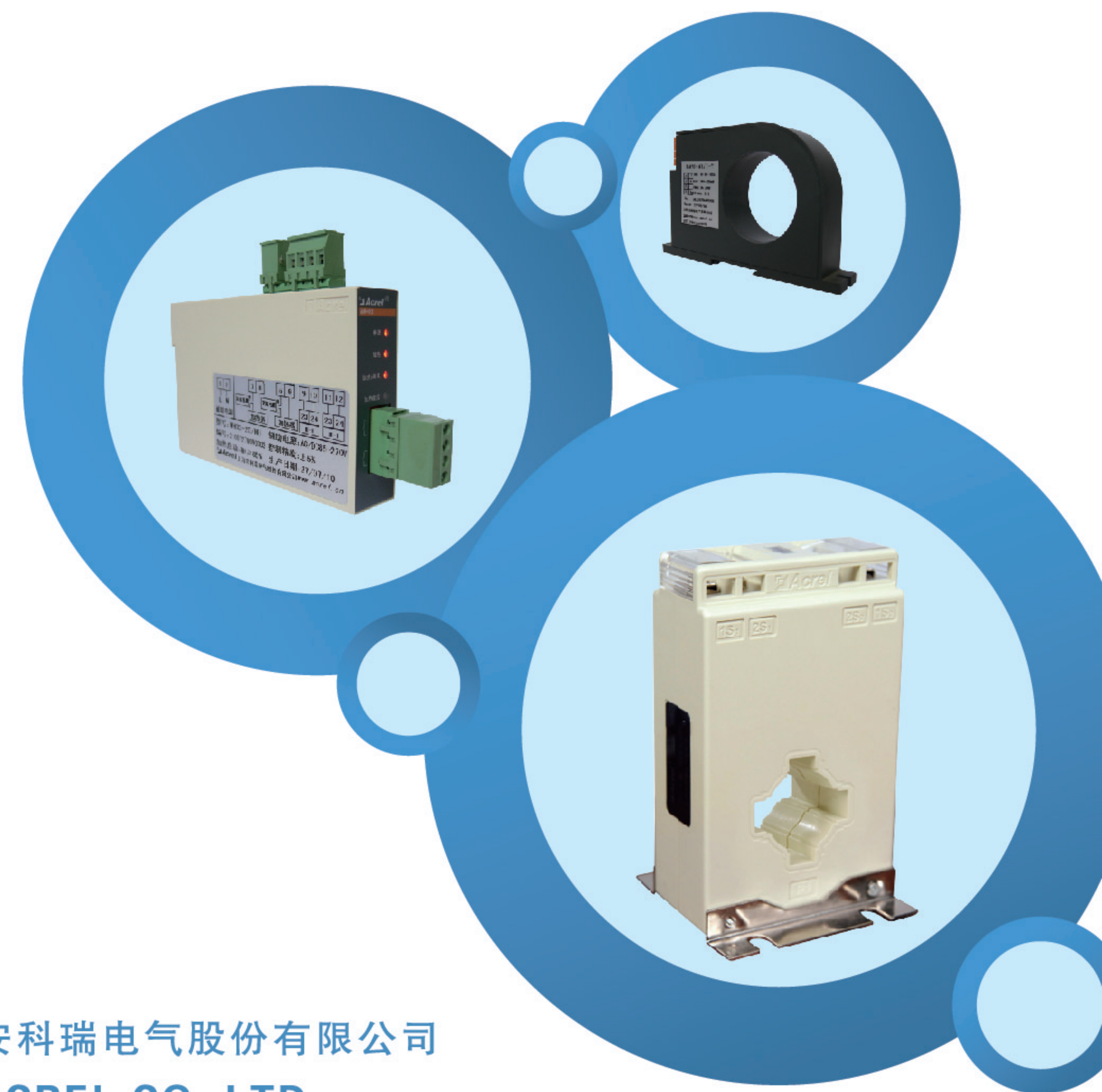


电量传感器选型手册

Selection manual for Power Sensor



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简介

BRIEF INTRODUCTYION

江苏安科瑞电器互感器事业部主要负责电量采集元件的研发与生产，包括AKH-0.66系列电流互感器、霍尔传感器、BR系列罗氏线圈变送器、BA系列交流电流传感器、BM系列模拟信号隔离器、BD系列电力变送器。

事业部为规范管理，进一步提高生产质量和效率，采用ERP和MES相结合的信息化管理系统，实现了生产车间的无纸化流程管理；拥有功能完善的产品试验中心，可开展环境、电磁兼容、安全性、可靠性等多种试验；制造过程中严格执行ISO9001管理标准，为事业部产品产业化、规模化实施提供保障。

事业部引进了国内、外先进的绕线机、全自动互感器检测仪、超声波自动焊接机、全自动灌封机、大电流直流源、全自动喷气式热收缩包装机等设备。2014年成立RoHS车间，率先引进无铅工艺，使产品品质有了质的飞跃，大大提高产品的竞争力，同时也为安科瑞产品顺利进军欧美发达国家市场提供了基础条件。

事业部产品符合IEC61869-2:2012，MOD《电流互感器》国际标准及GB20840.2-2014《电流互感器》国家标准，产品符合欧盟RoHS指令，已取得相应的TUV证书，并已获得ISO9001认证证书、AKH-0.66系列计量器具制造许可证、AKH-0.66电流互感器B级升温试验报告、计量合格确认证书、电量传感器CE证书、互感器壳体阻燃测试报告、高海拔试验报告。

江苏安科瑞电量传感器事业部产品广泛应用于半导体行业、冶金业、石油化工、建筑业、国家电网、电厂项目、轻工业、国防工程等行业，赢得了较好的市场声誉。

The Transformer Division of Jiangsu ACREL CO.,LTD is mainly responsible for development and production of electric collection device, including AKH-0.66 series current transformer, Hall sensors, BR Series Rogowski coil transducer, BA series AC current sensors, BM series analog signal isolators, BD series power transmitter.

In order to standardize management and further improve production quality and efficiency, the division use information management system based on ERP and MES to achieve paperless process in the production workshop. It have a fully functional product testing center to carry out environmental, electromagnetic compatibility, security, reliability and other tests. Our manufacturing process strictly enforce the ISO9001 management standards,which can provide protection for the product industrialization and large-scale implementation.

The division introduced domestic and foreign advanced winder, automatic transformer tester, ultrasonic automatic welding machines, automatic sealing machine, high-current DC source, automatic jet shrink packaging machines and other equipments. The Rosh workshop was established in 2014 and firstly introduced the lead-free technology, which made the product quality have a qualitative leap and greatly improve the competitiveness of the products.As well as it provide the basic condition for Acrel products smoothly entering the European and American developed countries market.

The products of division meet the international standards of IEC61869-2:2012,MOD "current transformer" and the national standards of GB20840.2-2014 "current transformer". The Products comply with the EU Rohs directive and have made the appropriate TUV certificate.The division have obtained ISO9001 certification, measurement equipment manufacturing license of AKH-0.66 series, Class B temperature test report of AKH-0.66 current transformer, qualified to confirm certificate, CE certificate of current sensor, flame test report of transformer shell and the high-altitude test report.

The Products of the Power sensor division of Jiangsu ACREL are widely used in the semiconductor industry, metallurgical industry, petrochemical industry, construction industry, the state grid, power plant project, light industry, national defense and other industries, which have won the good market reputation.

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一、AKH-0.66系列电流互感器 AKH-0.66 series current transformer

1 概述 Overview

AKH-0.66系列电流互感器外壳采用阻燃、耐温120℃的进口聚碳酸酯注塑成形，铁芯采用取向冷轧硅钢带卷绕而成，二次导线采用高强度电磁漆包线，产品结构新颖，造型美观，安装方便，体积小，准确度高，容量大。
产品符合国标GB20840.2-2014(等效IEC61869-2：2012，MOD)，并通过CE认证。

AKH-0.66 series current transformer, its shell is formed by press mould with flame retarding polycarbonate of heat resisting 120℃.The core, The Second wires adopt high strength electromagnetic wire. This product have features of novel construction, good appearance, mounting ease, smaller volume, higher accuracy, higher capacity.
This product meet the requirements of GB20840.2-2014 (IEC61869-2：2012，MOD), and have achieved CE certificate.

2 技术指标 Technical indicators

- 测量CT一次电流5-6300A，二次电流5A，1A，100mA，50mA；
Measuring CT primary current 5-6300A,secondary current 5A,1A,100mA,50mA;

组合式CT一次电流5-200A，二次电流5A，1A，20mA,50mA；
Integrated CT primary current 5-200A,secondarycurrent 5A,1A,20mA,50mA;

微型CT一次电流5-100A,二次电流20mA、50mA；
Micro CT primary current 5-100A,secondary current 20mA,50mA;

保护CT一次电流5-6300A，二次电流5A，1A，100mA，50mA；
Protection CT primary current 5-6300A,secondary current 5A,1A,100mA,50mA;

双绕组CT一次电流5-6300A，二次电流5A、20mA，1A、20mA；
Double-winding CT primary current 5-6300A,second current 5A,20mA,1A,20mA;

双绕组传感器一次电流5-6300A，二次电流AC5A、DC4-20mA，AC1A、DC4-20mA；
Double-winding sensor primary current 5-6300A,secondary current AC5A,DC4-20mA,AC 1A,DC4-20mA;

剩余电流CT一次电流0-5A，二次输出电压1V或电流5mA或电流2mA；
Residual current CT primary current 0-5A,secondary output voltage 1V or current 5mA or current 2mA;

计量CT一次电流5-2000A，二次电流5A，1A；
Metering CT primary current 5-2000A,secondary current 5A,1A;

开口式CT一次电流20-6300A，二次电流5A，1A；
Split CT primary current 20-6300A,secondary current 5A,1A;

浇注式CT一次电流15-20000A，二次电流5A，1A。
Casting CT primary current 15-20000A,secondary current 5A,1A.
- 额定工作电压AC0.66kV（等效AC0.69kV，GB156-2003）
Rated operation voltage AC 0.66kV(Equivalent AC 0.63kV,GB156-2003)
- 额定频率50-60Hz
Rated frequency 50-60Hz
- 环境温度-30℃~70℃，最高耐温120℃
Ambient air temperature -30℃-70℃,max. Heat resist 120℃
- 海拔高度≤3000m
Height above sea level≤3000m
- 工频耐压3000V/1min 50Hz
Power frequency withstand voltage 3000v/1min 50Hz
- 用于没有雨雪直接侵袭，无严重污染及剧烈震动的场所
Used in place without direct rain and snow,without severe pollution and acute shock
- 其他特殊要求可定制
Other special requirements can be customized

- 根据一次电流及母线截面等参数选择对应的规格产品。一次导线穿越互感器窗孔。打开翻盖，通过压线片进行二次接线，二次接线引出后翻盖复位。计量电能可直接利用翻盖小孔加封铅印，以防窃电。
Select proper product based on parameters of primary current and bus section area etc. Primary wire pass through the transformer window. Open the cover, do the second lead by pressing-ray, after outlet the second lead,restore the cover.
- 工作电流长期不超过1.1倍额定值，允许在1.2倍额定值时短时使用，时间不超过1h；
Long time working current does not exceed 110% of rating,120% of rating may be used in short time,duration does not exceed 1h.
- 根据被测电流大小，选定额定电流比，一般选用被测电流是额定电流的2/3；或者根据断路器的额定电流来选择额定电流比，或按GB/T50063-2008进行选择。
Based on detected current, select the rate current radio, generally above 2 /3 rate current; either select the rate current radio based on the rate current of breaker; either choose according to GB/T50063-2008.
- 产品极性表示为：一次接线标志P1、P2，相应二次接线标志S1、S2；S1表示P1的同名端，S2表示P2的同名端；
Product polarity indicate: P1,P2 mark for primary wiring;S1,S2 mark for relevant second wiring;S1 indicate same name end of P1;S2 indicate same name end of P2.
- 测量仪表接于S1、S2端上，此时所接回路的总负荷不应超过互感器的额定负荷，当安装仪表位置与电流互感器相距甚远或回路负载较大时，应优先选用二次电流为1A的电流互感器；
Measure meters are connected on S1 end,S2 end, and the total impedance shall not exceed the rated load of the transformer. If the meter mount position is far from current transformer or the circuit load is heavy, the preferable selection is current transformer for secondary current of 1A.
- 注意根据母排的规格和根数，选用相匹配窗口大小的互感器。
Based on spec. and number of bus, select the transformer with proper matched window.

3 选型说明 Selection of instructions

型号规格 Model and specification		主要特点 Main features	备注 note
测量CT Measuring CT	AKH-0.66-I	适用于（单）多根电缆或单根母排穿越 Suitably pass through by (single) multiple cables or bus	用于工矿企业内部测量 For internal measurement of industrial and mining enterprises
	AKH-0.66-II	具备I、II型特点，满足供电计量精度高，容量大的要求 Possess the characteristics of type I、II, satisfactory for requirement of high metering precision,high capacity	
	AKH-0.66-III	适用于小电流，小空间场所，为接线式CT，尤其适合抽屉柜要求 As connection CT, applicable to small current, small space, especially for draw-out cabinet	
	AKH-0.66-M8	组合式CT三相一体，用于小空间配电柜，测量范围5-200A Combined CT three-phase, for distribution cabinets in small space, measurement range 5-200A	
	AKH-0.66-Z	适用于多根母排（1-6根）或多根电缆穿越 Suitably pass through by multiple buses(1-6) or multiple cables	用于通信机柜 Used for communications cabinets
	AKH-0.66-W	用于通讯机房、移动基站63A多回路监控，与AMC16配合使用，为用户节约成本 Matched with AMC16 for the communications room, the mobile station 63A multi-loop control, cost saving for users	
保护CT Protection CT	AKH-0.66-P	适用于多根母排，立式安装，测量过载、短路电流与继电器配套使用 Suitably pass through by multiple buses, vertical installation, used with relay for measuring overload, short-circuit current	用于线路保护 For wiring protection
双绕组CT Double-winding CT	AKH-0.66-S	双路输出，一路用于电流表测量、显示，另一路用于系统监控的电流采集 Dual output, one for measuring and display of current meter, and the other for current collection of system monitoring	用于多回路监控 Used for multi-loop monitoring
双绕组传感器 Double-winding Sensor	AKH-0.66-SM	双路输出，一路用于交流电流的测量，另一路输出直流4-20mA用于远传，可与自控仪表如PLC配合使用，为用户节约成本，辅助电源DC24V由PLC提供 Dual output, one for AC current measuring, and the other of output DC4-20mA for remote transmission, can be matched with the automatic control instrument such as PLC, for the user cost savings, auxiliary power DC24V provided by PLC	用于自动化系统监测 For automated monitoring system
剩余电流CT Residual current CT	AKH-0.66-L	适用于电缆、母排安装，可与电气测控装置、电动机保护装置配套使用 Suitably pass through by buses or cables, can be matched with electric measurement and control device, motor protection device	用于火灾监控 Used for fire monitoring
计量CT Metering CT	AKH-0.66-G	用于电力计量用，准确级可达0.2S，计量准确 For electricity metering, accuracy class is 0.2S and have accurate measurement	工矿企业内部计量 For internal metering of industrial and mining enterprises
开口式CT Split CT	AKH-0.66-K	用于项目改造，无须拆一次母线，安装方便，为用户节省人力、财力，提高改造效率 For project transformation, without removing bus,mounting ease, save manpower and financial resources, improve the efficiency of transformation	用于配电系统改造 Used for reforming of power distribution system

型号规格 Model and specification		主要特点 Main features	备注 note
浇注式CT Casting CT	AKH-0.66Q (LQZJ4-0.66)	用于供电局计量用，准确级为0.2S，容量为10VA，计量精确，与收费电能表配合使用 Used in metering for power supply bureau,accuracy class of 0.2S, capacity 10VA, measurement precision,matched with charge watt-hour meter	用于国家电网计量 metering for state grid
	AKH-0.66/ZD (LMZD-0.66)	用于供电系统计量用，与供电系统收费电能表配合使用 Used for metering of power supply,matched with charge watt-hour meter of power supply	
	AKH-0.66-J	用于户外或环境条件比较恶劣的场所 Used for outdoor or poor environment	适用于沿海地区 Suitable for coastal areas
	AKH-0.66-H	非标产品，主要适合于6000A-20000A大电流场所 Non-standard product, mainly suitable for 6000A-20000A large urrent	适合于户外 Suitable for ourdoor
定制类产品 Customized product	AKH-L	适合于35kV高低压配电系统接地保护用，与继电器配合使用 Suitable for 35kv high and low voltage distribution systems to do earth protection, matched with relay	零序保护 Zero sequence protection
	AKH-3.3	采用环氧浇注，具有很强的耐热性和机械性能 Epoxy pouring,with strong heat resistance and mechanical properties	适用于煤矿 Applicable to coal mine
	JDG4-0.5	采集380V-1140V电压信号，输出100V。 Collect 380v to 1140v voltage signal, the output is 100v	工矿企业内部测量 For internal measurement of industrial and mining enterprises

4 产品规格 Product specification

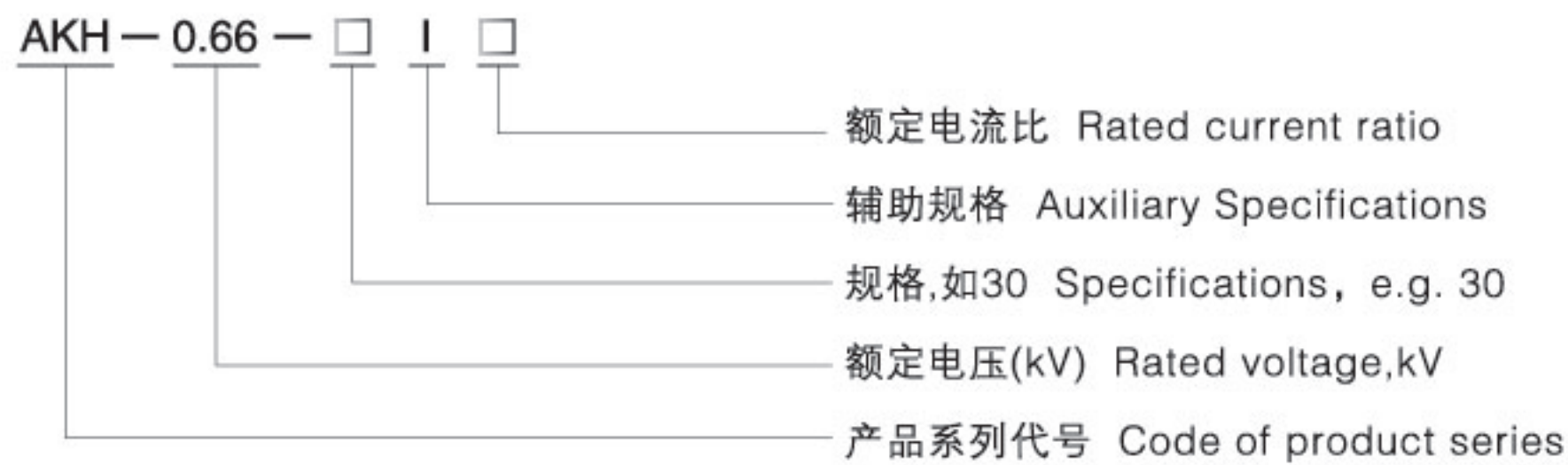
4.1 AKH-0.66测量型电流互感器 AKH-0.66 measuring current transformer

4.1.1 AKH-0.66 I 型电流互感器 AKH-0.66 I current transformer

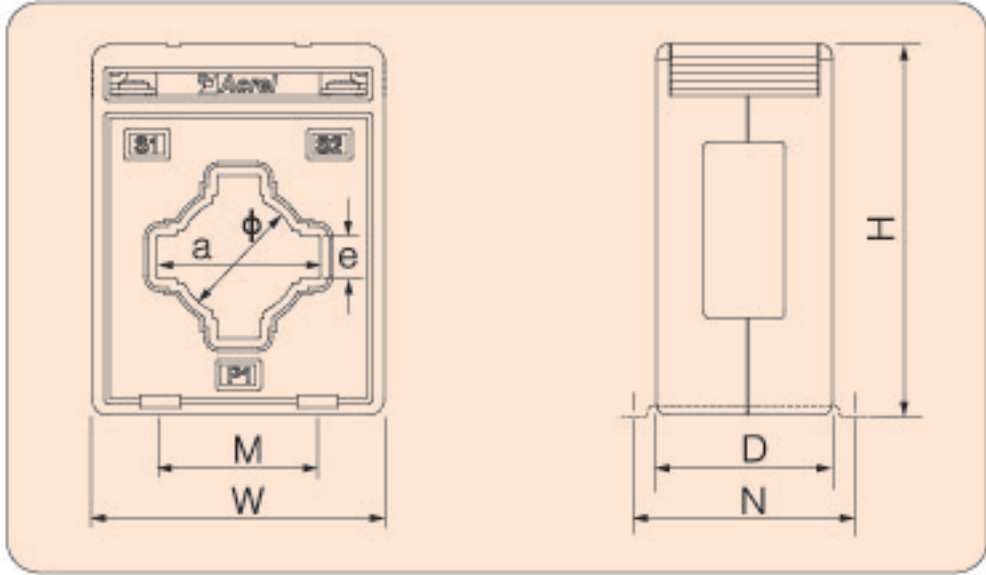
● 产品特点 Product feature

专利产品，翻盖式设计，外形美观，接线方便。翻盖材料选用透明聚碳酸酯，能清楚看到二次引线接线情况。方圆组合孔型，既可穿越电缆，也可穿越汇流排，作为交流电流信号采集元件，一般与测量仪表配套使用,广泛应用于电气成套。
They are patented and flip designed. The appearance is nice and the wiring is convenient. The transparent polycarbonate material is selected for the flip.We can clearly see the secondary lead wiring. It have square-round hole for both cable and bus passing through . As alternating current signal acquisition element,it is generally matched with measuring instruments and widely used in electrical sets.

● 型号说明 Explanation for type



● 规格尺寸 Spec. and size(mm)



规格 Type	尺寸 Size	外形尺寸 Outline size			穿孔尺寸 Through size			安装尺寸 Mounting size	
		W	H	D	a	e	Φ	M	N
30 I		60	78	36	31	11	23	34	57.5
40 I		75	95	45	42	11	31	40	57.5
60 I		102	130	45	61.5	21	45	42	57.5
80 I		118	140	45	82	11	52	60	57.5

规格参数对照表 Cross-reference tables of spec. - parameter

规格 Specification	额定电流比(A) Rated current ratio (A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load (VA)			穿心匝 数(匝) Straight- through turns	母排规格(mm) /根数 Bus spec (mm)/number	电缆最大外 径 (mm) Max. cable outer diameter (mm)	安装方式 Installation
		0.2	0.5	1				
30I	15/5(1)			1.5	5	/	Φ22	A
	20/5(1)			1.5	4			
	25-30/5(1)			1.5	3			
	40-60/5(1)			1.5	2			
	75-100/5(1)			1.5	1	30x10/1		A,B
	150-200/5(1)		2.5		1			
	250/5(1)		3.75		1			
	300-450/5(1)		5		1			
	500/5(1)		10		1			
	600/5		10		1			
40I	10/5(1)			1.5	8	/	Φ30	A
	15/5(1)			1.5	5			
	20/5(1)			1.5	4			
	25-30/5(1)			1.5	3			
	40-60/5(1)			1.5	2			
	75/5(1)			1.5	1	40x10/1		A,C
	100/5(1)			1.5	1			
	150/5(1)			2.5	1			
	200/5(1)		2.5		1			
	250/5(1)		3.75		1			
	300-450/5(1)		5		1			
	500-800/5(1)		10		1			
	1000/5(1)	10			1			
60I	150/5(1)			2.5	1	60x10/1 60x6/1-2	Φ44	A,C
	200/5(1)		2.5		1			
	250/5(1)		3.75		1			
	300-450/5(1)		5		1			
	500-800/5(1)		10		1			
	1000-1250/5(1)	10			1			
	1500-2000/5(1)	20			1			
	2500/5(1)	30			1			
80I	150/5 (1)			2.5	1	80x10/1	Φ50	A,C
	200-250/5(1)		2.5		1			
	300-450/5(1)		5		1			
	500-800/5(1)		10		1			
	1000-1250/5(1)	10			1			
	1500-2000/5(1)	20			1			
	2500-3000/5(1)	30			1			

4.1.2 AKH-0.66II 型电流互感器 AKH-0.66 II current transformer

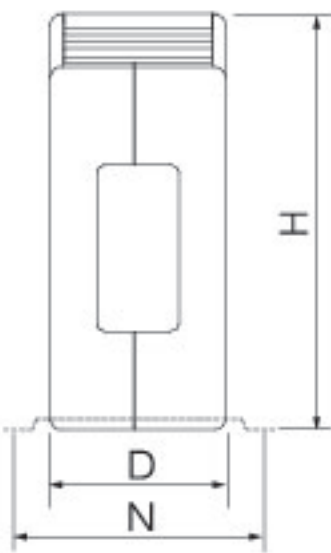
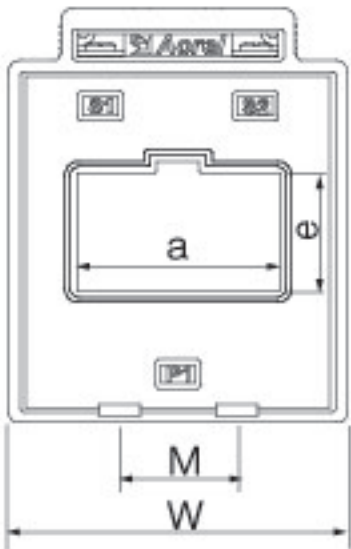
产品特点 Product feature

卧式方孔型，可穿越1-6根汇流排，亦可穿越多根电缆，一般与电气测量仪表配套使用，广泛应用于电气成套。
Horizontal square hole type, they can pass through 1-6 bar bus and also pass through multiple cables. They are generally used with electrical measuring instruments, widely used in electrical sets.

型号说明 Explanation for type



规格尺寸(单位: mm) Spec. and size(mm)



规格 Type	外形尺寸 Outline size			穿孔尺寸 Through size		安装尺寸 Mounting size	
	W	H	D	a	e	M	N
30II	62	98	45	32	32	28	57.5
40II	78	103	45	43	31.5	48	57.5
50II	87	113	45	52	32	30	57.5
60II	102	125	45	61	33	42	57.5
60 × 50II	102	142	45	62	51.5	42	57.5
80II	117	119	45	82	32	60	57.5
80 × 50II	120	141	45	82	52	60	57.5
100II	145	125	45	103	35	80	57.5
100 × 50II	145	155	50	103	55	80	70.5
100 × 80II	152	190	55	104	85	80	70.5
120 × 50II	174	168	48	122	53	79	70.5
120 × 80II	160	193	60	122	72	56	70.5
130 × 50II	176	160	50	135	55	86	70.5
150 × 50II	210	176	55	155	55	103	70.5
180 × 50II	239	181	60	185	55	40	83
200 × 50II	247	175	55	202	61	188	83
220 × 50II	280	190	60	225	55	188	83
260 × 50II	320	191	60	265	55	65/55/65	83
170 × 100II	227	230	60	172	105	103	83
260 × 100II	308	218	63	265	104	58 × 3	83

规格参数对照表 Cross-reference tables of spec. - parameter



规格 Specification	额定电流比(A) Rated current ratio (A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load (VA)			穿心匝 数(匝) Straight- through turns	母排规格(mm) /根数 Bus spec (mm)/number	安装方式 Installation
		0.2	0.5	1			
30II	100/5(1)			1.5	1	30x10/1-2	A、C
	150/5(1)			1.5	1		
	200/5(1)		2.5		1		
	250/5(1)		3.75		1		
	300-450/5(1)		5		1		
	500/5(1)		10		1		
	600/5		10		1		



规格 Specification	额定电流比(A) Rated current ratio (A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load (VA)			穿心匝数(匝) Straight-through turns	母排规格(mm) /根数 Bus spec (mm)/number	安装方式 Installation
		0.2	0.5	1			
40II	100/5(1)			1.5	1	40x10/1-2	A、C
	150/5(1)			2.5	1		
	200/5(1)		2.5		1		
	250/5(1)		3.75		1		
	300-450/5(1)		5		1		
	500-800/5(1)		10		1		
	1000/5(1)	10			1		
50II	150/5(1)			2.5	1	50x10/1-2	C
	200-250/5(1)		2.5		1		
	300-450/5(1)		5		1		
	500-800/5(1)		10		1		
	1000-1250/5(1)	10			1		
	1500/5(1)	20			1		
60II	200-250/5(1)		2.5		1	60x10/1-2	D
	300-450/5(1)		5		1		
	500-800/5(1)		10		1		
	1000-1250/5(1)	10			1		
	1500-2000/5(1)	20			1		
	2500/5(1)	30			1		
60x50II	200-250/5(1)		2.5		1	60x10/1-3	
	300-450/5(1)		5		1		
	500-800/5(1)		10		1		
	1000-1250/5(1)	10			1		
	1500-2000/5(1)	20			1		
	2500/5(1)	30			1		
80II	200-250/5(1)		2.5		1	80x10/1-2	
	300-450/5(1)		5		1		
	500-800/5(1)		10		1		
	1000-1250/5(1)	10			1		
	1500-2000/5(1)	20			1		
	2500-3000/5(1)	30			1		
80x50II	200-250/5(1)		2.5		1	80x10/1-3	
	300-450/5(1)		5		1		
	500-800/5(1)		10		1		
	1000-1250/5(1)	10			1		
	1500-2000/5(1)	20			1		
	2500-3000/5(1)	30			1		
100II	300-450/5(1)		5		1	100x10/1-2	
	500-800/5(1)		10		1		
	1000-1250/5(1)	10			1		
	1500-2000/5(1)	20			1		
	2500-4000/5(1)	30			1		
100x50II	300-450/5(1)		5		1	100x10/1-3	
	500-800/5(1)		10		1		
	1000-1250/5(1)	10			1		
	1500-2000/5(1)	20			1		
	2500-4000/5(1)	30			1		



规格 Specification	额定电流比(A) Rated current ratio (A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load (VA)			穿心匝数(匝) Straight-through turns	母排规格(mm) /根数 Bus spec (mm)/number	安装方式 Installation
		0.2	0.5	1			
100x80II	600-800/5(1)		10		1	100x10/1-4	D
	1000-1250/5(1)	10			1		
	1500-2000/5(1)	20			1		
	2500-4000/5(1)	30			1		
120x50II	500-800/5(1)		10		1	120x10/1-3	
	1000-1250/5(1)	10			1		
	1500-2000/5(1)	20			1		
	2500-5000/5(1)	30			1		
130x50II	600-800/5(1)		10		1	125x10/1-3 130x10/1-3 60x10/2-6	
	1000-1250/5(1)	10			1		
	1500-2000/5(1)	20			1		
	2500-5000/5(1)	30			1		
120x80II	1000-1250/5(1)	10			1	120x10/1-4	
150x50II	1500-2000/5(1)	20			1		
	2500-5000/5(1)	30			1		
170x100II	1500-2000/5(1)	15			1	170x10/1-3 100x10/3-6	
	2500-5000/5(1)	30			1		
180x50II	1200-2000/5(1)	10			1	180x10/1-3	
	2500-5000/5(1)	30			1		
200x50II 220x50II 260x50II	1500-2000/5(1)	20			1	200x10/1-3 100x10/4-6	
	2500-5000/5(1)	30			1		
260x100II	1200-1500/5(1)	10			1	250x10/2-5 125x10/4-10	
	1500-2000/5(1)	20			1		
	2500-6300/5(1)	30			1		

注：额定一次电流的标准值为：10A、12.5A、15A、20A、25A、30A、40A、50A、60A、75A以及它们十进位倍数或小数，有下标线的是优先值。
Note: The standard value of the rated primary current is: 10A、12.5A、15A、20A、25A、30A、40A、50A、60A、75A, and their decimal multiples or decimal, which marked are the priority value.

4.1.3 AKH-0.66III 型电流互感器 AKH-0.66 III current transformer

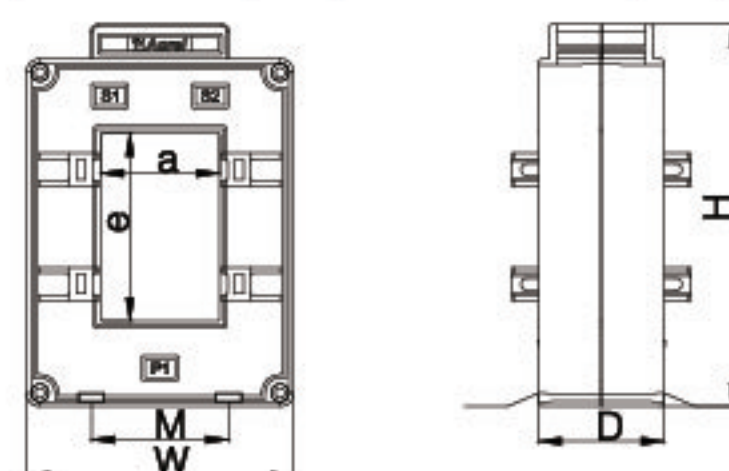
● 产品特点 Product feature

立式方孔型，可穿越1-3根汇流排，不但具有 I、II 型的特点，而且可供电系统计量电能用，以及可与电流继电器配套作保护用。
Vertical square hole type, they can pass through 1-3 bar bus. Not only they possess features of type I, II, but also can be used for electric metering of power supply, and matched with current relay to do protection.

● 型号说明 Explanation for type



● 规格尺寸(单位: mm) Spec. and size(mm)



规格 Type	尺寸 Size	外形尺寸 Outline size			穿孔尺寸 Through size		安装尺寸 Mounting size
		W	H	D	a	e	
60 III		117	147	55	52	62	60
80 III		117	167	55	52	82	60
100 III		120	190	55	52	102	60
130 III		125	224	55	52	132	60

● 规格参数对照表 Cross-reference tables of spec. - parameter



规格 Specification	额定电流比(A) Rated current ratio(A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load (VA)		穿心匝数(匝) Straight-through turns	母排规格(mm)/根数 Bus spec (mm)/number	安装方式 Installation
		0.2	0.5			
60III	200-300/5(1)		2.5	1	60x10/1-3	E
	400/5(1)		5	1		
	500-800/5(1)		10	1		
	1000/5(1)	10		1		
	1200-1500/5(1)	15		1		
	2000/5(1)	20		1		
	2500/5(1)	30		1		
80III	300-400/5(1)		5	1	80x10/1-3	
	500-800/5(1)		10	1		
	1000/5(1)	10		1		
	1200-1500/5(1)	15		1		
	2000/5(1)	20		1		
	2500-3000/5(1)	30		1		
100III	600-800/5(1)		10	1	100x10/1-3	
	1000/5(1)	10		1		
	1200-1500/5(1)	15		1		
	2000/5(1)	20		1		
	2500-5000/5(1)	30		1		
130III	2000/5(1)	20		1	130x10/1-3	
	2500-5000/5(1)	30		1	125x10/1-3	

注: 额定一次电流的标准值为: 10A、12.5A、15A、20A、25A、30A、40A、50A、60A、75A以及它们十进位倍数或小数, 有下标线的是优先值。

Note: The standard value of the rated primary current is: 10A、12.5A、15A、20A、25A、30A、40A、50A、60A、75A, and their decimal multiples or decimal, which marked are the priority value.

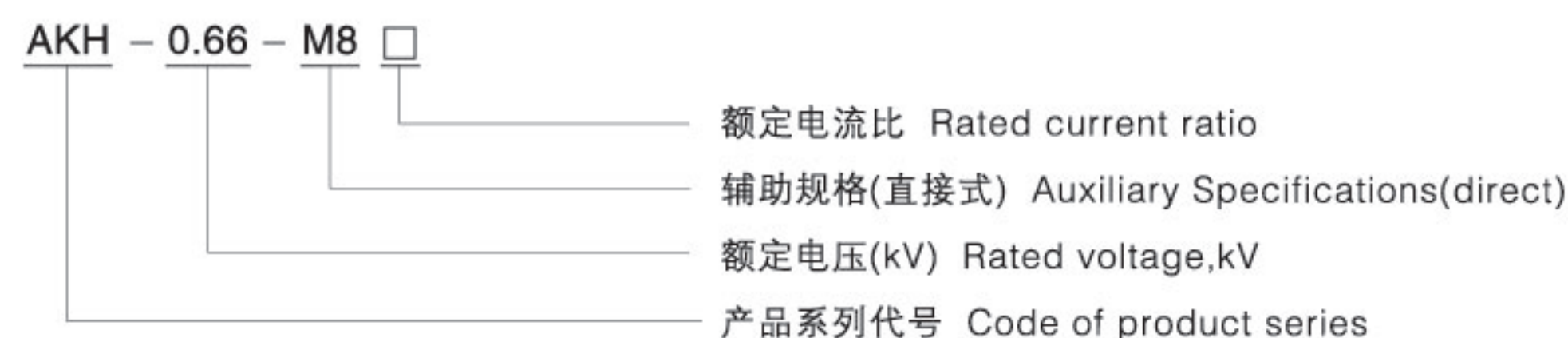
4.1.4 AKH-0.66 M8型电流互感器 AKH-0.66 M8 current transformer

● 产品特点 Product feature

一次电流较小, 容量2.5VA及以下用于测量或保护, 多用于低压抽屉柜等小空间场所。

Primary current is small, capacity 2.5VA and below for measuring or protection, and more used for small space such as low voltage draw-out cabinet etc.

● 型号说明 Explanation for type



● 规格尺寸(单位: mm) Spec. and size(mm)

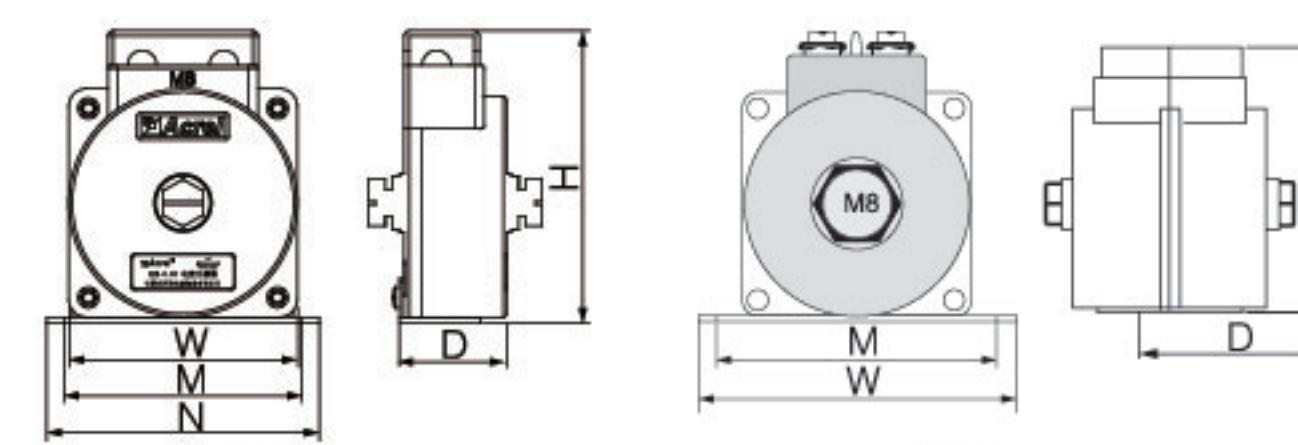


图1
Fig.1

图2
Fig.2

规格 Type	尺寸 Size	外形尺寸 Outline size			安装尺寸 Mounting size		图形 Figure
		W	H	D	M	N	
M8		67	86	30	70.8	80.5	图1 Fig.1
双M8 Double M8		67	86	56	70.8	80.5	图2 Fig.2

● 规格参数对照表 Cross-reference tables of spec. - parameter



规格 Specification	额定电流比(A) Rated current ratio (A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load (VA)					穿心匝数 (匝) Straight-through turns	母排规格 (mm)/根数 Bus spec (mm)/number	线缆最大 外径(mm) Max. cable outer diameter (mm)	安装方式 Installation
		0.2S	0.5S	0.2	0.5	1				
M8	5-100/5(1)					2.5	直接式 Direct	/	/	H
双M8 Double M8	5-100/5	2.5	2.5	2.5						

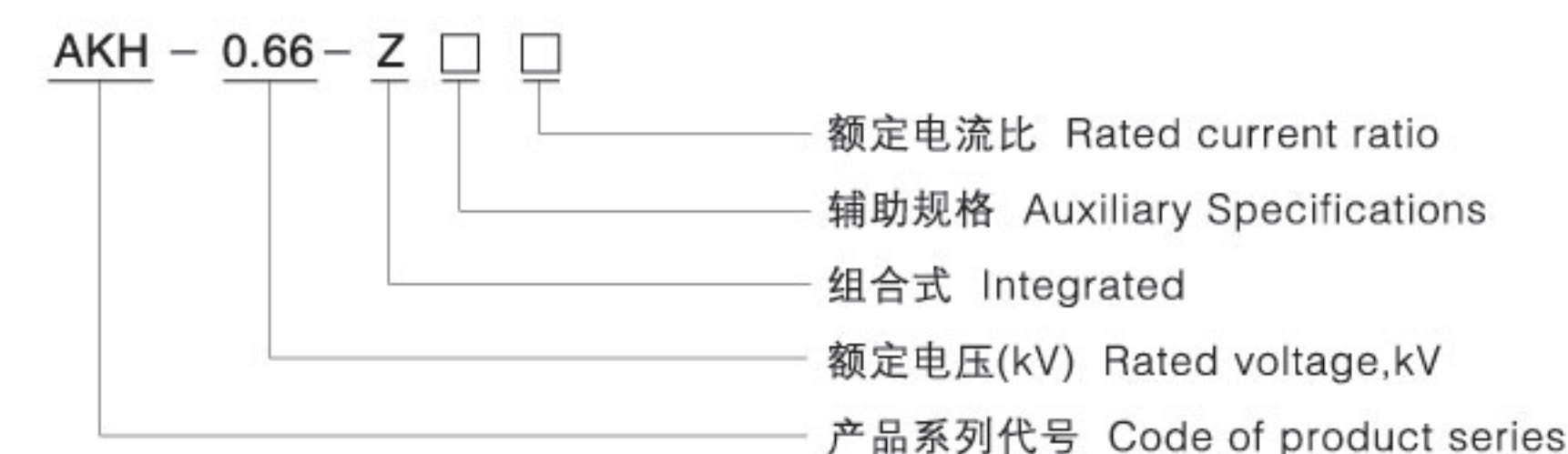
4.1.5 AKH-0.66/Z型组合式电流互感器 AKH-0.66/Z integrated current transformer

● 产品特点 Product feature

组合式电流互感器也叫三相电流互感器, 作为电流信号采集元件, 一般可与多回路电流监控装置 (AMC16)、PZ300、塑壳断路器等产品配套使用, 节约了安装空间、减少了接线烦琐, 方便用户的使用, 有效的降低了成本。

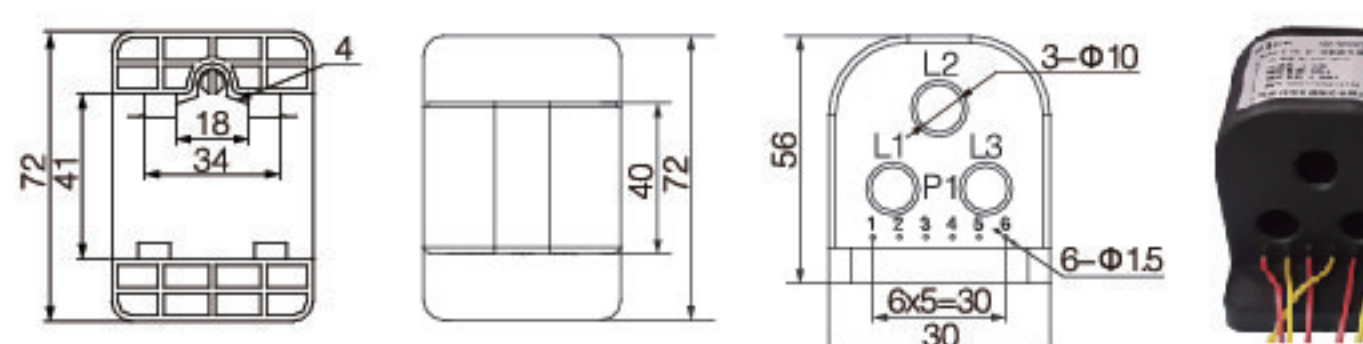
Combined current transformer is also called the three-phase current transformer. As current signal acquisition device, it is generally matched with multi-loop current monitoring device (AMC16), PZ300, moulded case circuit breaker and other products. It can save installation space, reduce the cumbersome wiring, be convenient to use and effectively reduce the cost.

● Explanation for type



4.1.5.1 AKH-0.66/Z-10型电流互感器 AKH-0.66/Z-10 current transformer

● 规格尺寸(单位: mm) Spec. and size(mm)



注: 互感器引出线为6根 (标注有1、2、3、4、5、6) Φ 1.5mmRV软导线, 红色为S1, 黄色为S2, 引出线必须固定在P1面, 且S1、S2引出线长3m $\pm$ 10cm; 一次电流从P1面进, P2面出。

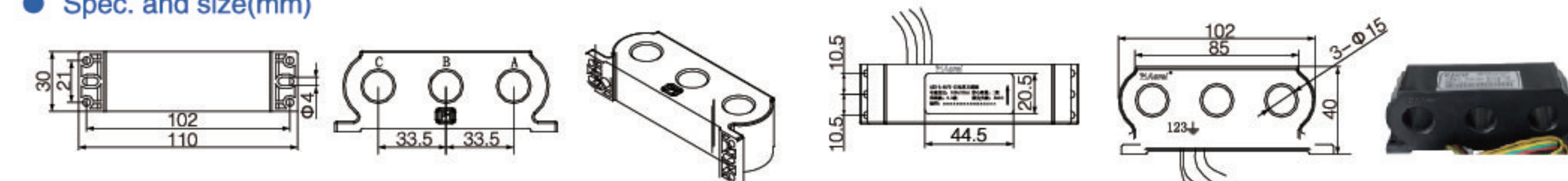
Note: There are six Φ 1.5mm RV soft wires lead from the transformer (marked 1,2,3,4,5,6). S1 is red and S2 is yellow. The outlet must be fixed on P1, and the length of S1, S2 is 3m + 10cm. Primary current flow from P1 to P2.

● Cross-reference tables of spec. - parameter

规格 Specification	额定电流比(A) Rated current ratio	准确级 Precision degree class 0.2	母排规格(mm)/根数 Bus spec (mm)/number	线缆最大外径(mm) Max. cable outer diameter (mm)	安装方式 Mounting made
Z-10	50A/25mA	10 Ω	1	Φ 10	导轨式 Rail designed

4.1.5.2 AKH-0.66/Z-15 current transformer

● Spec. and size(mm)

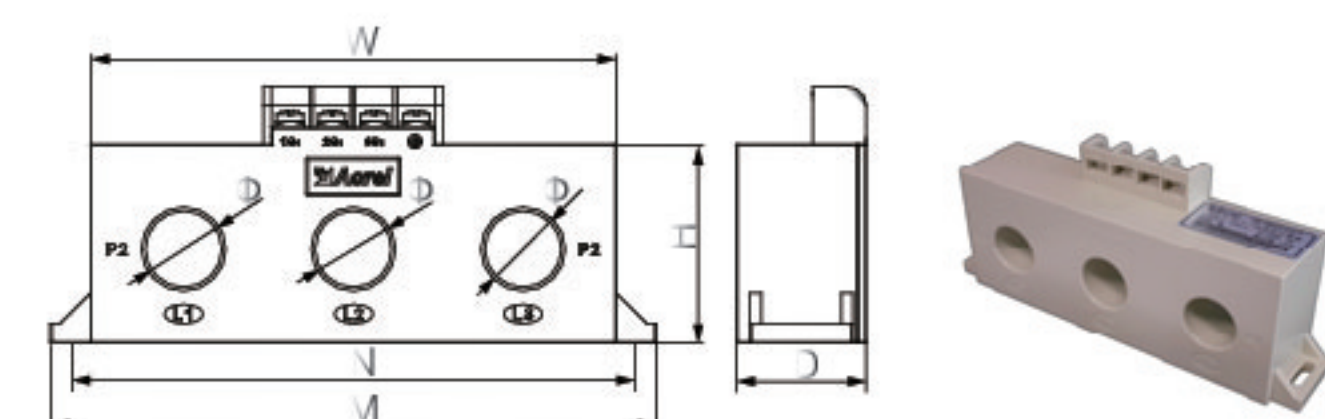


规格 Specification	额定电流比 Rated current ratio	准确级及相应额定负荷 Precision degree and corresponding rated load	穿心匝数(匝) Straight-through turns	电缆最大外径(mm) Max. cable outer diameter(mm)
		0.2		
Z-15	20-100A/20mA	10 Ω	1	Φ 10
	100A/50mA	10 Ω		

注：一次电流从P1面进，P2面出，二次引线黄色为A相S1，绿色为B相S1，红色为C相S1黑色为公共地，引出线为2m ± 10cm。
Note: Primary current flow from P1 to P2. The yellow second wiring is A-phase S1, the green is B-phase S1, the red is C-phase S1, and the black is common ground. The outlet length is 2m + 10cm.

4.1.5.3 AKH-0.66/Z-20型电流互感器 AKH-0.66/Z-20 current transformer

● 规格尺寸(单位: mm) Spec. and size(mm)



规格 Type	尺寸 Size	外形尺寸 Outline size			穿孔尺寸 Through size	安装尺寸 Mounting size		公差 Tolerance
		W	H	D	Φ	M	N	
AKH-0.66/Z-20		138	52	34	20	159	148	± 1

● 规格参数对照表 Cross-reference tables of spec. - parameter

规格 Specification	额定电流比 Rated current ratio	准确级及相应额定负荷 (VA/Ω) Precision degree and corresponding rated load (VA/Ω)		电缆最大 外径(mm) Max. cable outer diameter(mm)
		0.5	1	
Z-3 × Φ20	5-100/5A		1.5VA	Φ20
	150/5A	1.5VA		
	200/5A	2.5VA		
	5-100/1A		1.5 Ω	
	150/1A	1.5 Ω		
	200/1A	2.5 Ω		
	5-200A/50mA	0.5VA		

4.1.6 AKH-0.66/W系列电流互感器 AKH-0.66/W series current transformer

● 产品特点 Product feature

该产品为圆型，输出为5-20mA等小电流信号，与AMC16多回路电力仪表配套使用，产品具有体积小，精度高，带载能力强，安装方便等优点，为用户实现多回路监控节约成本。

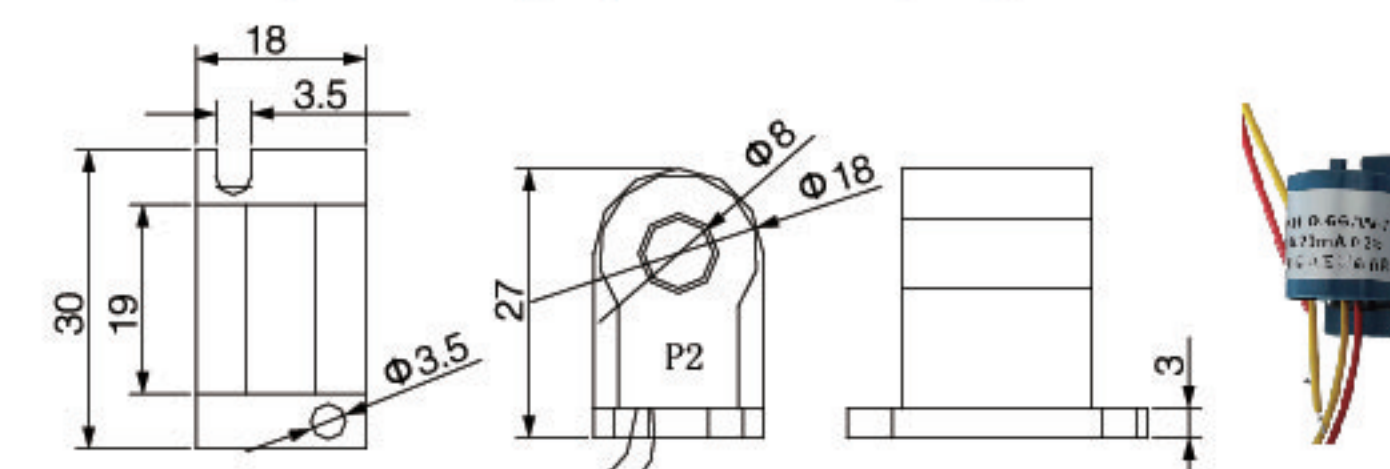
The product is round and the output is small current signal such as 4-20mA. It is matched with multi-loop electric meter (AMC16). Product has the advantages of small size, high accuracy, strong load capacity, easy installation, etc., and can save cost to realizing multi loop monitoring for users.

● 型号说明 Explanation for type



4.1.6.1 AKH-0.66/W-7型电流互感器 AKH-0.66/W-7 current transformer

● 规格尺寸(单位: mm) Spec. and size(mm)



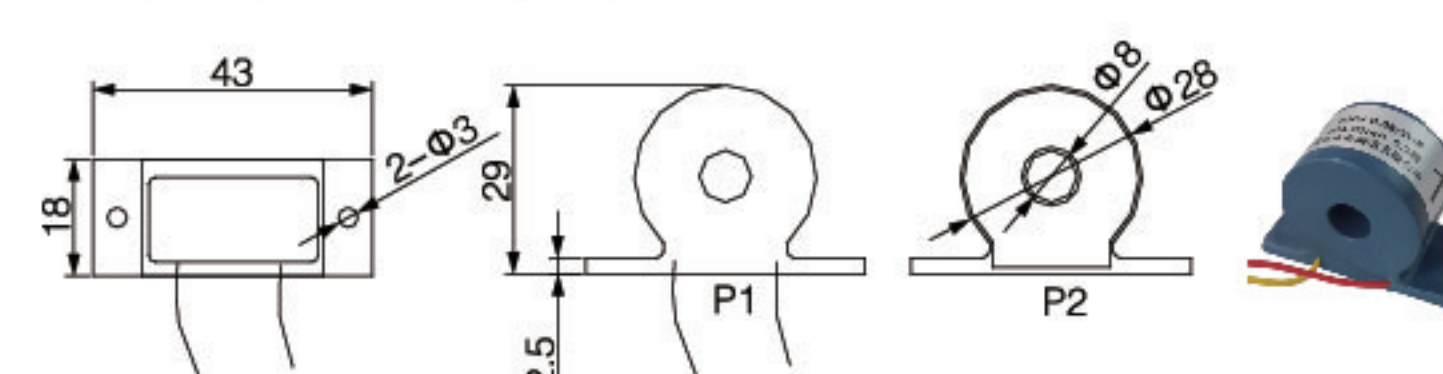
注：一次电流从P1面进，P2(灌胶面)面出，二次引线黄色为S2，红色为S1，引出线长为2m ± 10cm。特殊产品线长可根据需要定制。
Note: Primary current flow from P1 to P2 (Glue surface). The yellow second wiring is S2, the red is S1. The outlet length is 2m + 10cm.

● 规格参数对照表 Cross-reference tables of spec. - parameter

规格 Specification	额定电流比 Rated current ratio	准确级及相应额定负荷(Ω) Precision degree and corresponding rated load (Ω)			穿心匝数 Straight-through turns	电缆最大 外径(mm) Max. cable outer diameter (mm)
		0.2	0.5	1		
W-7	5-15/5mA	10			1	Φ 7
	10-30/10mA	10			1	
	5/20mA		10		2	
	10-15/20mA		10		1	
	20-60/20mA	10			1	

4.1.6.2 AKH-0.66/W-8型电流互感器 AKH-0.66/W-8 current transformer

● 规格尺寸(单位: mm) Spec. and size



注：一次电流从P1面进，P2面出，二次引线黄色为S2，红色为S1，引出线长为2m ± 10cm。特殊产品线长可根据需要定制。
Note: Primary current flow from P1 to P2. The yellow second wiring is S2, the red is S1. The outlet length is 2m + 10cm.

● 规格参数对照表 Cross-reference tables of spec. - parameter

规格 Specification	额定电流比 Rated current ratio	准确级及相应额定负荷(Ω) Precision degree and corresponding rated load (Ω)			穿心匝数 Straight-through turns	电缆最大 外径(mm) Max. cable outer diameter (mm)
		0.2	0.5	1		
W-8	5-15/5mA	10			1	Φ 8
	10-30/10mA	10			1	
	5/20mA		10		2	
	10-15/20mA		10		1	
	20-60/20mA	10			1	

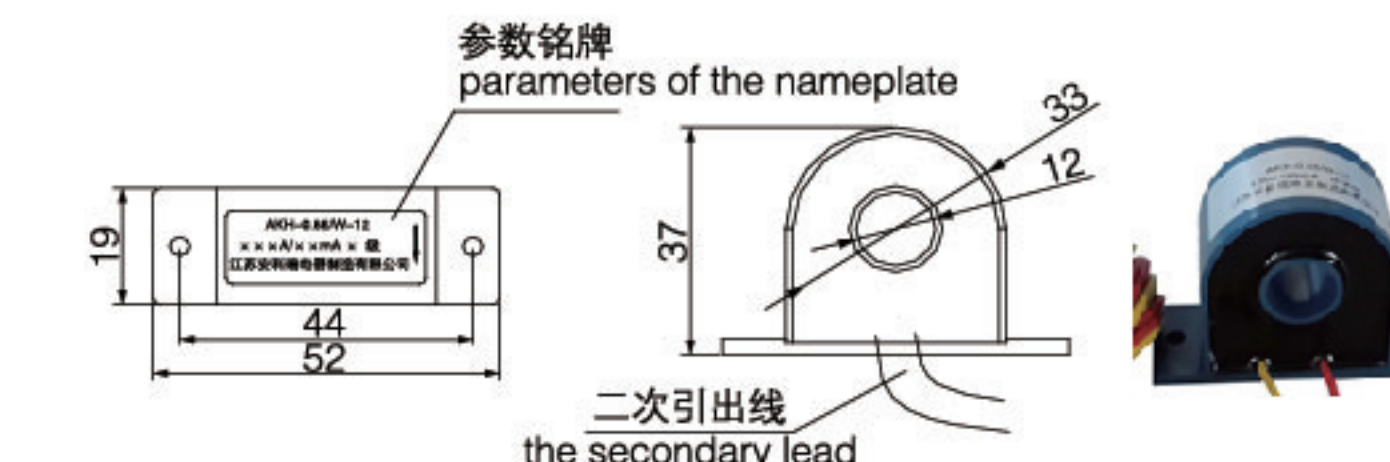
4.1.6.3 AKH-0.66/W-12型电流互感器 AKH-0.66/W-12 current transformer

● 产品特点 Product feature

AKH-0.66/W-12二次带有开路保护，便于用户维护。

The second lead of AKH-0.66/W-12 has open circuit protection, making it easy for users to maintain.

● 规格尺寸(单位: mm) Spec. and size(mm)



注：一次电流从P1面进，P2(灌胶面)面出，二次引线黄色为S2，红色为S1，引出线长为2m ± 10cm。
Note: Primary current flow from P1 to P2 (Glue surface). The yellow second wiring is S2, the red is S1. The outlet length is 2m + 10cm.

● 规格参数对照表 Cross-reference tables of spec. - parameter

规格 Specification	额定电流比 Rated current ratio	准确级及相应额定负荷(Ω) Precision degree and corresponding rated load (Ω)			穿心匝数 Straight-through turns	电缆最大 外径(mm) Max. cable outer diameter (mm)
		0.2	0.5	1		
W-12	5/20mA		10		4	Φ 12
	10-15/20mA		10		2	
	20/20mA		10		1	
	30-100/20mA	10			1	

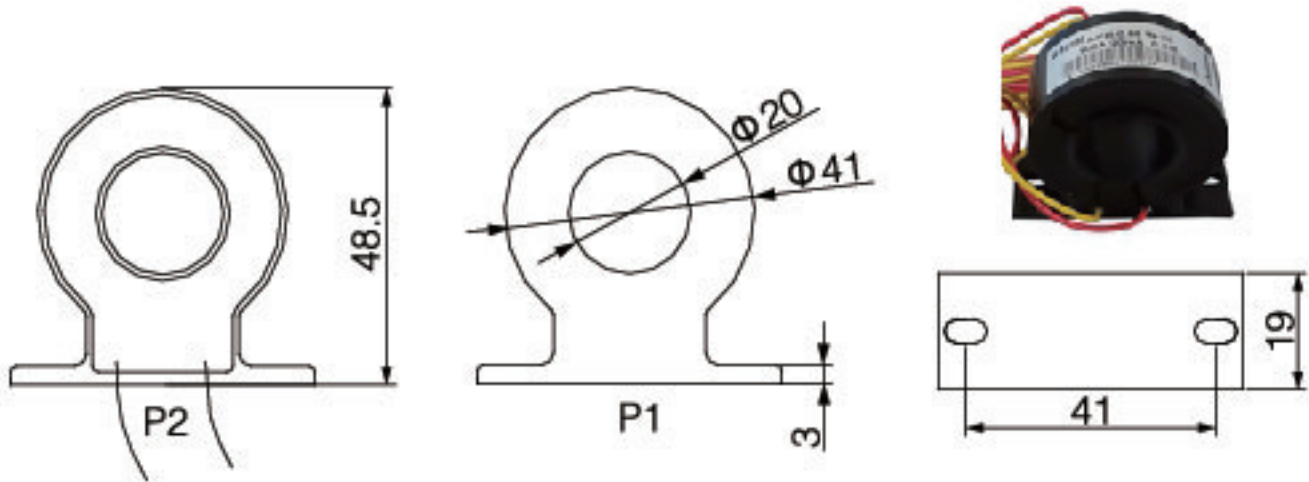
4.1.6.4 AKH-0.66/W-20型电流互感器 AKH-0.66/W-20 current transformer

● 产品特点 Product feature

AKH-0.66/W-20二次带有开路保护，便于用户维护。

The second lead of AKH-0.66/W-12 has open circuit protection,making it easy for users to maintain.

● 规格尺寸(单位: mm) Spec. and size(mm)



注：一次电流从P1面进，P2(灌胶面)面出，二次引线黄色为S2，红色为S1，引出线长为2m±10cm。

Note: Primary current flow from P1 to P2(Glue surface). The yellow second wiring is S2,the red is S1.The outlet length is 2m + 10cm.

● 规格参数对照表 Cross-reference tables of spec. - parameter

规格 Specification	额定电流比 Rated current ratio	准确级及相应额定负荷(Ω) Precision degree and corresponding rated load (Ω)			穿心匝数 Straight-through turns	电缆最大外径(mm) Max. cable outer diameter (mm)
		0.2	0.5	1		
W-20	5/20mA		10		4	Φ20
	10-15/20mA		10		2	
	20/20mA		10		1	
	30-200/20mA	10			1	

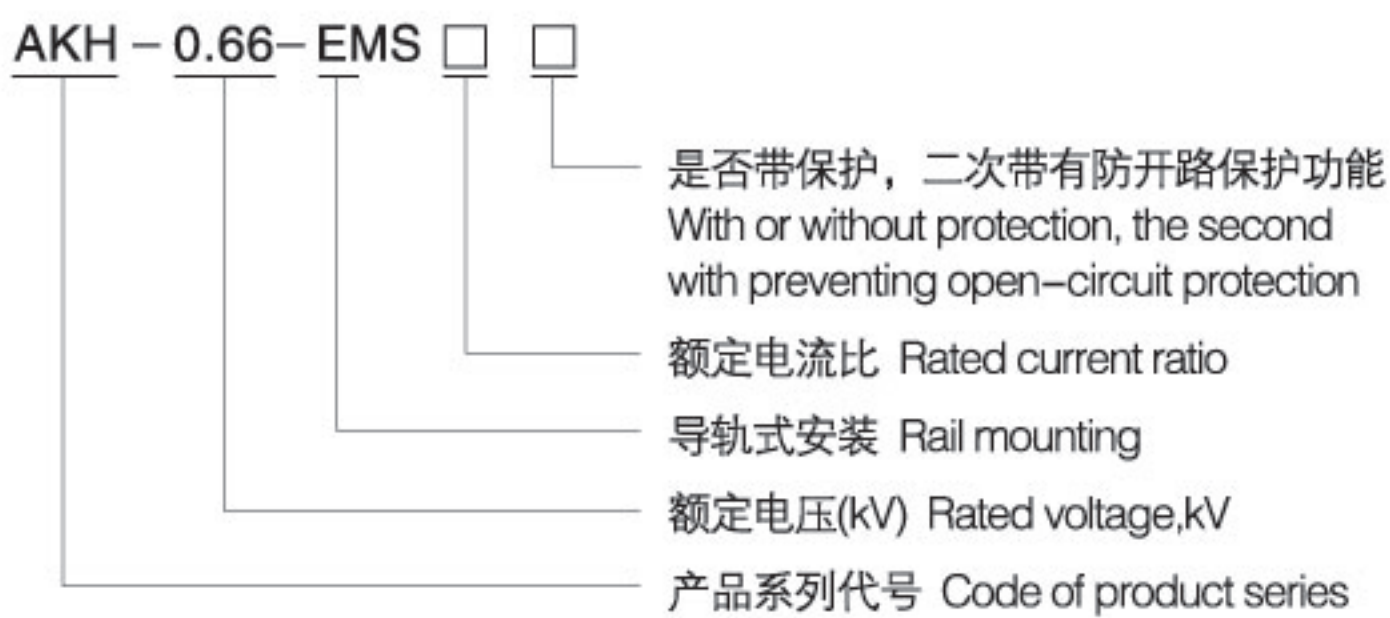
4.1.6.5 AKH-0.66/EMS型电流互感器 AKH-0.66/EMS current transformer

● 产品特点 Product feature

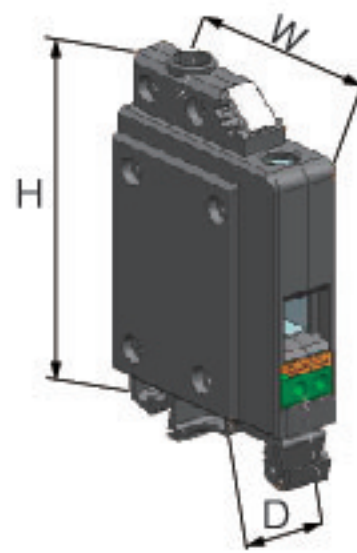
导轨式设计，外形美观，同微型断路器，接线方便。外壳材料选用PC/ABS合金，一次采用10mm²导线引出用户可直接接线，线长100mm(可根据客户要求定制)，剥线长16mm。二次端子采用直插式端子，且二次带有防开路保护功能，开路电压小于7.8V，方便用户接线及维护。作为交流电流信号采集元件，可与我司AMC16多回路监控仪表或其他电气测量仪表配套使用。

It is rail designed and has good appearance.As miniature circuit breakers, it is convenient to connect. The housing is formed by PC/ABS alloy. 10mm squared wire is used as outlet the primary lead,and can be directly connect for users,which length is 100mm (can be customized according to customer requirements), wire stripping is 16mm long. The secondary winding dopt direct plug-in terminals and have the function of open-circuit protection which the circuit voltage is less than 7.8V. It' s convient to connect and maintent for users. As acquisition device of alternating current signal , it can be matched with multi-loop monitoring instruments AMC16 or other electrical measuring instruments.

● 型号说明 Explanation for type



● 规格尺寸(单位: mm) Spec. and size(mm)



规格 Type	尺寸 Size	外形尺寸 Outline size			公差 Tolerance
		W	H	D	
EMS		46.5	75.8	18	±1

● 规格参数对照表 Cross-reference tables of spec. - parameter



规格 Specification	额定电流比 Rated current ratio	准确级及相应额定负荷(Ω) Precision degree and corresponding rated load (Ω)			耐压 withst and voltage	开路电压 Open-circuit voltage	环境温度℃ Ambient t emperature(℃)	安装方式 Installation
		0.2	0.5	1				
EMS	50A/10mA	10			3kV	≤7.8V	-20℃~70℃	导轨 Guide Installation

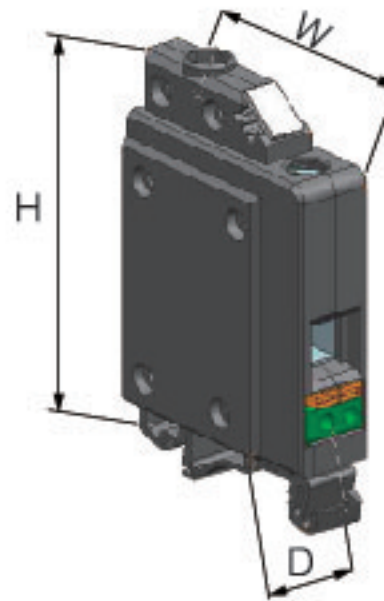
4.1.6.6 EMS63A接线端子 EMS63A terminal

● 产品特点 Product feature

导轨式设计，外形美观，同AKH-0.66/EMS导轨式电流互感器外形一致，接线方便，外壳材料选用黑色PC/ABS合金，一次采用10mm²导线引出用户可直接接线，线长100mm（可根据客户需求定制），剥线长16mm。

It adopts the rail-mounted design and looks nice. Its appearance matches with AKH-0.66/EMS rail-mounted current transformer. The wiring is convenient. Its housing is made of black PC/ABS alloy. Users can carry out the direct wiring with 10mm² primary outlet. The length of primary outlet is 100mm or customized by users and the stripping length is 16mm.

● 规格尺寸(单位: mm) Spec. and size(mm)



规格 Type	尺寸 Size	外形尺寸 Outline size			公差 Tolerance
		W	H	D	
EMS63A		46.5	75.8	18	±1

● 规格参数对照表 Parameter table

序号 No.	项目 Item	技术要求 Technical requirements
1	外观 Appearance	各部件加工良好与图纸吻合，模塑成型无飞边、划伤、缩影等缺陷。 All components are intact and comply with requirements of drawings. The mould shaping is free of trimming, scratch, reduction or other defects.
2	尺寸 Dimensions	按图纸要求 Comply with requirements of drawings.
3	绝缘电阻 Insulating resistance	用DC500V兆欧表测试路与路之间：>100 MΩ 带电部位与易接触部位之间> 100MΩ >100MΩ between circuits and >100MΩ between live parts and accessible parts, tested with DC500V megger
4	电线保持力 Voltage resistance	试验电压：路与路之间，带电部位与易接触部位之间AC3000V（额定电压小于660V时，试验电压为2500V），频率50HZ，1分钟无击穿、闪烁现象 No breakdown or flashover in one minute at the test voltage of AC3000 (or 2500V if the rated voltage is below 660V) between circuits and between live parts and accessible parts and the frequency of 50HZ
5	耐温耐燃性 Wire retention	正规插入的相应额定连接容量的连线，对于本端子最大扭力可承受10牛力 Max. 10N torque if wires of appropriate capacity are inserted
6	耐电压 Temperature and flame resistance	PC/ABS合金：110℃±3℃放置2小时，无异常，PC耐燃性：UL94-V0 PC/ABS alloy: keep normal after the terminal is placed at 110℃±3℃ for 2 hours; flame resistance of PC: UL94-V0
7	接触电阻 Contact resistance	接触件与测量规之间的接触电阻≤3mΩ，耐久性试验后≤6mΩ Contact resistance: ≤3MΩ between the resistance measuring meter and the contacted part; 6MΩ after endurance test
8	标志 Marking	应在端子排的主要部位有如下永久性标志：a.额定电压（660V）b.额定电流（63A）c.型号：EMS A terminal block must have following permanent markings at main positions: a. rated voltage: 660V; b. rated current: 63A; c. model: EMS

4.2 AKH-0.66P系列保护型电流互感器 AKH-0.66Pseries protection current transformer

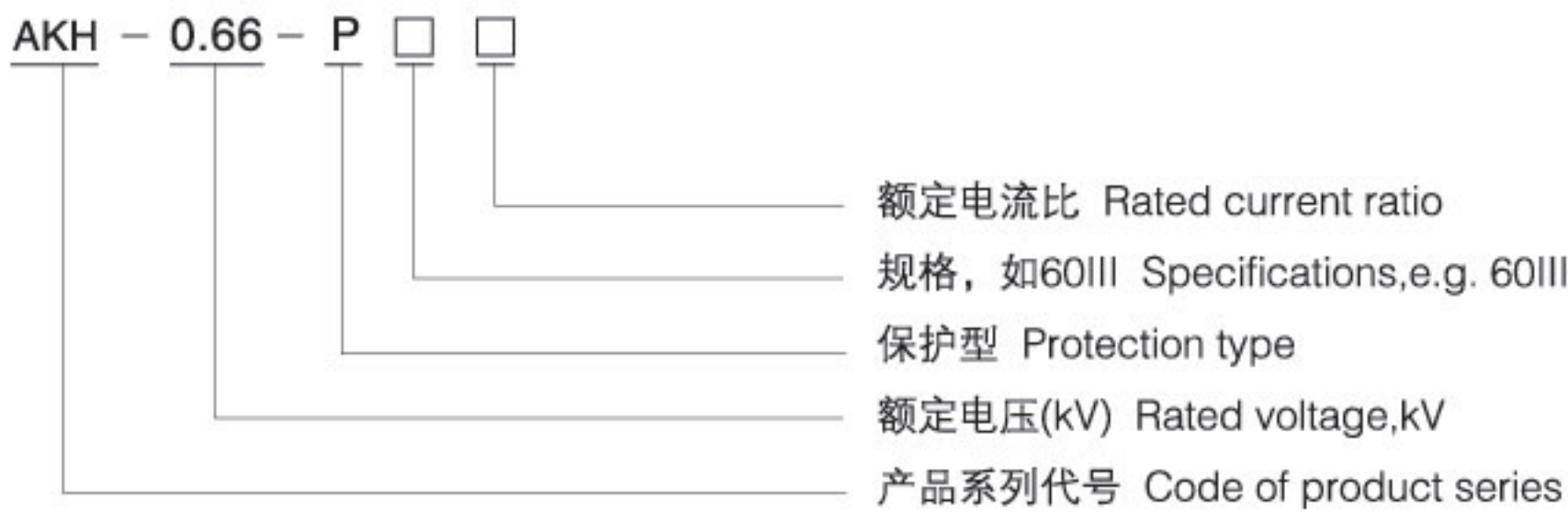
4.2.1 AKH-0.66P低压保护用电流互感器 AKH-0.66Pseries protection current transformer

● 产品特点 Product feature

主要适用于多根母排穿越的继电保护回路，该产品为保护系统检测短路或过载电流而开发，具有不同准确级和准确限值系数，可扩展为不同穿孔尺寸，广泛应用于低压配电保护系统，广泛应用于电厂以及工矿企业线路保护用。

It is mainly suitable for the relay protection circuit crossing by multiple root bus. The product were developed for the detection of short circuit or overload current of the protection system, and have different level and accurate limit factor. It can be extended to different perforation size. The product are widely used in low-voltage distribution protection system, and in power plants and industrial and mining enterprises for line protection.

● 型号说明 Explanation for type



● 型号尺寸(单位: mm) Spec. and size(mm)

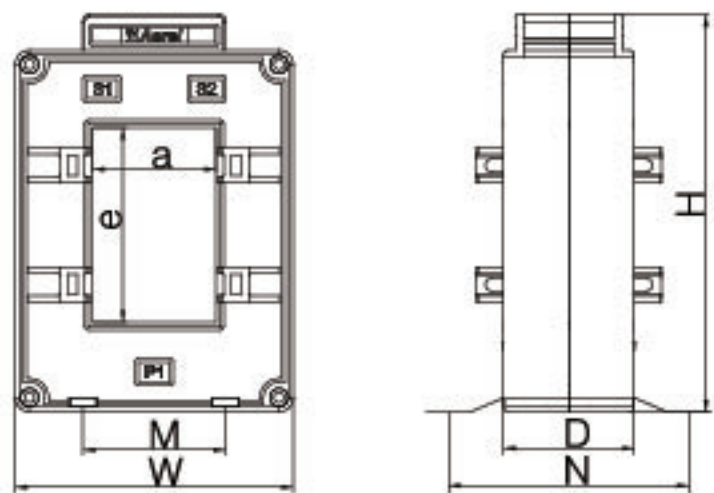


图1 Fig.1

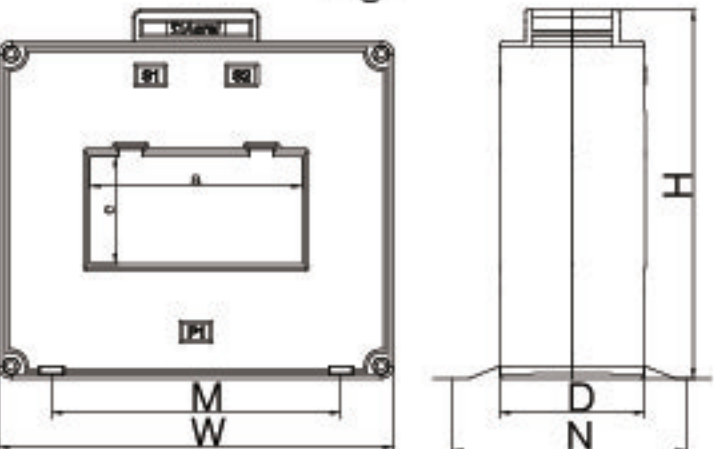


图2 Fig.2

规格 Type	尺寸 Size	外形尺寸(mm) Outline size (mm)			安装尺寸(mm) Through size(mm)		安装尺寸(mm) Mounting size (mm)		图形 Figure
		W	H	D	a	e	M	N	
P-60 III		117	147	55	52	62	60	/	图1 Fig.1
P-80 III		117	167	55	52	82	60	/	
P-100 III		120	190	55	52	102	60	/	
P-130 III		125	224	55	52	132	60	/	
P-60 × 50II		112	177	70	62	52	60	/	图2 Fig.2
P-80 × 50II		132	177	70	82	52	80	/	
P-100 × 50II		190	177	70	102	52	139	/	
P-130 × 50II		220	177	75	131	51	170	/	
P-170 × 100II		227	230	60	172	105	103	83	
P-180 × 50II		239	181	60	185	55	40	83	
P-220 × 50II		280	190	60	225	55	65/55/65	83	

● 规格参数对照表 Cross-reference tables of spec. -parameter



规格 Specification	额定电流比(A) Rated current ratio(A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load(VA)			穿心匝数(匝) Straight- through tum	母排规格(mm) /根数 Bus spec(mm) /number	安装方式 Installation
		10P5	10P10	10P15			
P-60 Ⅲ	200-400/5(1)	15	2.5	/	1	60×10/1-3	E
	500-800/5(1)	10	5	2.5	1		
	1000-1250/5(1)	15	10	5	1		
	1500/5(1)	20	10	5	1		
P-80 Ⅲ	500-800/5(1)	10	5	2.5	1	80×10/1-3	
	1000-1250/5(1)	15	10	5	1		
	1500-2000/5(1)	20	10	5	1		
	2500-3000/5(1)	30	15	10	1		



规格 Specification	额定电流比(A) Rated current ratio(A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load(VA)			穿心匝数(匝) Straight-through tum	母排规格(mm) /根数 Bus spec(mm) /number	安装方式 Installation
		10P5	10P10	10P15			
P-100Ⅲ	600-800/5(1)	10	5	2.5	1	100×10/1-3	E
	1000-1250/5(1)	15	10	5	1		
	1500-2000/5(1)	20	10	5	1		
	2500-4000/5(1)	30	15	10	1		
P-130Ⅲ	1000-1250/5(1)	15	10	5	1	130×10/1-3 125×10/1-3	
	1500-2000/5(1)	20	10	5	1		
	2500-6300/5(1)	30	15	10	1		
P-60×50Ⅱ	100-150/5(1)	2.5	/	/	1	160×10/1-2	D
	200-300/5(1)	5	2.5	/	1		
	400-800/5(1)	10	5	2.5	1		
	1000-2000/5(1)	15	10	5	1		
P-80×50Ⅱ	200-300/5(1)	5	2.5	/	1	80×10/1-2	
	400-600/5(1)	10	5	2.5	1		
	800-1250/5(1)	15	10	5	1		
	1500-2500/5(1)	20	15	10	1		
P-100×50Ⅱ	600-800/5(1)	10	5	2.5	1	100×10/1-2	
	1000-1250/5(1)	15	10	5	1		
	1500-4000/5(1)	20	15	10	1		
P-130×50Ⅱ	600-800/5(1)	10	5	2.5	1	120×10/1-3	
	1000-1250/5(1)	15	10	5	1		
	1500-2500/5(1)	20	15	10	1		
	3000-5000/5(1)	30	15	10	1		
P-170×50Ⅱ	1000-2000/5(1)	15	10	5	1	160×10/1-3 80×10/1-3	
	2500-3000/5(1)	20	10	5	1		
	4000-6300/5(1)	30	15	10	1		
P-180×50Ⅱ	1000-2000/5(1)	15	10	5	1	180×10/1-3 80×10/1-6	
	2500-3000/5(1)	20	10	5	1		
	4000-6300/5(1)	30	15	10	1		
P-220×50Ⅱ	1000-2000/5(1)	15	10	5	1	220×10/1-3 100×10/1-6	
	2500-3000/5(1)	20	10	5	1		
	4000-6300/5(1)	30	15	10	1		

注：额定一次电流的标准值为：10A、12.5A、15A、20A、25A、30A、40A、50A、60A、75A以及它们十进位倍数或小数，有下标线的是优先值。

Note: The standard value of the rated primary current is: 10A、12.5A、15A、20A、25A、30A、40A、50A、60A、75A,and their decimal multiples or decimal, those marked are the priority value.

4.2.2 AKH-0.66/P-Ⅰ低压电动机保护器专用电流互感器

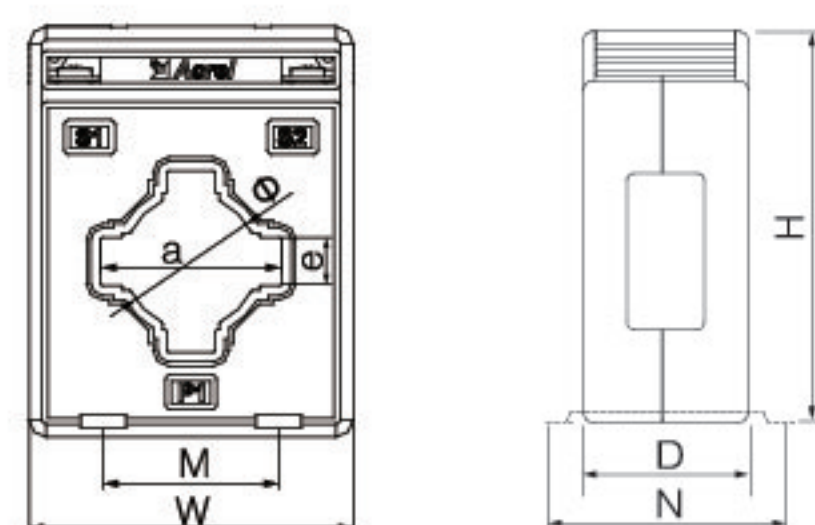
AKH-0.66/P-Ⅰ Special current transformer for low voltage motor protector

● 产品特点 Product feature

测量准确，过载能力强，可与ARD2、ARD3等电动机保护单元配套使用。

The product has accurate measurement, strong overload. It can be used with ARD3, ARD2 and other motor protection unit.

● 规格尺寸(单位: mm) Spec. and size(mm)



规格 Type	外形尺寸(mm) Outline size			安装尺寸(mm) Through size			安装尺寸(mm) Mounting size	
	W	H	D	a	e	Φ	M	N
P-40 I	75	95	45	42	11	31	40	57.5
P-60 I	102	130	45	61.5	21	45	42	57.5
P-40II	78	103	45	43	31.5	/	48	57.5
P-50II	87	113	45	52	32	/	30	57.5
P-60II	102	125	45	61	33	/	42	57.5
P-80II	117	119	45	82	32	/	60	57.5

● 规格参数对照表 Cross-reference tables of spec. -parameter



规格 Specification	额定电流比(A) Rated current ratio (A)	准确级 Precision degree	额定负荷 (VA) Rated load (VA)	安装方式 Installation
P-40I	250/0.05	0.5	1.25	A、C
P-60I	800/0.1	0.5	5	
P-40II	250-400/5(1)	10P10	2.5	
P-50II	250-600/5(1)		2.5	C
P-60II	300-400/5(1)		2.5	
	500-800/5(1)		5	
P-80 II	500-800/5(1)		5	D
	1000-1500/5(1)		10	

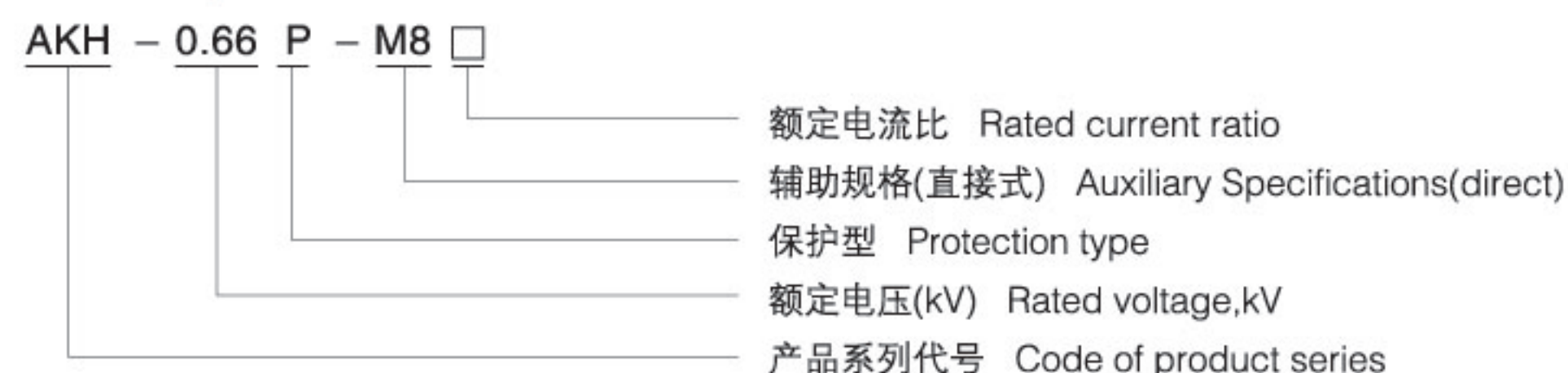
1.4.2.3 AKH-0.66 P-M8型保护用电流互感器 AKH-0.66 P-M8 protection current transformer

● 产品特点 Product feature

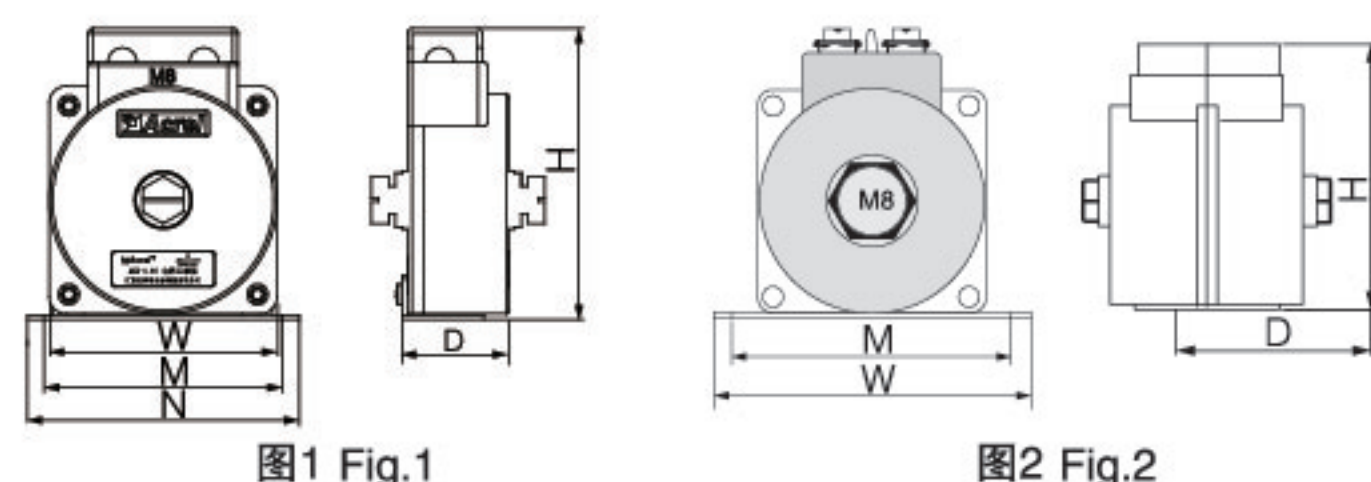
一次电流较小, 多用于继电器保护回路中, 适合低压抽屉柜等小空间场所。

Primary current is small. The product is more used for relay protection circuit, and suitable for low-voltage drawer cabinet and other places of small space.

● 型号说明 Spec. and size



● 规格尺寸(单位: mm) Spec. and size(mm)



规格 Type	外形尺寸(mm) Outline size			安装尺寸(mm) Mounting size		图形 Figure
	W	H	D	M	N	
P-M8	67	86	40	70.8	80.5	图1 Fig.1
P-双M8 P-double M8	67	86	56	70.8	80.5	图2 Fig.2

● 规格参数对照表 Cross-reference tables of spec. -parameter



规格 Specification	额定电流比(A) Rated current ratio(A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load			短时热电流 (ith)/(kA) Short-time thermal current (ith)/(kA)	额定动稳定电流 (idyn)/(kA) Rated dynamic current (idyn)/(kA)	穿心匝数(匝) Straight-through turns	扭矩值 Torque values	
		10P5	10P10	10P15				KGM	NM
P-M8	100/1	1.5	/	/	7.5	18.5	直接式 Direct type	7	69
	150/1	2	/	1	10	25			
	200/1	3.75	1.0	1.5	15	22.5			
	250/1	5	1.5	2.0	18	45			
	300/1	5	1.5	2.0	21	52.5			
	400/1	5	2.0	2.5	21	52.5			
P-双M8 P-DoubleM8	5/5(1)	2.5	2.5	2.5	0.5	1	直接式 Direct type	7	69
	10/5(1)	2.5	2.5	2.5	1	2			
	15/5(1)	2.5	2.5	2.5	3	6			
	20/5(1)	2.5	2.5	2.5	4	8			
	25/5(1)	2.5	2.5	2.5	5	10			
	30/5(1)	2.5	2.5	2.5	6	12			
	40/5(1)	2.5	2.5	2.5	6	12			
	50/5(1)	2.5	2.5	2.5	6	12			
	60/5(1)	2.5	2.5	2.5	6	12			
	75/5(1)	2.5	2.5	2.5	6	12			
	100/5(1)	2.5	2.5	2.5	10	12			

4.3 AKH-0.66S系列双绕组型电流互感器 AKH-0.66S series double-winding current transformer

4.3.1 AKH-0.66S系统监控用电流互感器 AKH-0.66S current transformer for system monitoring

● 产品特点 Product feature

AKH-0.66S系列双绕组电流互感器具有两个二次绕组, 其一(1S1、1S2)用于电流表指示, 额定电流为交流5A或交流1A, 其二(2S1、2S2)用于远传遥测, 可与ARTU-M32遥测单元或ARD3电动机保护器配套使用, 额定电流为交流20mA; 双绕组电流互感器的线性可至8倍, 且电流在8倍时, 也能保证双绕组电流互感器的误差在0.2%-0.5%, 因此可用于电动机保护回路。

产品外壳结构采用翻盖结构, 外壳采用阻燃、耐温120℃的PC材料注塑成形, 铁芯采用冷轧硅钢带卷制而成, 二次导线采用高强度电磁漆包线, 产品结构新颖, 造型美观, 安装方便。产品具有体积小、准确度高、容量大等特点。

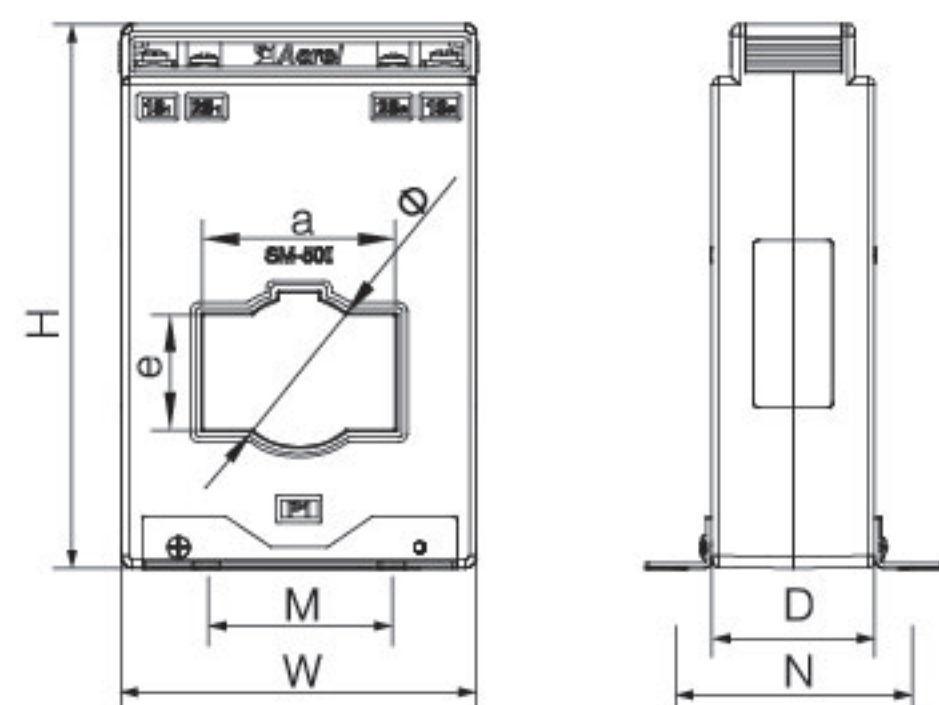
AKH-0.66S series double-winding current transformers have two secondary windings. One winding (1S1, 1S2) is used for ammeter indication and the rated current is 5A or 1A AC. The other winding (2S1, 2S2) is used for remote measuring and matches with ARTU-M2 remote measuring unit or ARD3 motor protector. The rated current is 20mA AC. The linearity of double-winding current transformers is increased to 8 times. When the actual current is 8 times higher, the error of double-winding current transformer is still maintained between 0.2% and 0.5%. Therefore, they can be used in the motor protection circuit.

The housing is fitted with flip-open cover and made of 120℃ flame-retarded PC by injection molding. The iron core is cold-rolled silicon steel belt. The secondary lead is the high-strength enameled magnet wire. The product has the novel structure and nice appearance and is easy for installation. It features the small size and weight, good accuracy and large capacity.

● 型号说明 Explanation for type



● 规格尺寸(单位: mm) Spec. and size(mm)



规格 Type	尺寸 Size	外形尺寸 (mm) Outline size			穿孔尺寸 (mm) Through size			安装尺寸 (mm) Mounting size	
		W	H	D	a	e	Φ	M	N
S-30I		85	139	44	31	11	23	45	65
S-40I		85	139	44	42	11	31	45	65
S-50 II		96	146	45	52	31	/	53	57.5
S-60 II		102	143	45	65	34	/	41	57.5
S-80 II		120	148	45	82	32	/	59	57.5
S-100 II		150	175	45	103	52	/	80	57.5
S-120 II		168	180	50	125	52	/	80	70.5
S-200 II		253	180	60	206	56	/	53×3	83

● 规格参数对照表 Cross-reference tables of spec. -parameter

规格 Specification	额定电流比(A) Rated current ratio(A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load(VA)			穿心匝数(匝) Straight-through turns	母排规格 (mm)/根数 Bus spec (mm)/number	电缆最大 外径(mm) Max. cable outer diameter (mm)	安装方式 Installation
		0.2/0.2	0.5/0.2	1/0.2				
S-30I	5/5(1)/0.02			2.5/0.02	15	/	φ 22	F
	10/5(1)/0.02			2.5/0.02	8			
	15/5(1)/0.02			2.5/0.02	5			
	20/5(1)/0.02			2.5/0.02	4			
	25-30/5(1)/0.02			2.5/0.02	3			
	40-60/5(1)/0.02			2.5/0.02	2			
	75-100/5(1)/0.02			1.5/0.02	1			
	150/5(1)/0.02	2.5/0.02			1			
S-40I	200/5(1)/0.02	5.0/0.02			1	40x10/1	φ 30	C、F
	250-400/5(1)/0.02	5.0/0.02			1			
	500-600/5(1)/0.02	10/0.02			1			
S-50II	600-800/5(1)/0.02				1	50x10/1-2	/	B
	1000/5(1)/0.02	15/0.02			1			
	1200-1250/5(1)/0.02	20/0.02			1			
S-60II	300-400/5(1)/0.02		5.0/0.02		1	60x10/1-2	/	C
	500-800/5(1)/0.02		10/0.02		1			
	1000-1250/5(1)/0.02	10/0.02			1			
	1500-2000/5(1)/0.02	20/0.02			1			
S-80II	600-800/5(1)/0.02		10/0.02		1	80x10/1-2	/	D
	1000-1250/5(1)/0.02	10/0.02			1			
	1500-2000/5(1)/0.02	20/0.02			1			
	2500-3000/5(1)/0.02	30/0.02			11			
S-100II	1000-1250/5(1)/0.02	10/0.02			1	100x10/1-3	/	
	1500-2000/5(1)/0.02	20/0.02			1			
	2500-3000/5(1)/0.02	30/0.02			1			
S-120II	4000/5(1)/0.02	30/0.02			1	120x10/1-3	/	
	2000-2500/5(1)/0.02	20/0.02			1			
	3000/5(1)/0.02	30/0.02			1			
S-200II	4000-5000/5(1)/0.02	30/0.02			1	100x10/2-6	/	
	2000/5(1)/0.02	20/0.02			1			
	2500-3000/5(1)/0.02	30/0.02			1			
	4000-6300/5(1)/0.02	30/0.02			1			

4.4 AKH-0.66/SM自控仪表用电流传感器(双绕组电流传感器)

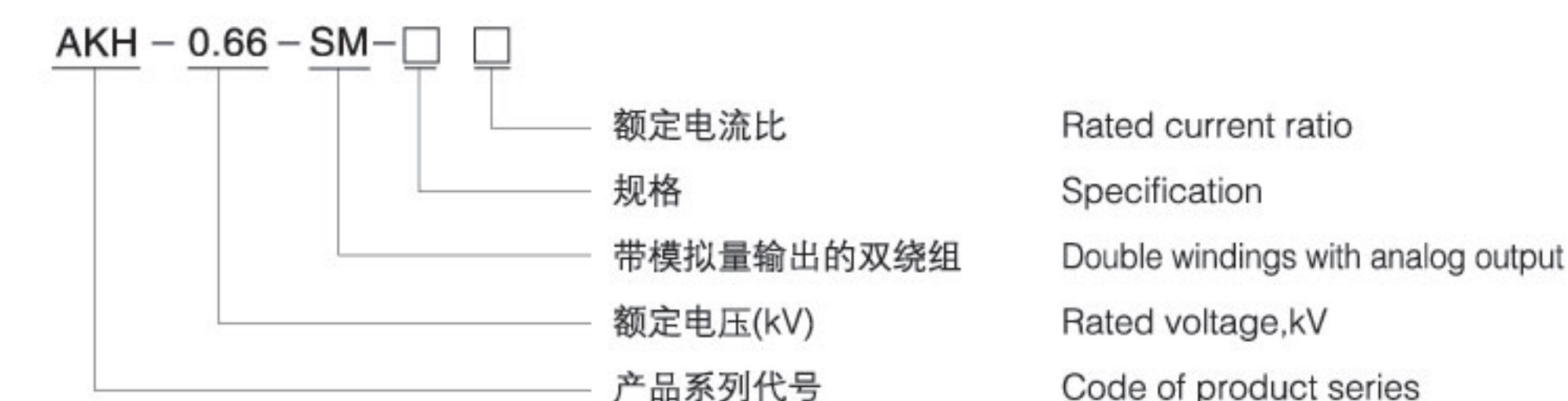
AKH-0.66/SM current transformer (double-winding current transformer) for auto control instruments

● 产品特点 Product feature

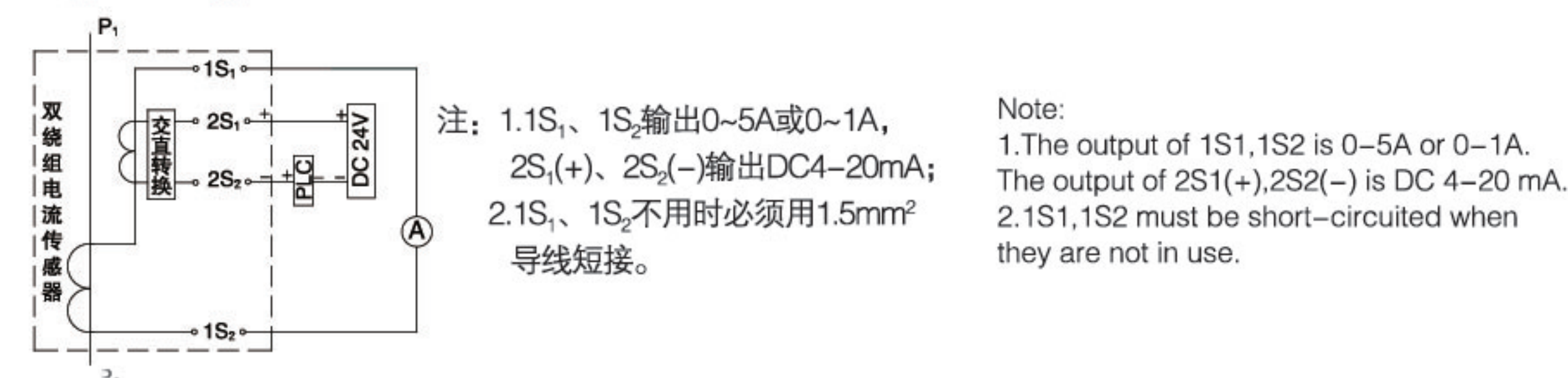
AKH-0.66SM型双绕组电流传感器可有两路输出, 其一(1S1, 1S2)输出AC0-5A或0-1A, 与测量、计量装置配套使用; 其二(2S1+, 2S2-)输出DC4-20mA, 与自控仪表(如PLC)配套使用, 其中辅助电源DC24V由PLC供电。

AKH-0.66SM double-winding current transformers have two outputs. One output (1S1, 1S2) ACO-5A or 0-A matches with measuring and metering equipment. The other output (2S1+, 2S2-) DC4-20mA matches with auto control instruments such as PLC. The auxiliary power supply DC24V is energized by PLC.

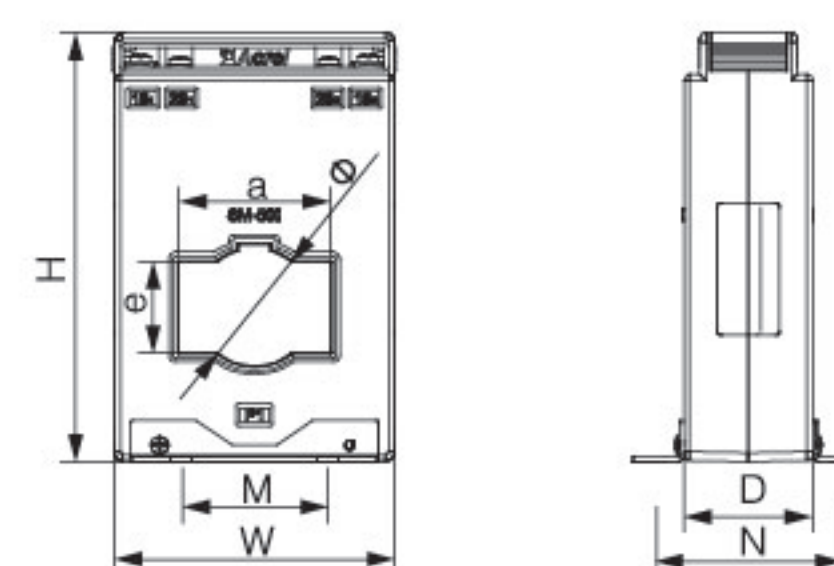
● 型号说明 Explanation for type



● 接线图 Wiring picture



● 规格尺寸(单位: mm) Spec. and size(mm)



规格 Type	尺寸 Size	外形尺寸 (mm) Outline size			穿孔尺寸 (mm) Through size			安装尺寸 (mm) Mounting size	
		W	H	D	a	e	Φ	M	N
SM-50I		96	146	45	52	31	40	40	60
SM-60 II		98	145	45	62	31.5	/	42	57.5
SM-80 II		118	152	45	82	32	/	60	57.5
SM-100 II		140	155	49	102	32	/	75	57.5
SM-120 II		167	187	48	122	52	/	54	57.5
SM-200 II		246	208	56	206	61	/	188	57.5

规格参数对照表 Cross-reference tables of spec. -parameter

规格 Specification	额定电流比(A) Rated current ratio(A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load(VA)			穿心匝数(匝) Straight-through turns	母排规格(mm)/根数 Bus spec (mm)/number	电缆最大外径(mm) Max. cable outer diameter (mm)	安装方式 Installation
		class0.2/0.5	class0.5/0.5	class1.1/1.0				
SM-50I	5/5(1)/4-20mA			2.5/500	30	/	φ 40	F
	10/5(1)/4-20mA			2.5/500	15			
	15/5(1)/4-20mA			2.5/500	10			
	20/5(1)/4-20mA			2.5/500	8			
	25/5(1)/4-20mA			2.5/500	6			
	30/5(1)/4-20mA			2.5/500	5			
	40/5(1)/4-20mA			2.5/500	4			
	50-60/5(1)/4-20mA			2.5/500	3			
	75-100/5(1)/4-20mA			2.5/500	2			
	150/5(1)/4-20mA			2.5/500	1			
	200-250/5(1)/4-20mA		2.5/500		1			
	300-400/5(1)/4-20mA		5.0/500		1			
	500-800/5(1)/4-20mA		10/500		1			
	1000/5(1)/4-20mA	10/500			1			
	1200/5(1)/4-20mA	15/500			1			
SM-60II	1250/5(1)/4-20mA	20/500			1	50x10/1-2	φ 40	C、F
	300-400/5(1)/4-20mA		5.0/500		1			
	500-800/5(1)/4-20mA		10/500		1			
	1000/5(1)/4-20mA	10/500			1			
	1200/5(1)/4-20mA	15/500			1			
SM-80II	1250-2000/5(1)/4-20mA	20/500			1	60x10/1-2	/	C
	600-800/5(1)/4-20mA		10/500		1			
	1000/5(1)/4-20mA	10/500			1			
	1200/5(1)/4-20mA	15/500			1			
	1250-2000/5(1)/4-20mA	20/500			1			
SM-100II	2500-3000/5(1)/4-20mA	30/500			1	80x10/1-2	/	D
	1000/5(1)/4-20mA	10/500			1			
	1200/5(1)/4-20mA	15/500			1			
	1250-2000/5(1)/4-20mA	20/500			1			
	2500-4000/5(1)/4-20mA	30/500			1			
SM-120II	2000/5(1)/4-20mA	20/500			1	100x10/1-2	/	D
	2500-5000/5(1)/4-20mA	30/500			1			
SM-200I	2000/5(1)/4-20mA	20/500			1	120x10/1-3	/	D
	2500-6300/5(1)/4-20mA	30/500			1			
SM-200I	2000/5(1)/4-20mA	20/500			1	200x10/1-3	/	D
	2500-6300/5(1)/4-20mA	30/500			1			



4.5 AKH-0.66/L剩余电流互感器 AKH-0.66/L residual current transformer

产品特点 Product feature

AKH-0.66L型剩余电流互感器专用于对低压剩余电流信号的采集，可与电气火灾监控装置ARCM系列、电动机保护装置ARD系列以及剩余电流继电器ASJ系列配套使用。该产品二次可输出0-5(2)mA或0-1V，有圆孔型和方孔型供用户根据需求选用。

AKH-0.66L residual current transformers are dedicated to acquire low-voltage residual current signals. They can be used with ARCM series electrical fire monitors, ARD series motor protectors and ASJ series residual current relays. The product has the secondary output 0-5 (2) mA or 0-1V. It has the round-hole type and the square-hole type for your selection.

型号说明 Explanation for type

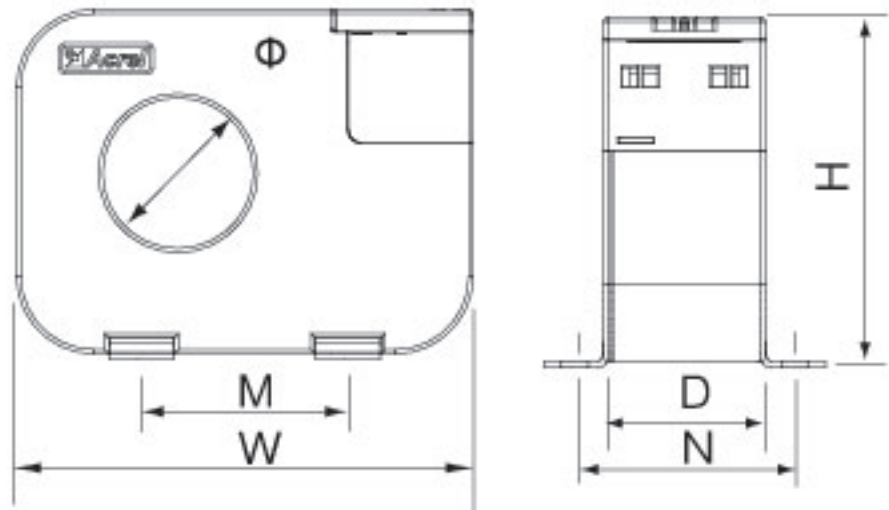


一次接线方式 Primary wiring

系统 System	TT系统 TT System	TN-S系统 TN-S System	TN-C系统 TN-C System	TN-C-S系统 TN-C-S System	IT系统 IT System
	AKH-0.66L	AKH-0.66L	AKH-0.66L	AKH-0.66L	AKH-0.66L
系统接线 System wiring					

注：打“√”为正确的接线方式。
Note: "√" for the correct wiring.

规格尺寸(单位：mm) Spec. and size(mm)



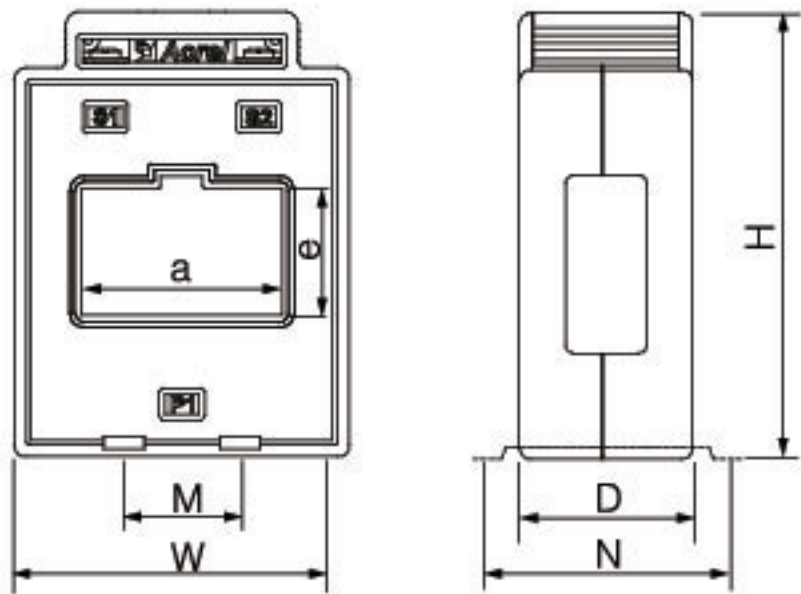
规格 Type	外形尺寸(mm) Outline size			穿孔尺寸(mm) Through size	安装尺寸(mm) Mounting size	
	W	H	D		M	N
L-35	106	80	32.5	35	48	51
L-70	136	110	32.5	70	66	51
L-105	176	150	32.5	105	92	51

规格参数对照表 Cross-reference tables of spec. -parameter



规格 Specification	一次电流(A) Primary current(A)	二次输出信号 Second output signal	准确级 Precision degree	额定负荷(VA) Rated load(Ω)	过载倍数 Overload factor
L-35	5	5mA/1V	0.5	0.2	8
		2mA	0.2	0.02	10
L-70		5mA/1V	0.5	0.2	8
		2mA	0.2	0.02	10
L-105	5	5mA/1V	0.5	0.2	8
		2mA	0.2	0.02	10

规格尺寸(单位: mm) Spec. and size(mm)



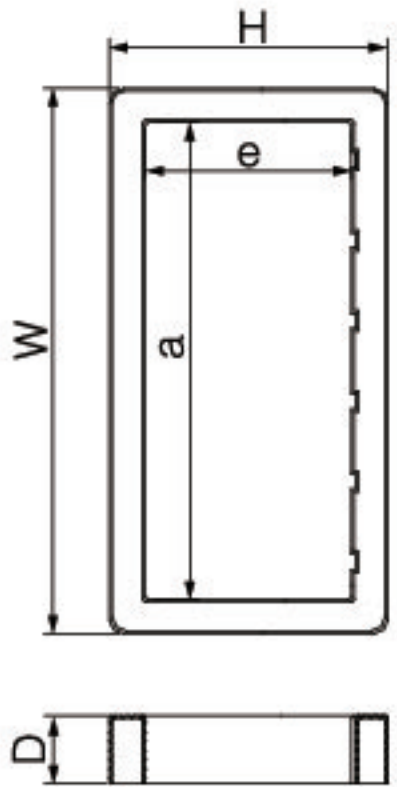
规格 Specification	尺寸 Size	外形尺寸 (mm) Outline size			穿孔尺寸 (mm) Through size		安装尺寸 (mm) Mounting size	
		W	H	D	a	e	M	N
L-80 × 50II		120	141	45	82	52	60	70.5
L-100 × 50II		145	155	50	103	55	80	70.5
L-130 × 50II		176	160	50	135	55	85	70.5
L-150 × 130II		199	245	50	150	133	71	70.5
L-180II		228	115	48	181	35	102	70.5
L-200 × 50II		247	175	55	202	61	188	83
L-260 × 100II		308	225	63	265	104	181	83

规格参数对照表 Cross-reference tables of spec. -parameter



规格 Specification	参考额定电流(A) Rated current	一次电流(A) Primary current(A)	二次输出信号 Second output	准确级 Precision degree	额定负荷(Ω) Rated load(Ω)	过载倍数 Overload factor
L-80 × 50II	16-200A	5	5mA	0.5	200	8
L-100 × 50II	16-100A					
L-130 × 50II	100-200A					
L-150 × 130II	100-300A					
L-180II	100-200A					
L-200 × 50II	250-400A					
L-260 × 100II	450-800A					

规格尺寸(单位: mm) Spec. and size(mm)



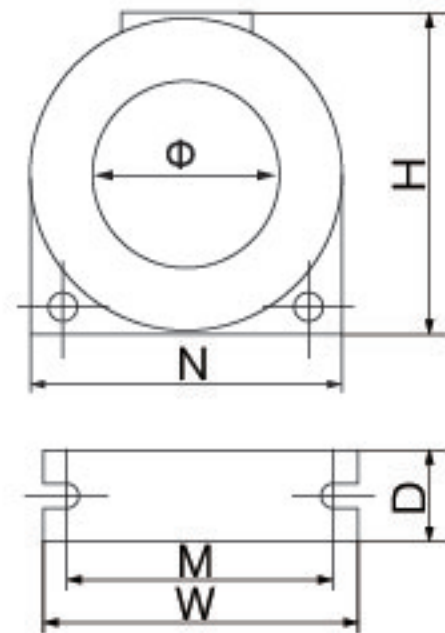
规格 Specification	尺寸 Size	外形尺寸 (mm) Outline size			穿孔尺寸 (mm) Through size	
		W	H	D	a	e
L-170 × 30		212	82	40	172	34
L-210 × 160		260	214	50	210	160
L-260 × 160		310	213	50	260	160
L-300 × 50		352	103	50	300	50
L-350 × 50		403	104	50	350	50
L-400 × 50		453	103	50	400	50
L-400 × 160		450	213	50	400	160
L-500 × 50		548	102	50	497	50
L-650 × 50		705	103	50	655	50
L-800 × 50		852	104	50	800	50
L-780 × 160		830	212	50	780	160

规格参数对照表 Cross-reference tables of spec. -parameter



规格 Specification	参考额定电流(A) Rated current	一次电流(A) Primary current(A)	二次输出信号 Second output	准确级 Precision degree	额定负荷(Ω) Rated load(Ω)	过载倍数 Overload factor
L-170 × 30	100-200A	5	5mA	0.5	300	10
L-210 × 160	450-800A					
L-260 × 160	450-800A					
L-300 × 50	500-1000A					
L-350 × 50	500-1000A					
L-400 × 50	1000-1250A					
L-400 × 160	1000-1250A					
L-500 × 50	1500-2000A					
L-650 × 50	2000-3000A					
L-800 × 50	3000-5000A					
L-780 × 160	3000-5000A					

规格尺寸(单位: mm) Spec. and size(mm)



规格 Specification	尺寸 Size	外形尺寸 (mm) Outline size			穿孔尺寸 (mm) Through size		安装尺寸 (mm) Mounting size	
		W	H	D	Φ	M	N	
L-45		75	75	22	46	60	65	
L-80		120	120	23	81	100	105	
L-100		140	140	23	100	119	124	
L-150		196	205	24	150	169	180	
L-200		240	247	28	200	219	212	

规格参数对照表 Cross-reference tables of spec. -parameter



规格 Specification	参考额定电流(A) Rated current	一次电流(A) Primary current(A)	二次输出信号 Second output	准确级 Precision degree	额定负荷(Ω) Rated load(Ω)	过载倍数 Overload factor
L-45	16-100A	5	5mA	0.5	250	10
L-80	100-250A					
L-100	250-400A					
L-150	400-800A					
L-200	800-1500A					

4.6 AKH-0.66/G计量型电流互感器 AKH-0.66/G metering current transformer

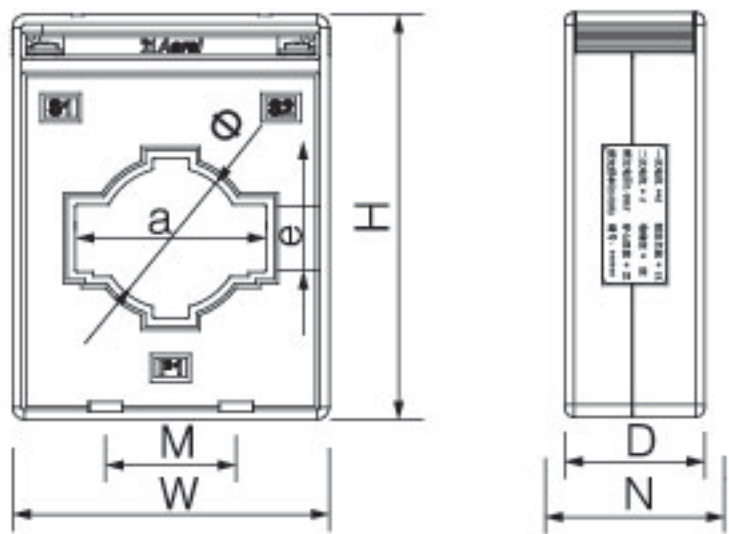
产品特点 Product feature

AKH-0.66/G型电流互感器专用于工业计量，与电能表配套使用，计量准确可靠。
AKH - 0.66 / G current transformer is specialized in industrial measurement, and can be matched with watt-hour meter. It is accurate and reliable.

● 型号说明 Explanation for type



● 规格尺寸(单位: mm) Spec. and size(mm)



规格 Specification	尺寸 Size	外形尺寸 (mm) Outline size			穿孔尺寸 (mm) Through size			安装尺寸 (mm) Mounting size	
		W	H	D	a	e	Φ	M	N
G-30I		62	78	45	32	11	22	40	57.5
G-30×30I		85	102	50	32	11	28	/	57.5
G-40I		75	95	45	42	11	31	40	57.5
G-60I		102	130	45	61.5	21	45	42	57.5
G-60II		102	125	45	61	33	/	42	57.5
G-80I		118	140	45	82	11	52	60	57.5
G-80II		117	119	45	82	32	/	60	57.5
G-100II		145	125	45	103	35	/	80	70.5

● Cross-reference tables of spec. -parameter



规格 Specification	额定电流比(A) Rated current ratio(A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load(VA)			穿心匝数(匝) Straight-through /turn	母排规格(mm) /根数 Bus spec (mm)/number	电缆最大外径 (mm) Max. cable outer diameter(mm)	安装方式 Installation
		0.2	0.5S	0.2S				
G-30I	10/5	2.5	1.5	1.5	15	30x10/1	Φ 22	A,E
	15/5	2.5	1.5	1.5	10			
	20/5	2.5	1.5	1.5	8			
	25/5	2.5	1.5	1.5	6			
	30/5	2.5	1.5	1.5	5			
	40/5	2.5	1.5	1.5	4			
	50/5	2.5	1.5	1.5	3			
	75/5	2.5	1.5	1.5	2			
	100/5	1.5	/	/	1			
	150/5	2.5	1.5	1.5	1			
G-30x30I	200-300/5	2.5	2.5	2.5	1	/	Φ 28	F
	400/5	5	2.5	2.5	1			
	5/5	2.5	2.5	2.5	16			
	10/5	2.5	2.5	2.5	8			E,F
	15/5	2.5	2.5	2.5	6			
	20-25/5	2.5	2.5	2.5	4			
	30/5	2.5	2.5	2.5	3			
	40-75/5	2.5	2.5	2.5	2			
	100-150/5	2.5	2.5	2.5	1			
	200/5	5	5	3.75	1			
	250-400/5	5	5	5	1			



规格 Specification	额定电流比(A) Rated current ratio(A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load(VA)			穿心匝数(匝) Straight-through /turn	母排规格(mm) /根数 Bus spec (mm)/number	电缆最大外径 (mm) Max. cable outer diameter(mm)	安装方式 Installation
		0.2	0.5S	0.2S				
G-40I	200-300/5	2.5	2.5	/	1	40×10/1	Φ30	E、F
	350-450/5	2.5	2.5	2.5	1			
	500-800/5	5	5	5	1			
G-60I	200-250/5	2.5	2.5	/	1	60×10/1	Φ44	A、C、D
	300-400/5	2.5	2.5	2.5	1			
	450-500/5	5	5	5	1			
	600/5	5	5	5	1			
	750/5	5	5	5	1			
	800/5	5	5	5	1			
	1000/5	/	5	5	1			
G-80I	1200-1250/5	/	15	10	1	80×10/1	Φ50	A、C、D
	750/5	5	5	5	1			
	800/5	5	5	5	1			
	1000/5	/	10	10	1			
G-60II	1200-2000/5	/	15	10	1	60x10/1-2	/	C
	200-250/5	2.5	2.5	/	1			
	300-400/5	2.5	2.5	2.5	1			
	450-500/5	5	5	5	1			
	600/5	5	5	5	1			
G-80II	750/5	5	5	5	1	80x10/1-2	/	D
	800/5	5	5	5	1			
	1000/5	/	5	5	1			
	1200-2000/5	/	15	10	1			
	750/5	5	5	5	1			
G-100II	1000/5	/	5	5	1	100x10/1-2	/	D
	1200-2000/5	/	15	10	1			

4.7 AKH-0.66开口式电流互感器 AKH-0.66 split current transformer

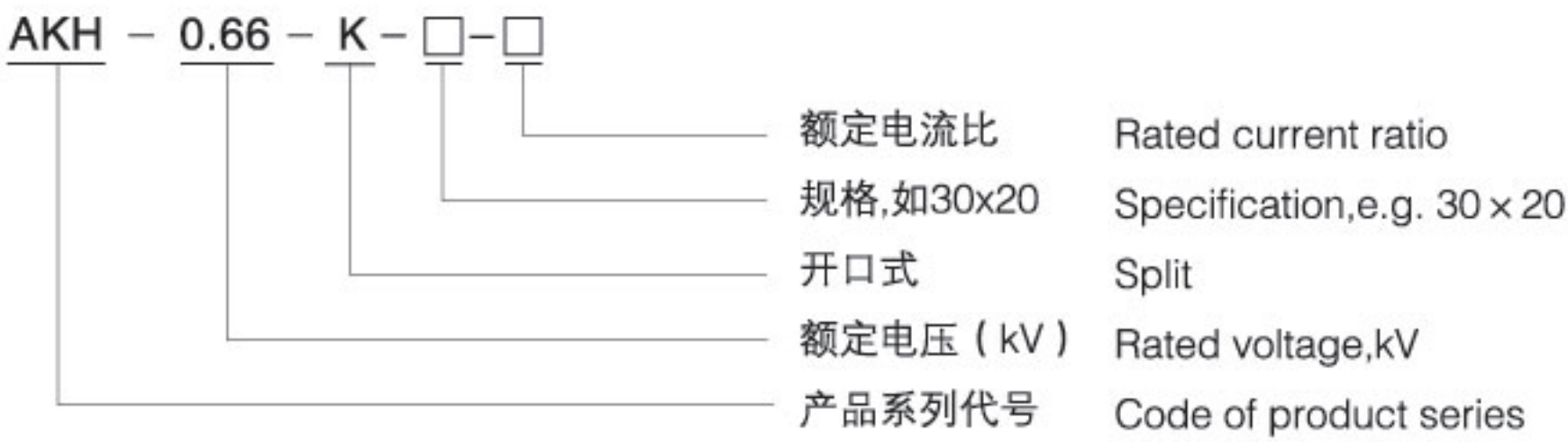
4.7.1 AKH-0.66/K开口式电流互感器 AKH-0.66/K split current transformer

● 产品特点 Product feature

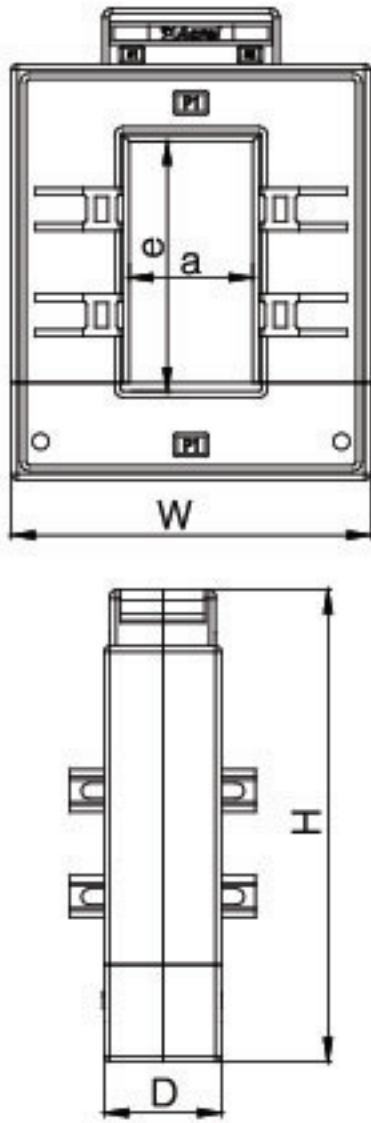
AKH-0.66K系列开口式电流互感器主要应用于工业中城网、农网改造项目，安装方便，无须拆一次母线，亦可带电操作，不影响客户正常用电，为用户改造项目节省人力、物力、财力，提高效率。该系列电流互感器可与继电器保护、测量以及计量装置配套使用。

AKH-0.66K series split current transformers are mainly used in reconstructing projects of urban and rural power grids. They can be mounted easily without removal of primary bus. They also can be operated with electricity, which prevents the normal utilization of electricity. Thus, they save the manpower, material resources and financial resources and improve the efficiency of users.< This series match with relay protection, measuring and metering equipment.

● 型号说明 Explanation for type



● 规格尺寸(单位: mm) Spec. and size(mm)



规格 Specification	外形尺寸 (mm) Outline size			穿孔尺寸 (mm) Through size		备注 Note	
	W	H	D	a	e	规格 (A) Specification(A)	质量 (kg) Quality (kg)
K-30 × 20	90	14	40	22	32	20-400	0.8-0.9
K-60 × 40	114	140	36	42	62	250-2000	1.0-2.0
K-80 × 40	122	162	40	42	82	300-3000	1.2-2.4
K-80 × 50	114	159	36	52	82	250-1000	1.1-1.4
K-80 × 80	144	159	36	82	82	250-1000	1.3-1.5
K-120 × 80	144	199	36	82	122	500-1500	1.5-2.3
K-120 × 60	164	214	52	62	122	400-5000	1.6-3.0
K-100 × 40	144	194	52	42	102	1000-5000	1.6-3.2
K-130 × 40	144	224	52	42	132	1000-5000	1.6-3.6
K-140 × 60	164	234	52	62	142	1000-5000	1.7-3.7
K-160 × 80	184	254	52	82	162	1000-5000	2.8-3.7
K-200 × 80	184	294	52	82	202	1000-5000	3.5-4.5

● 规格参数对照表 Cross-reference tables of spec. -parameter



型号 Type	额定电流比(A) Rated current ratio(A)	准确级 Precision degree	额定负荷(VA) Rated load,VA
K-30x20	20-75/1	1.0	0.2
	100-150/5 (1)		1.0
	200/5 (1)		1.5
	250-300/5 (1)	0.5	1.5
	350-400/5 (1)		2.5
K-60x40	250-300/5 (1)	1	1.5
	350-450/5 (1)	0.5	1.5
	500-800/5 (1)		2.5
	1000-1250/5 (1)		5
	1500-2000/5 (1)		10
K-80x40	300-450/5 (1) A	0.5	2.5
	500-800/5 (1) A		5.0
	1000-2000/5 (1) A	0.2	10
	2500-3000/5 (1) A		10
K-80x50	250-300/5 (1) A	1	1.5
	400-450/5 (1) A	0.5	1.5
	500-800/5 (1) A		2.5
	1000/5 (1) A		5
K-80x80	250-300/5 (1) A	1	1.5
	400-450/5 (1) A	0.5	1.5
	500-800/5 (1) A		2.5
	1000/5 (1) A		5

● 规格参数对照表 Cross-reference tables of spec. -parameter



型号 Type	额定电流比(A) Rated current ratio(A)	准确级 Precision degree	额定负荷(VA) Rated load,VA
AKH-0.66K-L-80 × 80	5A/5mA	0.5	检测低压剩余电流,与ARCM配套使用 Detection of low voltage residual current, and supporting the use of ARCM
AKH-0.66K-L-120 × 80			
AKH-0.66K-L-140 × 60			
AKH-0.66K-L-160 × 80			

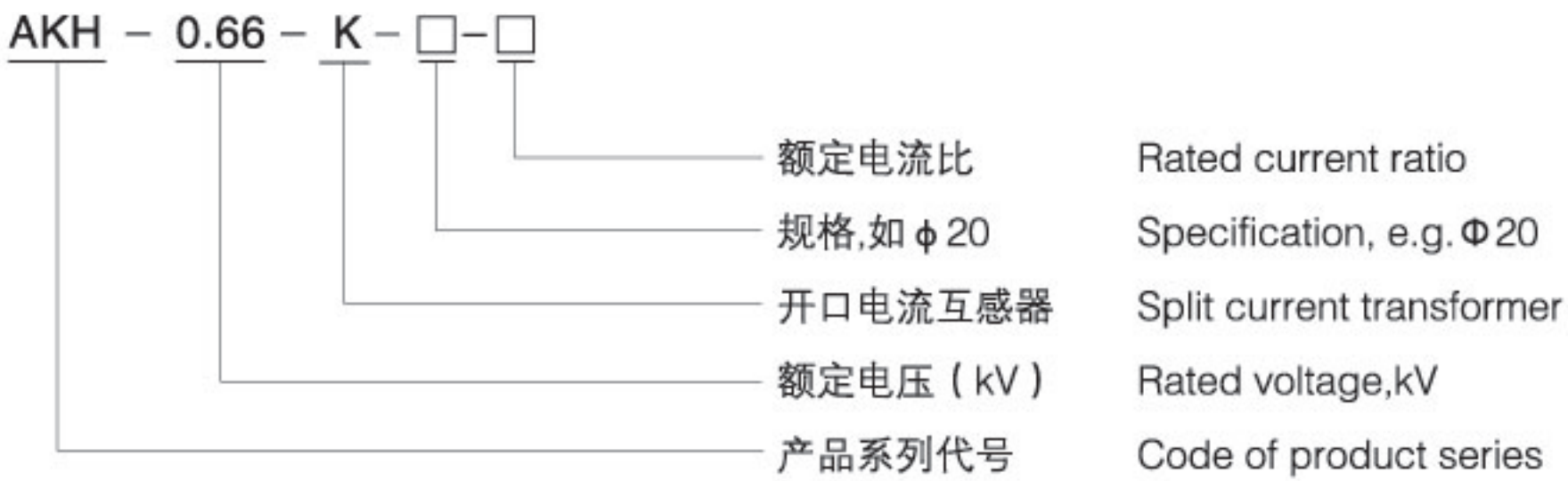
型号 Type	额定电流比(A) Rated current ratio(A)	准确级 Precision degree	额定负荷(VA) Rated load,VA
K-100x40	1000-2000/5 (1) A	0.5	10
	2500-3000/5 (1) A	0.2	10
	4000-5000A/5 (1) A		15
K-120x60	400-450/5 (1) A	0.5	2.5
	500-800/5 (1) A		5.0
	1000-2000/5 (1) A	0.2	10
	2500-5000/5 (1) A		10
K-120x80	500-800/5 (1) A	0.5	2.5
	1000-1200/5 (1) A		5
	1250-1500/5 (1) A		7.5
K-130x40	1000-2000/5 (1) A	0.5	10
	2500-5000/5 (1) A	0.2	10
K-140x60	1000-2000/5 (1) A	0.5	10
	2500-3000/5 (1) A	0.2	10
	4000-5000/5 (1) A		15
K-160x80	1000-2000/5 (1) A	0.5	10
	2500-3000/5 (1) A	0.2	10
	4000-5000/5 (1) A		15
K-200x80	1000-2000/5 (1) A	0.5	10
	2500-3000/5 (1) A		10
	4000-5000/5 (1) A		15
K-P-120x60	300-400/5 (1) A	5P10	2.5
	400/5 (1) A		2.5
	500/5 (1) A		3.75
	600-800/5 (1) A		5.0
	1000-1250/5 (1) A		7.5
	1500-1600/5 (1) A		10
	2000-3000/5 (1) A		15
K-P-160x80	500-800/5 (1) A	5P10	2.5
	1000-1500/5 (1) A		5.0
	2000/5 (1) A		10
	2500-3000/5 (1) A		15
K-P-200x80	4000-5000/1A	5P10	20
	500-800/5 (1) A		2.5
	1000-1500/5 (1) A		5.0
	2000/5 (1) A		10
	2500-3000/5 (1) A		15
	4000-5000/5 (1) A		20

4.7.2 AKH-0.66K-Φ 开口电流互感器 AKH-0.66K-Φ split current transformer

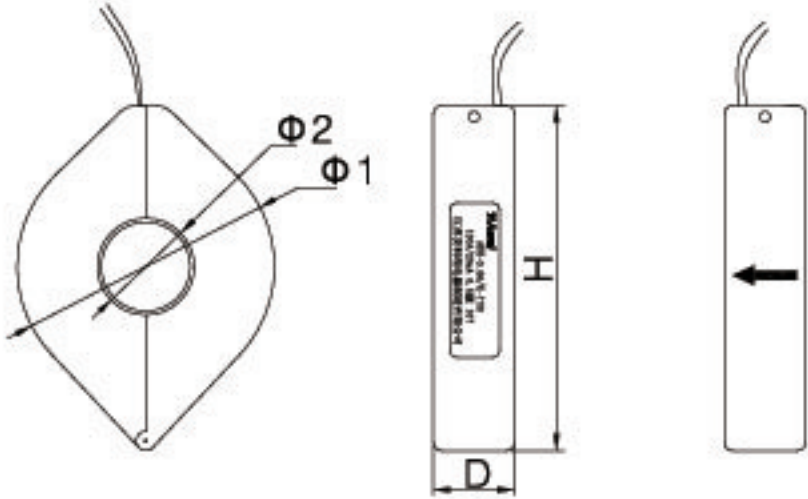
● 产品特点 Product feature

专利产品，外形美观，安装、接线方便，专用于通讯机房100A及以下配电系统改造，可与AMC16多回路监控仪表配合使用。
They are patented. The appearance is nice and the installation and wiring are convenient. They are specially applied for reconstructing of 100A or smaller power distribution systems and match with ACM16 multi-circuit monitoring devices.

● 型号说明 Explanation for type



● 规格尺寸(单位: mm) Spec. and size(mm)



规格 Specification	尺寸 Type	外形尺寸 Outline size			穿孔尺寸 Through size
		D	H	Φ1	Φ2
K-Φ20		21	89	66.5	25
K-Φ30		40	80	80	30

互感器二次引出线为RV软导线，其中红色为S1，黑色为S2，S1、S2引出线标配长度为2m±10cm。
The secondary outlet is RV soft lead. S1 is red and S2 is black. The standard length of S1 and S2 is 2m±10cm.

● 规格参数对照表 Cross-reference tables of spec. -parameter



规格 Specification	额定电流比 Rated current ratio	准确级 Precision degree		穿心匝数 Straight-through turns	电缆最大外径(mm) Max. cable outer diameter(mm)
		0.5	1		
K-Φ20	100A/20mA	10	15	1	Φ25
K-Φ30	200-300A/20mA	10		1	Φ30

4.8 AKH-0.66浇注式电流互感器 AKH-0.66 casting current transformer

4.8.1 AKH-0.66/Q(LQZJ4-0.66)型计量用电流互感器 AKH-0.66/Q(LQZJ4-0.66) current transformer for metering

● 产品特点 Product feature

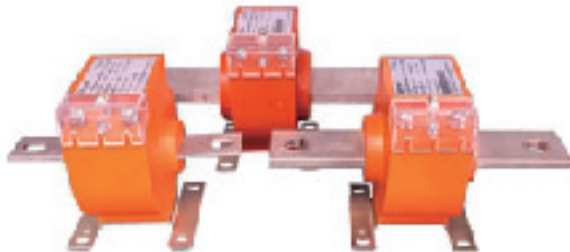
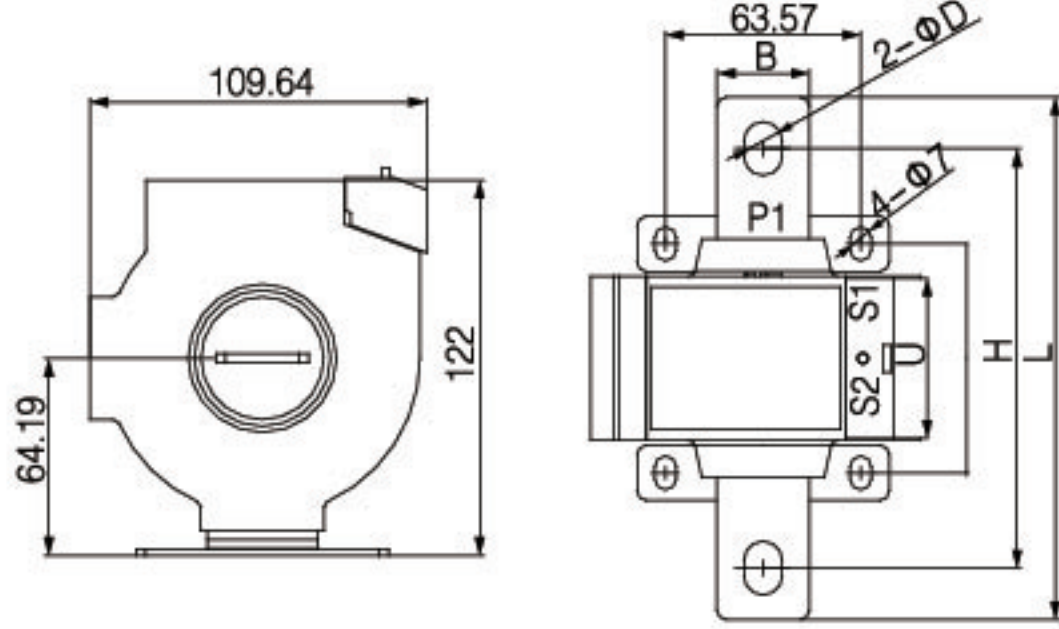
该产品主要用于供电局计量，与供电局收费电表配合使用，产品一次接线采用直接式，二次电流信号及一次电压信号接线用透明接线罩罩好后铅封，以防止窃电。

They are mainly used by power supply bureaus for metering and match with electricity meters of power supply bureaus. The primary wiring is direct. The secondary current signal wire and the primary voltage signal wire are accommodated by transparent wiring cover in order to avoid stealing the electricity.

● 型号说明 Explanation for type



● 规格尺寸(单位: mm) Spec. and size(mm)



规格 specification	尺寸 Size			
	L	H	B	D
30-300A/5A	170	140	30	13
400-800A/5	215	175	40	16.5
1000-1500A/5	280	240	50	16.5

● 规格参数对照表 Cross-reference tables of spec. -parameter

规格 Specification	额定一次电流(A) Rated primary current (A)	额定二次电流(A) Rated second current ratio(A)	准确级 Precision degree	额定负荷(VA) Rated load(VA)	短时热稳定电流(kA) Short-time thermal stability current (kA)	短时动稳定电流(kA) Short-time dynamic current (kA)
AKH-0.66/Q/30	30-300	5	0.2S	10	50	100
AKH-0.66/Q/40	400-800					
AKH-0.66/Q/50	1000-1500					

4.8.2 AKH-0.66ZD(LMZD-0.66)系列计量型电流互感器

AKH-0.66ZD(LMZD-0.66) series current transformer for metering

● 产品特点 Product feature

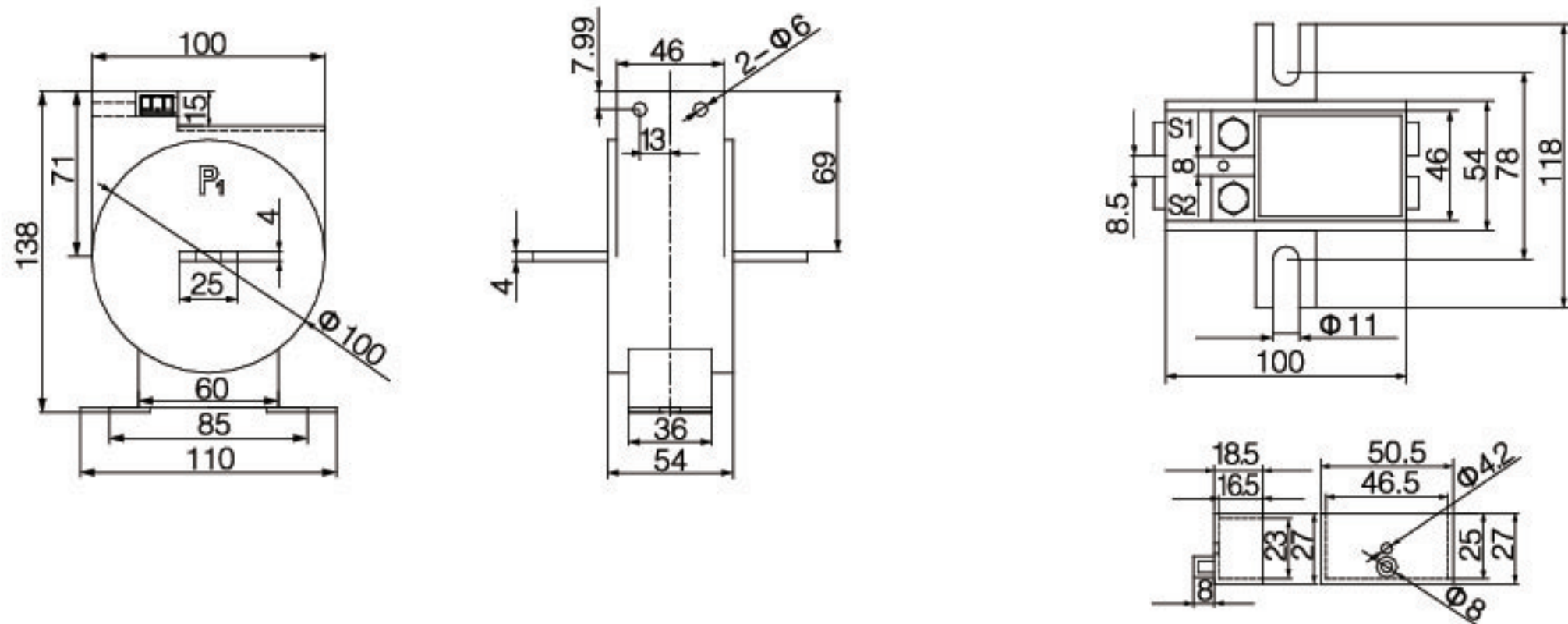
该产品用于供电系统计量用，与供电系统收费电能表配合使用，产品采用环氧浇注绝缘，二次接线端子采用透明接线罩罩好后铅封，以防止窃电，产品准确级为0.2S和0.5S,产品性能完全满足国家电网公司企业标准Q/GDW572-2010要求。

They are mainly used for metering and match with electricity meters in power supply systems. Adopt the epoxy resin casting insulation. The secondary wiring terminal is accommodated by transparent wiring cover in order to avoid stealing the electricity. The accuracy class is 0.2S and 0.5S. The performance satisfies requirements of State Grid standard Q/GDW572-2010.

● 型号说明 Explanation for type



● AKH-0.66LF1(LFZ1-0.66)规格尺寸(单位: mm) AKH-0.66LF1(LFZ1-0.66) spec. and size

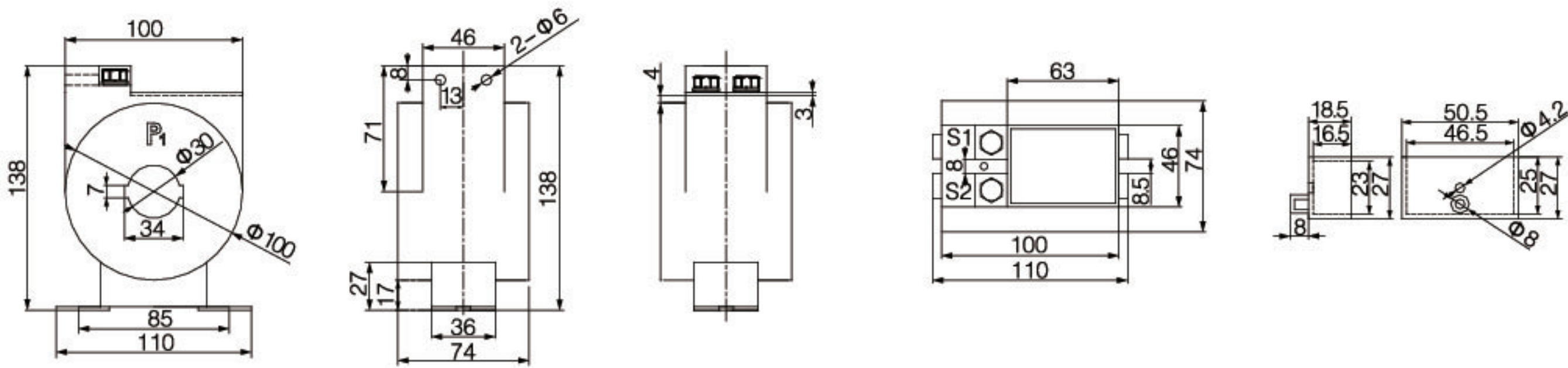


● AKH-0.66LF1(LFZ1-0.66)参数对照表 Cross-reference tables of spec. -parameter of AKH-0.66LF1(LFZ1-0.66)



额定一次电流(A) Rated primary current (A)	额定二次电流(A) Rated second current ratio(A)	准确级 Precision degree		短时热稳定电流(kA) Short-time thermal stability current (kA)	短时动稳定电流(kA) Short-time dynamic current (kA)
		0.2S	0.5S		
10、15、20、25、30、40、50、60	5、1	10VA		50 times than rated primary current	100 times than rated primary current

● AKH-0.66ZD1(LMZD1-0.66)规格尺寸(单位: mm) AKH-0.66ZD1(LMZD1-0.66) spec. and size (unit: mm)

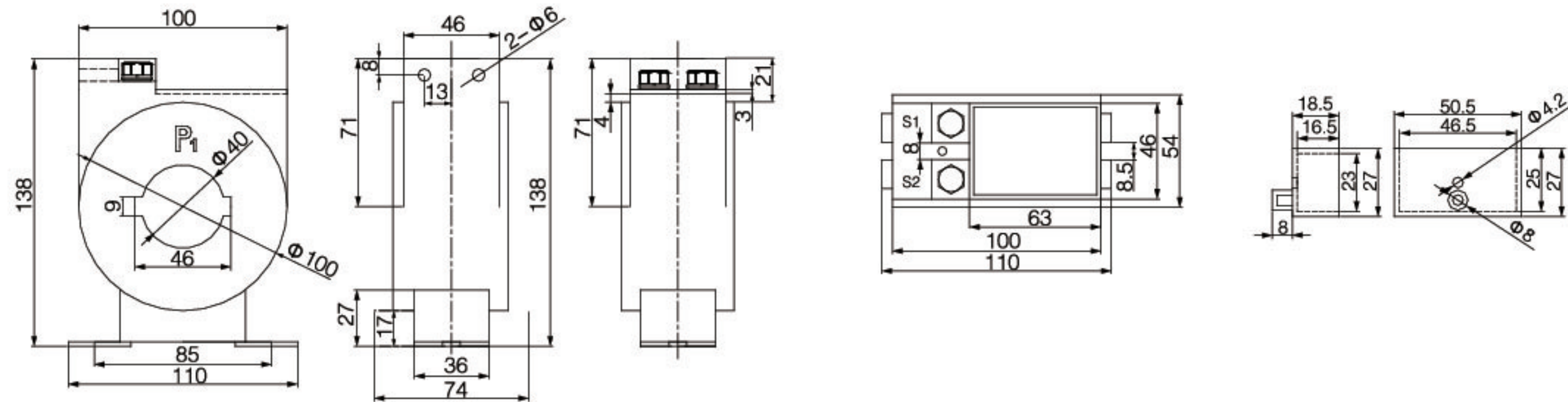


● AKH-0.66ZD1(LMZD1-0.66)参数对照表 Cross-reference tables of spec. -parameter of AKH-0.66ZD1(LMZD1-0.66)



规格 Specification	额定电流比(A) Rated current ratio(A)	准确级 Precision degree		穿心匝数 Straight-through turns	母排规格/根数 Bus spec(mm)/numbe	电缆最大外径(mm) Max. cable outer diameter(mm)
		0.2S	0.5S			
AKH-0.66ZD1 (LMZD1-0.66)	75/5(1)	5VA		1	30x6/1	Φ30
	100-200/5(1)	10VA				

● AKH-0.66ZD2(LMZD2-0.66)规格尺寸(单位: mm) AKH-0.66ZD2(LMZD2-0.66) spec. and size (unit: mm)

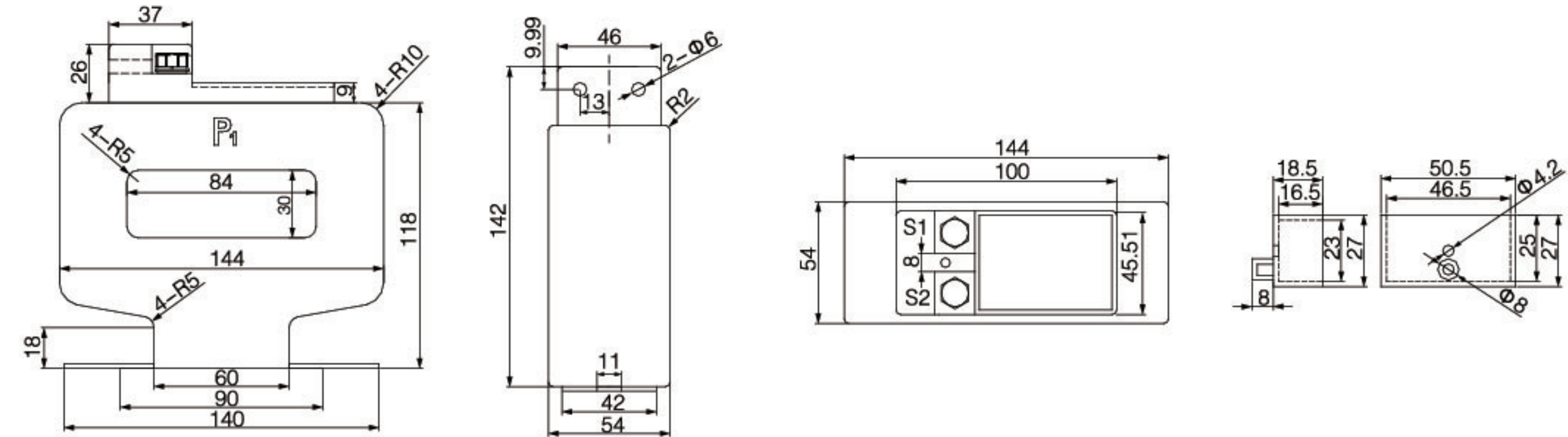


● AKH-0.66ZD2(LMZD2-0.66)参数对照表 Cross-reference tables of spec. -parameter of AKH-0.66ZD2(LMZD2-0.66)



规格 Specification	额定电流比(A) Rated current ratio(A)	准确级 Precision degree		穿心匝数 Straight- through turns	母排规格/根数 Bus spec(mm) /numbe	电缆最大外径(mm) Max. cable outer diameter(mm)
		0.2S	0.5S			
AKH-0.66ZD2 (LMZD2-0.66)	200/5(1)	5VA		1	40x8/1	Φ 40
	250-600/5(1)	10VA				

● AKH-0.66ZD3(LMZD3-0.66)规格尺寸(单位: mm) AKH-0.66ZD3(LMZD3-0.66)spec. and size (unit: mm)

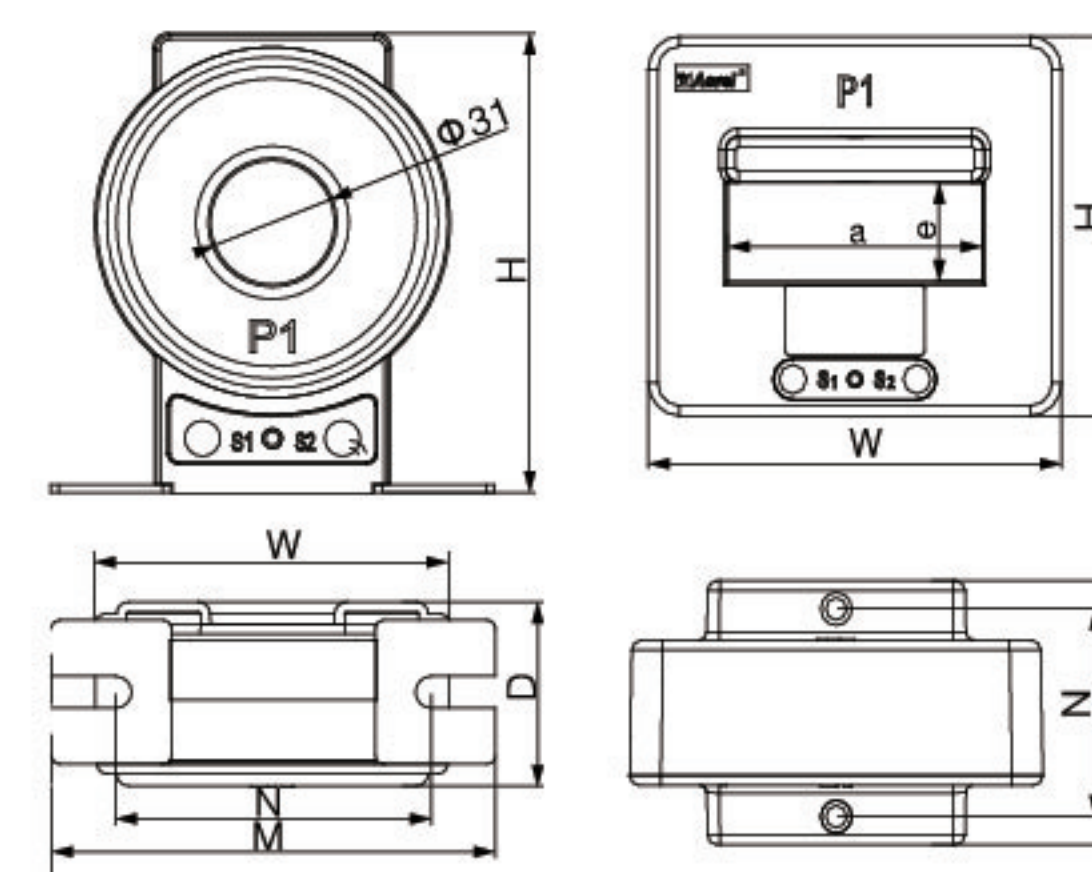
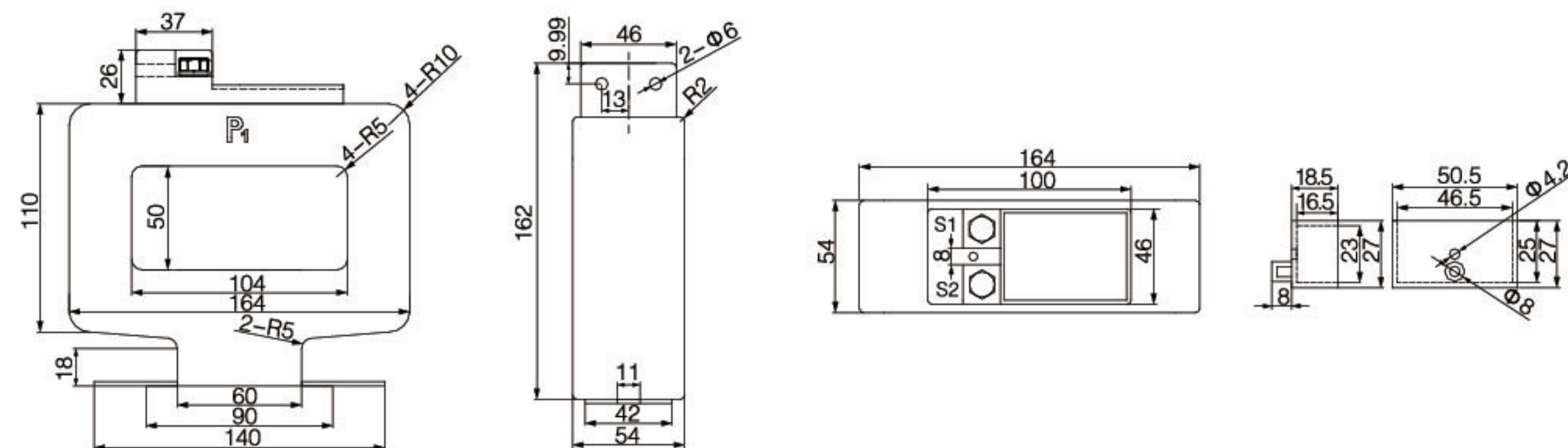


● AKH-0.66ZD3(LMZD3-0.66)参数对照表 Cross-reference tables of spec. -parameter of AKH-0.66ZD3(LMZD3-0.66)



规格 Specification	额定电流比(A) Rated current ratio(A)	准确级 Precision degree		穿心匝数 Straight-through turns	母排规格/根数 Bus spec (mm)/numbe
		0.2S	0.5S		
AKH-0.66ZD3 (LMZD3-0.66)	600/5(1)	5VA		1	80x10/1-2
	800/5(1)	10VA			

● 规格尺寸(单位: mm) Spec. and size(mm)



规格 Type	尺寸 Size	外形尺寸 Outline size			穿孔尺寸 Through size			安装尺寸 Mounting size		公差 Tolerance	图形 Figure
	W	H	D	a	e	Φ	M	N			
J-30I	88	115	46	31	/	/	111	79	± 1	图形1 Fig.1	
J-40I	105	137	46	41	/	/	111	79			
J-60II	101	120	45	/	63	22	67	85		图形2 Fig.2	
J-80II	132	114	45	/	82	30	64	80			
J-100II	152	126	46	/	102	26	66	82			
J-120II	184	134	46	/	120	31	70	89			

图形1 Fig.1

图形2 Fig.2

● AKH-0.66ZD4(LMZD4-0.66)参数对照表 Cross-reference tables of spec. -parameter of AKH-0.66ZD4(LMZD4-0.66)



规格 Specification	额定二次电流(A) Rated current ratio(A)	准确级 Precision degree		穿心匝数 Straight-through turns	母排规格/根数 Bus spec (mm)/numbe
		0.2S	0.5S		
AKH-0.66ZD4 ()	800/5(1)	5VA		1	100x10/1-3
	1000-1500/5(1)	10VA			

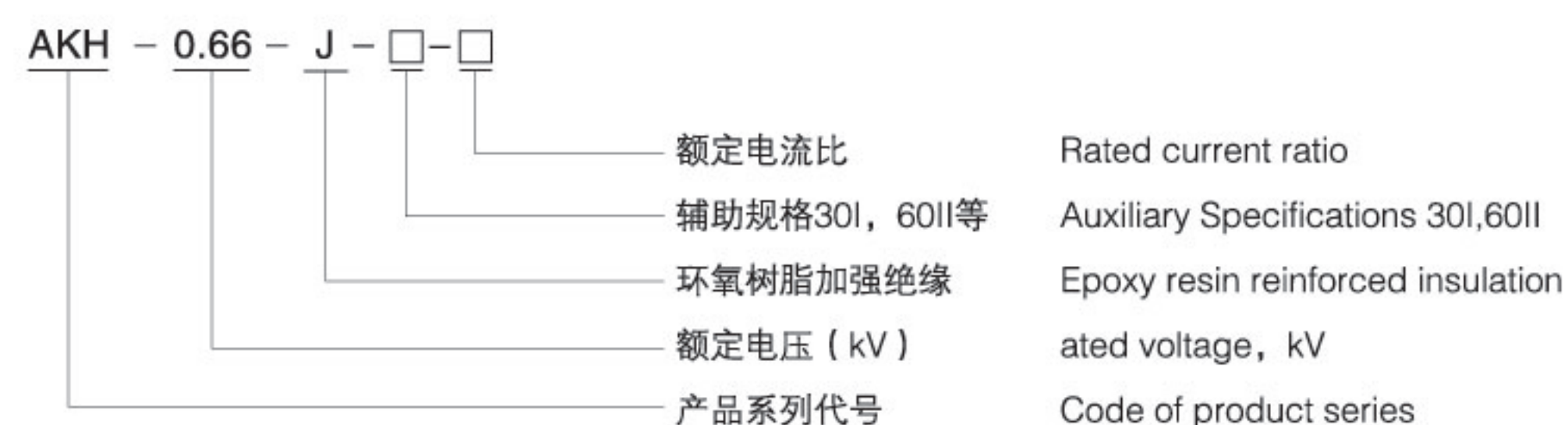
4.8.3 AKH-0.66/J系列计量型电流互感器 AKH-0.66/J series current transformer for metering

● 产品特点 Product feature

该系列产品用于低压配电系统测量、计量用，与测量仪器仪表和其他测控装置配套使用，产品采用环氧浇注绝缘，二次接线端子采用透明接线罩罩好后铅封，以防止窃电，产品准确级为最高可达0.2S,产品等效于LMZ-0.5和LMZJ-0.66，性能完全满足国家标准GB20840.2-2014等效IEC61869-2:2012，MOD要求。

This product is used for measuring and metering in low-voltage power distribution systems and matches with measuring instruments and other measuring and control devices. Adopt the epoxy resin casting insulation. The secondary wiring terminal is accommodated by transparent wiring cover in order to avoid stealing the electricity. The accuracy class is up to 0.2S. The performance is equivalent to LMZ-0.5 and LMZJ-0.66 and satisfies requirements of GB20840.2-2014 (equivalent IEC61869-2:2012:MOD).

● 型号说明 Explanation for type



● 规格参数对照表 Cross-reference tables of spec. -parameter



规格 Specification	额定电流比(A) Rated current ratio(A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load(VA)			穿心匝 数(匝) Straight- through /turns	母排规格(mm) /根数 Bus spec (mm) /number	电缆最大外 径 (mm) Max. cable outer diameter (mm)	安装方式 Installation
		0.2	0.5	1				
J-30I	15/5(1)			1.5	8	/	Φ30	F
	20/5(1)			1.5	5			
	25-30/5(1)			1.5	4			
	40/5(1)			1.5	4			
	50-75/5(1)			1.5	2			
	100/5(1)			1.5	1	30x10/1		
	150/5(1)			2.5	1			
	200-250/5(1)		2.5		1			
	300-450/5(1)		5		1			
	500-600/5(1)		10		1			
J-40I	200-250/5(1)		2.5		1	40x10/1	Φ40	F
	300-450/5(1)		5		1			
	500-800/5(1)		10		1			
	1000-1250/5(1)	10			1			
	1500/5(1)	20			1			
J-60II	200-250/5(1)		2.5		1	60x10/1-2	/	E
	300-450/5(1)		5		1			
	500-800/5(1)		10		1			
	1000-1250/5(1)	10			1			
	1500-2000/5(1)	20			1			
J-80II	200-250/5(1)		2.5		1	80x10/1-2	/	E
	300-450/5(1)		5		1			
	500-800/5(1)		10		1			
	1000-1250/5(1)	10			1			
	1500-2000/5(1)	20			1			
	2500-4000/5(1)	30			1			
J-100II	300-450/5(1)		2.5		1	100x10/1-2	/	E
	500-800/5(1)		5		1			
	1000-1250/5(1)	10			1			
	1500-2000/5(1)	20			1			
	2500-4000/5(1)	30			1			





规格 Specification	额定电流比(A) Rated current ratio(A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load(VA)			穿心匝数(匝) Straight-through turns	母排规格(mm)/根数 Bus spec (mm) /number	电缆最大外径 (mm) Max. cable outer diameter (mm)	安装方式 Installation
		class0.2	class0.5	class1				
J-120II	300-450/5(1)		2.5		1	120x10/1-2	/	E
	500-800/5(1)		5		1			
	1000-1250/5(1)	10			1			
	1500-2000/5(1)	20			1			
	2500-5000/5(1)	30			1			

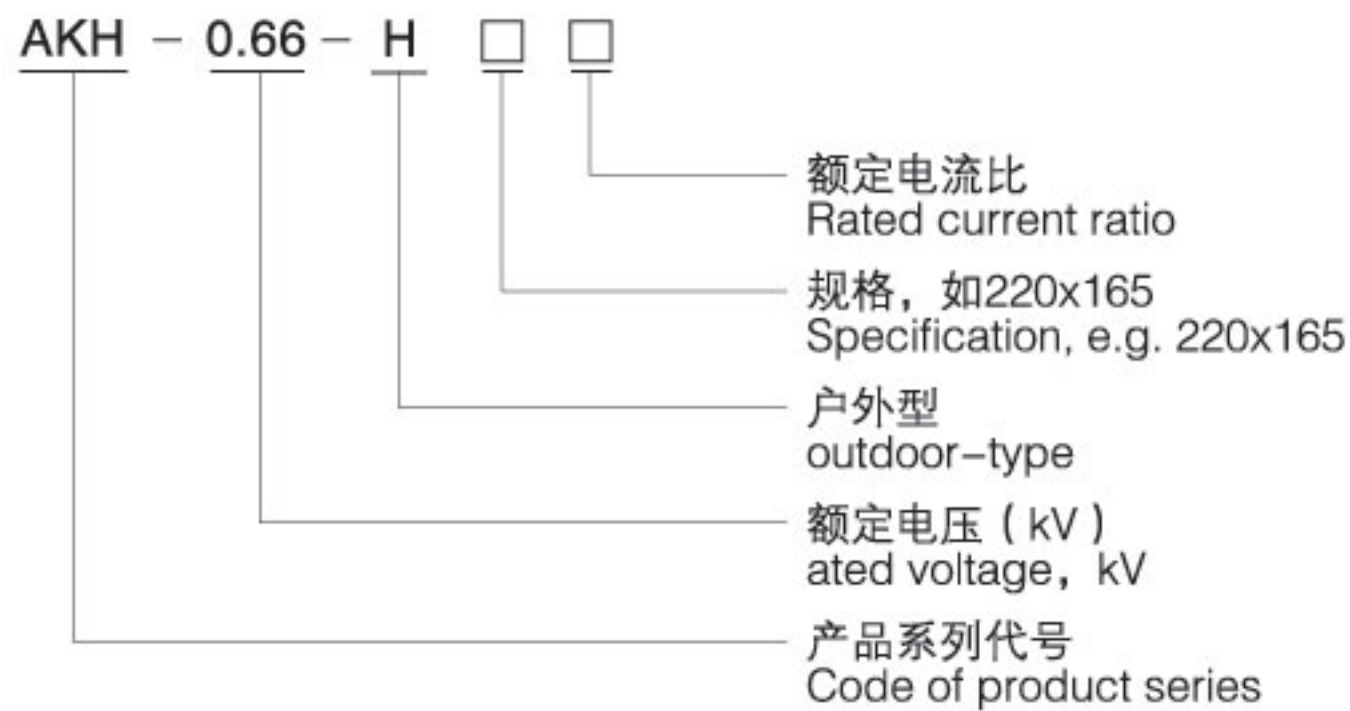
4.8.4 AKH-0.66/H系列电流互感器 AKH-0.66/H series current transformer

● 产品特点 Product feature

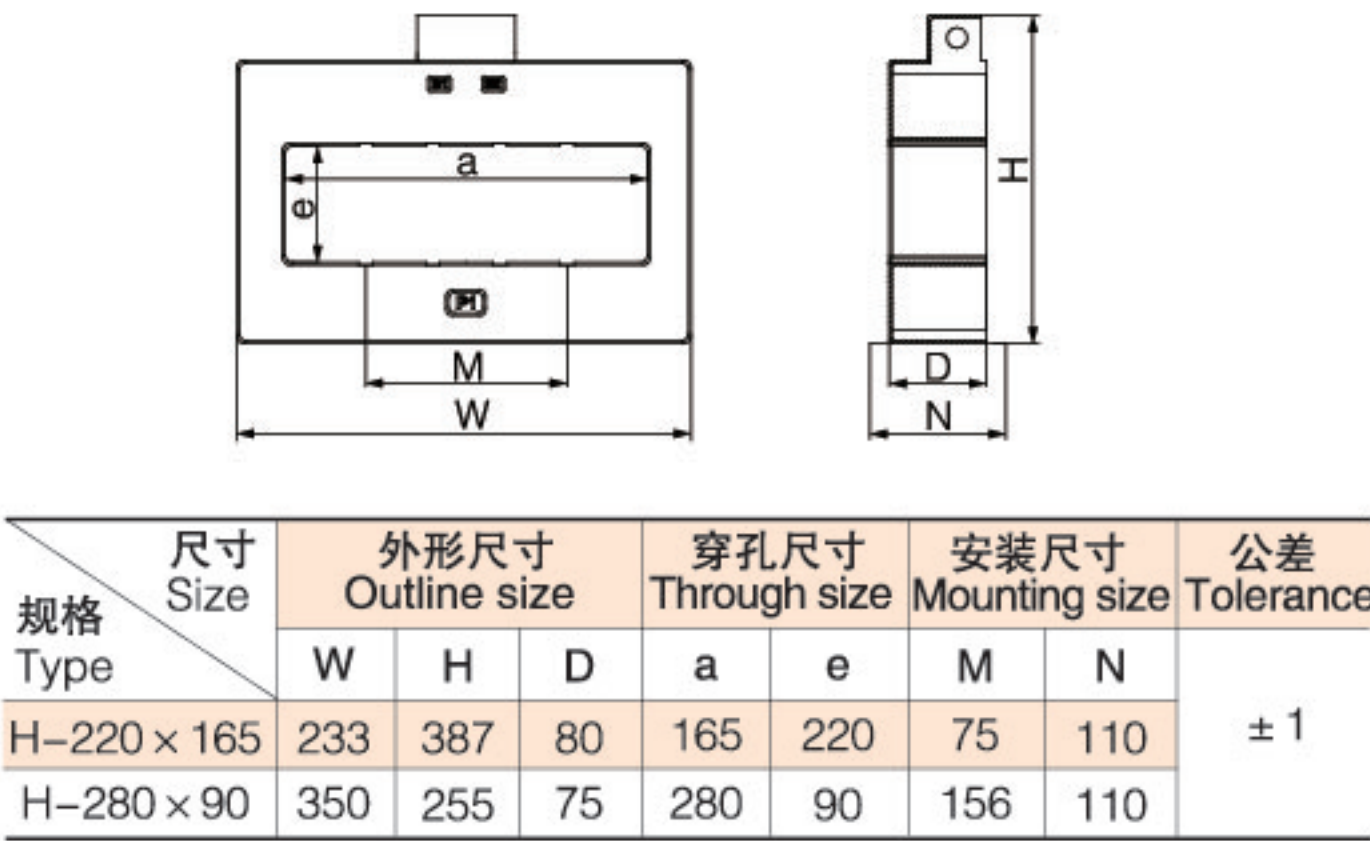
AKH-0.66/H户外型产品，外形美观，接线方便。容量大，防护等级为IP65，适用于变压器低压测量，保护等级可达10P20，能够有效对电动机进行短路或过载保护。方形孔型，可穿越铜排，一般配继电保护使用，可与ARD3T电动机保护器单元、ALP线路保护配套使用，也可以与ABB的SPAJ140C继电器配合使用。

AKH-0.66/H outdoor-type current transformers look nice and are easy for wiring. The capacity is large and the protection rating reaches IP65. They are suitable for low-voltage measurement of transformer. Provide the protection as high as 10P20. Protect motors from short circuit or overload efficiently. The square hole can accommodate the copper bar. Typically, they match with relay protection devices. And they also match with ARD3T motor protectors, ALOP circuit protectors and ABB SPAJ140C relays.

● 型号说明 Explanation for type



● 规格尺寸(单位: mm) Spec. and size (mm)



● 规格参数对照表 Cross-reference tables of spec. -parameter



规格 Specification	额定电流比(A) Rated current ratio(A)	准确级及相应额定负荷(VA) Precision degree and corresponding rated load(VA)		穿心匝数(匝) Straight-through turns	母排规格(mm)/根数 Bus spec (mm) /number	安装方式 Installation
		10P15	10P20			
H-220 × 165	6000-10000/5(1)	30	15	1	2 × 100 × 10/6-10	A
H-280 × 90	6000-10000/5(1)	30	15	1	2 × 125 × 10/6-10	
	20000/5	30	15	1	2 × 125 × 10/6-10	

4.9 特殊定制类电流互感器 Customized current transformers

4.9.1 AKH-L零序电流互感器 AKH-L zero sequence current transformer

● 产品特点 Product feature

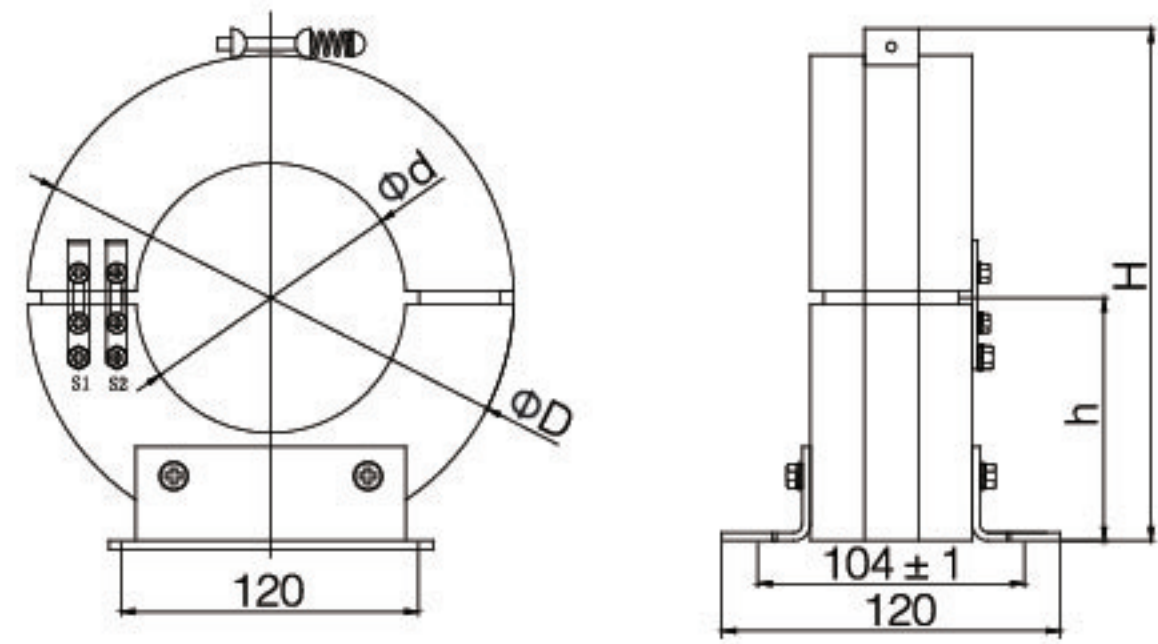
本系列零序电流互感器适用于户内、额定频率50Hz或60Hz、额定电压35kV及以下的小接地电流系统中供三相电缆接地保护用，也可与继电器配套使用，本型电流互感器为开口式，环氧树脂浇注结构，安装时可将互感器分为两半，装好电缆合并为一体，安装极为方便。

This series can provide the ground protection to 3-phase cables in an indoor ground system with the rated frequency of 50Hz or 60Hz and the rated current up to 35kV. They also match with relays. They are split and epoxy resin casting. Split a current transformer before installation and assemble it again after cables are wired. The mounting process is simple.

● 型号说明 Explanation for type



● 外形尺寸(单位: mm) Spec. and size(mm)



型号 Type	Φd	ΦD	h	H
AKH-L-Φ80	80	160	82.5	175
AKH-L-Φ100	100	180	92.5	195
AKH-L-Φ120	120	200	102.5	215
AKH-L-Φ140	140	220	120.5	235
AKH-L-Φ150	150	230	117.5	245
AKH-L-Φ160	160	240	122.5	255
AKH-L-Φ180	180	260	132.5	275
AKH-L-Φ200	200	280	152.5	295
AKH-L-Φ240	240	320	162.5	335

● 技术参数 Technical parameters

- 1、本系列零序电流互感器一次主绝缘由电缆保证，产品仅考核二次绕组的绝缘性能，二次绕组对地能承受3 kV工频耐压。
The primary insulation in this series is guaranteed by cables. Therefore, only insulation performance of secondary winding is examined. The secondary winding can withstand a voltage to ground at 3kV.
- 2、额定电流比、准确级、额定输出见下表：
The rated current ratio, precision degree, rated output see the table below:

额定电流比(A) Rated current ratio(A)	准确级 Precision degree	额定输出(VA) Rated output(VA)
60-75/1	10P10	1
100/1		1.5
150/1		2.5
200/1		3.75
300/1 ~ 600/1		5

额定电流比(A) Rated current ratio(A)	准确级 Precision degree	额定输出(VA) Rated output(VA)
150-200/5	10P10	2.5
300-400/5		5
500/5		7.5
600/5		10

3、与继电器配套使用时，本型互感器的一次零序电流满足下表的要求：
To match with relays, the primary zero sequence current must meet requirements in the following table:

继电器型号 Model of relay	继电器线圈 连接方式 Connection of relay coil	继电器刻度值 Scale value of relay	一次零序电流(A) Primary zero sequence current(A)	额定电流比(A) Rated current ratio(A)
DD-11/60	串联 Series	15×1~30×1	2~5	60/1
	并联 Parallel	15×2~30×2		
DD-1/60	串联 Series	15×1~30×1	2~6	
	并联 Parallel	15×2~30×2		



4.9.2 AKH-3.3/P-φ 型中压电动机保护专用电流互感器

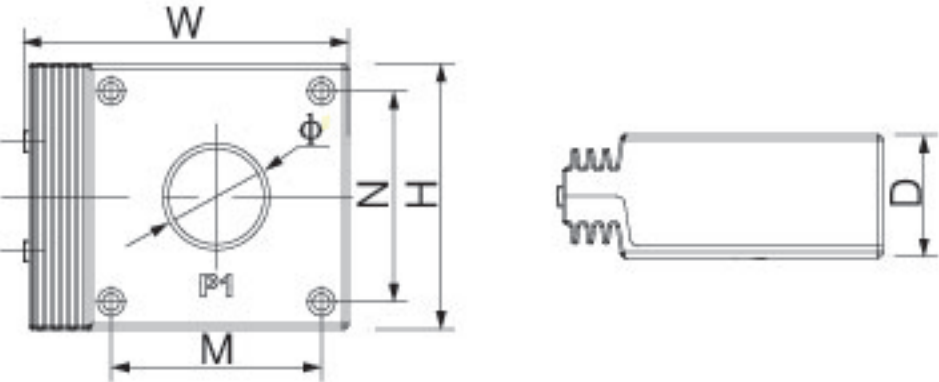
AKH-3.3/P-φ current transformer for medium-voltage motor protector

● 产品特点 Product feature

AKH-3.3P-φ 35 3.3kV保护用电流互感器外壳采用PPS材料，耐热200℃以上，并采用环氧树脂浇注，具有很强的耐热性和机械性能。该互感器可过载10倍，专用于煤矿，与煤矿专用电动机保护装置配套使用。

AKH-3.3P-φ 35 current transformers for 3.3kV protector are made of PPS. The minimum heat resistance is 200℃. Adopt the epoxy resin casting. Boast good heat resistance and mechanical properties.The permissible overloading capacity is 10 times. This product is designed for mines and matches with motor protectors in mines.

● 规格尺寸(单位: mm) Spec. and size(mm)



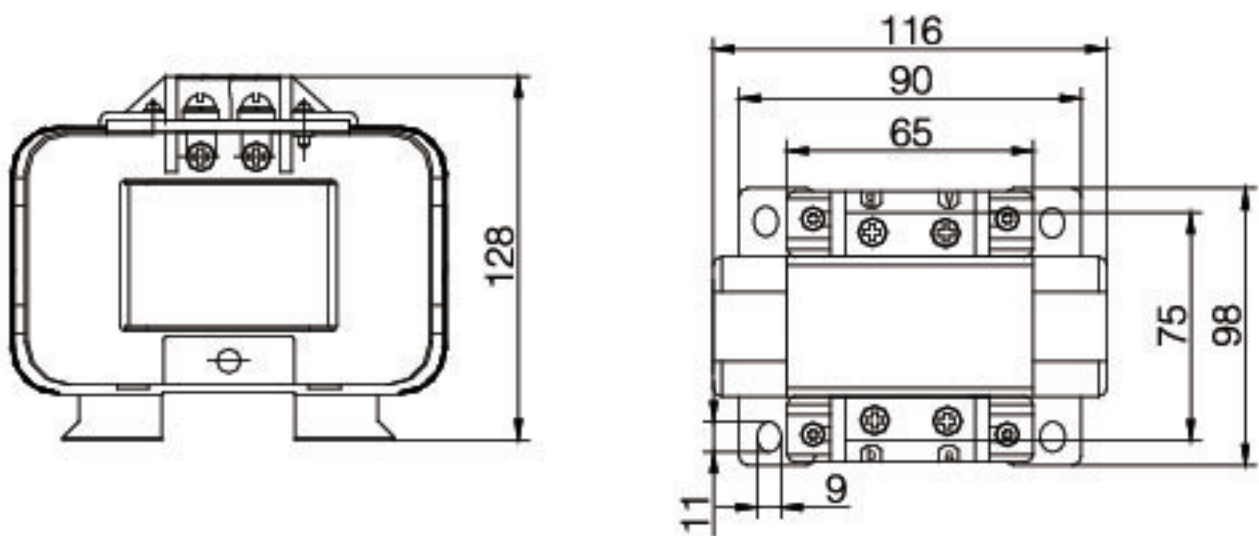
规格 specification	尺寸 Size	外形尺寸 Outline size			穿孔尺寸 Through size			安装尺寸 Mounting size	
		W	H	D	a	e	Φ	M	N
P-φ 35		119	97	45	/	/	35	77	77

● 规格参数对照表 Cross-reference tables of spec. -parameter

规格 specification	额定电流比(A) Rated current ratio(A)	准确级 Precision degree	额定负荷(VA) Rated load(VA)	过载倍数 Overload factor	安装方式 Installation
P-φ 35	800/0.1	0.5	5	10	F

4.9.3 JDG4-0.5电压互感器 JDG4-0.5 voltage transformer

● 外形尺寸(单位: mm) Spec. and size (mm)



● 技术参数 Technical parameters



型号 specification	额定电压比V Rated voltage ratio(V)	额定频率Hz Rated frequency(Hz)	准确级及相应额定负荷 (VA) Precision degree and rated output(VA)			极限输出VA Limit output (VA)	额定绝缘KV Rated insulation (kV)
			0.5	1	3		
JDG ₄ -0.5	220/100、380/100	50-60	15	25	60	120	3
JDG ₄ -0.5CY	500/100		/	5	15	60	6
	660/100、1140/100						

注：1.A,B (N) 为一次输入，a, b (n) 为二次输出；
2.额定输出及其相应的准确级仅符合其中一项。
Note:1.The primary input is A,B(N),the second output is a,b(n).
2.Rated output and its corresponding accuracy class can only meet one

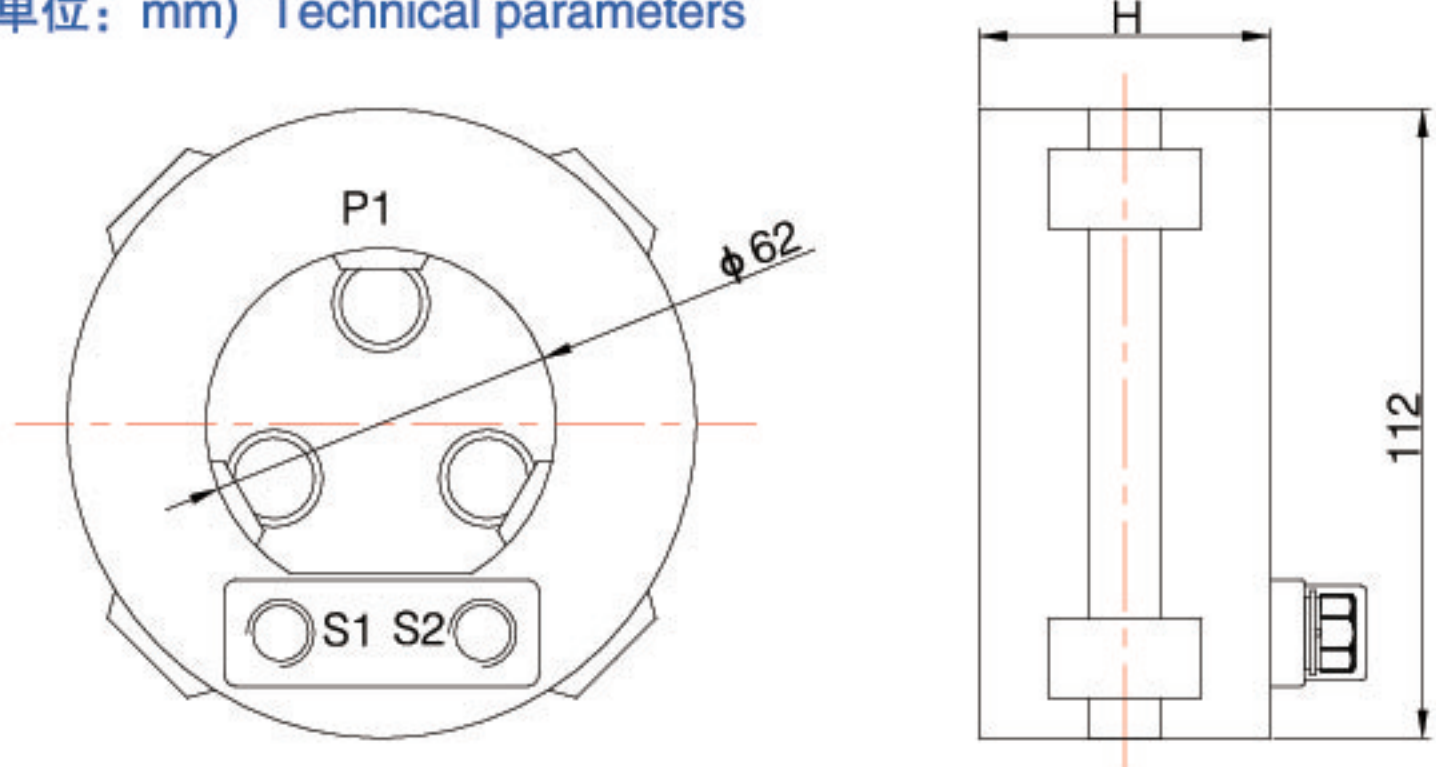
4.9.4 AKH-0.66/K-52系列电流互感器 AKH-0.66/K-52 series current transformer

● 产品特点 Product feature

本产品专为10kV环网柜设计，适用频率为50-60Hz,作电能计量、测量装置和继电保护用。本产品为开合式产品，安装极为方便，内部有三个橡胶圈用于固定一次电缆，本系列产品一次主绝缘由电缆保证，产品仅考核二次绕组的绝缘性能。

This product is designed for 10kV ring main cabinet. The suitable frequency is between 50Hz and 60Hz. It is used for electric energy metering and measuring and relay protection. It is split and easy for installation. Three inside rubber rings fix the primary cable. The primary insulation in this series is guaranteed by cables. So, only insulation performance of secondary winding is examined.

● 外形尺寸(单位: mm) Technical parameters



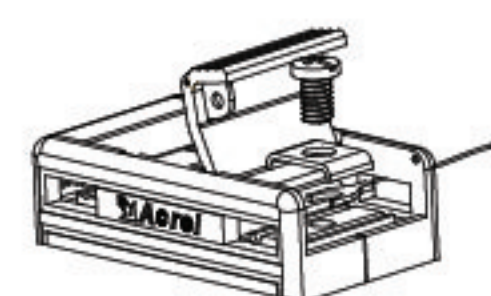
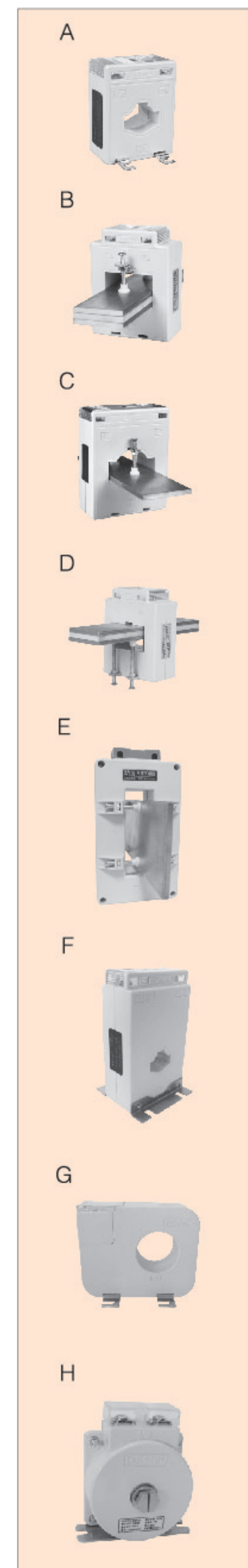
型号 Specification	H
AKH-0.66/K-52	52

● 技术参数 Technical parameters

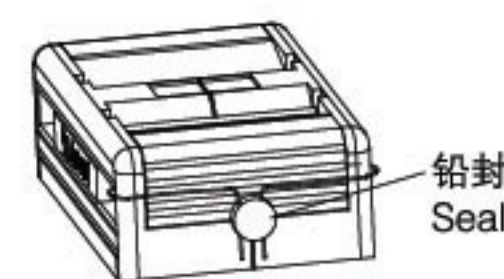


型号 Specification	额定电流比 Rated current ratio(A)	准确级及相应额定负荷 (VA) Precision degree and corresponding rated load(VA)			电缆孔径 Cable aperture	安装方式 Installation
		0.5	1	3		
AKH-0.66/K-52	150-200/5(1)A	1.5			Φ52	胶圈 Aprons
	250-350/5(1)A	2.5				
	400-600/5(1)A	5.0				

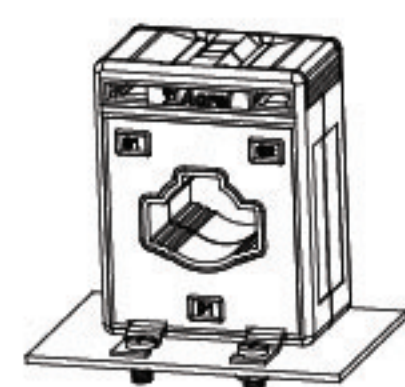
5 安装方法 Installation



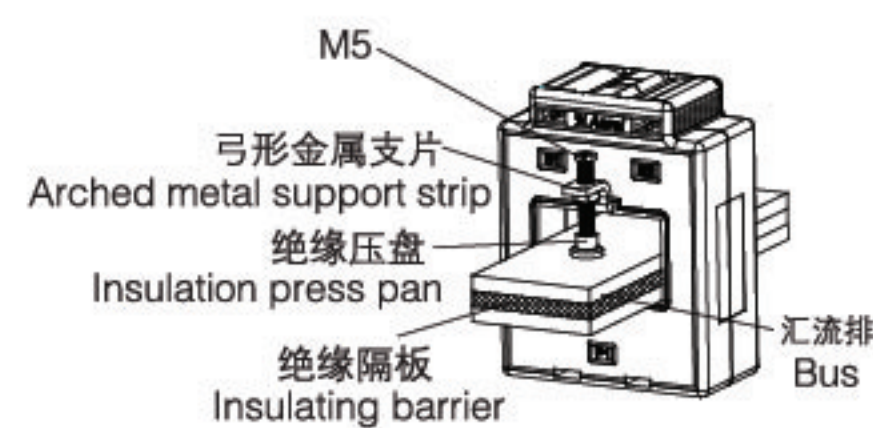
二次引线安装图
Installation diagram
of secondary lead



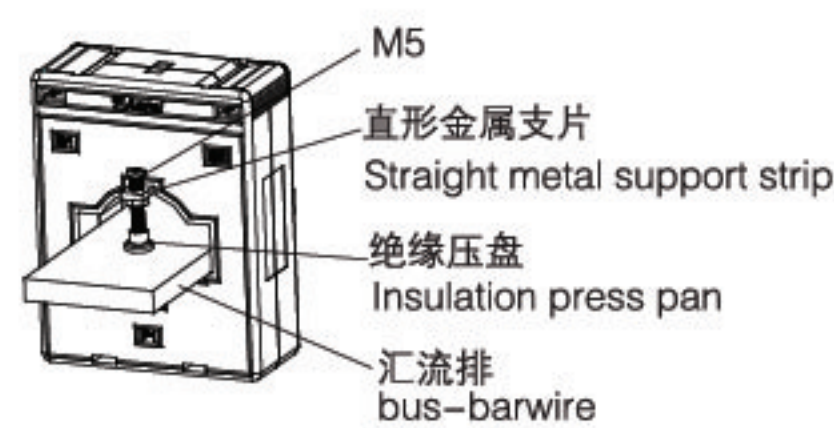
防窃电装置
Anti theft device



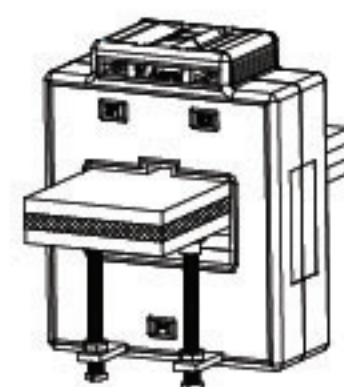
A. 直片固定
A. Fixed by straight piece



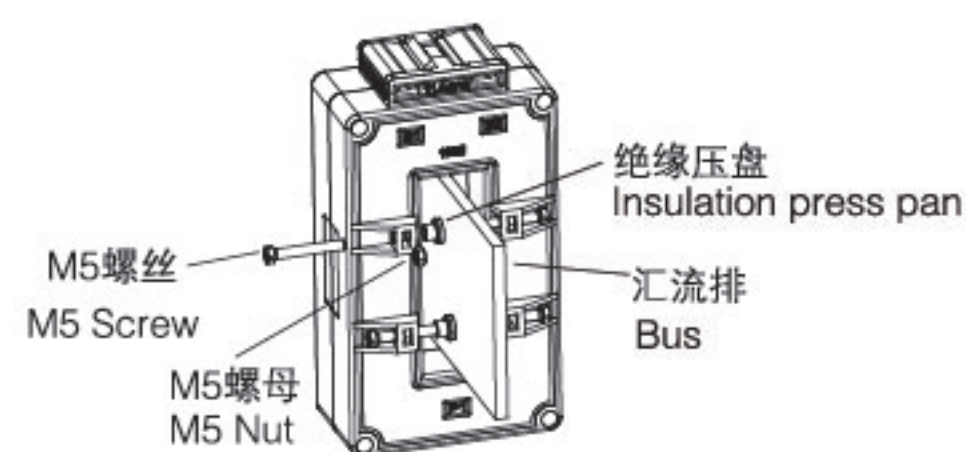
B. 弯片固定
B. Fixed by bend piece



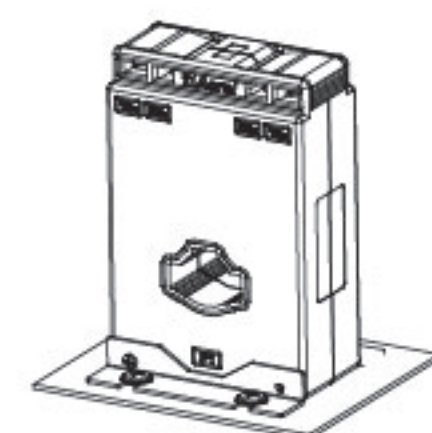
C. 单片压盘固定
C. Fixed by single press pan



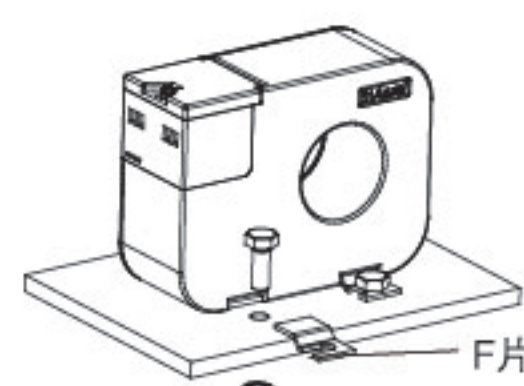
D. 双片压盘固定
D. Fixed by double press pan



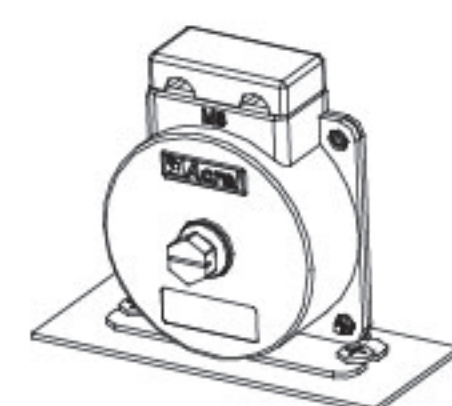
E. 母线固定
E. Fixed by generatrix



F. 底脚固定
F. Fixed by feet



G. F片固定
G. Fixed by F



H. 固定板固定
H. Fixed by fixed plate

AKH-0.66K系列开口式电流互感器安装方法 Installation of AKH-0.66K series split current transformer

图1 Fig.1

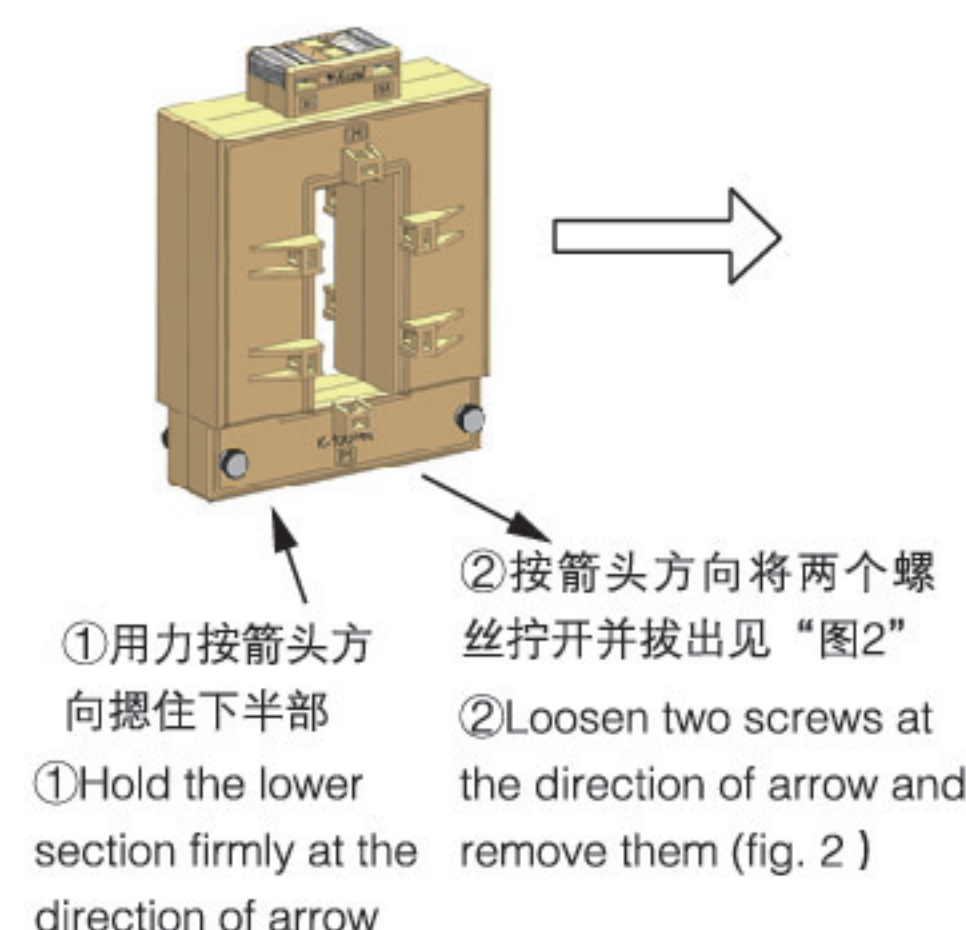


图2 Fig.2

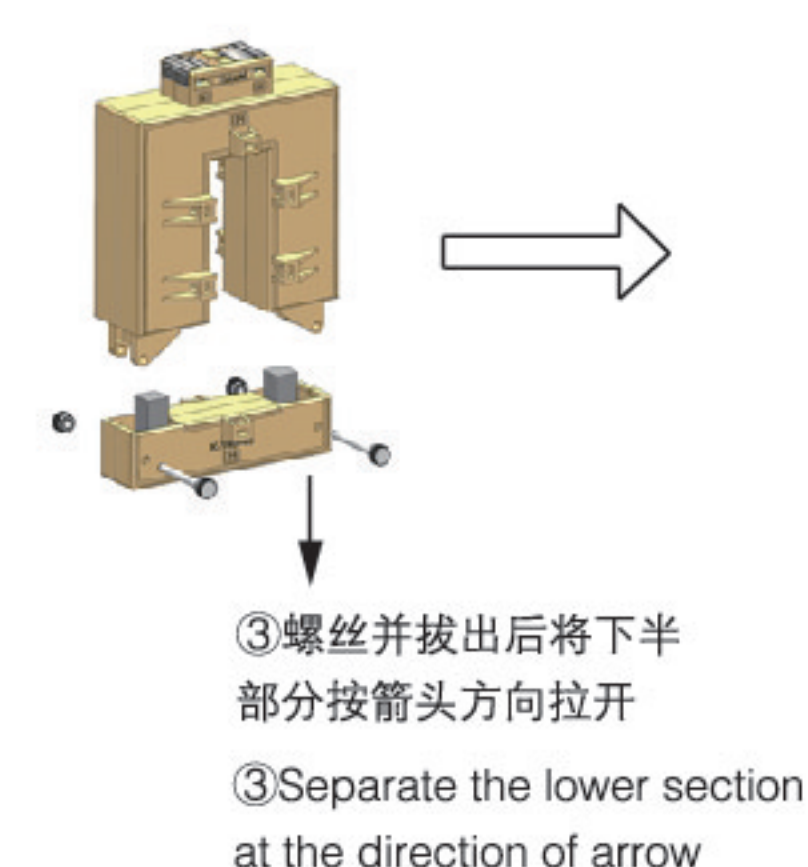


图3 Fig.3

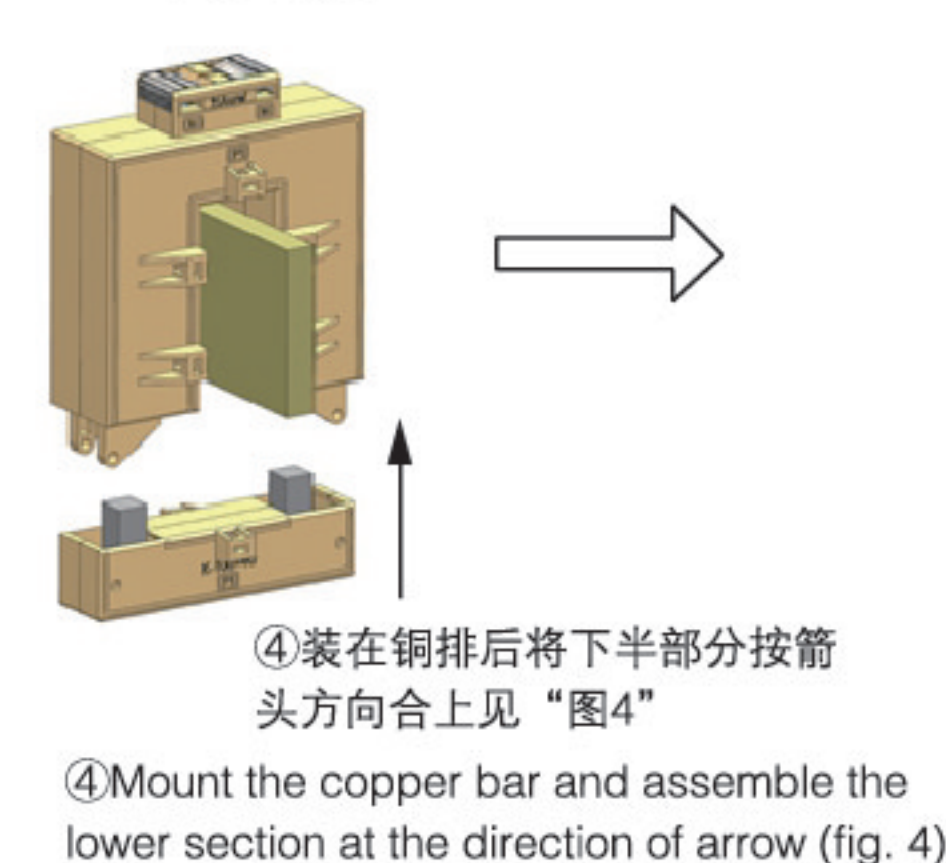


图4 Fig.4

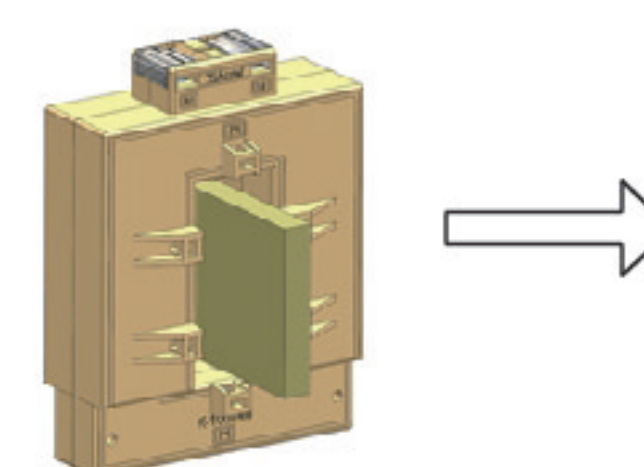


图5 Fig.5

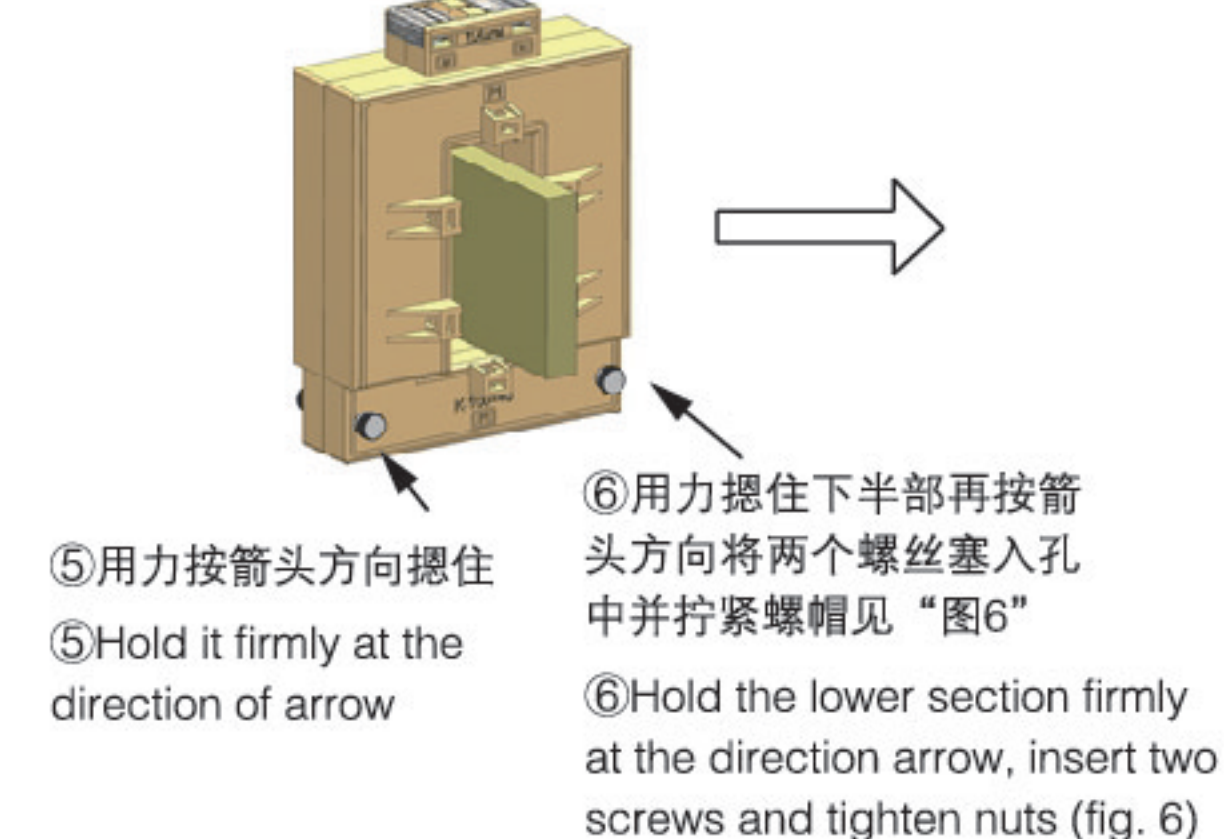
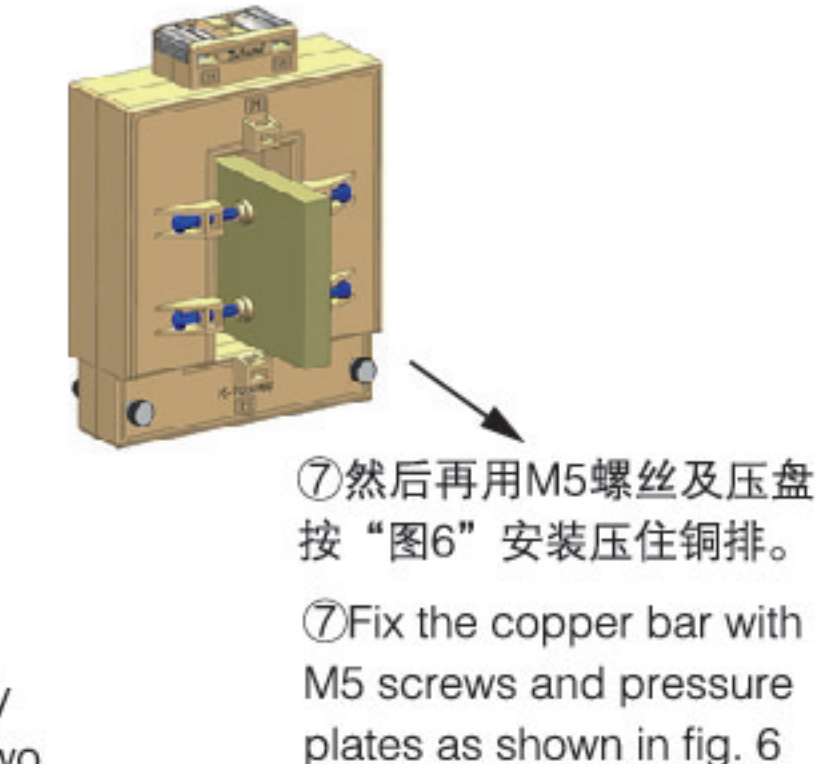


图6 Fig.6



注意事项:

1. 开口电流互感器安装前必须将其二次与电表（或其他测量装置）接好，确保互感器二次没有开路；
2. 将所有接好二次线的开口电流互感器放置现场，等待安装；
3. 若现场一次母线为电缆，可进行带电安装；若一次母线为铜排，则带电操作对操作者要求熟练程度比较高，且要求做好绝缘防护措施；
4. 安装互感器时，铁芯切面处不得有杂质、灰尘等异物落入，以免影响互感器性能。

Notes:

1. Before installation of split current transformer, connect the secondary winding with electricity meter (or other measuring equipment) and check if the secondary winding is short circuited.
2. Deliver all split current transformers with connected secondary winding to the installation site.
3. If the primary bus is the cable on site, a split current transformer can be installed with live line. If the primary bus is the copper bar, the live line work has higher requirements for skills of operator and requires the insulation protection.
4. To install a current transformer, keep the section of iron core away from dust and foreign matters in order to maintain the performance of current transformer.

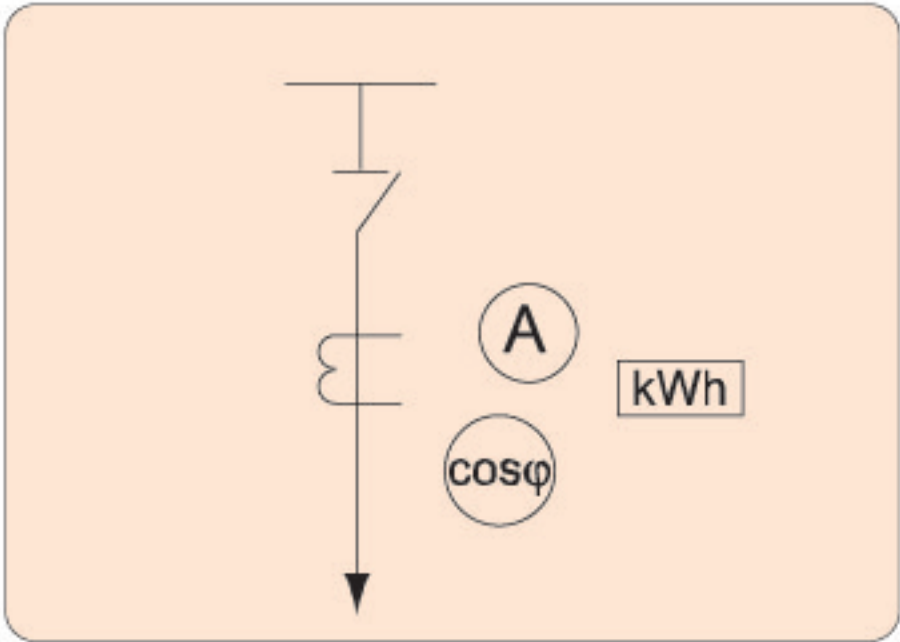
6 附录 Appendix

6.1 附录1 Appendix 1

互感器选用的额定容量应大于负荷阻抗
Rated capacity of transformer higher than load impedance

互感器在使用调试过程中，时有反馈信息：“电流表指示与实际电流值偏差较大”，进而怀疑“互感器质量有问题”，究其原因：“设计选用额定容量偏小，总负荷阻抗大于额定容量，实非互感器质量问题所引起。”
为明确起见，现举例说明：某配电装置，如在现场或中央两处测量和计量，导线截面2.5mm²，相距70m，应选用的互感器额定容量将不同（忽略接触电阻）。

During the use and commissioning of transformer, it is sometimes indicated that the reading on the ammeter is greatly different from the actual current value. In such case, the quality of transformer will be doubted. In fact, the root cause is that the rated capacity of selected transformer is lower than the load impedance, other than quality defect of transformer.
For clarification, the following example is given. If a power distribution unit is measured and metered at two positions 70m away centrally or locally and the section area of lead is 2.5mm², it is necessary to select current transformers different in rated capacity (neglect the contact resistance).



导线长度(m) Length of lead, m 二次电流(A) Secondary current, A 元件容量(VA) Component capacity, VA	3		60	
	1	5	1	5
测量导线 Measuring lead	0.042	1.05	0.84	21
电流表 Ammeter	0.4	0.4	0.4	0.4
功率因数表 Power factor meter	0.5	0.5	0.5	0.5
电度表 Electricity meter	1.5	1.5	1.5	1.5
负荷容量 Load capacity	2.44	3.45	3.25	23.4
互感器容量 Capacity of transformer	2.5	5	5	30

上表摘录的数据详见下面表1和表2
Refer to Table 1 and Table 2 for details about data in the table above.

测量回路的功耗 (VA) /电阻 (Ω)
Power Consumption of Measuring Circuit (VA)/ Resistance (Ω)
表1
Table 1

导线截面 (mm ²) Section area of lead, mm ²	二次 电流(A) Secondary current, A	传输距离 (m) Transmission distance, m									
		1		2		5		8		10	
1.5	1	0.023	0.023	0.047	0.047	0.117	0.117	0.188	0.188	0.235	0.235
	5	0.59		1.17		2.93		4.69		5.86	
2.5	1	0.014	0.014	0.028	0.028	0.071	0.071	0.112	0.112	0.14	0.14
	5	0.35		0.7		1.76		2.82		3.52	
4	1	0.009	0.009	0.018	0.018	0.044	0.044	0.071	0.071	0.088	0.088
	5	0.22		0.44		1.10		1.76		2.2	
6	1	0.006	0.006	0.012	0.012	0.029	0.029	0.468	0.468	0.058	0.058
	5	0.15		0.29		0.73		1.17		1.47	
10	1	0.004	0.004	0.007	0.007	0.018	0.018	0.028	0.028	0.035	0.035
	5	0.09		0.18		0.44		0.7		0.88	

常用仪表功耗一览表 (参考值)
List of Power Consumption of Common Instruments (reference)

表2
Table 2

仪表名称 Name of instrument		仪表型号 Model of instrument	每个电流线圈 Current coil		
			内阻 (Ω) Internal resistance / coil, Ω	功耗 (VA) Power consumption / coil, VA	个数 Qty.
可编程数显表 Programmable digital meter	单相 Single-phase	PZ72、PZ80、PZ96、PZ96B、PZ16、PZ42、PZ46	<0.0015	<0.05	1
	三相 3-phase	PZ80、PZ96、PZ42			3
数显功率表 功率因数表 Digital power meter power factor meter		PZ96、PZ42、PZ46、PZ16			1
多功能电力仪表 Multi-function electricity meter		ACR系列			3
指针式电流表 Pointer ammeter	整流系 Rectifier type	42L、6L、63L、45L		0.2 0.4	1
	电磁系 Electromagnetic type	1T1、63T		0.6 1.2	1
指针式功率表 Pointer power meter	整流系 Rectifier type	42L、6L、63L、45L		0.25 0.6	1
	电动系 Electrodynamic type	1D5、63D		<6	3
指针式功率因数表 Pointer power factor meter	整流系 Rectifier type	42L、6L、63L、45L		0.4 0.8	1
	电动系 Electrodynamic type	1D1		<6	
电度表 Electricity meter	单相 Single-phase	DD862		1~2	1
	三相三线 3-phase 3-wire	DD862、864、DX865、863		0.3 1	2
	三相四线 3-phase 4-wire	DT862、864、DX862、864		0.6 1	3
BD系列电量变送器 BD series electricity transducer		BD-AI(AI3)	<0.0015	<0.05	1(3)
		BD-3P(4P)	<0.0015	<0.05	2(3)
		BD-3P/Q/I	<0.0015	<0.05	2
		BD-PF	<0.0015	<0.05	1

6.2 附录2 Appendix 2

电工测量和计量仪表与互感器间准确级配置
Accuracy Configuration between Electric Measuring/ Metering Instrument and Current Transformer

- 测量仪表 Measuring instrument
通常电压表、电流表、功率表准确级为1.5~2.5级；频率表为0.5级；与仪表连接的分流器、附加电阻，电量变送器为0.5级。
相配置的互感器准确级，如仅作电压、电流测量用，一般不低于1级，非重要回路电流表（2.5级），可使用3级；如组合使用，应不低于回路内部仪表的最高准确级。
- Typically, the accuracy class is 1.5 to 2.5 for voltmeters, ammeters and power meters, 0.5 for frequency meter and 0.5 for attached shunts, additional resistances and power transmissions.
The accuracy class of matched transformer is 1 or above if it is only for voltage or current measurement, 3 if it is used with ammeter in the non-essential circuit (class 2.5) or the highest accuracy of instruments in the circuit if it is used with several instruments.

● 计量仪表 Metering instrument

根据《电能计量装置管理规定》（DL448-91）的有关规定：

According to applicable provisions in the Management Regulation for Electric Energy Metering Devices (DL448-91)

表1
Table1

电能计量装置分类 Classification of electric energy metering device	有功电能表准确级 Accuracy class of active electric energy meter	无功电能表准确级 Accuracy class of reactive electric energy meter	电压互感器准确级 Accuracy class of voltage transformer	电流互感器准确级 Accuracy class of current transformer
I	0.5	2.0	0.2	0.2 / 0.2S
II	1.0	2.0	0.2	0.2 / 0.2S
III	1.0	2.0	0.2	0.5 / 0.5S
IV	2.0	3.0	0.5	0.5 / 0.5S

上表中电能计量装置分类系根据用电量和重要程度划分：

Electric energy metering devices in the table above are classified in accordance with power consumption and degree of importance:

表2
Table 2

电能计量装置分类 Classification of electric energy metering device	月平均用电量（10 ⁴ kW.h） Monthly average power consumption, 104kW.h	变压器容量（kVA） Capacity of transformer, kVA	发电机容量(kVA) Capacity of generator, kVA	其他规定 Other provisions
I	≥ 100	≥2000（high voltage）	≥ 10	Trans-provincial power grid
II	≥ 10	≥315（high voltage）	≤ 10	Main electricity line of factories
III	≤ 10	≤315（low voltage）		Active energy balance evaluation for local power grid 110kV or above
IV		≤315（low voltage）		For internal index analysis of enterprises

6.3 附录3 Appendix 3

为什么推荐选用规格为1A的电流互感器 Why is 1A current transformer recommended?

国标GB 1208-2006《电流互感器》第5.2项中规定，额定二次电流标准值为1A和5A，优先值5A.当传输距离较大时，1A和5A相比有较多优点：

According to provisions in 5.2, Current Transformer GB1208-2006 standard values of rated secondary current are 1A and 5A and 5A is preferred. If the transmission distance is long, 1A transformer is better than 5A transformer in following aspects:

- 线路功耗降低，线路功耗与通过电流平方成正比，二次电流为1A的互感器相比5A降低功耗25倍，即1A的功耗仅5A的4%。在设计1A系统时，一般只需计算测量和保护仪表的阻抗（忽略接触电阻）
- Lower power consumption of line. The power consumption of line is proportional to the squared value of passing current. Compared to 5A transformer, a current transformer with 1A secondary current reduces the power consumption by 25 times, i.e. 4% power consumption of 5A transformer. Normally calculate the impedance of measuring and protection instruments and neglect the contact resistance during the design of 1A system.

测量线路的功耗（VA）
Power Consumption of Measuring Circuit (VA)

表1
Table1

电线截面(mm²) Section area of wire(mm²)	二次电流(A) Secondary current(A)	传输距离（m） ransmission distance, m				
		1	2	5	8	10
1.5	1	0.023	0.047	0.117	0.188	0.235
	5	0.59	1.17	2.93	4.68	5.86
2.5	1	0.014	0.028	0.07	0.112	0.14
	5	0.35	0.7	1.76	2.82	3.52
4	1	0.009	0.018	0.044	0.07	0.088
	5	0.22	0.44	1.1	1.76	2.2

- 传输距离加大，电流互感器二次负载计算公式 $S=I^2Z$,在相同负载下，二次电流为1A互感器的传输距离是5A的25倍，这样可避免选5/1A中间互感器或选用大容量互感器。
- Longer transmission distance. Calculation formula for secondary load of current transformer: $S=I^2Z$. The transmission distance of current transformer with 1A secondary current is 25 times longer than 5A transformer. So, it is unnecessary to select large-capacity current transformers.

不同额定容量时的传输距离(m)
Ransmission Distances of Current Transformers of Different Rated Capacities (m)

表2
Table 2

额定容量（VA） Rated capacity, VA	电流规格 (A) Current, A	电线截面(mm²) Section area of wire, mm²			
		1	1.5	2.5	4
2.5	1	71	106.5	178	284
	5	2.8	4.3	7.1	11.4
5	1	142	213	355	586
	5	5.7	8.5	14.2	22.7
10	1	284	426	710	1136
	5	11.4	17	28.4	45.5

- 电线截面减小：大中型工厂，当仪表和电流互感器安装距离较远(例如45.5m)时，从表2可以看出，当选用5A、10VA电流互感器时，线截面经计算需4mm²；若选用1A、2.5VA电流互感器，线截面仅需1mm²。目前随着计算机和数控仪表的普及和发展，额定二次电流为1A及以下规格的电流互感器选型已较普遍。
- Smaller section area of wire. Instruments are normally far from current transformers (e.g. 45.5m away) in large and medium-sized factories. Table 2 shows that the section area of wire must be 4mm2 if 5A or 10A current transformer is selected. If 1A or 2.5A current transformer is selected, the section area of wire is merely 1mm2. With popularization and development of computers and digital instruments, it becomes common to select current transformers with rated secondary current 1A and below.

二、霍尔传感器 Hall sensor

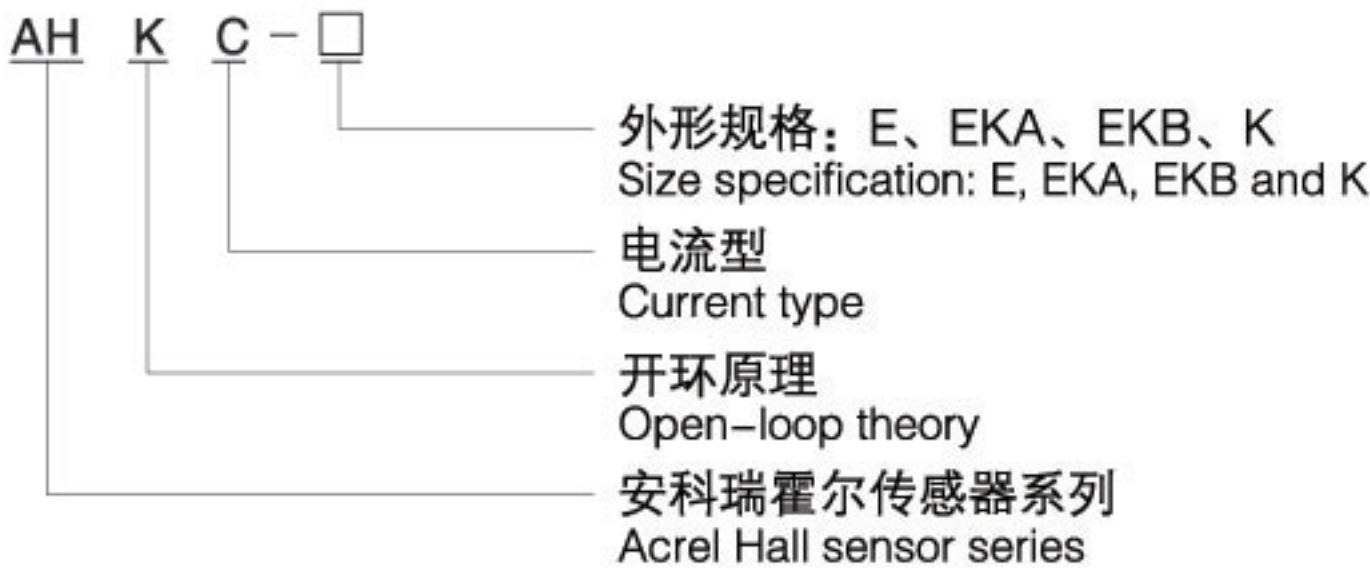
1 概述 Overview

霍尔电流传感器主要适用于交流、直流、脉冲等复杂信号的隔离转换，通过霍尔效应原理使变换后的信号能够直接被AD、DSP、PLC、二次仪表等各种采集装置直接采集，广泛应用于电流监控及电池应用、逆变电源及太阳能电源管理系统、直流屏及直流马达驱动、电镀、焊接应用、变频器，UPS伺服控制系统等系统电流信号采集和反馈控制，具有响应时间快，电流测量范围宽，精度高，过载能力强，线性好，抗干扰能力强等优点。

Hall current sensors are mainly used to isolate and convert AC, DC, pulse and other complex signals. After signals are converted according to the Hall Effect Theory, they can be directly acquired by AD, DSP, PLC, secondary instruments and other devices. Hall current sensors are widely applicable for acquisition and feedback control of current signals in the current monitoring, battery application, inverter, solar power management, direct current cabinet, DC motor drive, electroplating, welding, frequency converter, UPS servo control systems. They feature the quick response, wide range of measurement, high precision, strong overload capacity, good linearity and excellent anti-interference performance.

2 开环霍尔电流传感器 Open-loop Hall current sensor

2.1 型号说明 Explanation for type



2.2 技术指标 Technical data

技术参数		指标 Data	
Technical parameters		霍尔开口/闭口式开环 Split/closed open-loop	霍尔变送器 Hall Transducer
输出 Output	标称值 Nominal value	电压Voltage: $\pm 5V/\pm 4V$	电流Current: 4 ~ 20mA
	零点失调电压(电流) Zero offset voltage (current)	电压Voltage: $\pm 20mV$	电流Current: $\pm 0.05mA$
	失调电压(电流)漂移 Offset voltage (current) drift	电压Voltage: $\leq \pm 1.0mV/^{\circ}C$	电流Current: $\pm 0.04mA/^{\circ}C$
	线性度 Linearity	$\leq 0.2\%FS$	
电源电压 Power voltage		DC $\pm 15V$	DC 24V
频宽 Bandwidth		0 ~ 20kHz	
响应时间 Response time		$\leq 5\mu s$	$\leq 1ms$
耐压强度 Dielectric strength		输入与输出及电源之间允许AC2500V工频耐压 Permissible 2500VAC between input/ output and power supply at the power frequency	
精度等级 Accuracy class		1.0	
环境 Ambient conditions	温度 Temperature	工作 Operating temperature: $-40^{\circ}C \sim +85^{\circ}C$; 储存 Storage temperature: $-40^{\circ}C \sim +85^{\circ}C$	
	湿度 Humidity	$\leq 95\%RH$, 不结露, 无腐蚀性气体场所 no dew, no aggressive gas	
	海拔 Altitude	$\leq 3500m$	

2.3 开口式开环霍尔电流传感器 Split open-loop hall current sensor

规格尺寸(单位: mm) Spec. and size (unit: mm)

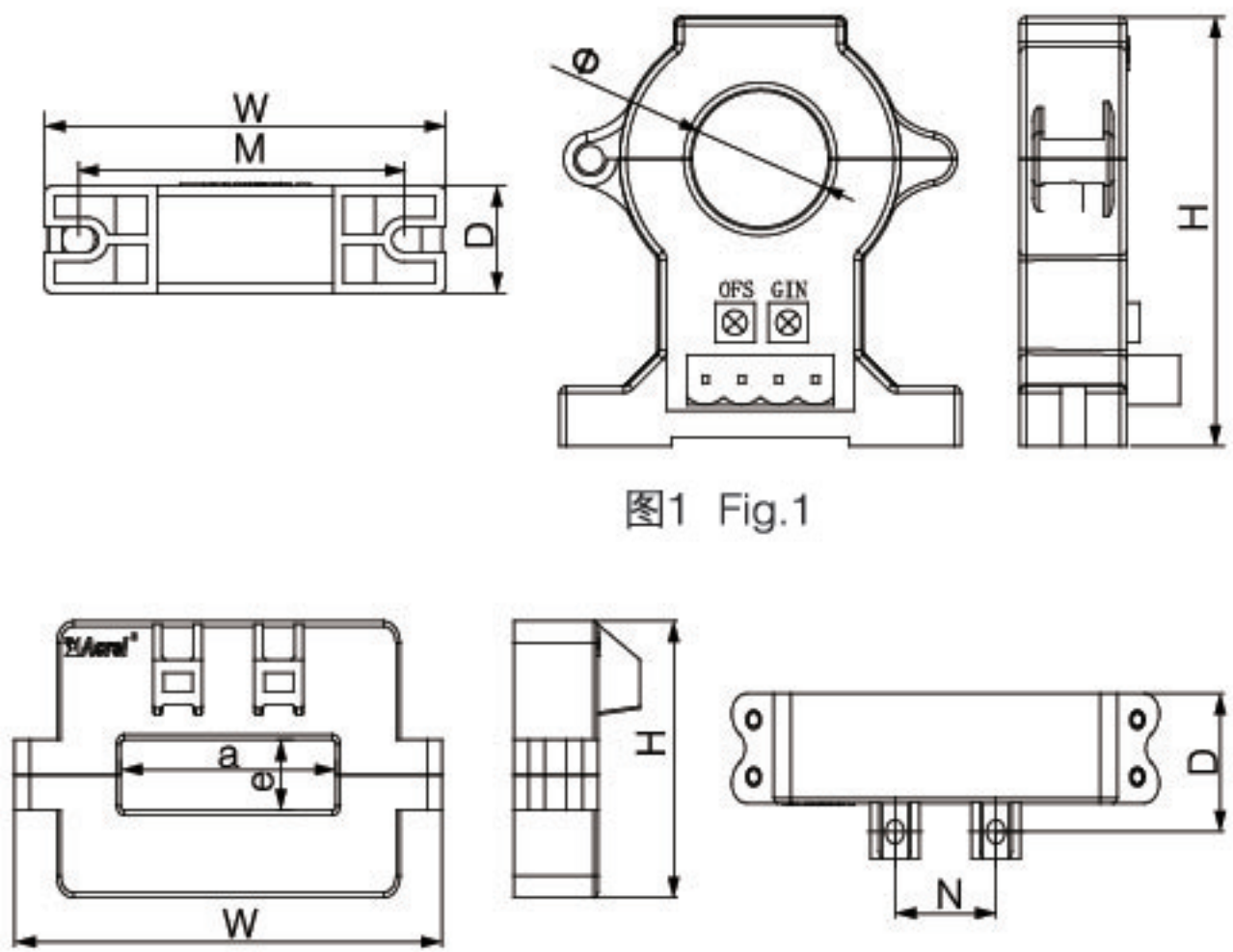


图1 Fig.1

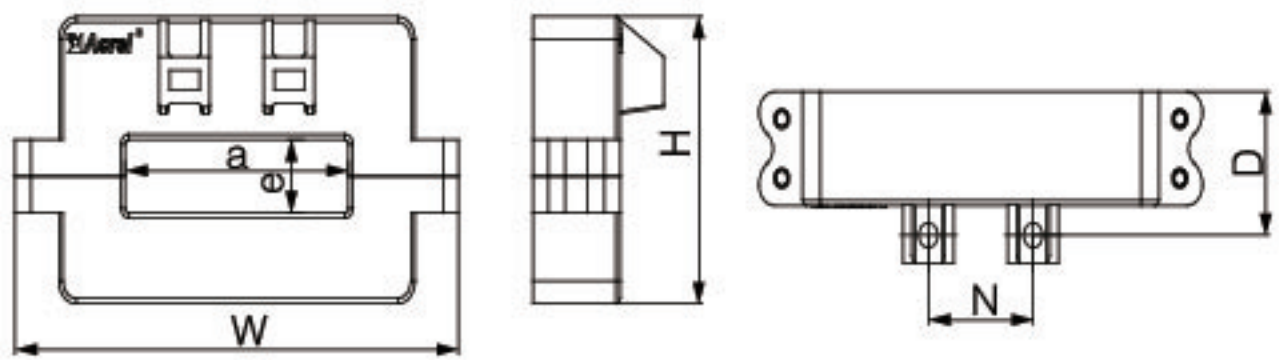


图2 Fig.2

规格 Specification	外形尺寸 Outline size			穿孔尺寸 Through size			安装尺寸 Mounting size		图形 Figure
	W	H	D	a	e	Φ	M	N	
AHKC-EKA	60	64	16	/	/	20	47	/	图1 Fig.1
AHKC-EKAA	60	64	16	/	/	20	47	/	图1 Fig.1
AHKC-EKDA	60	64	16	/	/	20	47	/	图1 Fig.1
AHKC-EKB	100	102	24	/	/	40	80	/	图1 Fig.1
AHKC-EKBA	100	102	24	/	/	40	80	/	图1 Fig.1
AHKC-EKBDA	100	102	24	/	/	40	80	/	图1 Fig.1
AHKC-K	127	63	25	64	16	/	/	30	图2 Fig.2
AHKC-KAA	127	63	25	64	16	/	/	30	图2 Fig.2
AHKC-KDA	127	63	25	64	16	/	/	30	图2 Fig.2
AHKC-H	149	79	25	82	32	/	/	46	图2 Fig.2
AHKC-KA	176	95.5	29	104	36	/	/	60	图2 Fig.2
AHKC-HB	204	111.5	29	132	52	/	/	48×2	图2 Fig.2
AHKC-HBAA	204	111.5	29	132	52	/	/	48×2	图2 Fig.2
AHKC-HBDA	204	111.5	29	132	52	/	/	48×2	图2 Fig.2

规格参数对照表 Cross-reference tables of spec. -parameter



型号 Specification	额定电流 Rated current	供电电源 Power supply	额定输出 Rated output	测量孔径(mm) Measuring aperture(mm)	准确度 Precision degree
AHKC-EKA	0 ~ (20~500)A	$\pm 15V$	5V	$\phi 20$	1
AHKC-EKAA	DC 0 ~ (50~500)A	12V/24V	4 ~ 20mA	$\phi 20$	1
AHKC-EKDA	AC 0 ~ (50~500)A	12V/24V	4 ~ 20mA	$\phi 20$	1
AHKC-EKB	0 ~ (200~1000)A	$\pm 15V$	5V	$\phi 40$	1
AHKC-EKBA	DC 0 ~ (200~1000)A	12V/24V	4 ~ 20mA	$\phi 40$	1
AHKC-EKBDA	AC 0 ~ (200~1000)A	12V/24V	4 ~ 20mA	$\phi 40$	1
AHKC-K	0 ~ (400~2000)A	$\pm 15V$	5V	64 × 16	1
AHKC-KAA	DC 0 ~ (400~2000)A	12V/24V	4 ~ 20mA	64 × 16	1
AHKC-KDA	AC 0 ~ (400~2000)A	12V/24V	4 ~ 20mA	64 × 16	1
AHKC-H	0 ~ (500~3000)A	$\pm 15V$	5V	82 × 32	1
AHKC-KA	0 ~ (500~5000)A	$\pm 15V$	5V	104 × 36	1
AHKC-HB	0 ~ (2000~20000)A	$\pm 15V$	5V	132 × 52	1
AHKC-HBAA	DC 0 ~ (2000~20000)A	12V/24V	4 ~ 20mA	132 × 52	1
AHKC-HBDA	AC 0 ~ (2000~20000)A	12V/24V	4 ~ 20mA	132 × 52	1

注:额定电流未标注表示输入电流交直流均可测量, 订货时请注明。
Note: Rated current unlabeled indicates that AC and DC input current can be measured, please specify when ordering.

2.4 闭口式开环霍尔电流传感器 Closed hall current sensor

规格尺寸(单位: mm) Spec. and size (unit: mm)

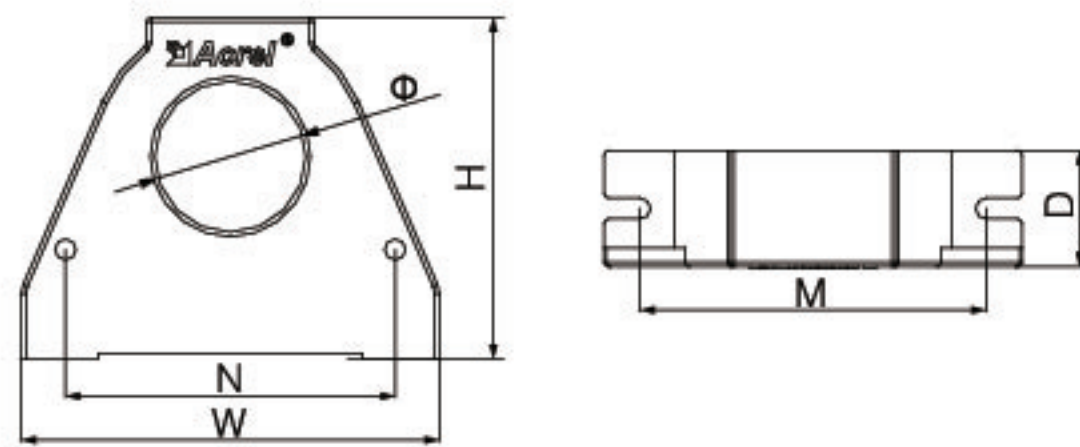


图1 Fig.1

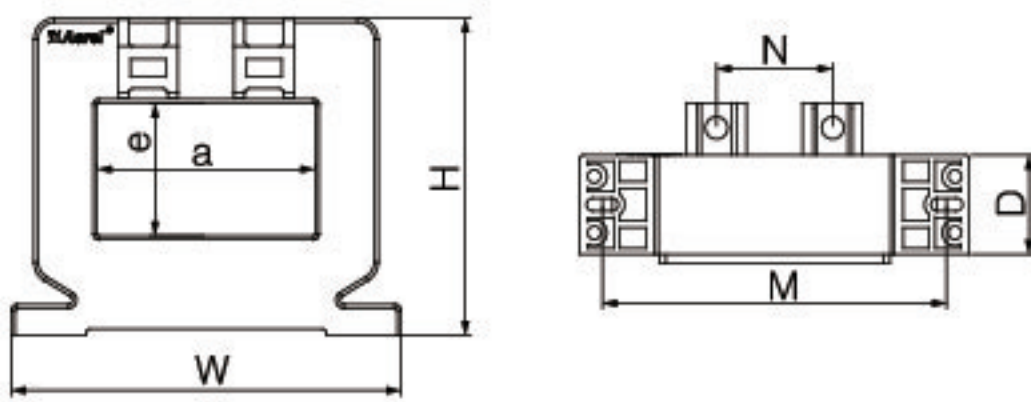
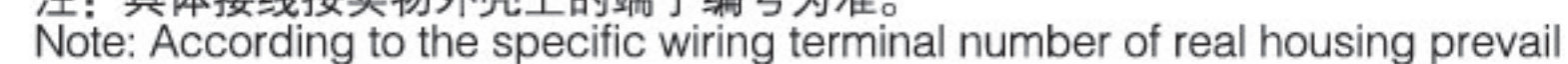


图2 Fig.2

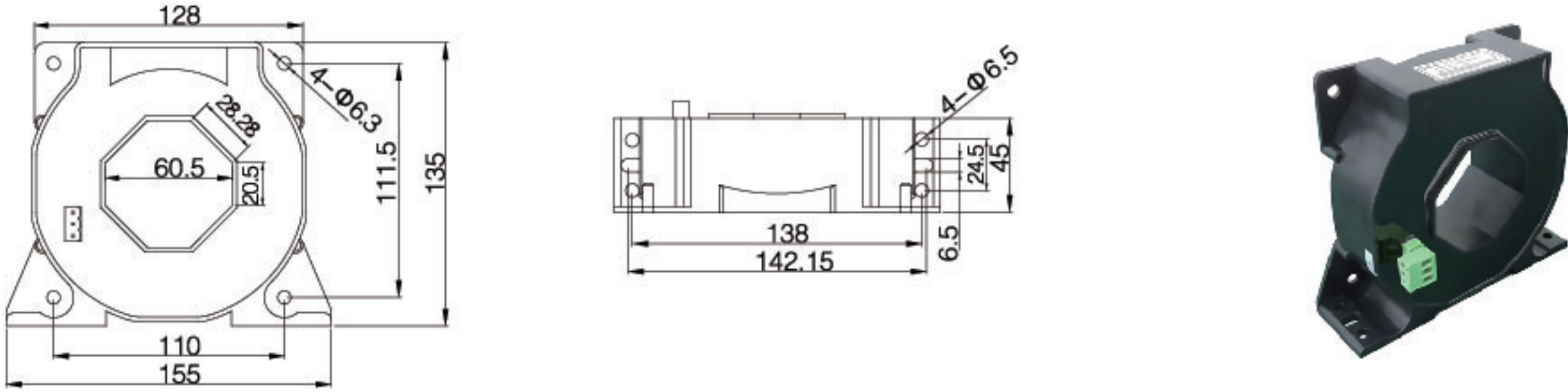
● 规格参数对照表 Cross-reference tables of spec. -parameter

Note: Rated current unlabeled indicates that AC and DC input current can be measured, please specify when ordering.

- Definition of wiring terminals



3.3.2 AHBC-LF外形尺寸 Outline size of AHBC-LF

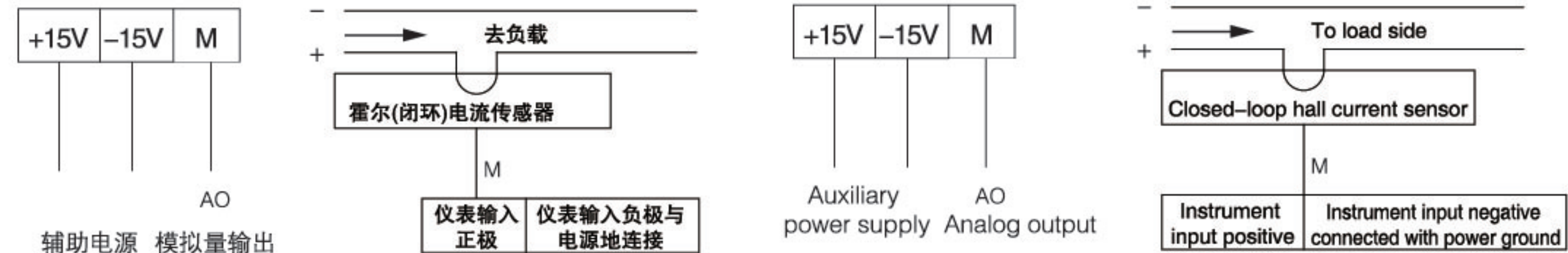


3.4 规格参数对照表 Cross-reference tables of spec. -parameter

型号 Specification	额定电流 Rated current	供电电源 Power supply	额定输出 Rated output	测量孔径(mm) Measuring aperture(mm)	准确度 Precision degree
AHBC-LTA	0~ (100~300) A	± 15V	50mA/100mA	φ 20	0.5
AHBC-LT1005	0~1000A	± 15V~ ± 24V	200mA	/	0.5
AHBC-LF	0~2000A	± 15V~ ± 24V	400mA	/	0.5

3.5 接线方式 Wiring method

● 接线端子定义 Definition of wiring terminals



注：1. 模拟量输出地需要和电源地连接；
2. 请选择正确的电流流入方向。

Note: 1. Analog output GND must be connected with Power Ground.
2. Please select the correct current flow direction.

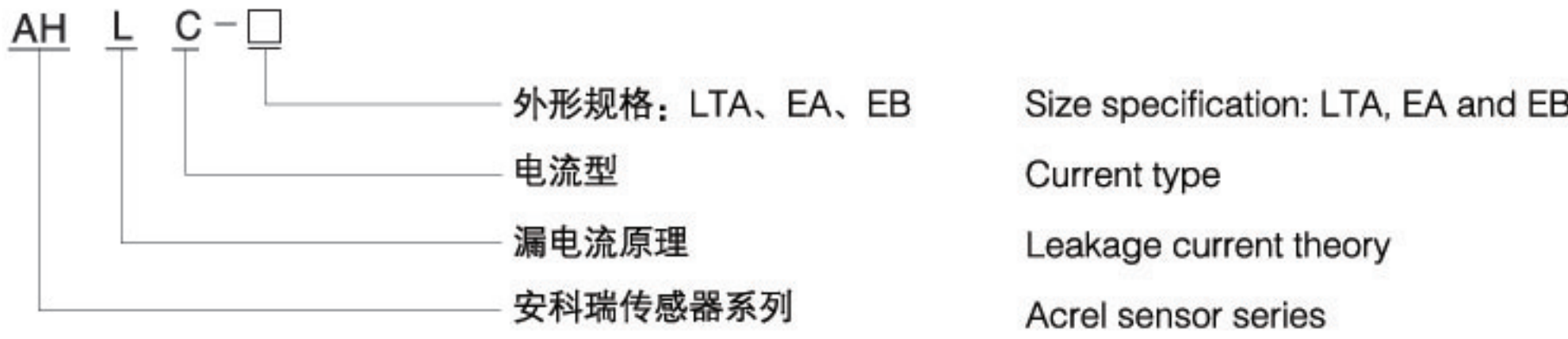
4 直流漏电流传感器 DC leakage current sensor

4.1 概述 Product overview

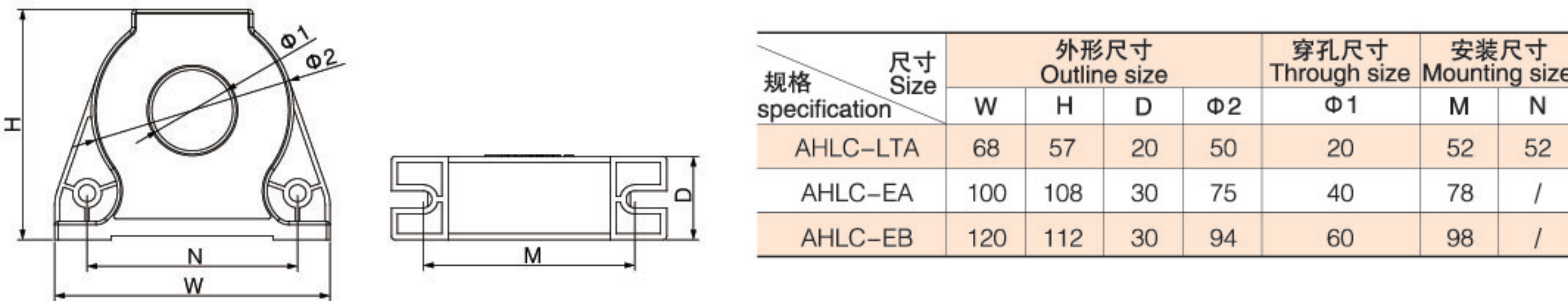
直流漏电流传感器是一种利用磁通门原理（Flux gate）将被测直流电流转换成与该电流成比例输出的直流电流或电压信号的测量模块，原副边之间高度绝缘。通常输出标准的直流DC 4~20mA、DC0~5V、DC0~10V等信号，此标准信号可以被多种采集设备采集，如PLC、RTU、DAS卡等，用于多种电流监控的场合。漏电流传感器环绕安装在直流回路的正负出线上，当装置运行时，实时检测各支路传感器输出的信号，当支路绝缘情况正常时，流过传感器的电流大小相等，方向相反，其输出信号为零；当支路有接地时，漏电流传感器有差流流过，传感器的输出不为零。因此通过检测各支路传感器的输出信号，就可以判断直流系统接地支路。该原理选线精度高，不受线路分布电容的影响。

DC leakage current sensor is a measuring module that converts the measured direct current into the proportional direct current or voltage signal according to the flux gate theory and the input side is highly insulated from the output side. Typical outputs include 4~20mA, DC0~5V and DC0~10V signals. These standard signals can be acquired by various devices such as PLC, RTU and DAS card and used for different current monitoring applications. leakage current transformerS surround the outlet + and - of DC circuit. It detects output signals of sensors in circuit branches. If the insulation in circuit branches is normal, the current passing the sensor must be equal in the opposite direction. The output signal is zero. If a circuit branch is grounded, the differential current passes the leakage current transformer and the output of sensor is not zero. Therefore, it is possible to identify the grounded branch in the DC system by detecting output signals from circuit branches. The theory guarantees the accurate line identification and prevents the influence of distributed capacitance.

4.2 型号说明 Explanation for type



4.3 规格尺寸(单位: mm) Spec. and size (unit: mm)



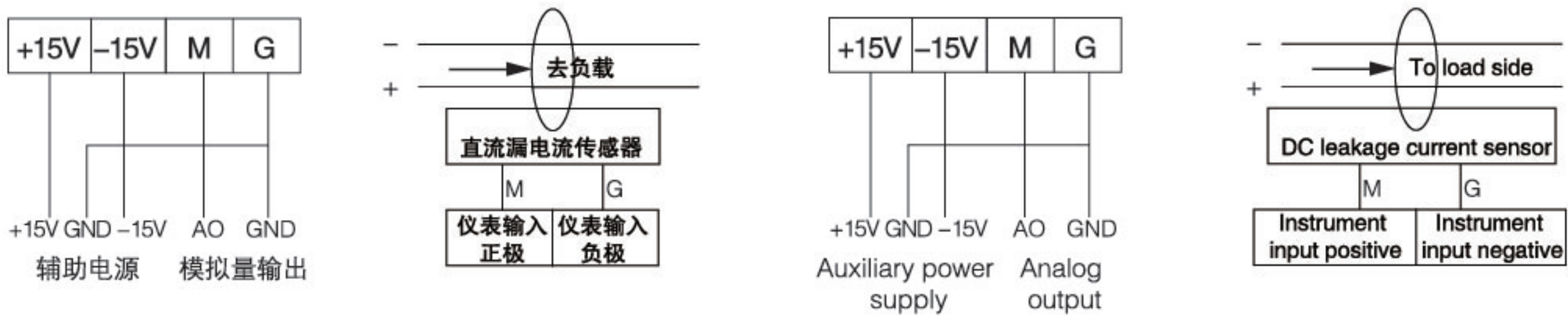
4.4 规格参数对照表 Cross-reference tables of spec. -parameter



型 号 Specification	额定电流 Rated current	供电电源 Power supply	额定输出 Rated output	测量孔径(mm) Measuring aperture(mm)	准确度 Precision degree	图片 Figure
AHLC-LTA	DC 0~(10mA~2A)	± 15V	5V	φ 20	1	Fig.1
AHLC-EA	DC 0~(10mA~2A)	± 15V	5V	φ 40	1	Fig.2
AHLC-EB	DC 0~(10mA~2A)	± 15V	5V	φ 60	1	Fig.3

4.5 接线方式 Wiring method

接线端子定义 Definition of wiring terminals



5 直流电压传感器 DC voltage sensor

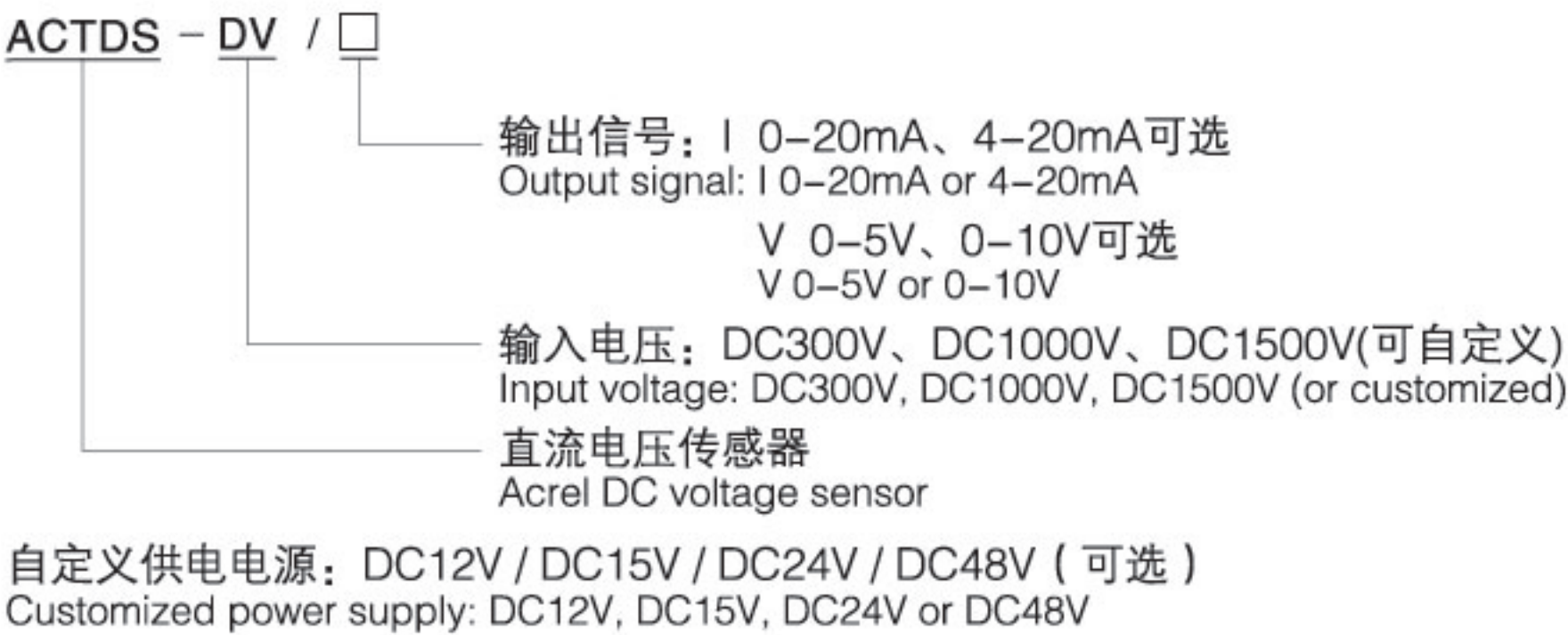
5.1 概述 Product overview

ACTDS系列直流电压传感器是一种利用光电隔离原理将被测直流电压转换成将原边电压成比例输出的直流电流或直流电压信号的测量模块，原副边之间高度绝缘，具有高精度、高线性度、高集成度、体积小结构简单、长期工作稳定且适应各种工作环境的特点。广泛地应用在电力、石油、煤矿、化工、铁路、通信、楼宇自控等行业的电气设备的系统控制及检测。

ACTDS series DC voltage sensors are the measuring module that converts the measured DC voltage into the proportional DC current or DC voltage signal according to the optical isolation theory. The input side is highly insulated from the output side. They feature the high accuracy, linearity and integration, small size, simple structure, long-term stability and adaptability to various working conditions. They are widely used for system control and detection of electrical equipment in the power, petroleum, mine, chemical, railway, communication, building automation sectors.

- ★用于测量直流电压
- ★响应速度快
- ★过载能力强
- ★精确度高
- ★DIN导轨安装
- ★原副边3.5kV高度绝缘
- ★Measurement of DC voltage
- ★ Quick response
- ★ Large overload capacity
- ★ High accuracy
- ★ DIN rail mounting
- ★ 3.5kV insulation between the input side and the output side

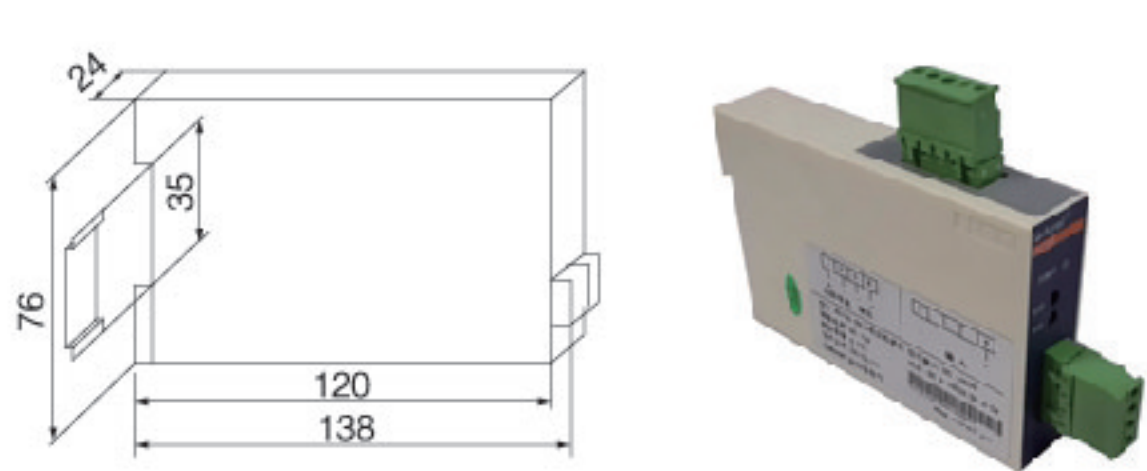
5.2 型号说明 Explanation for type



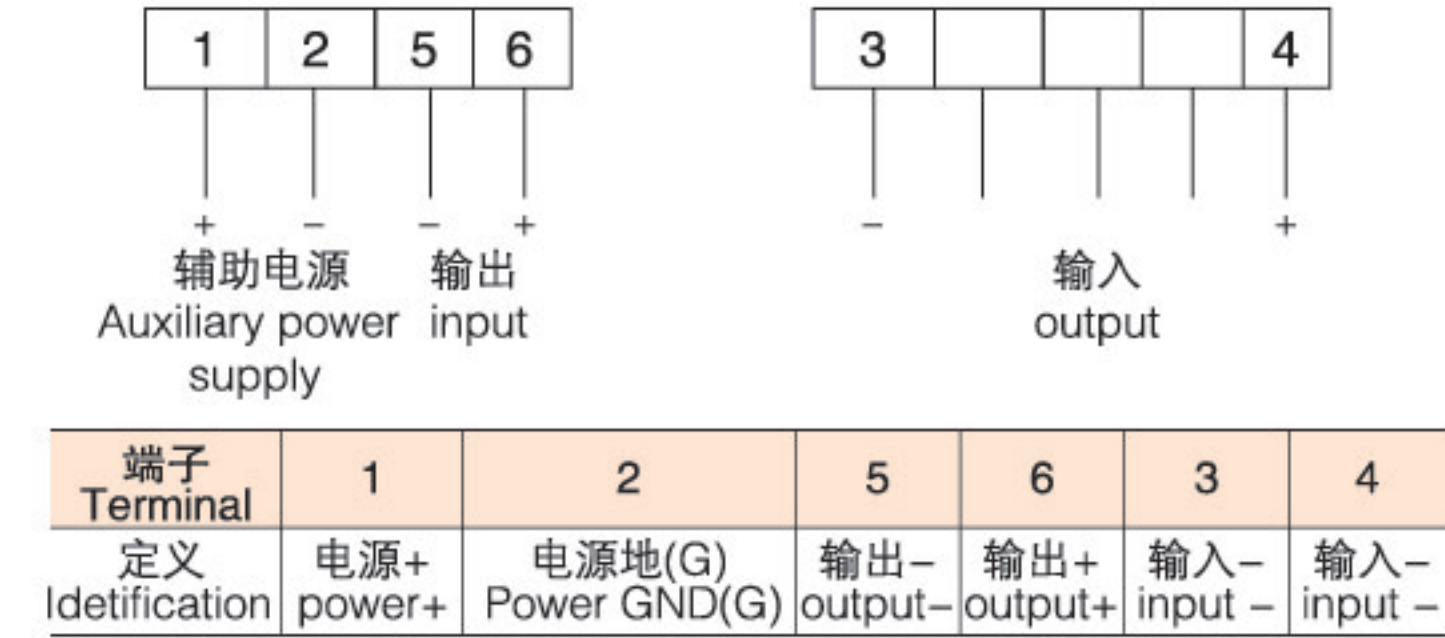
5.3 技术指标 Technical data

技术参数 Technical parameters		指标 Index
输入信号 Input	额定电压值 Rated voltage	DC300 ~ 2000V
	测量电压范围 Measuring voltage range	120% * Vpn
输出 Output	标称值 Nominal value	电压 voltage: DC 0-5V、DC0-10V ; 电流 current : DC 4-20mA、DC 0-20mA
	过载保护 Overload protection	最大输出≤满度的150% Max. output≤ 150% of full scale
	负载电阻 Load resistance	大于5000Ω(电压输出型)/小于450Ω(电流输出型) >5000Ω(voltage output)/<450Ω(current output)
工作电源 Power supply	DC12V / DC15V / DC24V / DC48V (可选 Optional)	
精度等级 Precision degree	0.5	
耐压强度 withstand voltage	输入与输出及电源之间允许AC3500V工频耐压 Power frequency withstands voltage 3500VAC between input/ output and power supply	
线性度误差 Linearity error	0.2%	
失调电压/失调电流 (Ta = +25℃) Offset voltage / Offset Current	50mV(对应于电压输出型)/80uA(对应于电流输出型) 50mV(correspond to the voltage output)/80uA (correspond to the current output)	
反应时间 Response time	≤ 30mS	
绝缘电阻 Insulation resistance	> 20MΩ@DC500V	
安装方式 Installation method	TS35导轨 With guide rail TS35	
环境 Ambient conditions	温度 Temperature	工作 Operating temperature: -10℃ ~ +55℃; 储存 storage temperature: -40℃ ~ +85℃
	湿度 Humidity	≤93%RH, 不结露, 无腐蚀性气体场所 no dew, no aggressive gas
	海拔 Altitude	≤2500m

5.4 规格尺寸(单位: mm) Spec. and size (unit: mm)

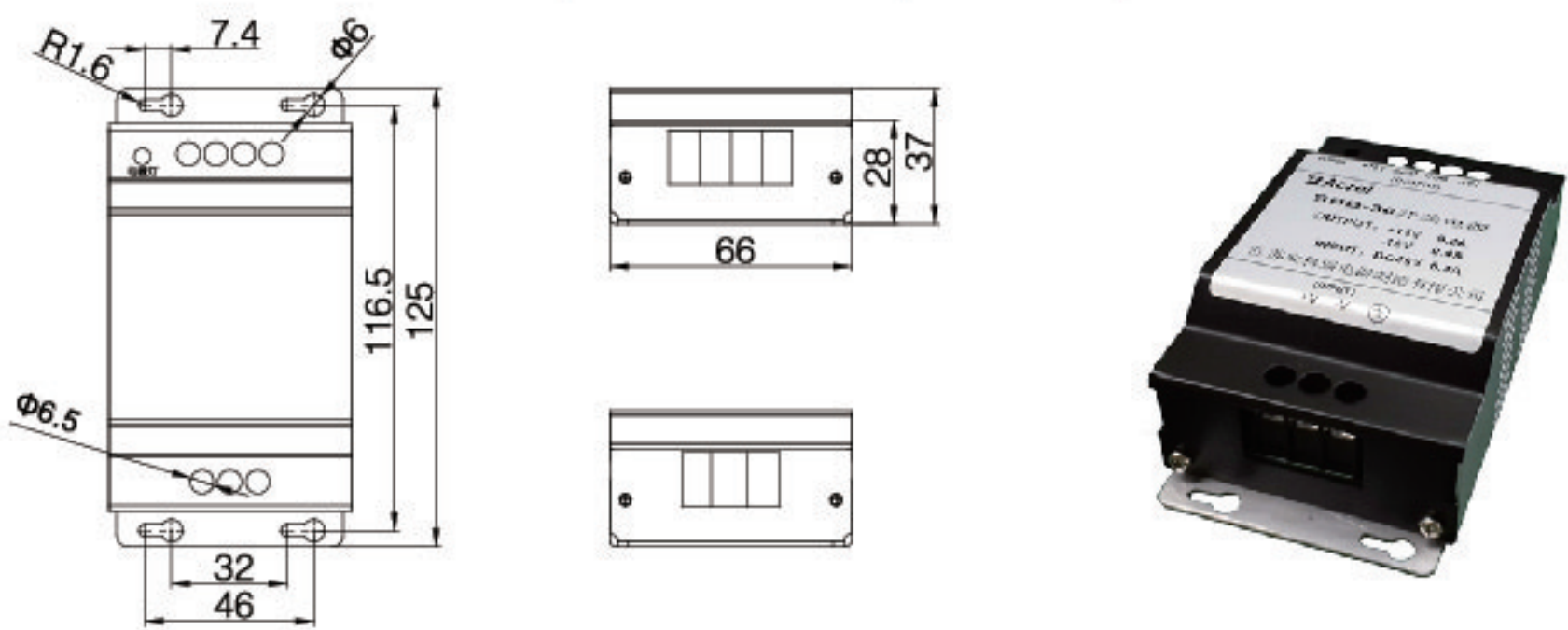


5.5 接线方式 wiring method



6 开关电源 Switching Mode Power Supply

6.1 规格尺寸 (单位: mm) Spec. and size (unit: mm)



6.2 规格参数对照表 Cross-reference tables of spec. -parameter

产品型号 Specification	输入 Input	输出 Output
D-20	220V	± 15V
SBD-30	± 48V	± 15V

三、BR系列罗氏线圈变送器 BR series Rogowski coil transducer

1 概述 Product overview

BR系列产品应用电磁感应原理，对电网中的交流大电流进行实时测量，采用真有效值和线性补偿技术，将其隔离变换为标准的直流信号输出。DC24V安全电压供电，具有高精度、高隔离、高安全性、低功耗等特点，可广泛用于冶金、电镀、焊接等领域。

BR series conduct the real-time measurement on the alternating current in the power grid according to the electromagnetic induction theory. They utilize the RMS and the linear compensation technology to isolate and convert the measured current into the standard DC signal. 24VDC safety source features high precision, isolation and safety and low power consumption. It is widely used in metallurgical, electroplating, welding and other fields.

2 型号说明 Explanation for type



3 技术指标 Technical data

技术参数 Technical parameters		指标 Index
输入信号 Input signal		AC200A ~ 20kA
输出 Output	标称值 Nominal value	DC4~20mA
	负载电阻 load resistance	≤500Ω
	输出纹波 output ripple	输出纹波峰值 Peak to peak value of output ripple ≤ 100mV
工作电源 Power supply	DC24V 允许范围 allowed range 21.6 V ~ 26.4V	
功耗 Power consumption	≤0.5W	
准确级 Precision degree	0.5	
温度漂移系数 Temperature drift coefficient	≤200ppm	
响应时间 Response time	≤500mS	
安装方式 Installation method	支架固定 Bracket	

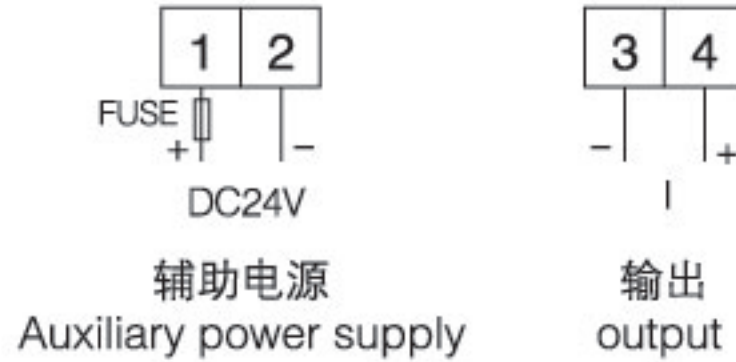
4 外形尺寸 Outline size



输入电流范围 Input current range	罗氏线圈长度(mm) Length of Rogowski coil(cm)
AC 200A~1000A	350
AC 1200A~2000A	370
AC 2500A~5000A	450
AC 6300A~20000A	600

注：可根据客户需要另行定制。
Note: Can further customize according to the needs of customers.

5 接线方式 Wiring method



注：具体接线按实物外壳上的接线图为准。
Note: The specific wiring will be subject to the wiring diagram on the physical shell.

6 安装方式 Installation



四、BA系列交流电流传感器 BA series AC current sensor

1 概述 General information

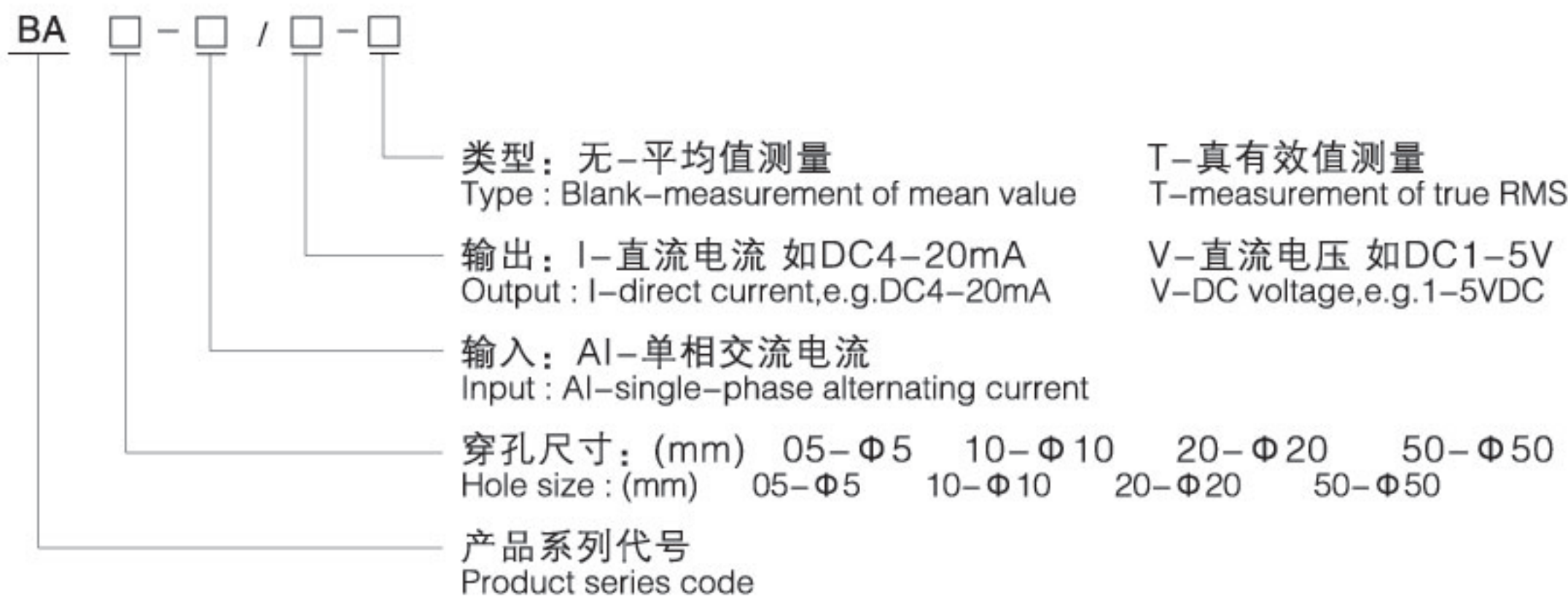
BA系列产品应用电磁感应原理，对电网中的交流电流进行实时测量，采用精密恒流技术和线性温度补偿技术，将其隔离变换为标准的直流信号输出。采用24伏或12伏安全电压供电，具有过载能力强、高精度、高隔离、高安全性、低功耗等特点，可广泛用于工业自动化领域。

BA系列中剩余电流传感器专用于漏电监控，监测电气线路或电气设备绝缘状态，避免电气线路或电气设备绝缘性能降低引起的事故。产品符合GB/T 13850-1998、GB 1208-2006

BA series conduct the real-time measurement on the alternating current in the power grid according to the electromagnetic induction theory. They utilize the precise constant current technology and the linear temperature compensation technology to isolate and convert the measured current into the DC signal. They adopt the 24V or 12V power supply. They feature the large overload capacity, high accuracy, isolation and safety and low power consumption. Applications cover the industrial automation sector.

BA series residual current sensors are designed to monitor the electric leakage and detect the insulation of electrical circuit or electrical equipment in order to avoid accidents arising from reduction of insulation performance of electrical circuit or electrical equipment. The product complies with GB/T13850-1998 and GB1208-2006.

2 型号说明 Explanation for type



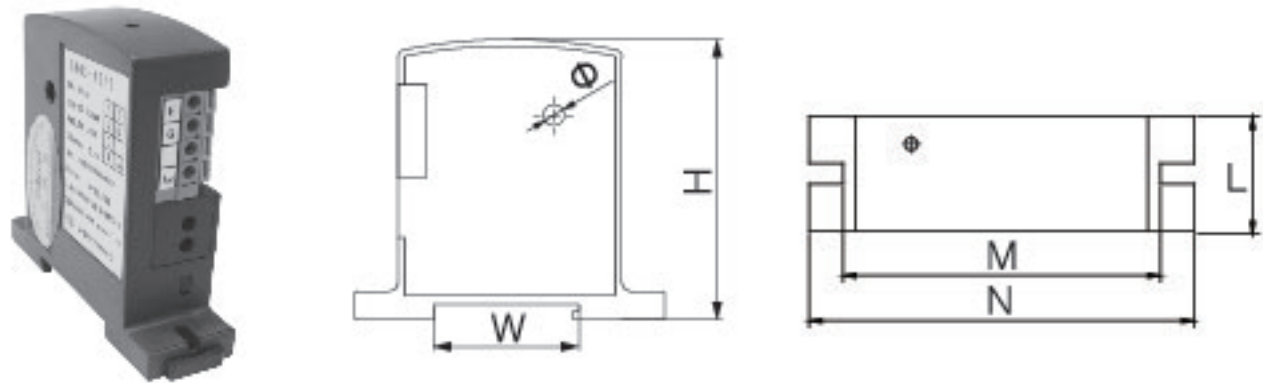
注：BA50L-AI/I (V) 为交流剩余电流传感器
Note: BA50L-AI/I (V): alternating residual current sensor

3 技术指标 Technical data

技术参数 Technical parameters		指标 Index
输入信号 Input signal		BA05-AI 测量范围 measuring range AC 0~(0.5~10)A
		BA10-AI 测量范围 measuring range AC 0~(8~50)A
		BA20-AI 测量范围 measuring range AC 0~(40~200)A
		BA50-AI 测量范围 measuring range AC 0~(60~600)A
		BA50L-AI 测量范围 measuring range AC 0~(0.1~1)A
输出 Output	标称值 Nominal value	DC4~20mA、DC0~20mA、DC1~5V、DC0~5V
	过载保护 Overload protection	最大输出≤满度的135% Max. output ≤ 135% of full scale
	负载电阻 Load resistance	输出为电压时≥1000Ω；输出为电流时：(电源电压-4/0.02)Ω When Voltage output≥1000Ω；when current output：(supply voltage-4/0.02)Ω
	纹波分量 Ripple component	输出信号中的交流成分≤满度的1% AC component of the output signal ≤1% of full scale
工作电源 Power supply		DC12V 允许范围10~15V DC12V allowed range 10~15V DC24V 允许范围18~30V DC24V allowed range 18~30V
功耗 Power consumption		≤1W
耐压强度 Dielectric strength		输入与输出及电源之间允许AC2000V工频耐压 Power frequency withstands voltage 2000VAC between input/ output and power supply
精度等级 Precision degree		0.5
温度漂移系数 Temperature drift coefficient		≤200ppm
响应时间 Response time		平均值≤350mS 真有效值≤100mS Average ≤350mS true RMS≤100mS
安装方式 Installation method		TS35mm导轨安装，或用螺钉固定在柜体上 TS35mm guide installation, or screw in cabinet
环境 Ambient conditions	温度 Temperature	工作：-25~+70℃；存储：-40~+80℃ Operating temperature: -25℃~+70℃； storage temperature: -40℃~+85℃
	湿度 Humidity	≤90%RH，不结露，无腐蚀性气体场所 ≤90%RH, no dew, no aggressive gas
	海拔 Altitude	≤2500m

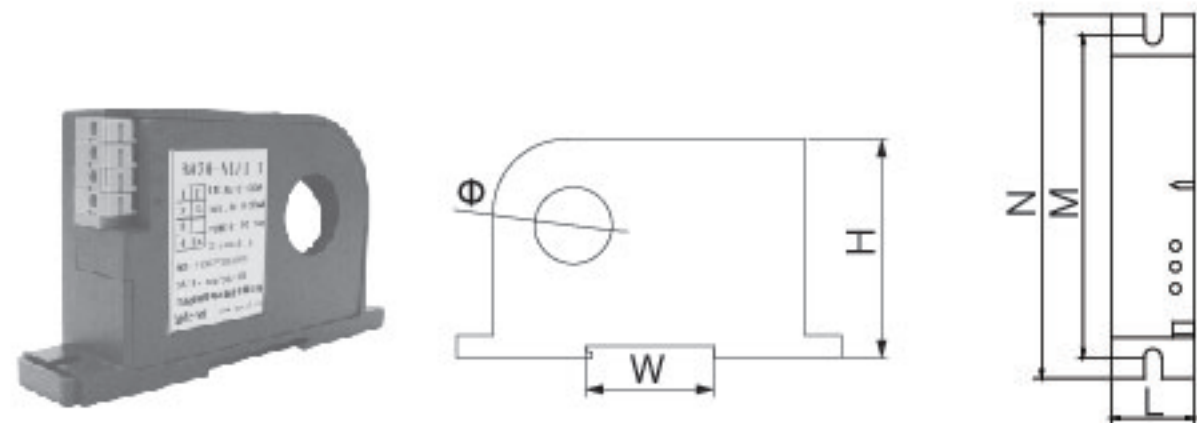
4 外形及穿孔尺寸 Shape and hole size

● BA05、10电流传感器外形及穿孔尺寸 The Shape and hole size of BA05、10 current transformer.



型号 Type	外形尺寸 (mm) Outline size (mm)					
	W	H	Φ	M	N	L
BA05	35	69	5	62.5	76	22.5
BA10	35	74	9.5	62.5	76	22.5

● BA20、50、50L电流传感器外形及穿孔尺寸 The Shape and hole size of BA20、50、50L current transformer.

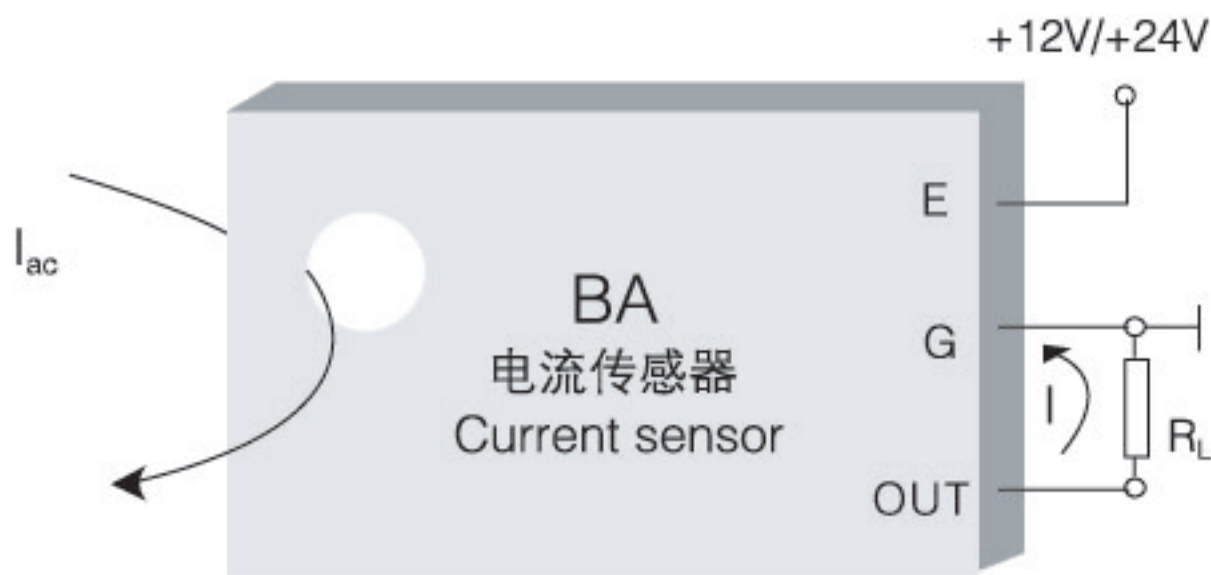


型号 Type	外形尺寸 (mm) Outline size (mm)					
	W	H	Φ	M	N	L
BA20	35	60	21	93	105	24
BA50	35	84	50	125	135	24
BA50L	35	84	50	125	135	24

5 接线示例 Example of wiring

如图所示穿心输入I_{ac}，电流输出型传感器的输出为共地电流源，电压输出型传感器的输出为共地电压源。图中RL是用户负载，输出为电流时，负载≤400Ω（12V供电）或≤800Ω（24V供电）；输出为电压时负载≥1kΩ。

As shown in the figure, the input is I_{ac}. The output of current output sensor is the current source with common GND while the output of voltage output sensor is the voltage source with common GND. In this example, RL is the user load. If the output is current, the load is up to 400Ω (with 12V power supply) or 800Ω (with 24V power supply). If the output is voltage, the load is 1kΩ or above.



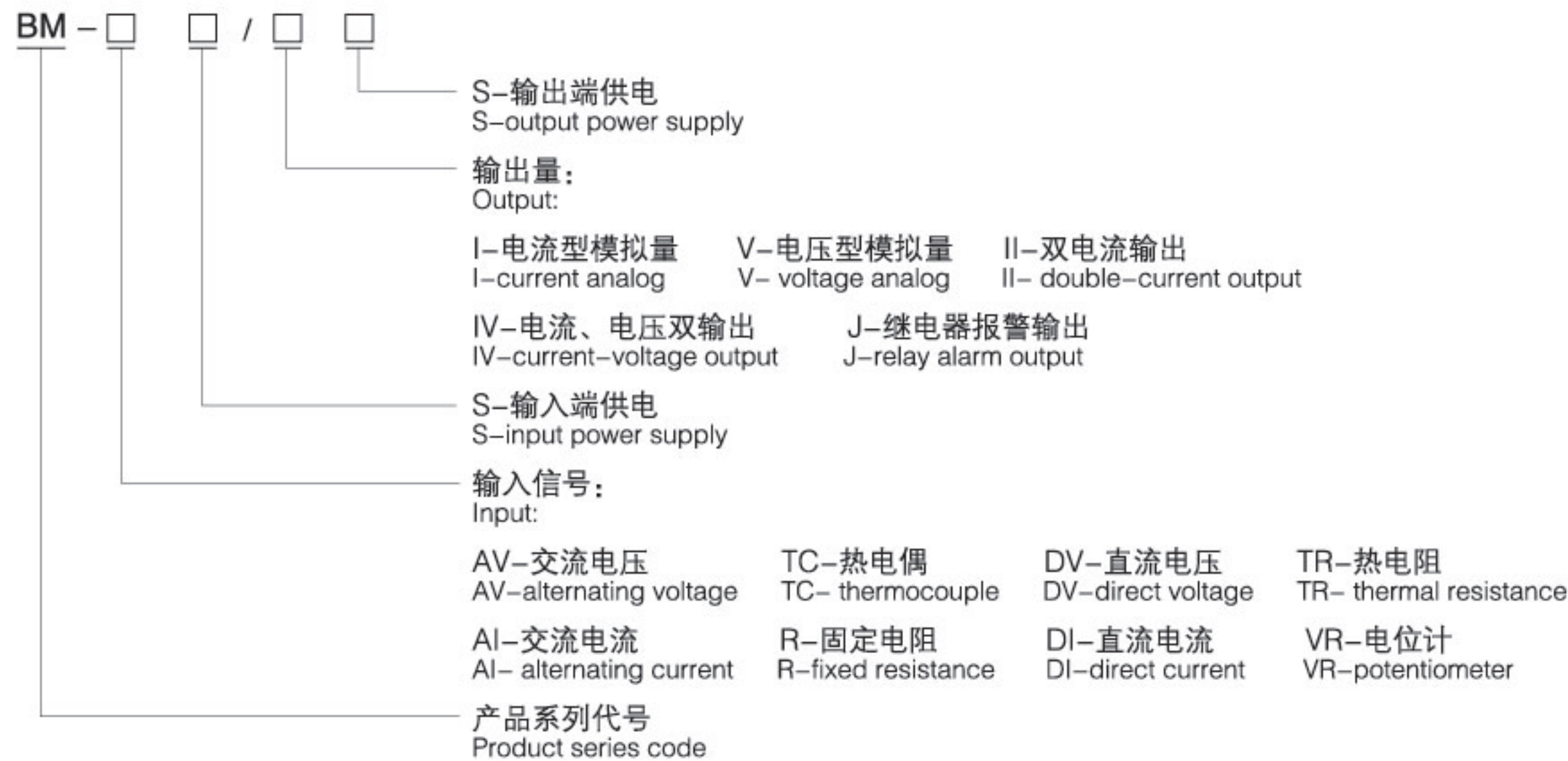
五、BM系列模拟信号隔离器 BM series analog signal isolator

1 概述 General information

BM系列模拟信号隔离器可以对电流、电压等电量参数或温度、电阻等非电量参数进行高速精确测量，经隔离转换成标准的模拟信号输出。既可直接与指针表、数显表相接，也可以与自控仪表（如PLC）、各种A/D转换器以及计算机系统配接，广泛应用于电力、铁路、石化、冶金、化工、食品、仓储等行业的自动化系统中，是一种具有高性价比的产品。

BM series measure both electrical parameters (e.g. current and voltage) and non-electrical parameters (e.g. temperature and resistance) quickly and accurately and isolate and convert the measured value into standard analog signal output. They can be connected directly with pointer instruments and digital instruments and integrated into automatic control instruments (e.g. PLC), various A/D converters and computer systems. They can be used in automation systems in the power, railway, petrochemical, metallurgical, food, warehousing and similar industries. The cost performance is high.

2 型号说明 Explanation for type

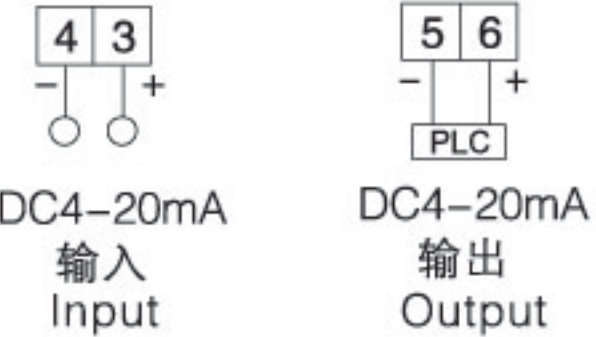


3 技术指标 Technical data

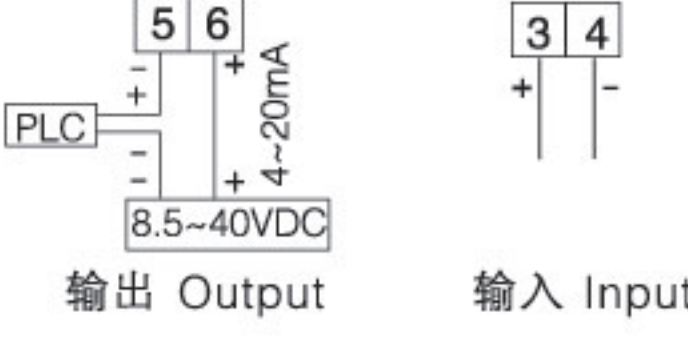
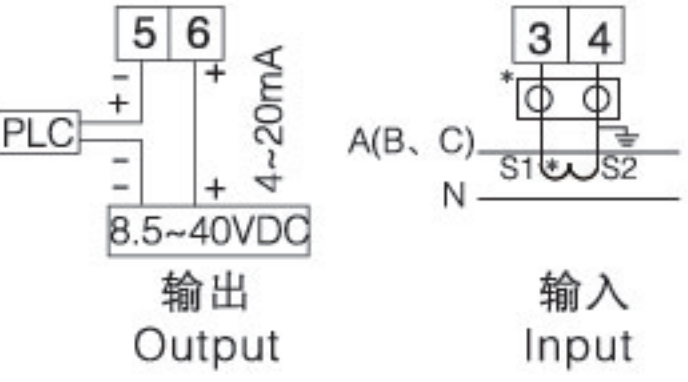
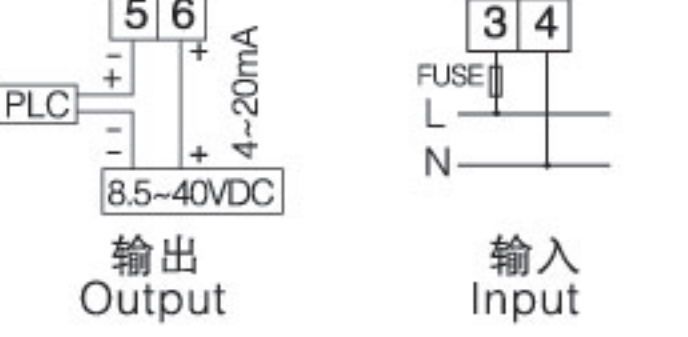
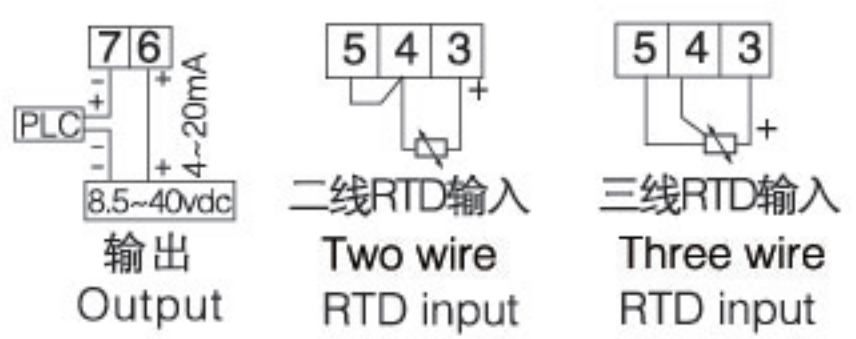
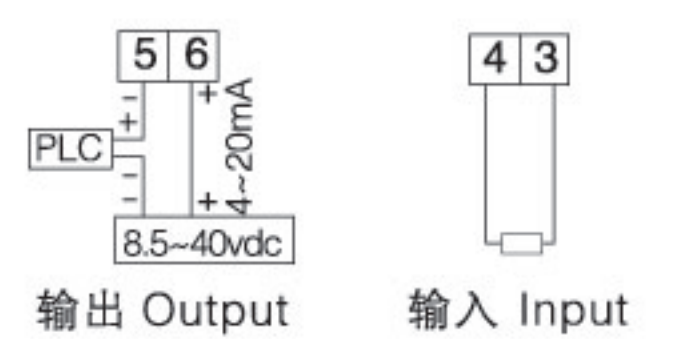
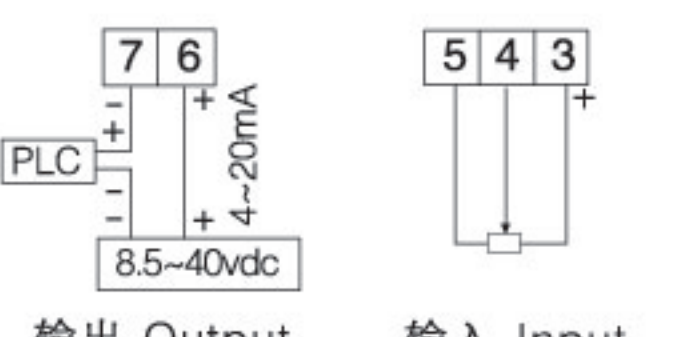
型号 Type		BM-DIS/I	BM-AI/IS BM-AV/IS	BM-TR/IS BM-TR/I	BM-R/IS BM-VR/IS	BM-DI/IS BM-DV/IS	BM-DI/I BM-DI/V BM-DV/I BM-DV/V	BM-DI/II BM-DV/II BM-DI/VI BM-DV/VI	BM-TC/I BM-TC/V	BM-DI/J BM-DV/J BM-TR/J
精度等级 Pricision degree		0.5, 0.2								
输入信号 Input signal		DC 4~20mA	AC 0~1A, 0~5A AC 0~500V	PT100	电阻: 0~10kΩ resistance:0~10kΩ 电位计: 0~10kΩ potentimeter:0~10kΩ	DC 4~20mA , 0~20mA, DC 0~5V ,0~10V			热电阻: Pt100,Cu50,BA1,BA2 热电阻: J,K,B,R,S,T,E,N Thermal resistance: Pt100,Cu50,BA1,BA2 thermocouple: J,K, B,R,S,T,E,N	DC 0~20mA, DC 0~10V, PT100
输出 Output	信号 Signal	DC 4~20mA				DC 4~20mA 或 (or) 0~20mA, 0~5V 或 (or) 0~10V		DC4~20mA, 0~20mA, 0~5V, 0~10V(RS485 通讯 communication)	两路继 电器报警 Two alarm relay	
	负载 Load	电流输出时 ≤500Ω , 电压输出时 ≥1000Ω Current output ≤500Ω , voltage output ≥1000Ω								
电源 Power		/	DC 24V (允许范围DC 18V~32V) DC 24V (allowed range DC 18V~32V)							AC 220V
温度漂移系数 Temperature drift coefficient		0.5级时 ≤200ppm/℃ , 0.2级时 ≤100ppm/℃ Class 0.5 ≤200ppm/℃, Class 0.2 ≤100ppm/℃								
响应时间 Response time		<400ms								
绝缘电阻 Insulation resistance		≥100MΩ								
隔离电压 Isolation voltage		辅助电源、输入、输出两两之间2kV/1min,50Hz 2kV/1min,50Hz between power supply,input and output								
环境 Ambient conditions	温度 Temperature	工作: -10℃~55℃ 储存: -25℃~70℃ Operating temperature:-10℃~+55℃; Storage temperature: -25℃~+70℃								
	湿度 Humidity	≤93%RH, 不结露, 无腐蚀性气体场所 ≤93%RH, no dew, no aggressive gas								
	海拔 Altitude	≤2500m								
安装方式 Installation method		TS35mm guide installation TS35导轨								

4 产品介绍 Product description

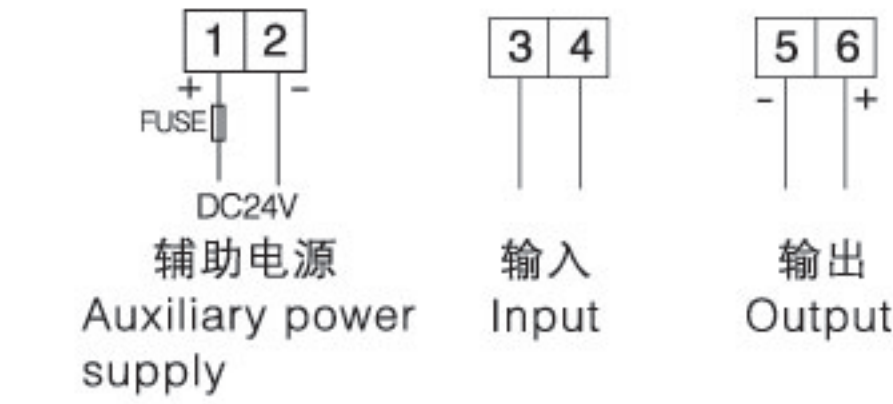
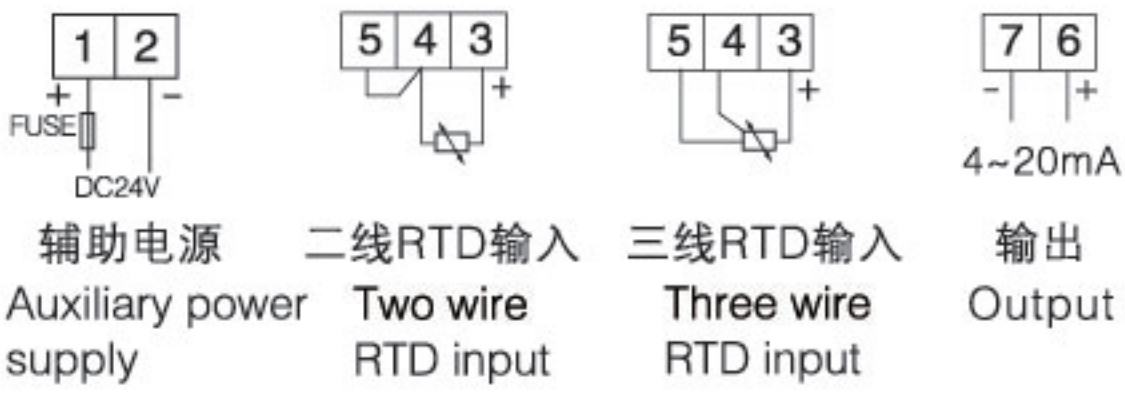
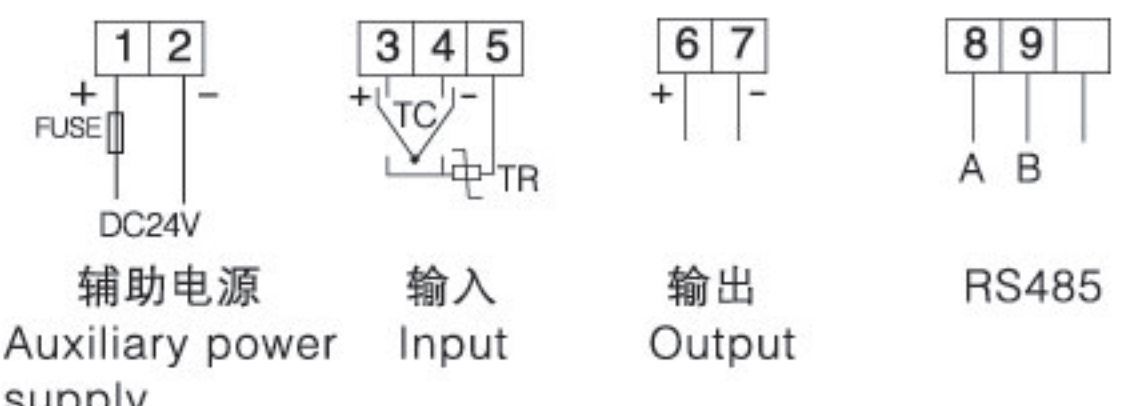
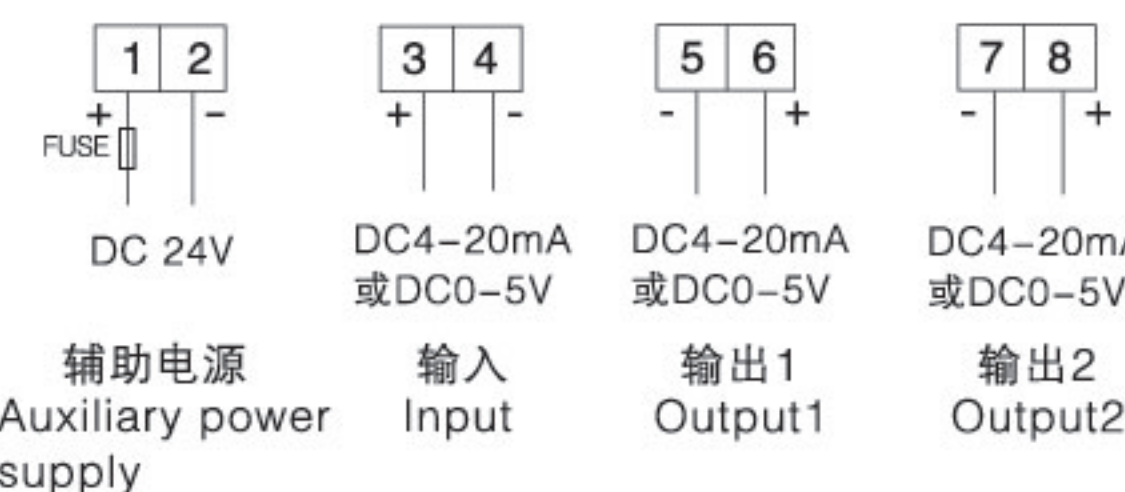
4.1 无源隔离器 Passive isolator

型号 Type	产品特点 Product feature	接线方式 Wiring method
BM-DIS/I	该隔离器是标准的DC4~20mA信号输入，通过2kV的电气隔离，能有效地将干扰信号滤除，按比例输出4~20mA信号。由输入信号向隔离器供电，并通过变压器进行耦合输出，不必外加电源，可以应用在不便使用电源的场合。 Receive the standard DC4~20mA signal input. Filter interfering signals effectively with 2kV electrical isolation. Provide 4~20mA signal output in proportion. The input signal energizes the isolator. Realize the coupling output through transformer. The external power supply is not required. Therefore, it can be used at places where the external power supply is unavailable.	

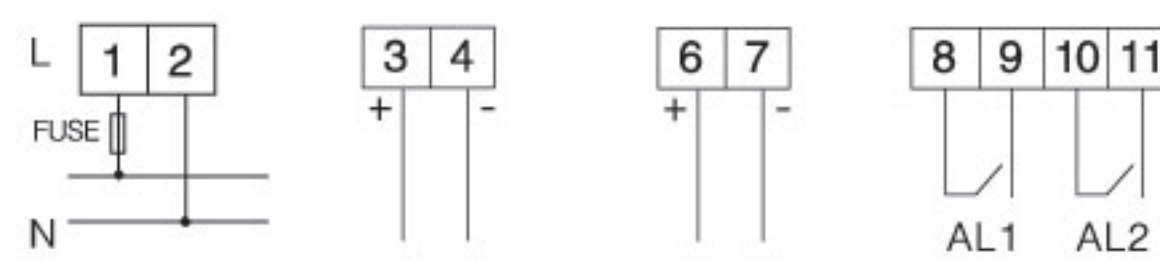
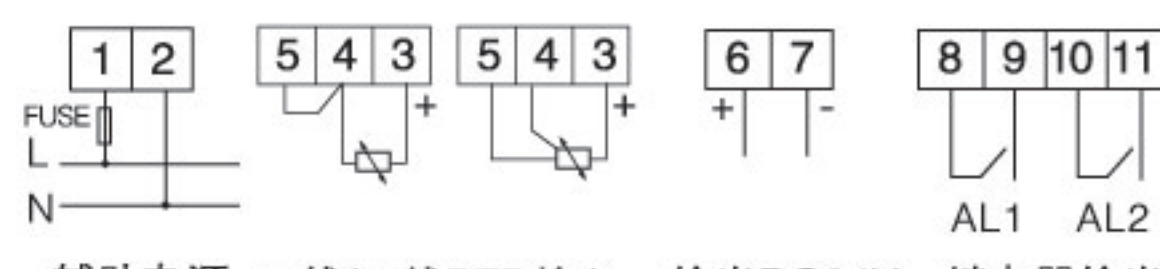
4.2 两线制输出回路供电隔离器 2-wire isolator energized by output circuit

型号 Type	产品特点 Product feature	接线方式 Wiring method
BM-DV/IS BM-DI/IS	输出回路供电的二线制直流隔离器，可以将现场的直流电流、电压信号经电气隔离变换为DC4~20mA电流信号输出。隔离器内设有浪涌保护电路，适用于恶劣环境。 It is a 2-wire DC isolator energized by output circuit. Convert the on-site direct current or voltage signals into DC4~20mA current signal output by electric isolation. It contains the surge protector and is suitable for severe environment.	
BM-AI/IS	该隔离器可以直接将AC5A及以下的交流电流信号经电气隔离转换为DC4~20mA输出信号。回路工作状态的输出电平由LED显示，隔离器内设有浪涌保护回路，适用于恶劣环境。 Convert the alternating current signal AC5A or below directly into DC4~20mA signal output by electric isolation. Working conditions and the output level of circuit are indicated on LED. It contains the surge protector and is suitable for severe environment.	
BM-AV/IS	该隔离器可以将AC450V及以下的交流电压信号经电气隔离转换为DC4~20mA输出信号，该隔离器具有浪涌保护，可以用于电机启动和停机时电源电压的监视。 Convert the alternating voltage signal 450VAC or below into DC4~20mA signal output by electric isolation. It contains the surge protector and is suitable for severe environment.	
BM-TR/IS	该隔离器为输出端供电，将RTD输入信号隔离转换为DC4~20mA电流输出，隔离电压达到2000V。隔离器内具有浪涌保护电路，适用于恶劣环境。 It is energized by output circuit. Isolate and convert RTD input signal into DC4~20mA output. The isolation voltage reaches 2000V. It contains the surge protector and is suitable for severe environment.	
BM-R/IS	该隔离器可将标准的二线制电阻信号隔离转换为DC4~20mA输出信号，其精度不低于0.2级，隔离电压达到2000V。 Isolate and convert standard 2-wire resistance signals into DC4~20mA output. The minimum accuracy class is 0.2. The isolation voltage reaches 2000V.	
BM-VR/IS	该隔离器可将0~350Ω、0~10KΩ的电位计输入信号隔离变换为DC4~20mA的电流输出，精度不低于0.2级，隔离电压达到2000V。 Isolate and convert input signals from 0~350Ω and 0~10KΩ potentiometer into DC4~20mA current output. The minimum accuracy class is 0.2. The isolation voltage reaches 2000V.	

4.3 四线制隔离器

型号 Type	产品特点 Product feature	接线方式 Wiring method
BM-DI/I BM-DI/V BM-DV/V BM-DV/I	四线隔离器为所有直流电流和电压信号提供2000V三端隔离，可消除地回路。 4-wire isolator provides 2000V isolation for all direct current and voltage signals from input, output and power supply. Prevent the ground loop.	 辅助电源 Auxiliary power supply 输入 Input 输出 Output
BM-TR/I	该隔离器为独立电源供电，将RTD输入信号隔离转换为DC4~20mA输出信号，隔离电压达到2000V。 It is energized by an independent power supply. Isolate and convert RTD input signal into DC4~20mA output. The isolation voltage reaches 2000V.	 辅助电源 Auxiliary power supply 二线RTD输入 Two wire RTD input 三线RTD输入 Three wire RTD input 输出 Output
BM-TC/I BM-TC/V	该隔离器为热电偶输入，线性比例输出4~20mA或0~5V信号，具备自动冷端补偿（CJC），模块内具有浪涌保护电路，适用于恶劣环境。该隔离器可带RS485通讯接口，Modbus/RTU通讯协议，可选配LED显示模块，用以参数设置及温度显示。 Receive the input from thermocouple and provide 4~20mA or 0~5V output linearly. Boast the cold-junction compensation (CJC) and the surge protector and adapt to the severe environment. It can be fitted with RS485 port, Modbus/RTU communication protocol and LED module to set parameters and indicate the temperature.	 辅助电源 Auxiliary power supply 输入 Input 输出 Output RS485
BM-DI/VI BM-DI/II BM-DV/VI BM-DV/II	该隔离器将输入端的一路直流电流或电压信号隔离变送输出二路相互独立的模拟信号，其中一路信号到PLC，另一路接现场指示器。该隔离器只有一个单独的输入回路，输入压降几乎恒定，不大于3.5V，与负载没有关系。光耦隔离同时能达到2000V的隔离电压。 Isolate and convert one channel of direct current or voltage signal at the input side into two independent channels of analog signal. One channel is transmitted to PLC and the other to the local indicator. It has only one input circuit. The input voltage drop is almost constant and under 3.5V. It is independent of load. And the isolation voltage of optocoupler reaches 2000V.	 辅助电源 Auxiliary power supply 输入 Input 输出1 Output1 输出2 Output2

4.4 带设定点的报警器

型号 Type	产品特点 Product feature	接线方式 Wiring method
BM-DI/J BM-DV/J	该报警器为直流输入，双路报警接点输出，可对直流电流信号或电压信号进行报警。报警设置点可在输入的0~100%内设置，并有1%的回滞量，可消除继电器触点抖动的影响，并有LED灯显示继电器接点状态。可向现场提供AC220V辅助电源，可设置高（正向）或低（反向）报警。 Receive the DC input and provide two channels of alarm output, i.e. direct current signal alarm or direct voltage signal alarm. The permissible setpoint is between 0% and 100% input. 1% hysteresis eliminates the influence of relay contact chattering. And LED indicates the condition of relay contact. Act as AC220V auxiliary power supply on site. It is allowed to set the high (forward) or low (reverse) alarm.	 辅助电源 Auxiliary power supply 输入mA或V Input mA or V 输出DC24V Output DC24V 继电器输出 Relay output
BM-TR/J	该报警器为热电阻输入，双路报警接点输出。报警设置点可在输入的0~100%内设置，并有1%的回滞量，可消除继电器触点抖动的影响，并有LED灯显示继电器接点状态。可向现场提供AC220V辅助电源，可设置高（正向）或低（反向）报警。 Receive the output from thermocouple and provide two channels of alarm output. The permissible setpoint is between 0% and 100% input. 1% hysteresis eliminates the influence of relay contact chattering. And LED indicates the condition of relay contact. Act as AC220V auxiliary power supply on site. It is allowed to set the high (forward) or low (reverse) alarm.	 辅助电源 Auxiliary power supply 二线/三线RTD输入 Two/Three wire RTD input 输出DC24V Output DC24V 继电器输出 Relay output

5 外形尺寸(单位: mm) Outline size (unit: mm)

BM-DIS/I、BM-DI/IS、BM-DV/IS、BM-TR/IS、BM-VR/IS、BM-R/IS、BM-DI/V、BM-DI/I、BM-DV/I、BM-DV/V、BM-TR/I的外形尺寸如图1所示：
The outline size of BM-DIS/I, BM-DI/IS, BM-DV/IS, BM-TR/IS, BM-VR/IS, BM-R/IS, BM-DI/V, BM-DI/I, BM-DV/I, BM-DV/V and BM-TR/I is shown in figure 1.

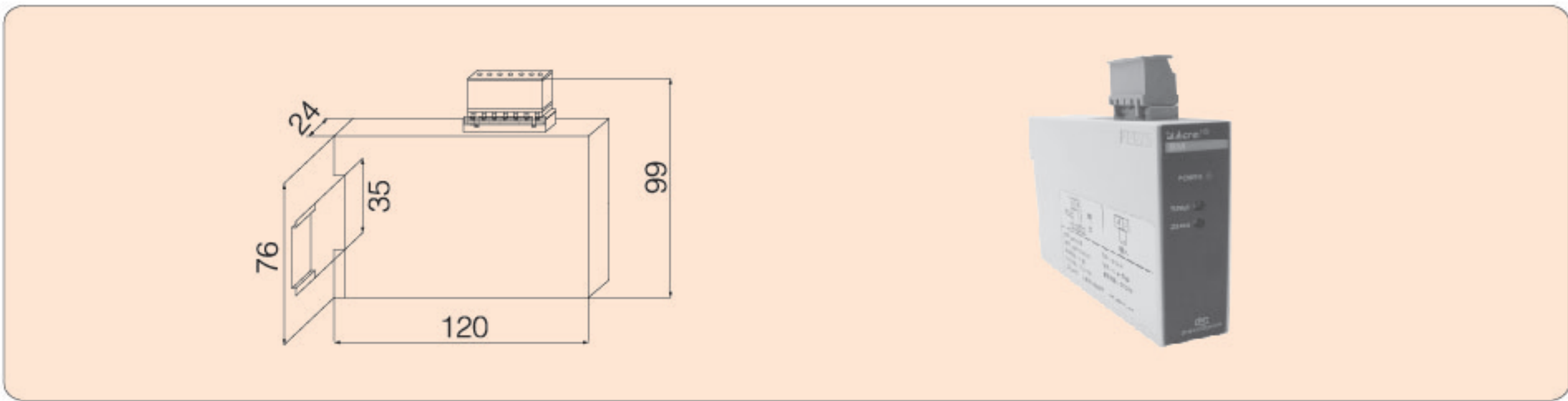


图1 Fig.1

BM-AV/IS、BM-AI/IS、BM-DI/II、BM-DV/II、BM-DI/VI、BM-DV/VI、BM-DV/J、BM-DI/J、BM-TR/J的外形尺寸如图2所示：
The outline size of BM-AV/IS,BM-AI/IS,BM-DI/II,BM-DV/II,BM-DI/VI,BM-DV/VI,BM-DV/J,BM-DI/J and BM-TR/J is shown in figure 2.

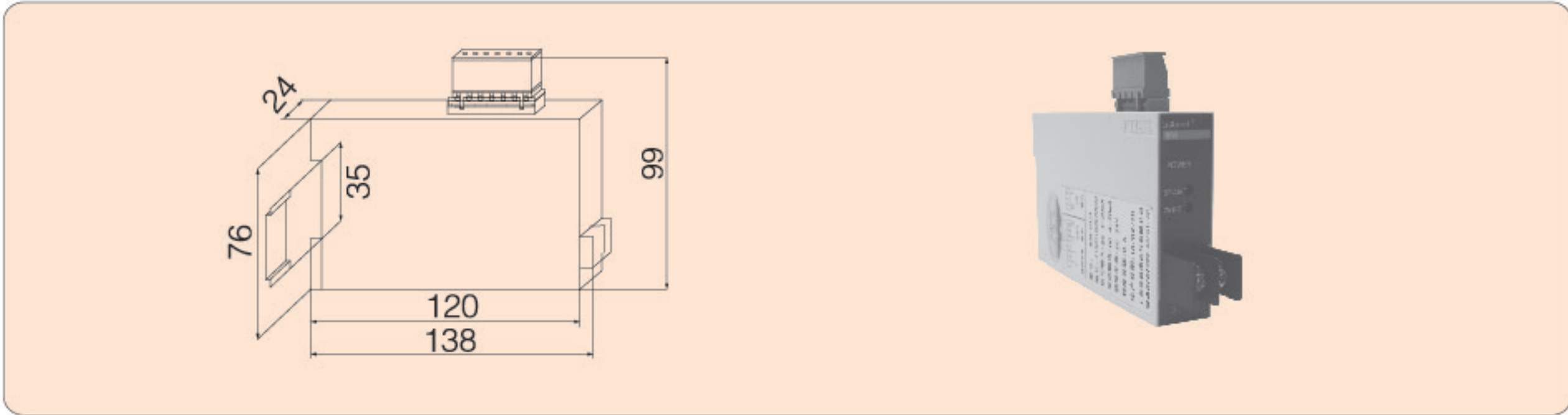


图2 Fig.2

BM-TC/I、BM-TC/V的外形尺寸如图3所示：
The outline size of BM-TC/I and BM-TC/V is shown in figure 3.



图3 Fig.3

六、BD系列电力变送器 BD series electricity transducer

1 概述 General information

BD系列电力变送器是一种将电网中的电流、电压、频率、功率、功率因数等电参量，经隔离变送成线性的直流模拟信号或数字信号装置。产品符合GB/T13850-1998、IEC-688标准。
BD series isolate and convert electrical parameters (e.g. current, voltage, frequency, power and power factor) in the power grid into DC analog signal or digital signal.The product complies with GB/T13850-1998 and IEC-688.

2 型号说明 Explanation for type

BD - □ □

辅助代号，表示输出路数：
Auxiliary code indicating the number of output channels:
1-单路输出，省略 2-双路输出 3-三路输出
1-single output channel, negligible 2-two output channels 3-three output channels

功能代号：
Function code:
AI-单相交流电流 4Q-三相四线无功功率
AI-single-phase alternating current 4Q-3-phase 4-wire reactive power
DI-单相直流电流 3P/Q/I-三相三线有功功率/无功功率/电流组合变送器
DI-single-phase direct current 3P/Q/I-3-phase 3-wire active power/ reactive power/ combined current transducer
AV-单相交流电压 4P/Q/I-三相四线有功功率/无功功率/电流组合变送器
AV-single-phase alternating voltage 4P/Q/I-3-phase 4-wire active power/ reactive power/ combined current transducer
DV-单相直流电压 3E-三相三线多电量数字变送
DV-single-phase direct voltage 3E-3-phase 3-wire digital-type multiple electricity transducer
3I-三相电流 4E-三相四线多电量数字变送
3I-3-phase current 4E-3-phase 4-wire digital-type multiple electricity transducer
3V-三相三线电压 4EA-组合式多功能电力仪表
3V-3-phse 3-wire voltage 4EA-combined multi-function electric meter
4V-三相四线电压 3P-三相三线有功功率
4V-3-phse 4-wire voltage 3P-3-phase 3-wire active power
3Q-三相三线无功功率 F-频率 TR(A)-热电阻(带显示)
3Q-3-phase 3-wire reactive power F-frequency TR(A)- thermal resistor (with display)
4P-三相四线有功功率
4P-3-phase 4-wire active power

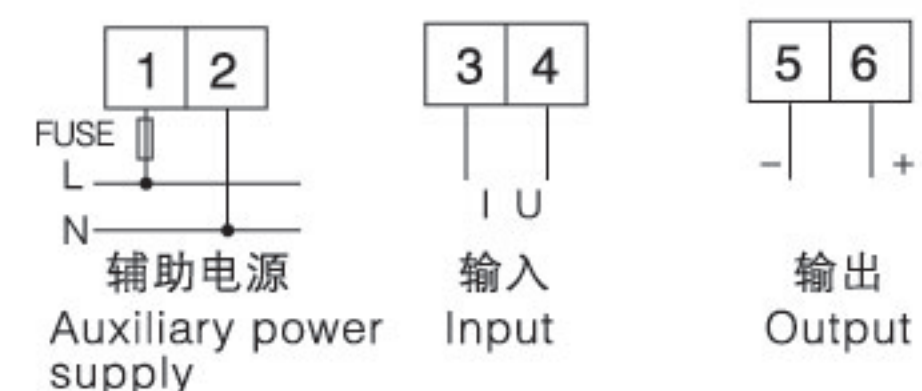
产品系列代号
Product series code

3 技术指标 Technical indicator

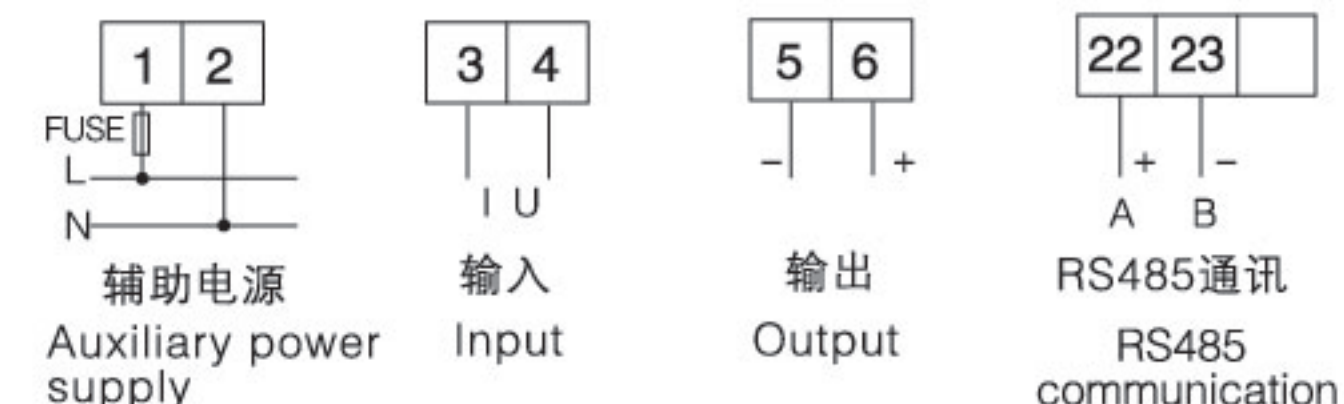
技术参数 Technical parameters		型号 Type		BD-DI BD-DV	BD-TR BD-TRA	BD-AI BD-AV	BD-3I3 BD-3V3 BD-4V3	BD-3P BD-3Q BD-3P/Q/I	BD-4P BD-4Q BD-4P/Q/I	BD-3E BD-4E BD-4EA	BD-PF BD-F	
精度等级 Precision grade				0.5, 0.2								
输入 Input	信号 Signal	DC 4~20mA, 0~20 mA DC 0~10V, 0~75mV DC 0~300V		PT100		AC 0~1A、0~5A AC 0~120V、 0~300V、0~500V		AC 1A、5A AC 100V、220V、380V				
	过载 Overload	电流：持续1.2倍，瞬时电流10倍/1秒； Cerrnt:1.2 times everlasting, 10 times/1s instantaneousness										电压：持续1.2倍，瞬时电压2倍/1秒 Voltage: 1.2 times everlasting, 2times/1s instantaneousness
	频率 Frequency	45Hz~65Hz										
输出 Output	信号 Signal	DC 4~20mA、0~20mA、0~5V、0~10V										
	负载 Load	Current Output≤600 Ω Voltage Output≥1000 Ω										
	选配功能 Selected function	/		/		RS485通讯 communicaton	/		RS485通讯 communicaton			
	电源 Power supply	AC85V~265V/ DC100V~350V/ DC24V		AC85V~265V/ DC100V~350V		AC85V~265V/ DC100V~350V/ DC24V	AC 85V~265V/ DC100V~350V/ DC24V/DC48V	AC 85V~265V/DC 100V~350V				
温度漂移系数 Temperature drift coefficient		0.5级时≤200ppm/℃，0.2级时≤100ppm/℃ Class 0.5 ≤200ppm/℃，class 0.2≤100ppm/℃										
响应时间 Response time		<400ms										
绝缘电阻 Insulation resistance		≥100MΩ										
工作耐压 Power frequency withstand voltage		辅助电源/输入/输出2kV/1min,50Hz the value of alternating current between the power supply, input and output: 2kV/1min										
环境 Ambient conditions	温度 Temperature	工作 operating temperature: -10℃ ~ +55℃ 储存 storage temperature: -25℃ ~ +70℃										
	湿度 Humidity	≤95%RH，不结露，无腐蚀性气体场所 no dew, no aggressive gas										
	海拔 Altitude	≤2500m										
安装方式 Installation method		TS35mm导轨或螺钉固定 TS35mm rail designed or screw										

4 接线端子 Wiring terminal

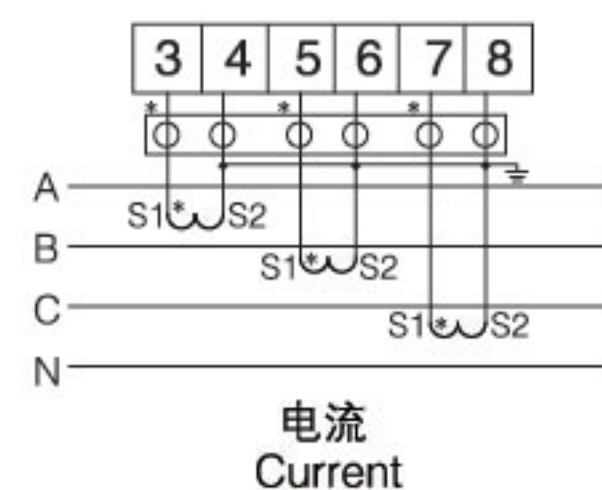
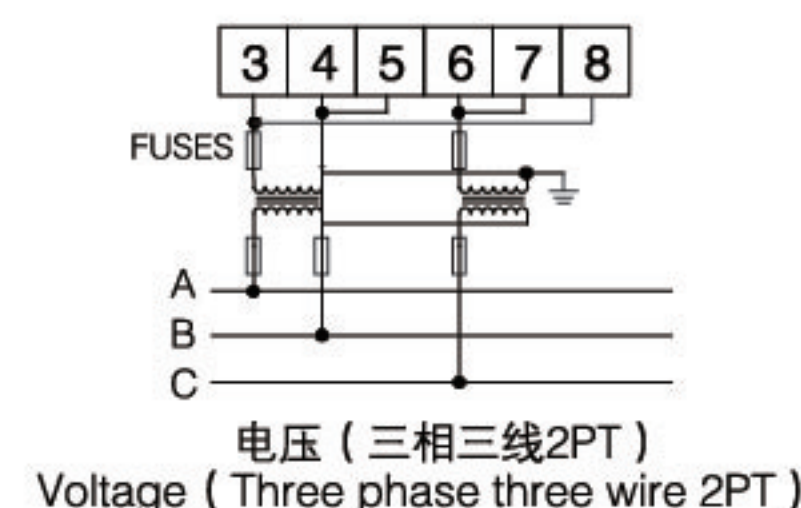
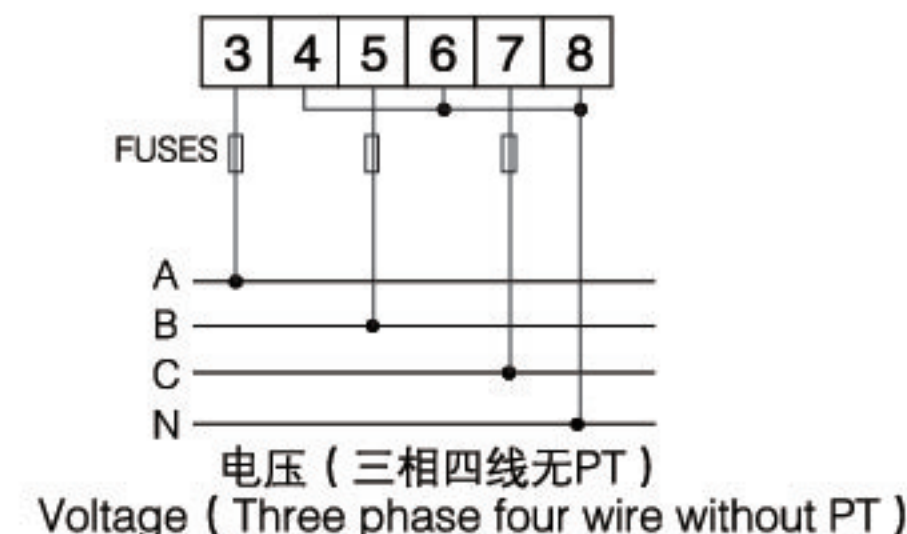
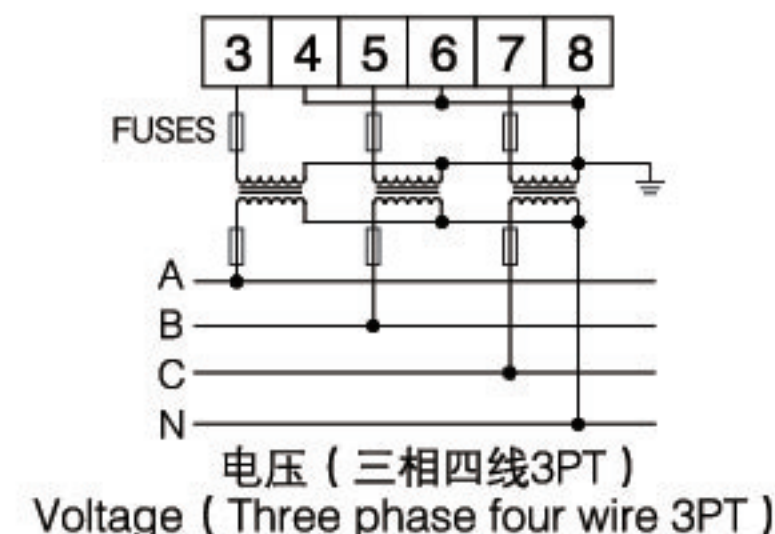
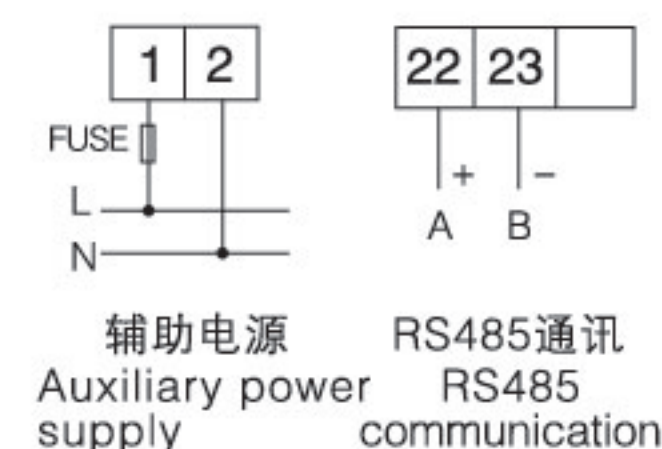
● BD-DV、BD-DI



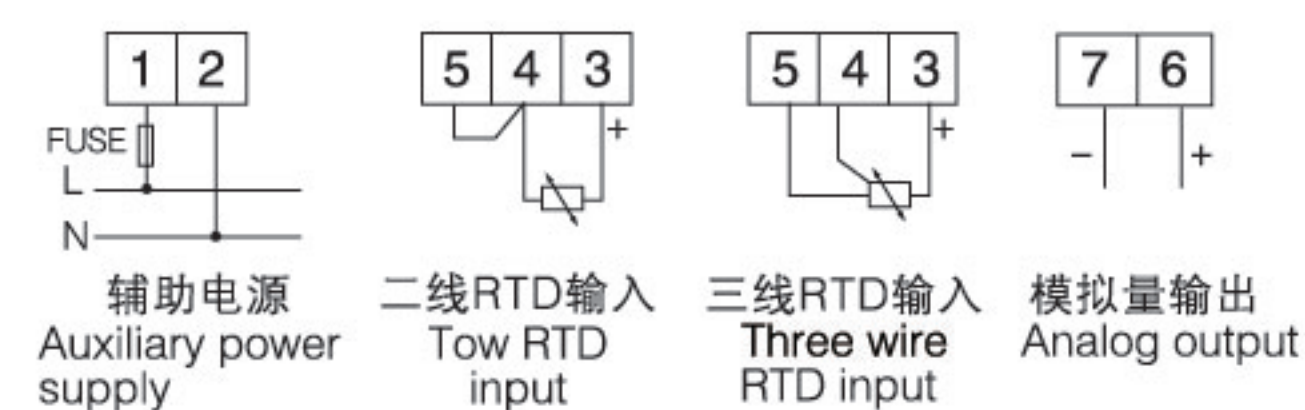
● BD-AV、BD-AI



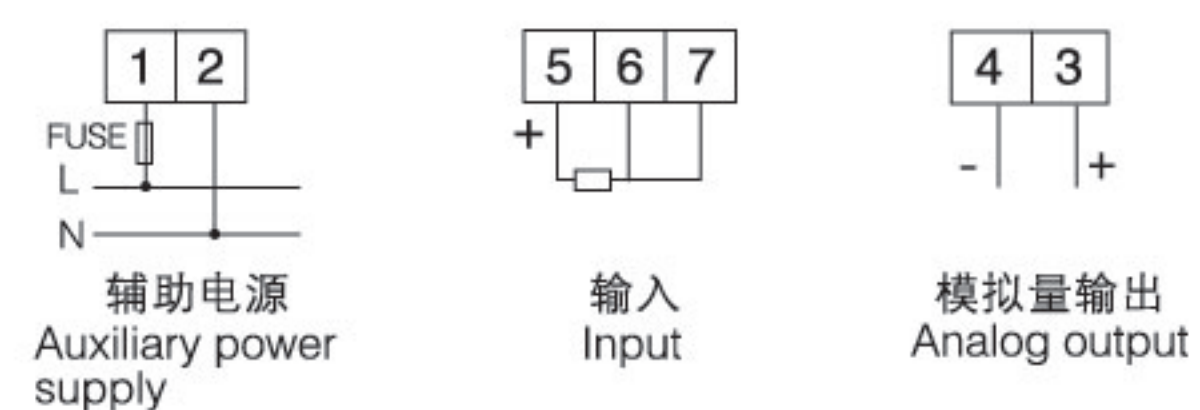
● BD-3I3、BD-3V3、BD-4V3



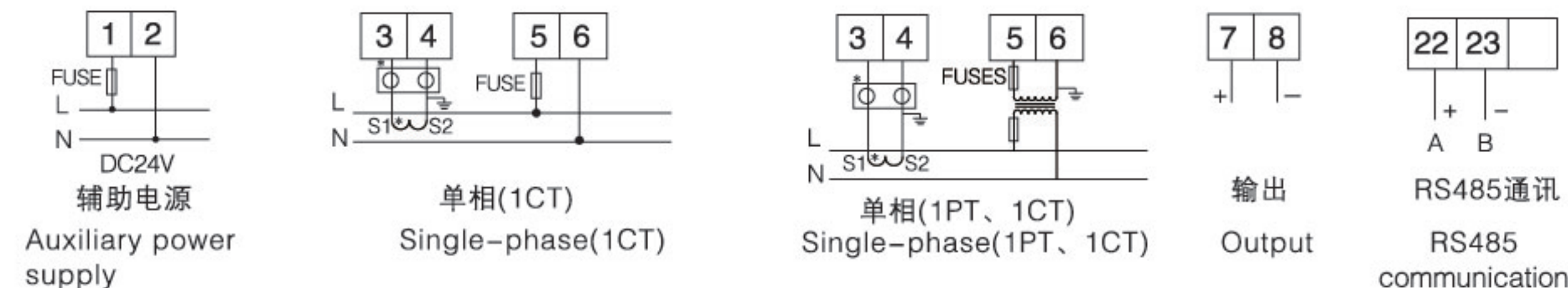
● BD-TR



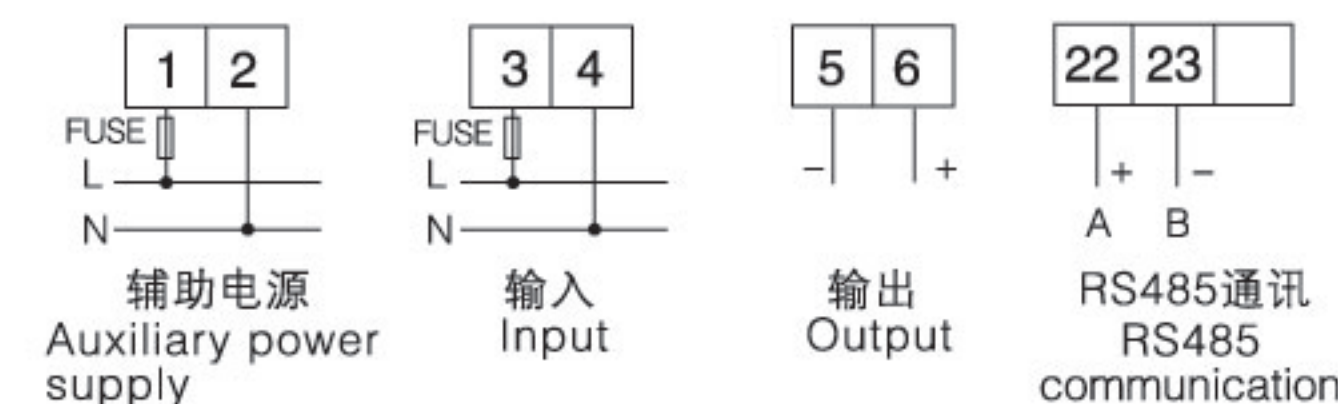
● BD-TRA



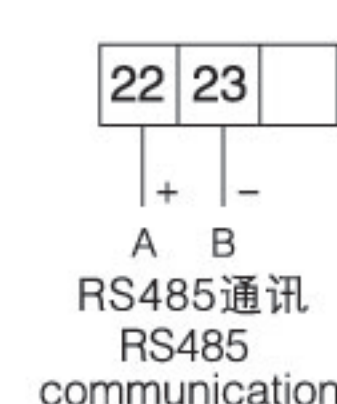
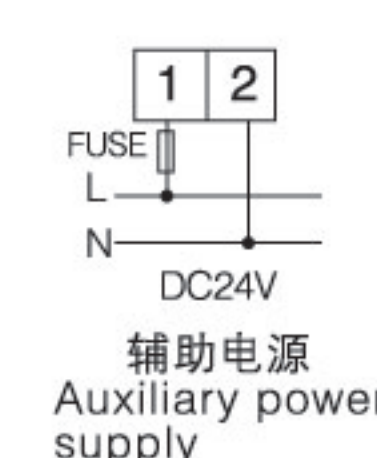
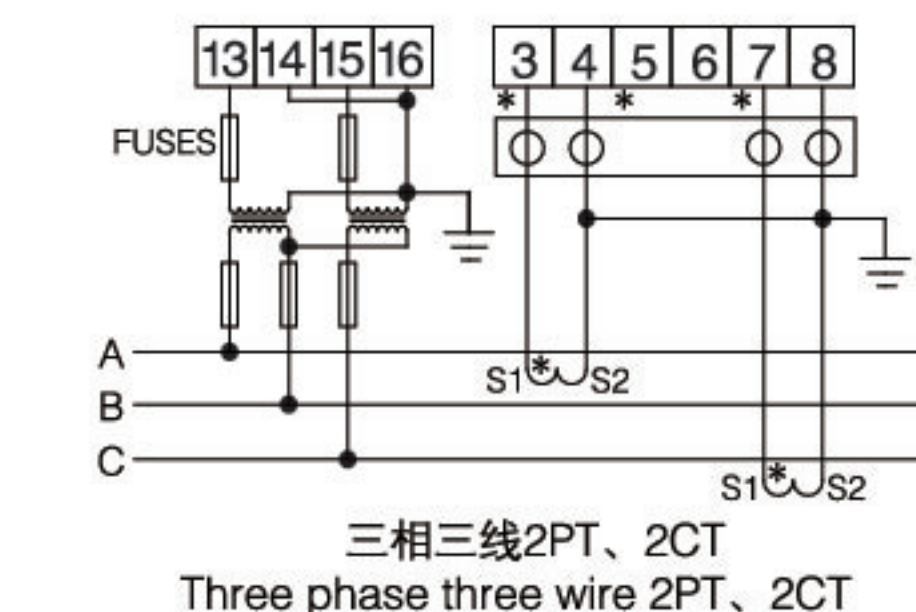
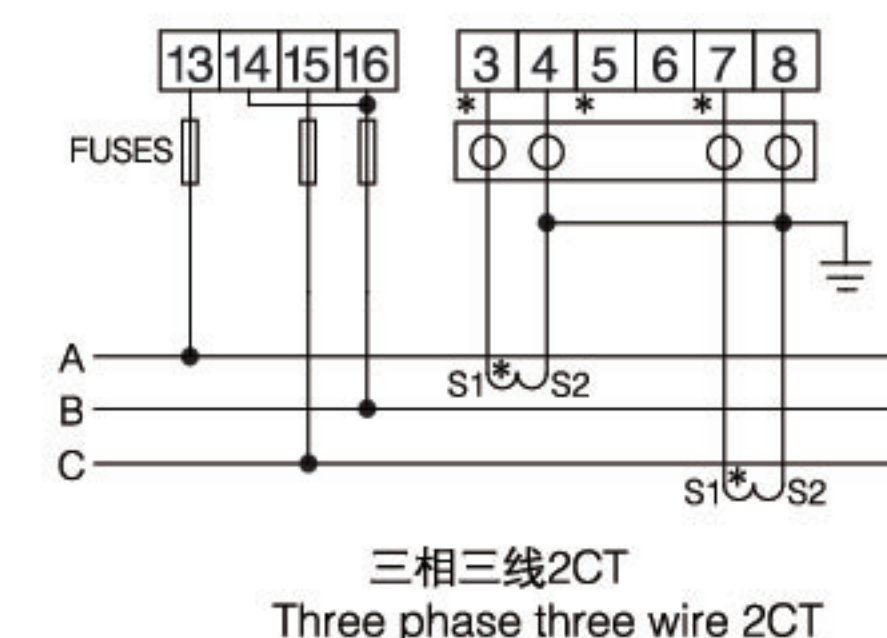
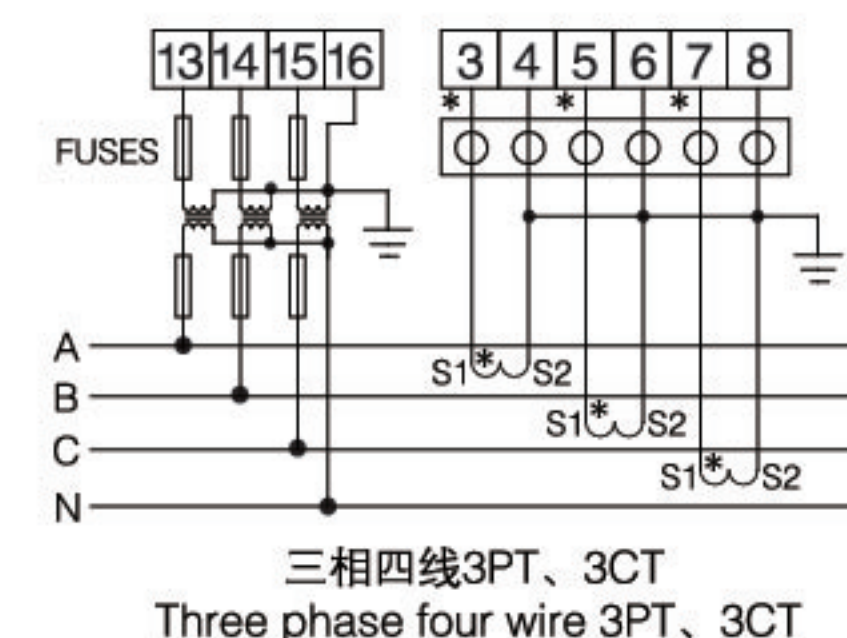
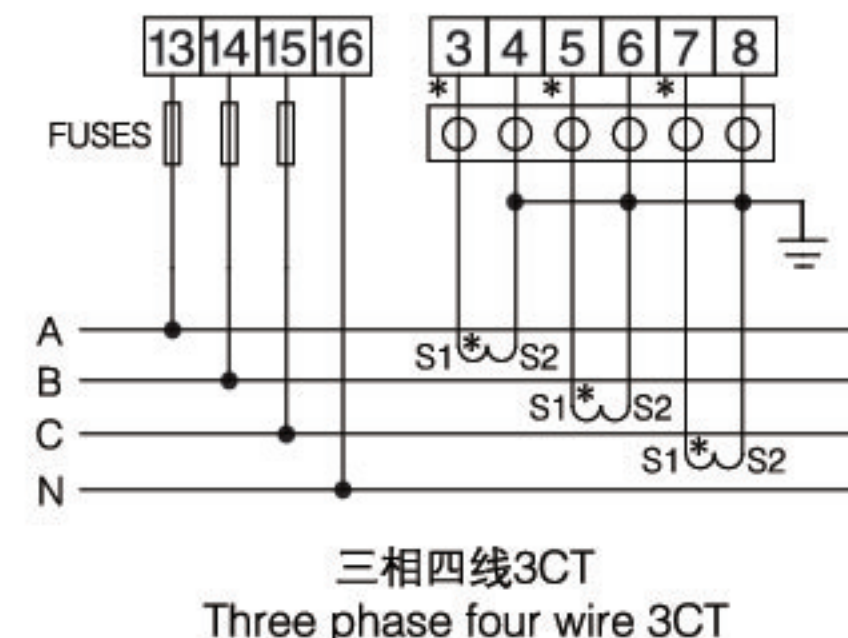
● BD-PF



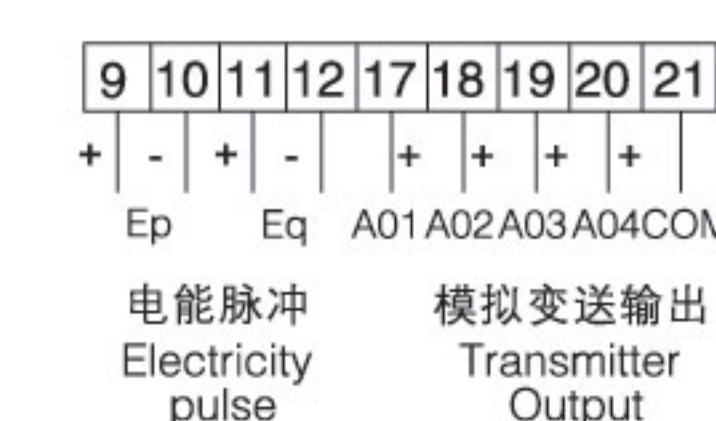
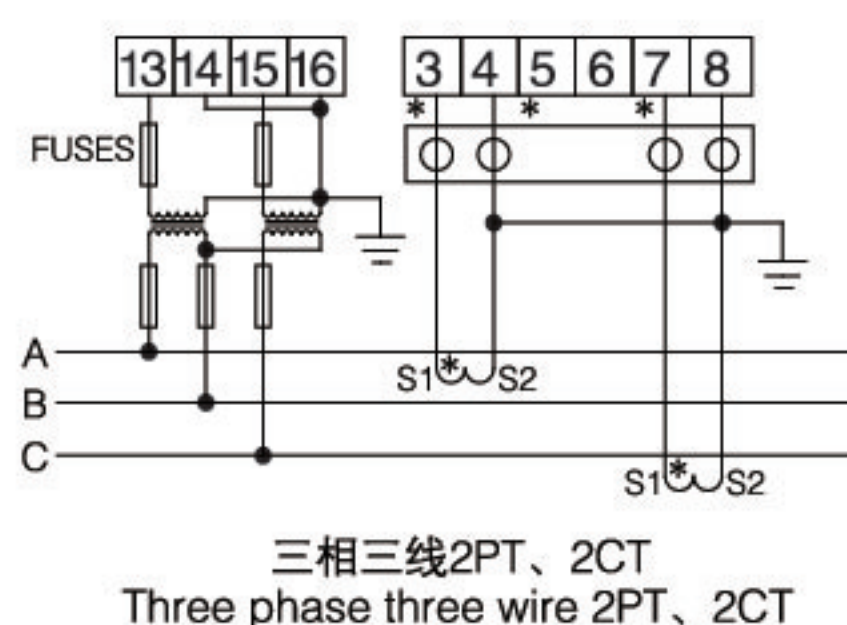
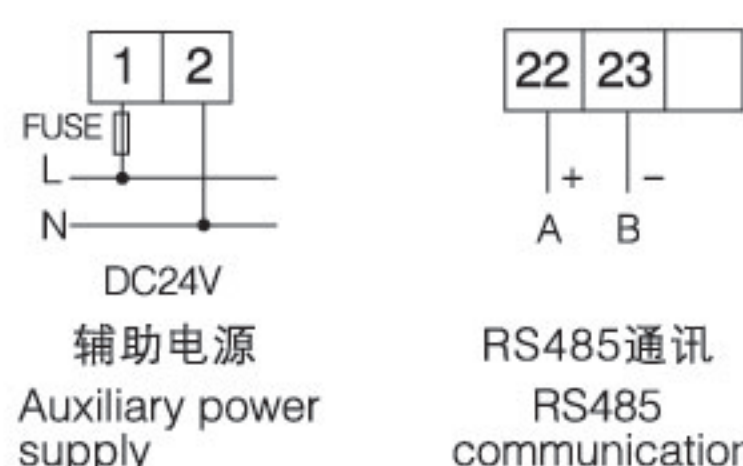
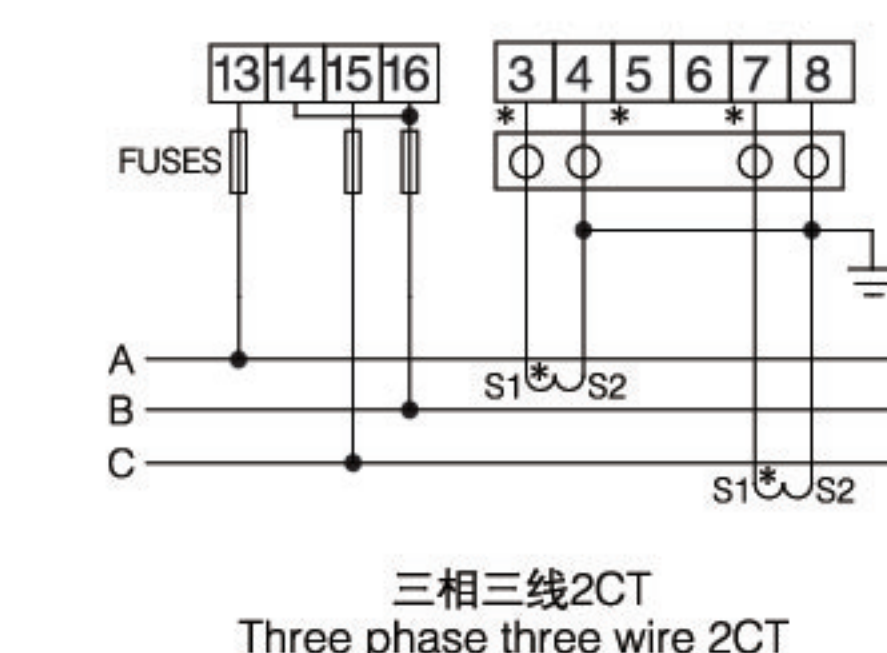
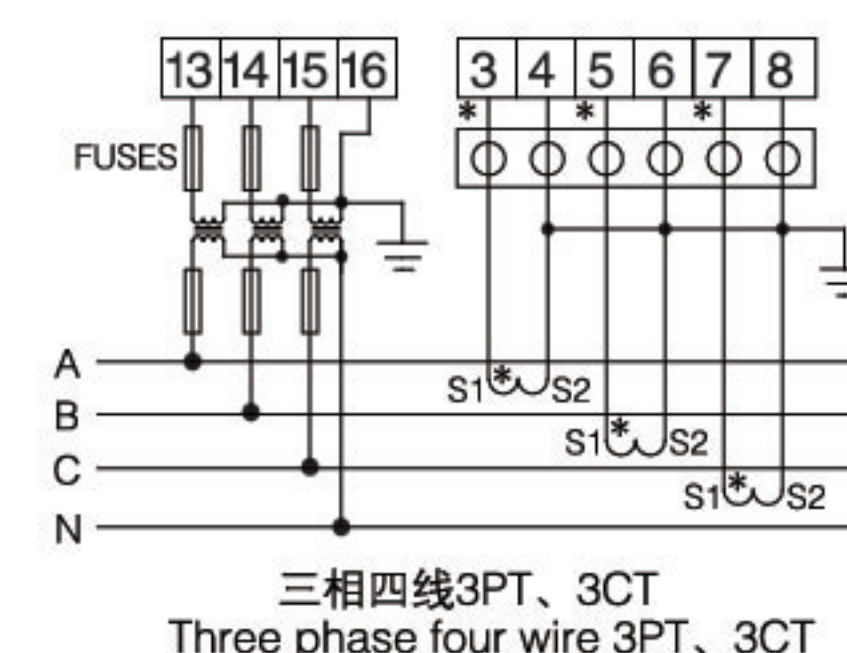
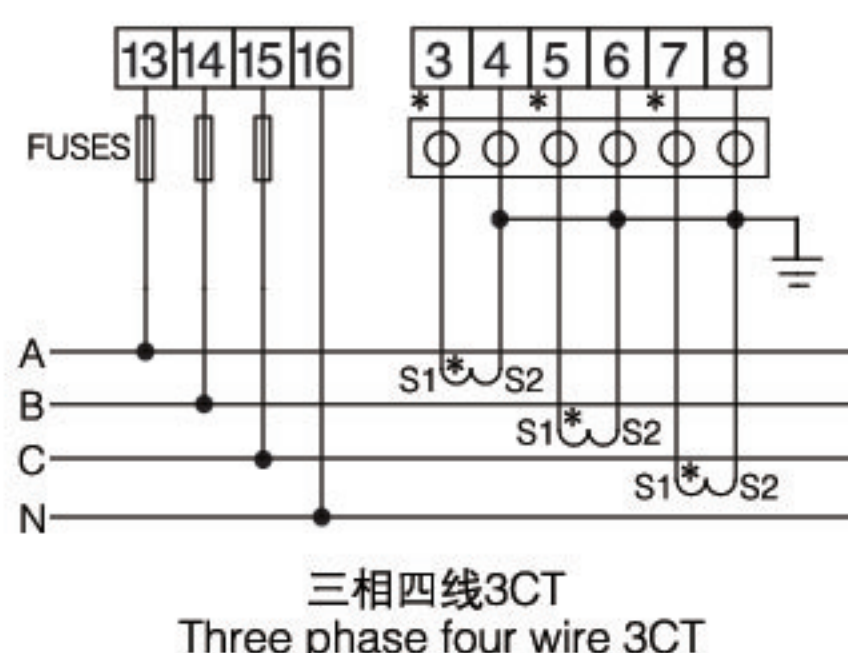
● BD-F



● BD-3P、BD-3Q、BD-3P/Q/I、BD-4P、BD-4Q、BD-4P/Q/I



● BD-3E、BD-4E、BD-4EA



5 外形尺寸(单位: mm) Outline size (unit: mm)

- BD-AI、BD-AV、BD-DI、BD-DV、BD-TR外形尺寸如图1所示:
The outline size of BD-AI、BD-AV、BD-DI、BD-DV and BD-T is shown in figure 1.

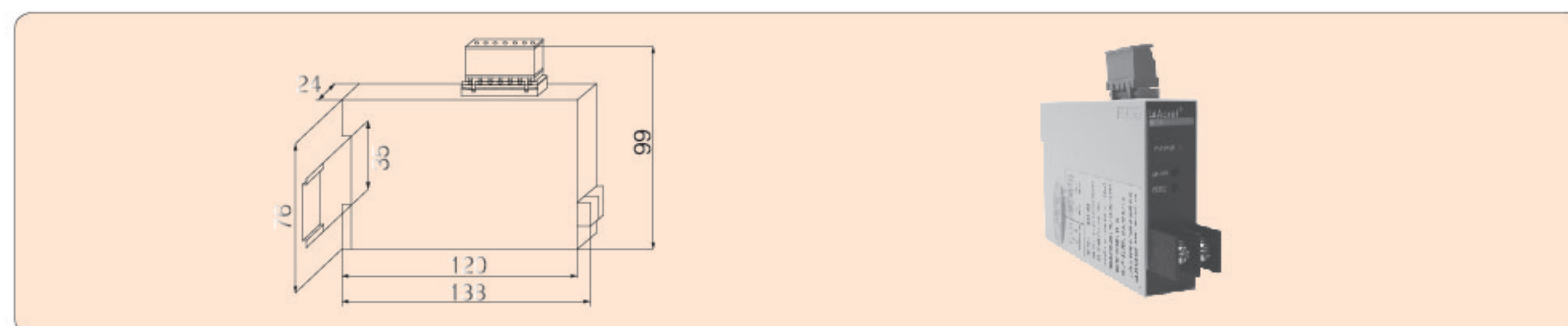


图1 Fig.1

- BD-PF、BD-F、BD-TRA外形尺寸如图2所示:
The outline size of BD-PF、BD-F and BD-TRA is shown in figure 2.

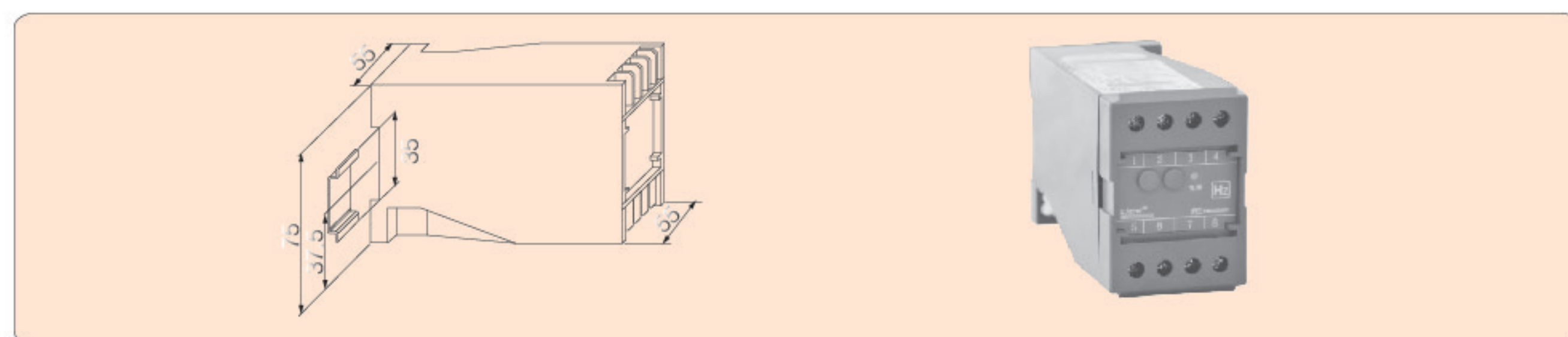


图2 Fig.2

- BD-3I3、BD-3V3、BD-4V3的外形尺寸如图3所示:
The outline size of BD-3I3、BD-3V3 and BD-4V3 is shown in figure 3.

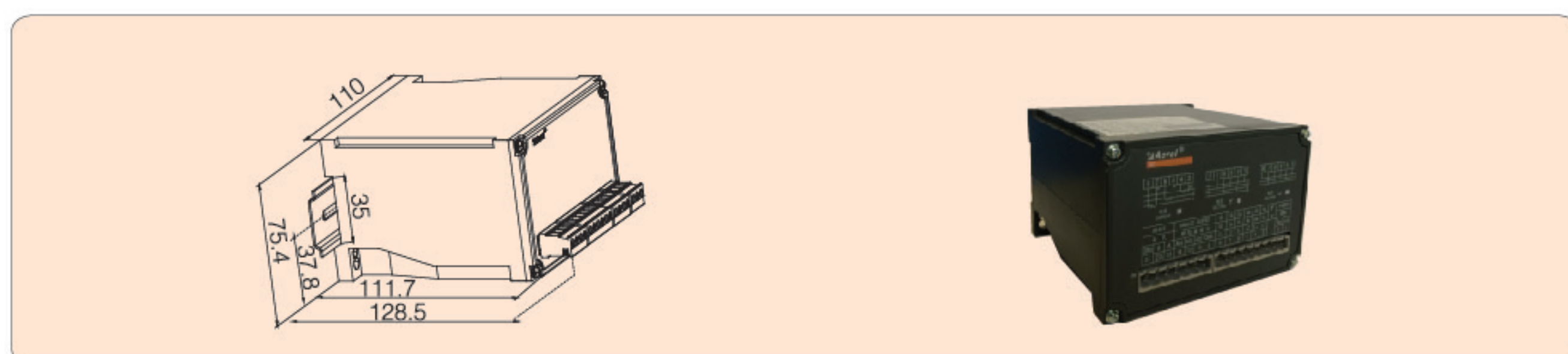


图3 Fig.3

- BD-4EA、BD-3P、BD-3Q、BD-3P/Q/I、BD-4P、BD-4Q、BD-4P/Q/I、BD-3E、BD-4E的外形尺寸如图4所示:
The outline size of BD-4EA、BD-3P、BD-3Q、BD-3P/Q/I、BD-4P、BD-4Q、BD-4P/Q/I、BD-3E、BD-4E is shown in figure 4.



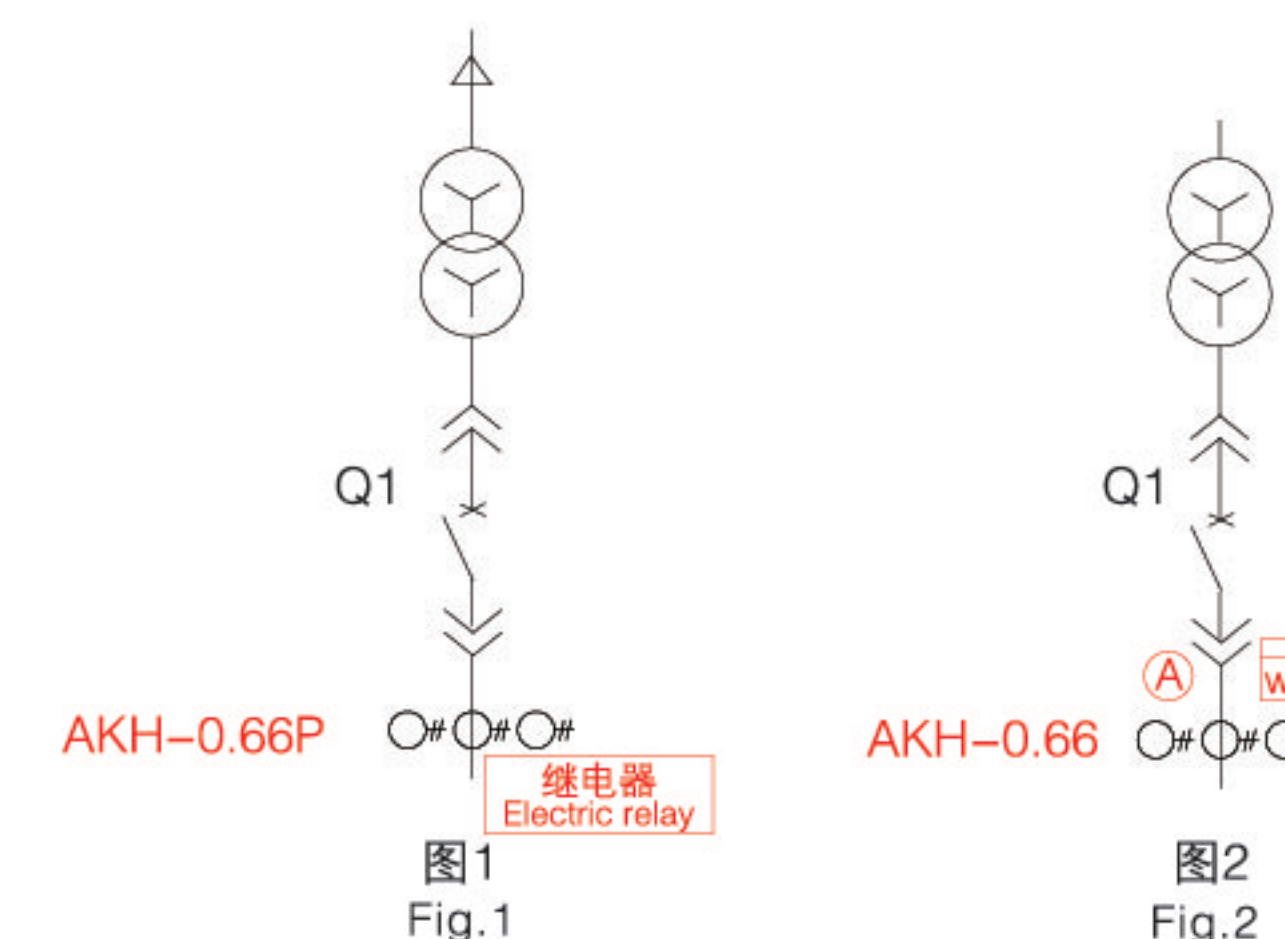
图4 Fig.4

七、典型案例

1 案例一 Case 1

以半导体行业上海某公司低压馈线为例如图1所示, 每条馈线均需测量三相电流, 将电流信号供给继电器, 以防止系统电流过载或短路。每条馈线的A相、B相、C相的一次母排规格为120×10×3, 铜排高度1.5米, 每相额定电流为2500A, 采用AKH-0.66/120×50II闭口式电流互感器采集电流信号, 施工时必须拆卸每相铜排, 每相铜排重量为480kg, 所以安装人员至少需要2人, 至少需要3个小时才能拆卸完毕。互感器安装接线20分钟, 安装铜排还需要3个小时。那么每条馈线至少需要19个小时才能安装完毕, 而工厂必须停电20小时左右。

Take the low-voltage feeder of one semiconductor manufacturer in Shanghai. As shown in Fig. 1, it is necessary to measure the 3-phase current of each feeder and transfer the current signal to relay in order to avoid overloading or short circuiting. The size of primary busbar of each feeder is 120x10x3. The copper bar is 1.5m high. The rated current of each phase is 2500A. Utilize AKH-0.66/120X50II closed current transformer to acquire current signals. To install the current transformer, all copper bars have to be removed by at least two installers for minimum three hours because the copper bar of each phase weighs 480kg. Then the wiring of current transformer needs 20 minutes and the installation of copper bars requires 3 hours. It means that it will take minimum 19 hours to install one feeder and the duration of power failure is about 20 hours in the manufacturer.



以半导体行业苏州某公司同样的低压馈线为例如图2所示, 每条馈线均需测量三相电流, 将电流信号供给测量仪表。每条馈线的A相、B相、C相的一次母排规格为120×10×3, 铜排高度1.5米, 每相额定电流为2500A, 采用AKH-0.66/K-120×60 开口式电流互感器采集电流信号, 施工时, 无须拆卸每相铜排, 一名安装人员只要将互感器打开安装螺丝螺母, 将互感器套在母排上, 合上互感器, 再用螺丝螺母固定好, 再将互感器固定在母排上, 整个过程只需要30分钟就可以完成安装接线才能拆卸完毕, 而工厂停电只需要40分钟左右。

所以上述方案每条馈线需要的成本对照如下表:

Take the same low-voltage feeder of another semiconductor manufacturer in Suzhou. As shown in Fig. 2, it is necessary to measure the 3-phase current of each feeder and transfer the current signal to the measuring instrument. The size of primary busbar of each feeder is 120x10x3. The copper bar is 1.5m high. The rated current of each phase is 2500A. Utilize AKH-0.66/120X50II close-ended current transformer to acquire current signals. To install the current transformer, all copper bars have to be removed by at least two installers for minimum three hours because the copper bar of each phase weighs 480kg. Then the wiring of current transformer needs 20 minutes and the installation of copper bars requires 3 hours. It means that it will take minimum 19 hours to install one feeder and the duration of power failure is about 20 hours in the manufacturer. The size of primary busbar of each feeder is 120x10x3. The copper bar is 1.5m high. The rated current of each phase is 2500A. Utilize AKH-0.66/120X50II open-ended current transformer to acquire current signals. To install the current transformer, it is unnecessary to remove the copper bar of each phase. One installer loosens retaining screws and nuts, positions the current transformer on the busbar, close the current transformer, fix screws and nuts and secure the current transformer. The installation process spends just 30 minutes. And it needs 40-minute power failure in the manufacturer.

Table 1 compares the installation cost of each feeder in two proposals.

表1
Table 1

成本 Cost	类别 Category	互感器平均成本 (元) Average cost of current transformer, RMB	人工费 (元) Labor cost, RMB	停电时间 (小时) Duration of power failure, h	安装接线时间 (小时) Installation time,h	备注 Note
方案 Proposal						
常规电流互感器 Conventional current transformer		176	950	19	18	4名安装工 4 installers
开口电流互感器 Split current transformer		595	37.5	0.67	0.5	1名安装工 1 installers

2 施工细节 Detailed information on installation

根据我公司上述产品规格书中的参数，并根据用户现场的实际情况选用合适的开口电流互感器
将继电器或测量仪表与保护用开口电流互感器二次接好，确保电流互感器二次不能开路，将开口电流互感器上、下两部分都打开，并注意电流互感器的P1面上、下两部分一致，并将继电器在现场安装好，所有现场全部放置好，大电流一次母线穿铜排场合等待停电，如图3、图4所示：

Select the suitable split current transformer in accordance with parameters in our product catalog and user's conditions.
Connect the relay or measuring instrument with the secondary winding of split safety current transformer. Check if the secondary winding of transformer is open. Open the upper and the lower sections of split current transformer. Keep the upper part identical to the lower part on P1 side of current transformer. Place relays in position. Cut off the power supply at the place where the primary high-current bus is assembled with copper bar. Refer to Fig. 3 and Fig. 4.

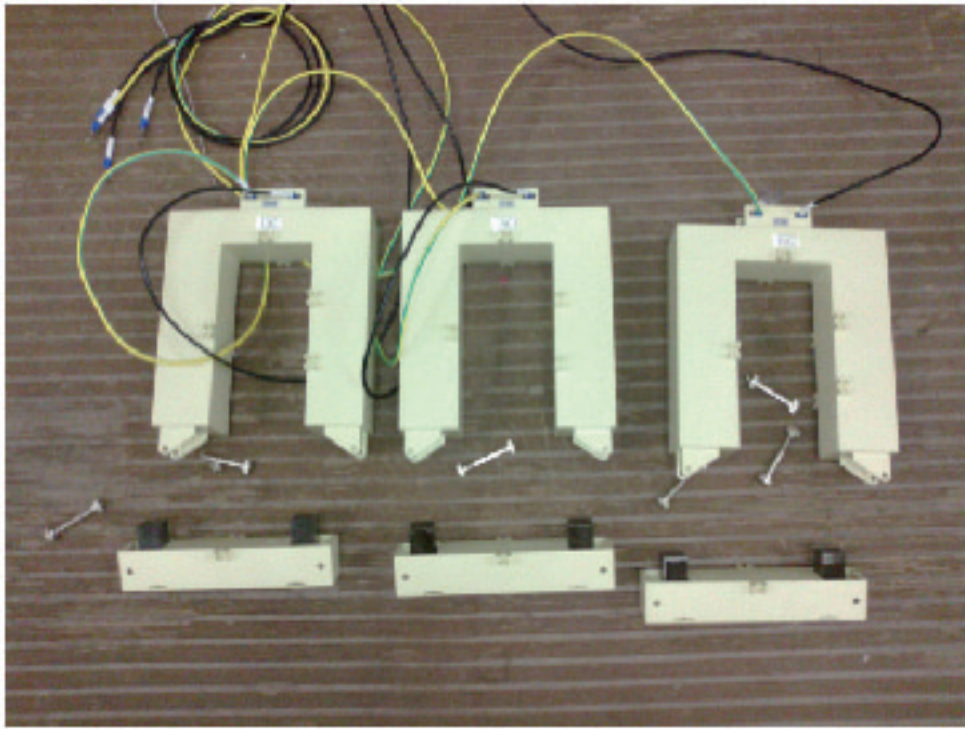


图3 Fig. 3



图4 Fig. 4

停电后将所有回路的开口电流互感器，全部同时安装在母排上，并将开口电流互感器上、下两部分通过螺丝、螺母安装好，如图5、图6所示：

After power failure, mount all split current transformers on the busbar and fix the upper and the lower section of these transformers with screws and nuts. Refer to Fig. 5 and Fig. 6.



图5 Fig. 5

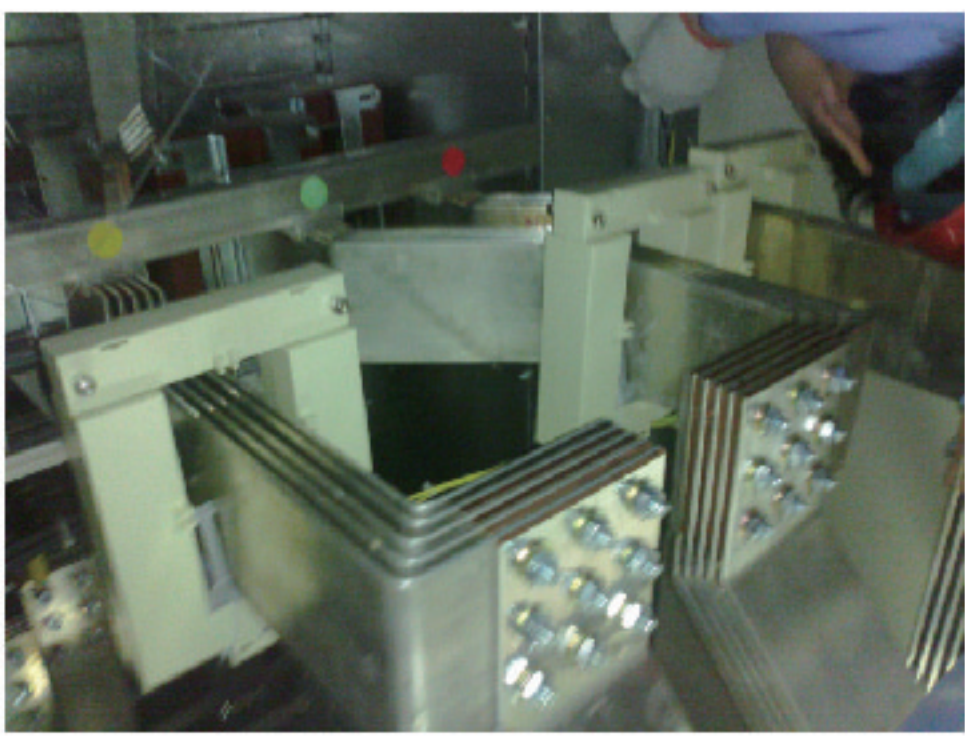


图6 Fig. 6

最后将开口电流互感器通过我们标配的配件将互感器固定在母排上，同时将继电器输出信号线连接至断路器的辅助触点，完成整个安装过程。如图7所示：

In the last, secure current transformers on the copper bar with our standard accessories and connect the relay output line to the auxiliary contact of breaker. Now the installation is completed.Refer to Fig. 7.

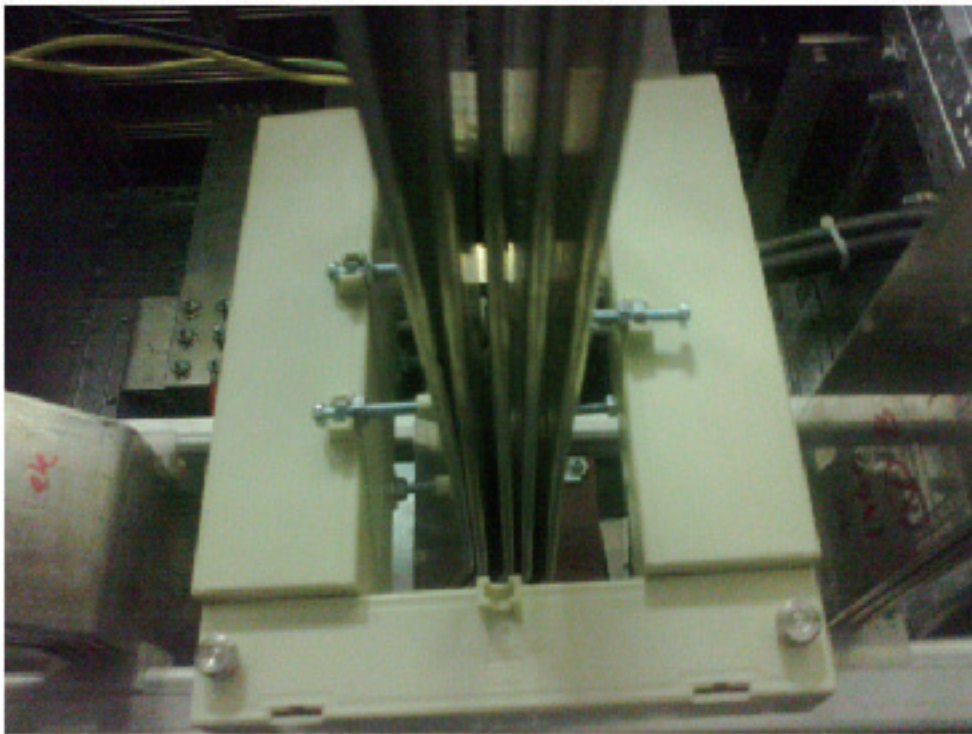


图7 Fig. 7

综合对比，改造项目中使用开口式电流互感器性价比最高，可以快速实现对低压配电智能化低成本的多回路监控，有利于低压智能配电进一步推广和应用。

The comparison shows that the cost performance of split current transformer is high for this project. Use of split current transformers can realize the intelligent and cost-efficient monitoring of multiple circuits in the low-voltage power distribution system quickly, which will facilitate the popularization and application of intelligent low-voltage power distribution.

3 结论 Conclusion

开口式电流互感器已在上海、苏州、深圳、云南、重庆、杭州、天津、济南、西安、内蒙古等地工矿企业工程配电监控系统中得到应用，降低了投资成本，产生了较好的社会和经济效益。

[1]江苏安科瑞电器制造有限公司.电量传感器选型手册,201203版.

Split current transformers have been applied in the power distribution monitoring systems of industrial and mining enterprises in Shanghai, Suzhou, Shenzhen, Yunnan, Chongqing, Hangzhou, Tianjin, Jinan, Xi'an and Inner Mongolia. They save the investment and produce good social and economic benefits.

[1] Selection Guide of Electricity Transducer (rev. 201203), Jiangsu Acrel Electric MFG. Co., Ltd.

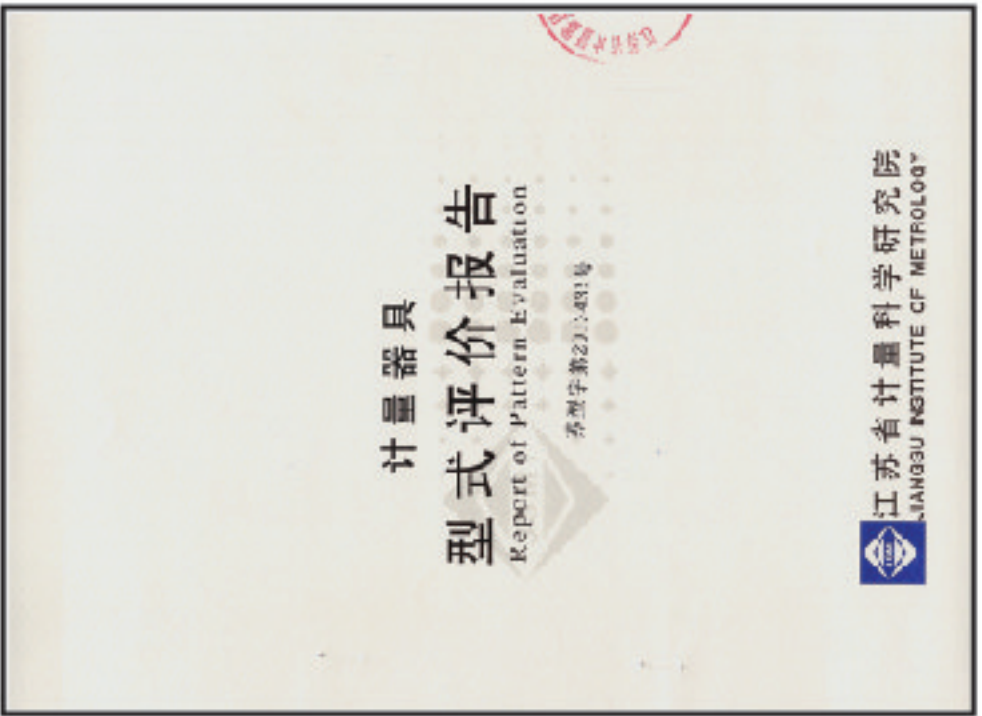
八、获得证书 Certificate



江苏安科瑞ISO9001体系证书
Certificate of ISO9001 system of Jiangsu ACREL



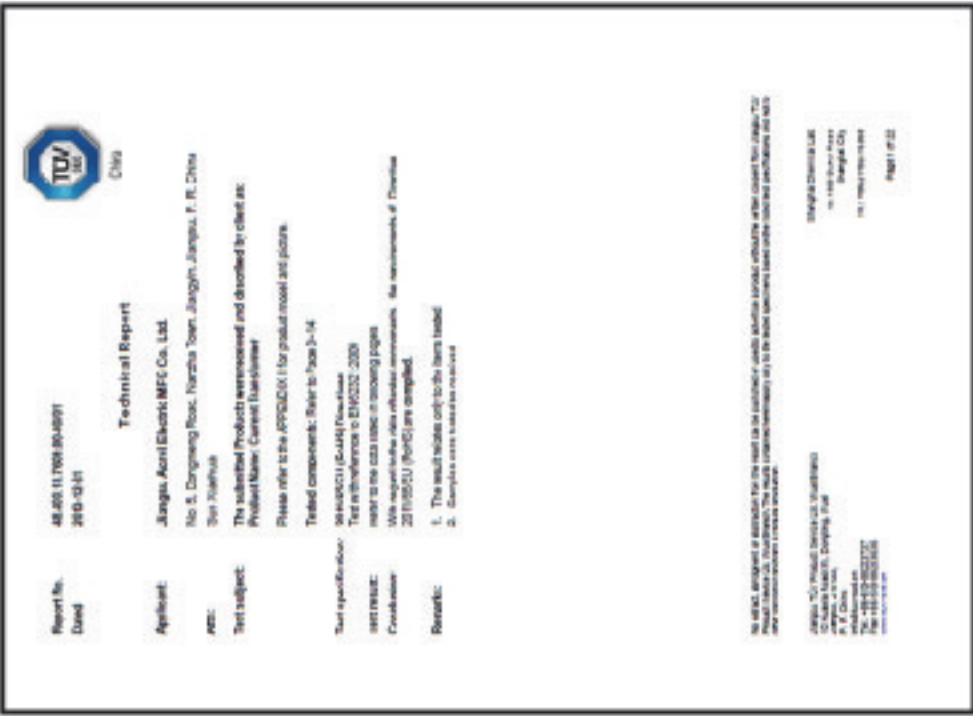
互感器CE证书
CE certificate for transformer



AKH-0.66型式评价报告
Report of Pattern evaluation for AKH-0.66



互感器壳体阻燃试验报告
Flame test report of transformer shell



互感器材质RoHS检测报告 (TUV)
RoHS test report (TUV) of transformer material



电流互感器升温B报告
Current transformer temperature B report



互感器高海拔试验报告
Transformer high altitude test report



互感器计量许可证
Transformer metering license

Company Contact Card

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