

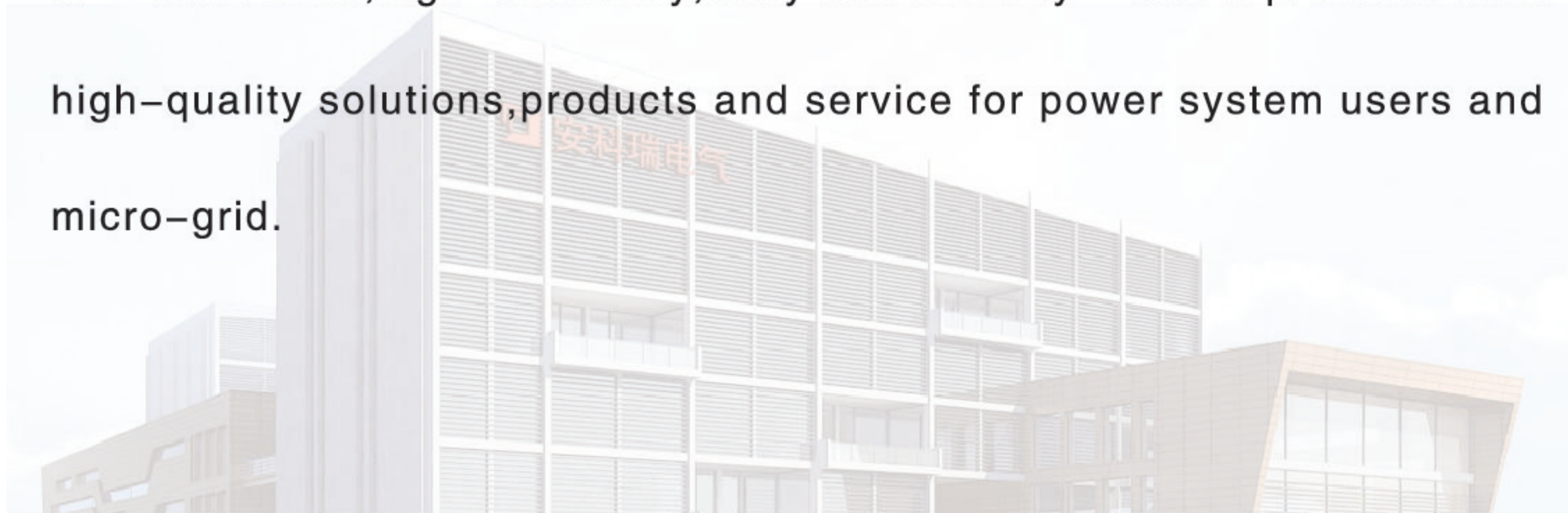
# LOW VOLTAGE CURRENT TRANSFORMER



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## Company Profile

Acrel Co., Ltd. [Stock Code : 300286. SZ] is a high-tech enterprise concentrating on research, production, sales and services. It mainly provides systemic solutions of energy efficiency management and electrical safety for users. 'Acrel' is equipped with the complete production lines from cloud platform software to sensors. Until now, it has more than 8000 sets systemic solutions used in China to help users to realize energy visual management ,supply energy data services and improve electrical efficiency and safety. 'Acrel' has maintained steady growth since its listing in 2012. The company will adhere to the concept of 'innovation,high-efficiency,unity and honesty' and it provides more high-quality solutions,products and service for power system users and micro-grid.



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### 1 AKH-0.66 series current transformer

#### ● General

Current Transformer (CT) is used to transform the high AC current to small easily manageable values. They are connected with the Panel Meter or Relay and they can help to measure the current or protect the equipments.

#### ● Standards

IEC/EN61869-1, IEC/EN61869-2

#### ● Security factor

FS < 5

#### ● Rated frequency

50/60Hz

#### ● Maximum system voltage

720V AC

#### ● Test voltage

3kV AC(1min)

#### ● Rated short-time thermal current

$I_{th}=40\sim60I_n$

#### ● Rated dynamic current

$I_{dyn}=2.5I_{th}$

#### ● Continuous overload

120% $I_n$

#### ● Environment

Operating temperature:  $-25^{\circ}\text{C}\sim+50^{\circ}\text{C}$

Storage temperature:  $-40^{\circ}\text{C}\sim+80^{\circ}\text{C}$

Relative humidity, no condensation: 90%

#### ● Protection level

IP30

#### ● Accuracy

$\pm 3.0\%$ ,  $\pm 1.0\%$ ,  $\pm 0.5\%$ ,  $\pm 0.2\%$

#### ● Burden

Ranging 0-30VA

#### ● Rated secondary current

X/5A(X/1A upon request)

#### ● Rated primary current

Ranging up to 6000A


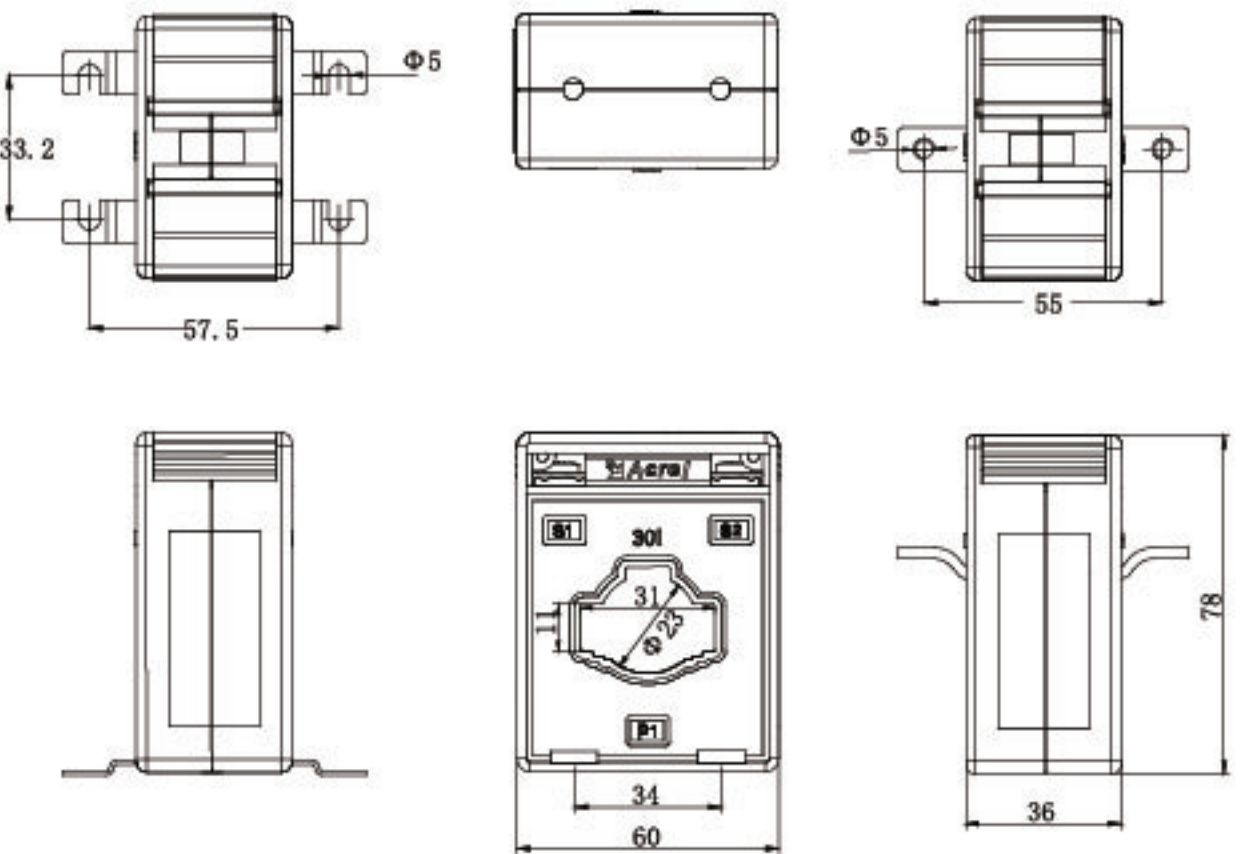

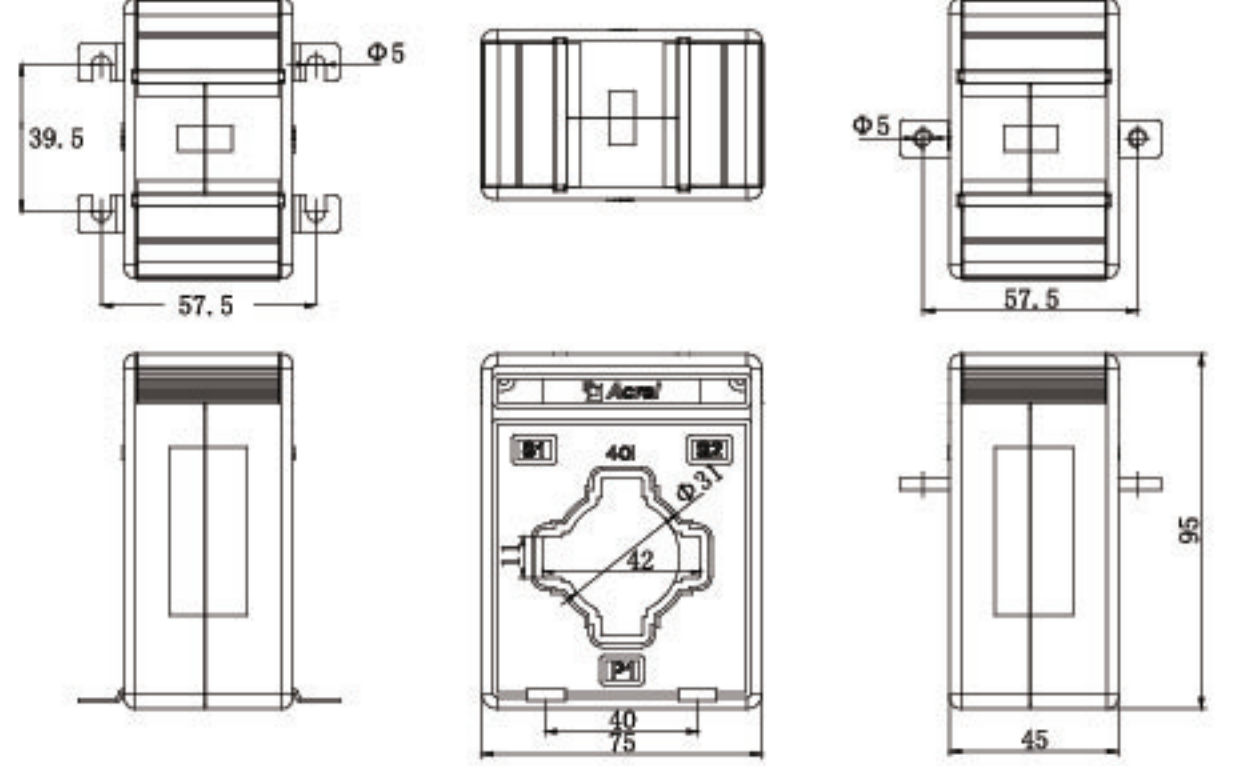


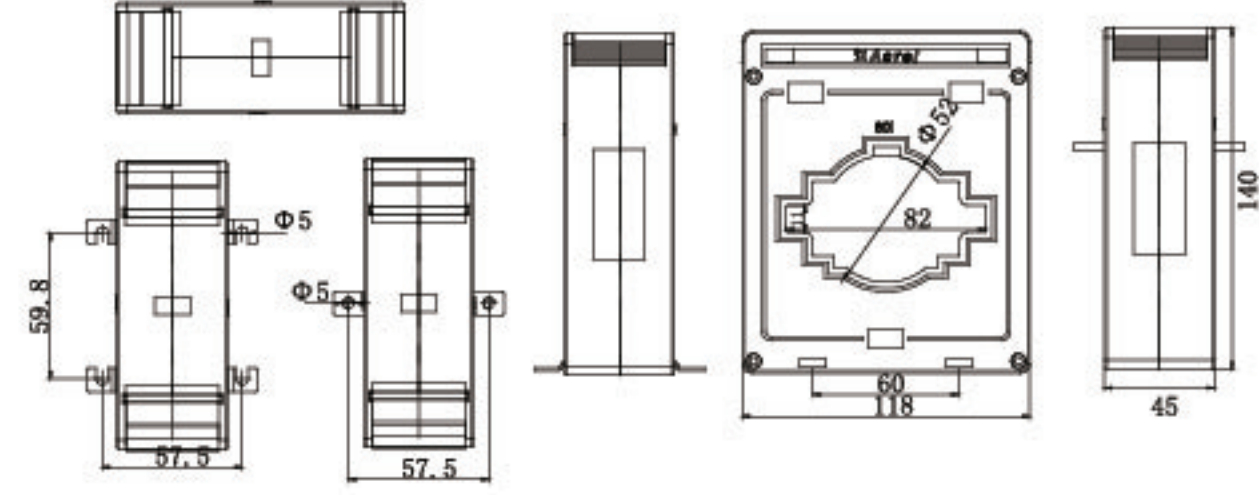
#### ● Casing

Non-flammable, polycarbonate self extinguishing ABS

#### ● Terminal marks


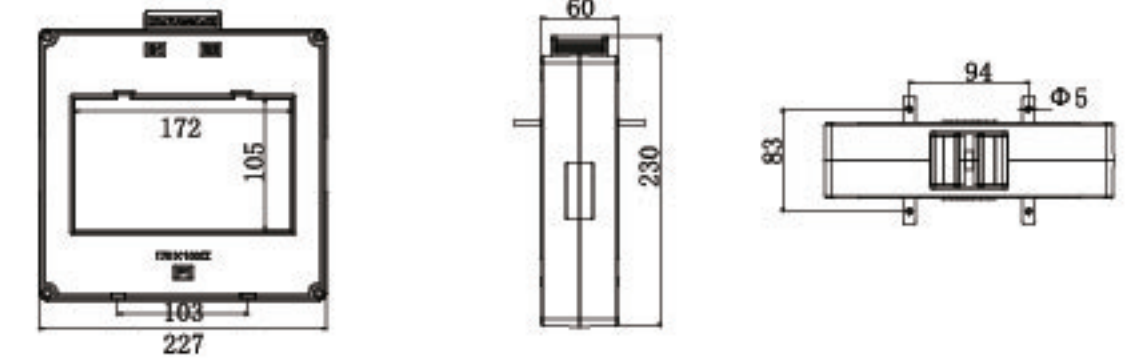

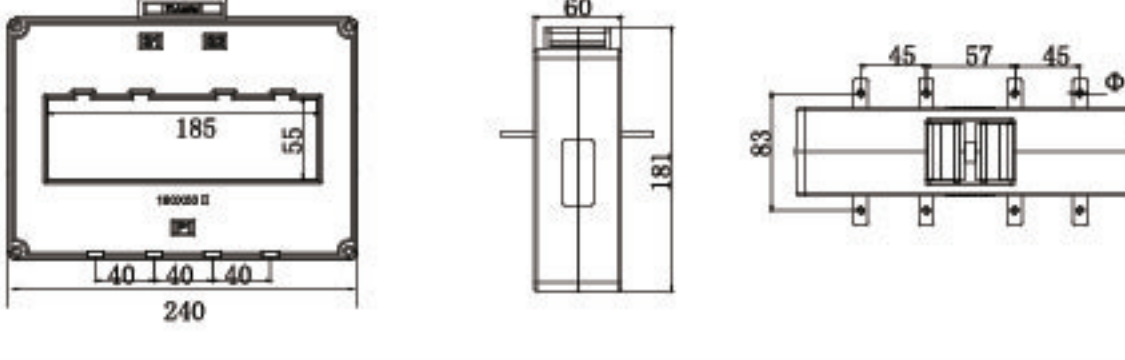

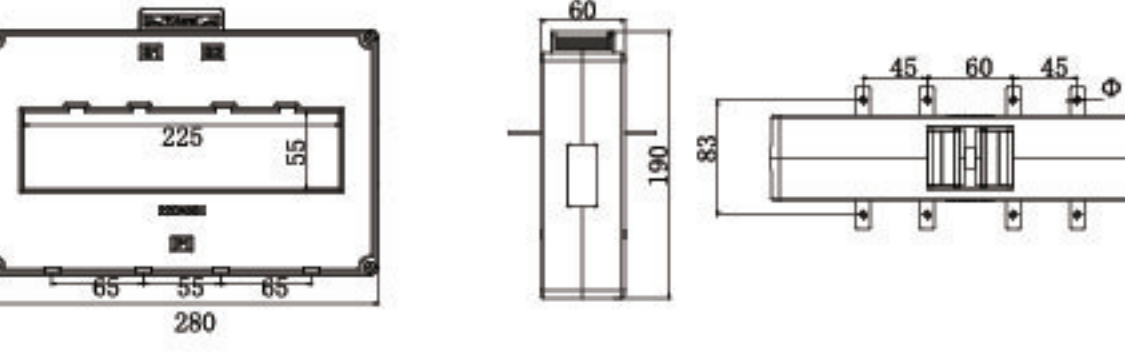

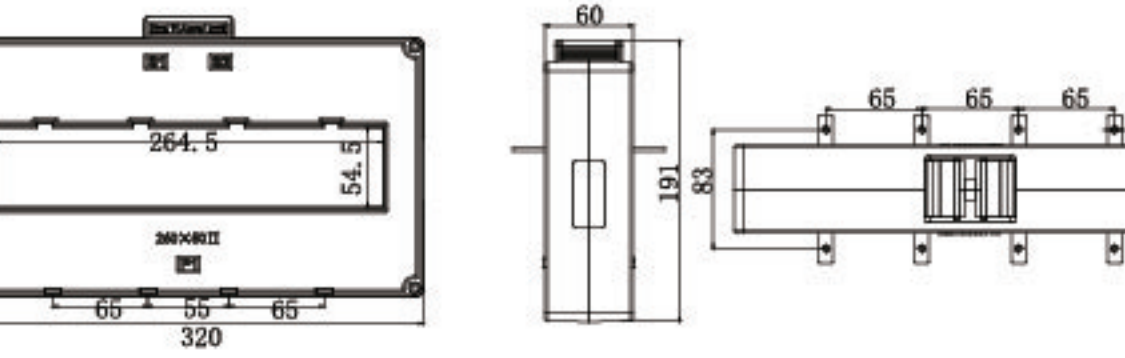
Primary P1 and P2


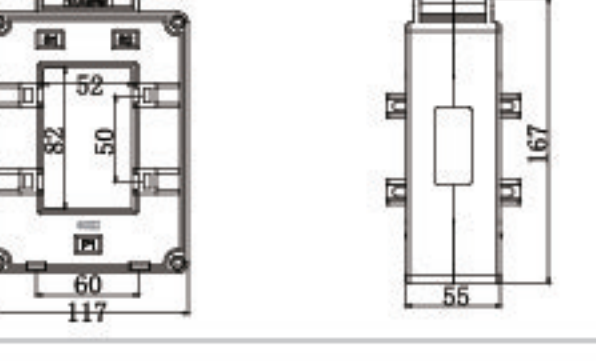

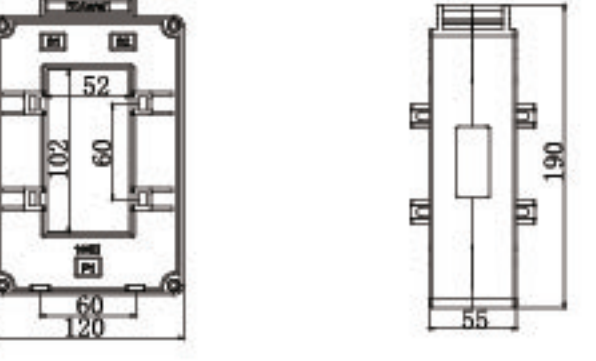

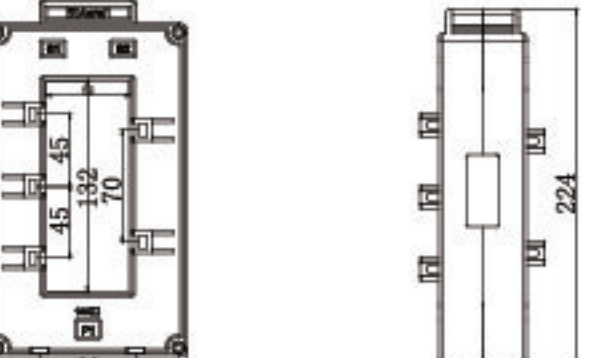
Secondary S1 and S2


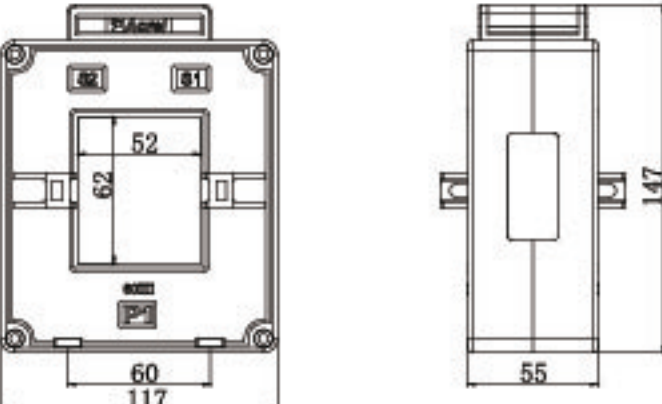

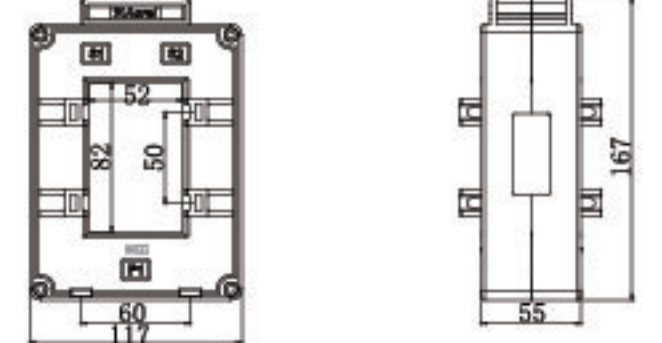
Type	Ratio (A)	Burden(VA)			Turns	Size(unit: mm)
		Class 0.2	Class 0.5	Class 1.0		
	15/5			1.5	5	
	20/5			1.5	4	
	25/5			1.5	3	
	30/5			1.5	3	
	40/5			1.5	2	
	50/5			1.5	2	
	60/5			1.5	2	
	75/5			1.5	1	
	80/5			1.5	1	
	100/5			1.5	1	
	150/5		2.5		1	
	200/5		2.5		1	
	250/5		3.75		1	
	300/5		5		1	
	400/5		5		1	
	500/5		10		1	
	600/5		10		1	
	800/5		10		1	
	1000/5	10			1	
		500/5		10		
600/5			10		1	
800/5			10		1	
1000/5		10			1	
1200/5		10			1	
1500/5		20			1	
	2000/5	20			1	
	1000/5	10			1	
	1200/5	10			1	
	1500/5	20			1	
	2500/5	30			1	
3000/5	30			1		


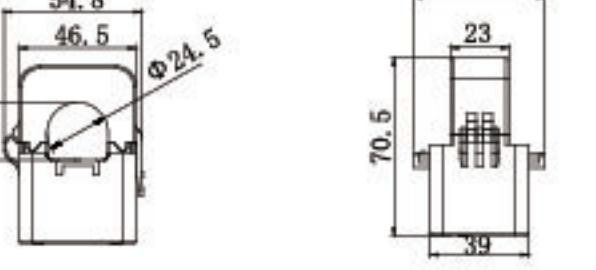

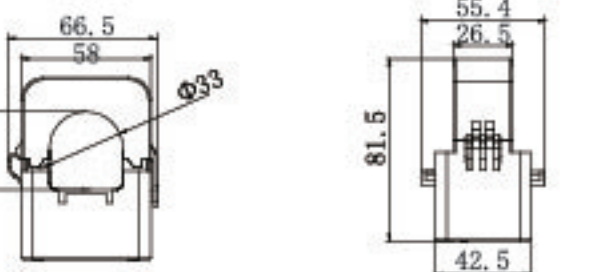

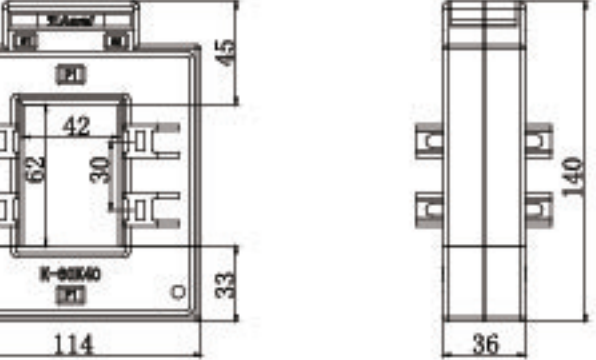

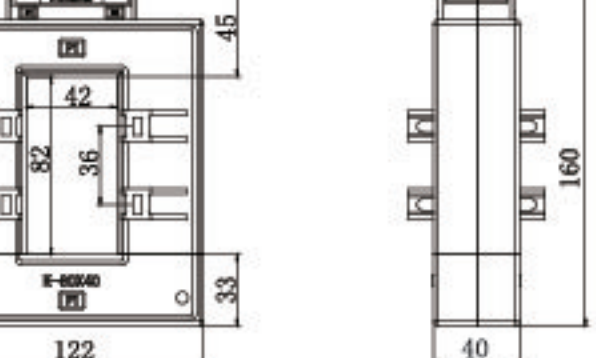
Type	Ratio (A)	Burden(VA)			Size(unit: mm)
		Class 0.2	Class 0.5	Class 1.0	
	100/5			1.5	
	150/5			1.5	
	200/5		1.5		
	250/5		3.75		
	300/5		5		
	400/5		5		
	500/5		10		
	600/5		10		
	300/5		5		
	400/5		5		
	500/5		10		
	600/5		10		
	800/5		10		
	500/5		10		
	600/5		10		
	800/5		10		
	1000/5	10			
	1200/5	10			
	800/5		10		
	1000/5	10			
	1200/5	10			
	1500/5	20			
	2000/5	20			
	800/5		10		
	1000/5	10			
	1200/5	10			
	2000/5	20			
	1000/5	10			
	1200/5	10			
	1500/5	20			
	2000/5	20			
	3000/5	30			

Type	Ratio (A)	Burden(VA)			Size(unit: mm)
		Class 0.2	Class 0.5	Class 1.0	
	1000/5	10			
	1200/5	10			
	1500/5	20			
	2000/5	20			
	2500/5	30			
	3000/5	30			
	1500/5	20			
	2000/5	20			
	2500/5	30			
	1500/5	20			
	2000/5	20			
	2500/5	30			
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	1500/5	20			
	2000/5	20			
	2500/5	30			
	3000/5	30			
	4000/5	30			
	1500/5	20			
	2000/5	20			
	2500/5	30			
	3000/5	30			
	5000/5	30			

Type	Ratio (A)	Burden(VA)			Size(unit: mm)
		Class 0.2	Class 0.5	Class 1.0	
	1500/5	20			
	2000/5	20			
	2500/5	30			
	3000/5	30			
	4000/5	30			
	2000/5	20			
	2500/5	30			
	3000/5	30			
	4000/5	30			
	5000/5	30			
	2000/5	20			
	2500/5	30			
	3000/5	30			
	4000/5	30			
	5000/5	30			
	2000/5	20			
	2500/5	30			
	3000/5	30			
	4000/5	30			
	5000/5	30			

Type	Ratio (A)	Burden(VA)			Size(unit: mm)
		Class 0.2	Class 0.5	Class 1.0	
	1500/5	15			
	2000/5	20			
	2500/5	30			
	3000/5	30			
	1000/5	10			
	1500/5	15			
	2000/5	20			
	2500/5	20			
	3000/5	30			
	2000/5	20			
	2500/5	30			
	3000/5	30			
	4000/5	30			
	5000/5	30			

Type	Ratio (A)	Burden(VA)			Size(unit: mm)
		Class 0.2	Class 0.5	Class 1.0	
	200/5		2.5		
	300/5		2.5		
	400/5		5		
	500/5		10		
	600/5		10		
	800/5		10		
	1000/5	10			
	1500/5	15			
	2500/5	30			
	500/5		10		
	600/5		10		
	800/5		10		
	1000/5		10		

Type	Ratio (A)	Burden(VA)			Size(unit: mm)
		Class 0.2	Class 0.5	Class 1.0	
	150/5			1	
	200/5			1	
	250/5		1.5		
	300/5		1.5		
	300/5		1.5		
	400/5		1.5		
	500/5		2.5		
	600/5		2.5		
	400/5		1.5		
	500/5		2.5		
	600/5		2.5		
	800/5	2.5			
	1000/5	5			
	1500/5		10		
	800/5	2.5			
	1000/5	5			
	2000/5	10			
	3000/5	10			

Type	Ratio (A)	Burden(VA)			Size(unit: mm)
		Class 0.2	Class 0.5	Class 1.0	
	1500/5	10			
	2000/5	10			
	3000/5	10			
	4000/5	15			
	1500/5	10			
	2000/5	10			
	3000/5	10			
	4000/5	15			
	5000/5	15			
	2000/5	10			
	3000/5	10			
	4000/5	15			
	5000/5	15			
	3000/5	10			
	4000/5	15			
	5000/5	15			
	6000/5	15			

Type	Ratio (A)	Burden(VA)			Turns	Size(unit: mm)
		Class 0.2	Class 0.5	Class 1.0		
	50/5			1.5	2	
	100/5			1.5	1	
	150/5			1.5	1	
	200/5			2.5	1	
	200/5		1.5		1	
	250/5		3.75		1	
	300/5		5		1	
	400/5		5		1	
	500/5		10		1	
	600/5		10		1	
	800/5		10		1	
	1000/5	10			1	

## 2 BA Current Transducer

### ● Measuring

- Direct AC Current measurement up to 600A
- Measurement of leakage currents
- Overload : 1.2 times of rated value

### ● Application

- Industrial automation

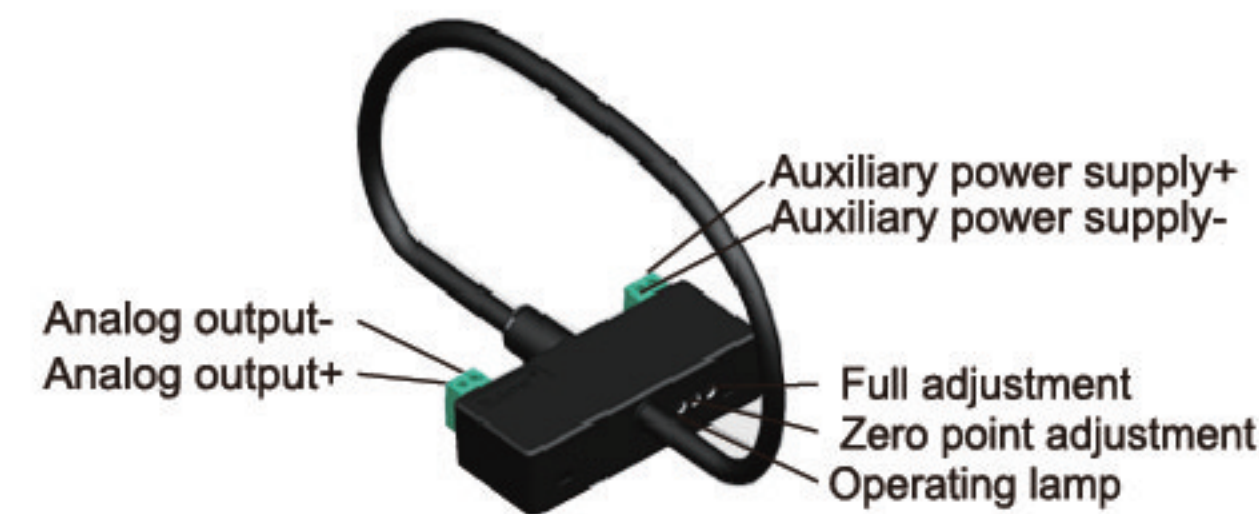
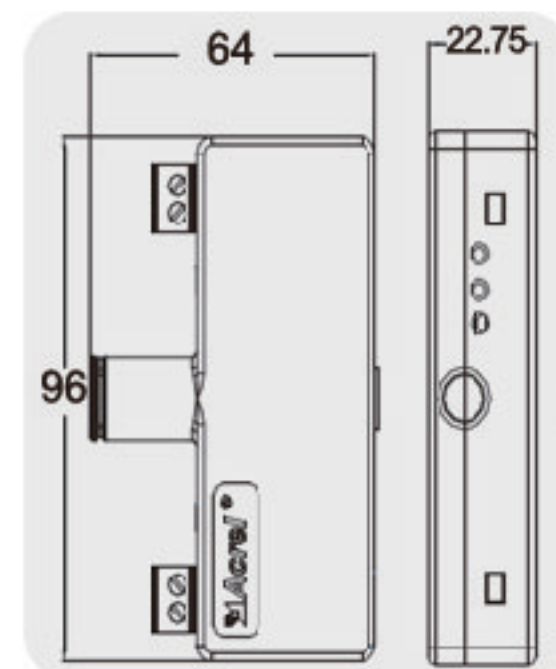
### ● Specifications



		BA05-AI/I(V)	BA10-AI/I(V)	BA20-AI/I(V)	BA50-AI/I(V)	BA50L-AI/I(V)
Auxiliary Power	DC 12V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	DC24V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consumption		≤1W	≤1W	≤1W	≤1W	≤1W
Through-hole size		Φ5mm	Φ10mm	Φ20mm	Φ50mm	Φ50mm
Input	Current	AC 0 ~ (0.5 ~ 10)A	AC 0 ~ (8 ~ 50)A	AC 0 ~ (40 ~ 200)A	AC 0 ~ (60 ~ 600)A	AC 0 ~ (0.1 ~ 1)A (limitation of leakage currents)
	Output	DC4~20mA ,or 0~20mA ,0~5V,0~10V etc				
Load resistance		Current output ≤500Ω ,Voltage output ≥1kΩ				
Accuracy Class		0.5%				
Response time		≤350ms				
Temperature		Operation:-10 to +55℃ Storage:-25 to +70℃				
Temperature coefficient		≤200ppm/℃				
Installation		(Rail)DIN35 , fix on cubicle with screws				
Standards		GB/T 13850				

### 3 BR Series Rogowski Coil Transducer

- **Measuring**
  - Rogowski coil and RMS measurement
  - Super-Current Measurement ,Direct measurement up to 30000A
  - Overload : 1.2 times of rated value
- **Application**
  - Industrial automation
  - Metallurgical and Electroplating
- **Dimension**



#### ● Specifications

		BR-AI			
Auxiliary Power		DC24V			
Consumption		≤1W			
Length of Rogowski coil		350mm	370mm	450mm	600mm
Input	Current	0 ~ (200 ~ 1000)A	0 ~ (1200 ~ 2000)A	0 ~ (2500 ~ 5000)A	0 ~ (6300 ~ 30000)A
Output	Nominal value	DC4~20mA			
	Load resistance	≤500Ω			
Accuracy Class		0.5%			
Response time		≤500ms			
Temperature		Operation:-10 to +55℃ Storage:-25 to +70℃			
Temperature coefficient		≤200ppm/℃			
Installation		Bracket			
Standards		GB/T 13850			

### 4 BD Series Electricity Transducer

- **Measuring**
  - Voltage\Current\Power\Power factor\Frequency
  - Measurement of leakage currents
  - Overload : 1.2 times of rated value
- **Output**
  - Analog Output: DC 0-5V/0-10V/0-20mA/4-20mA
- **Communication**
  - Interface:RS485
  - Protocol:Modbus-RTU
- **Application**
  - Power Monitoring



		BD-AI BD-AV	BD-F	BD-PF	BD-3I3 BD-3(4)V3	BD-3(4)P BD-3(4)Q	BD-3(4)E
Phase & Wiring	1P2W	■	□	□	□	□	□
	3P3W	—	—	□	□	□	□
	3P4W	—	—	□	□	□	□
Input	Voltage	Direct L-L	Up to 480V AC				
		Direct L-N	Up to 276V AC				
	With external PT	■	■	■	■	■	■
Current	Direct	Up to 5A AC					
	With external CT	■	■	■	■	■	■
Measuring	Voltage	□	—	—	□	□	□
	Current	□	—	—	□	□	□
	Active/Reactive Power	—	—	—	—	□	□
	Apparent Power	—	—	—	—	□	□
	Power Factor	—	—	■	—	□	□
	Frequency	—	■	—	—	□	□
Energy Metering	± KWh	—	—	—	—	—	□
Accuracy Class		0.5%					
Communication	Interface:RS485 Protocol:Modbus-RTU	□	□	—	□	□	□
Analog Output		DC 0-5V,0-10V,0-20mA,4-20mA					
Pulse Output		—	—	—	—	—	■
Dimensions(mm)	Housing(W × H × D)	138 × 76 × 24	119 × 75 × 55	119 × 75 × 55	112 × 110 × 75	112 × 110 × 75	112 × 110 × 75
Auxiliary Power		85-265V AC/DC,DC24V,DC48V					
Temperature	Operation	-10 to 55℃					
	Storage	-25 to 70℃					
Humidity		Up to 95%,no condensing					
Installation		(Rail)DIN35 , fix on cubicle with screws					
Standards		GB/T 13850					

MOTE: “■” :Yes “—” :No “□” :Optional

## 5 Hall sensor

### Measuring

-AC, DC, pulse and other complex current signals

### Features

- Small package size
- Low power consumption
- Extended measuring range

### Application

- AC variable speed drives
- Battery supplied applications
- Uninterruptible Power Supplies

### Technical data

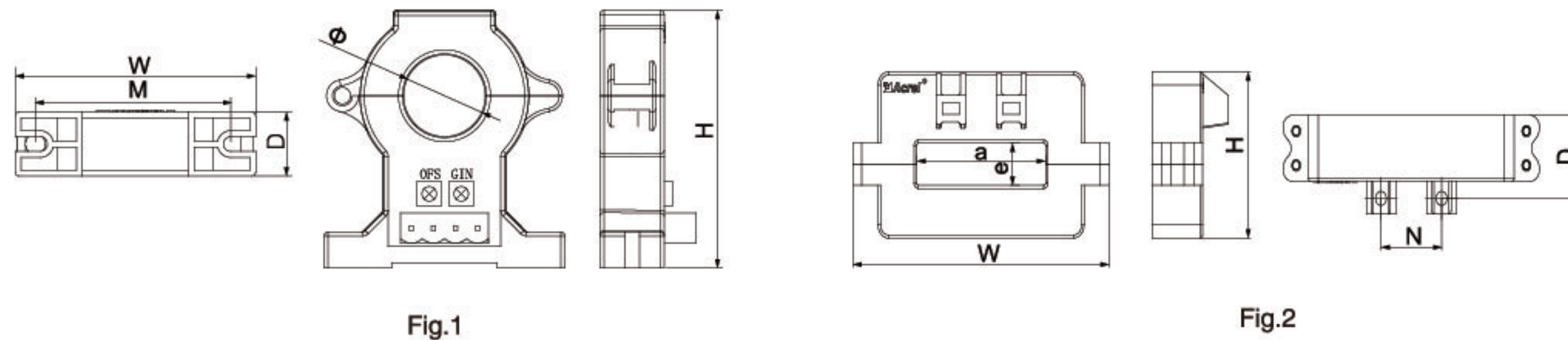
Technical parameters		Open-loop	
		Real-time values	Hall (true RMS)
Output	Nominal value	Voltage: $\pm 5V \pm 4V$	Current: 4-20mA
	Zero offset voltage (current)	Voltage: $\pm 20mV$	Current: $\pm 0.05mA$
	Offset voltage (current) drift	Voltage: $\leq \pm 1.0mV/^{\circ}C$	Current: $\pm 0.04mA/^{\circ}C$
	Linearity	$\leq 0.2\%FS$	
Power voltage		DC $\pm 15V$ DC 12V/24V	DC 12V/24V
Bandwidth		0-20kHz	
Response time		$\leq 20 \mu s$	$\leq 1ms$
Dielectric strength		Permissible 3500VAC between input/output	
Accuracy class		1.0	
Environment	Temperature	$-40^{\circ}C \sim +85^{\circ}C$	
	Humidity	Up to 95%,no condensing	
	Altitude	$\leq 3500m$	

### Specifications

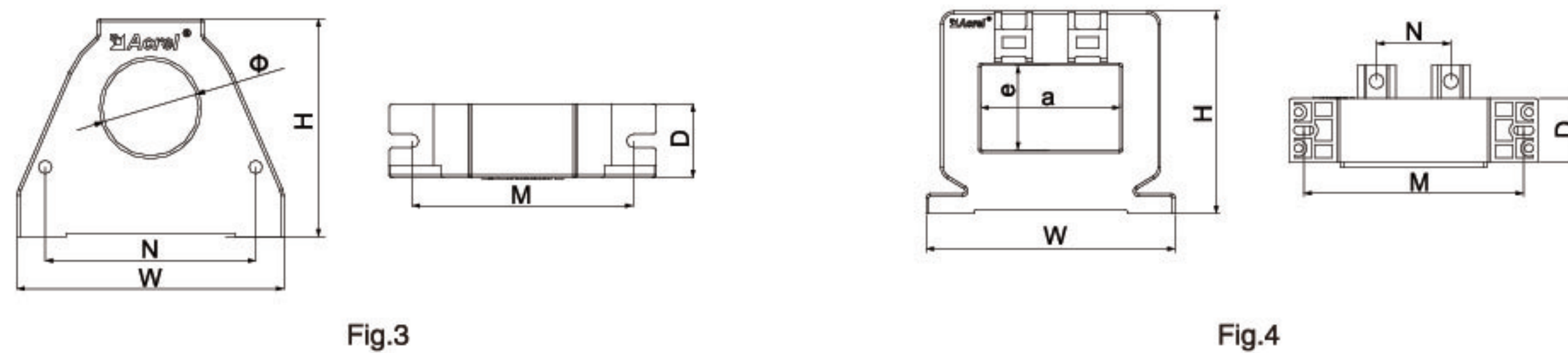
Appearance	Type	Rated input	Auxiliary Power	Rated Output	Measuring Aperture (mm)	
	AHKC-EKA	$\pm (50-500)A$	$\pm 12V \sim \pm 15V$	$\pm 5V/4V$	$\phi 20$	Split
	AHKC-EKAA	DC 0~(50-500)A	12V, 24V	4-20mA		
	AHKC-EKB	$\pm (200-1000)A$	$\pm 12V \sim \pm 15V$	$\pm 5V/4V$	$\phi 40$	Split
	AHKC-EKBA	DC 0~(200-1000)A	12V, 24V	4-20mA		
	AHKC-EKC	$\pm (500-1500)A$	$\pm 12V \sim \pm 15V$	$\pm 5V/4V$	$\phi 60$	Split
	AHKC-EKCA	DC 0~ (500-1500)A	12V, 24V	4-20mA		
	AHKC-K	$\pm (400-2000)A$	$\pm 12V \sim \pm 15V$	$\pm 5V/4V$	64 x 16	Split
	AHKC-KAA	DC0~(400-2000)A	12V, 24V	4-20mA		
	AHKC-H	$\pm (500-3000)A$	$\pm 12V \sim \pm 15V$	$\pm 5V/4V$	82 x 32	Split
	AHKC-KA	$\pm (500-5000)A$	$\pm 12V \sim \pm 15V$	$\pm 5V/4V$	104 x 36	Split
	AHKC-HB	$\pm (2000-40000)A$	$\pm 12V \sim \pm 15V$	$\pm 5V/4V$	132 x 52	Split
	AHKC-HBAA	DC0~(2000-40000)A	12V, 24V	4-20mA		
	AHKC-E	$\pm (50-500)A$	$\pm 12V \sim \pm 15V$	$\pm 5V/4V$	$\pm 5V/4V$	$\phi 20$
	AHKC-LT	$\pm (100-800)A$	$\pm 12V \sim \pm 15V$	$\pm 5V/4V$	$\pm 5V/4V$	$\phi 32.5$
	AHKC-C	$\pm (100-800)A$	$\pm 12V \sim \pm 15V$	$\pm 5V/4V$	$\pm 5V/4V$	30*10.5
	AHKC-BS	$\pm (50-500)A$	$\pm 12V \sim \pm 15V$	$\pm 5V/4V$	$\pm 5V/4V$	20.5*10.5
	AHKC-BSA	DC0~(50-500)A	12V, 24V	4-20mA	20.5*10.5	closed
	AHKC-F	$\pm (200-1000)A$	$\pm 12V \sim \pm 15V$	$\pm 5V/4V$		
	AHKC-FA	$\pm (200-1500)A$	$\pm 12V \sim \pm 15V$	$\pm 5V/4V$	52*15	closed
	AHKC-HAT	$\pm (400-2000)A$	$\pm 12V \sim \pm 15V$	$\pm 5V/4V$	52*32	closed



● Spec. and size (unit: mm)



Size	Specification	Outline size			Through size			Mounting size		Figure
		W	H	D	a	e	Φ	M	N	
	AHKC-EKA	60	64	16	/	/	20	47	/	Fig.1
	AHKC-EKAA	60	64	16	/	/	20	47	/	Fig.1
	AHKC-EKB	100	102	24	/	/	40	80	/	Fig.1
	AHKC-EKBA	100	102	24	/	/	40	80	/	Fig.1
	AHKC-K	127	63	25	64	16	/	/	30	Fig.2
	AHKC-KAA	127	63	25	64	16	/	/	30	Fig.2
	AHKC-H	149	79	25	82	32	/	/	46	Fig.2
	AHKC-KA	176	95.5	29	104	36	/	/	60	Fig.2
	AHKC-HB	204	111.5	29	132	52	/	/	48 × 2	Fig.2



Size	Specification	Outline size			Through size			Mounting size		Figure
		W	H	D	a	e	Φ	M	N	
	AHKC-E	53	72	16	/	/	21	47	/	Fig.3
	AHKC-LT	90	73.5	25	/	/	32.5	74.5	71	Fig.3
	AHKC-BS	43	32.5	19	20.5	10.5	/	/	/	Fig.3
	AHKC-BSA	43	32.5	19	20.5	10.5	/	/	/	Fig.3
	AHKC-F	74	57	22	43	13	/	/	22	Fig.4
	AHKC-FA	94	60.5	26.5	52	15	/	83	28	Fig.4
	AHKC-HAT	94	76.5	24	52.5	32	/	83	28	Fig.4

## 6 Closed-loop Transducer

● Measuring

-AC, DC, pulse and other complex current signals

● Features

- Excellent accuracy
- Low temperature drift
- Wide frequency bandwidth
- Optimized response time

● Application

- AC variable speed drives
- Battery supplied applications
- Uninterruptible Power Supplies
- Power supplies for welding application

● Technical data

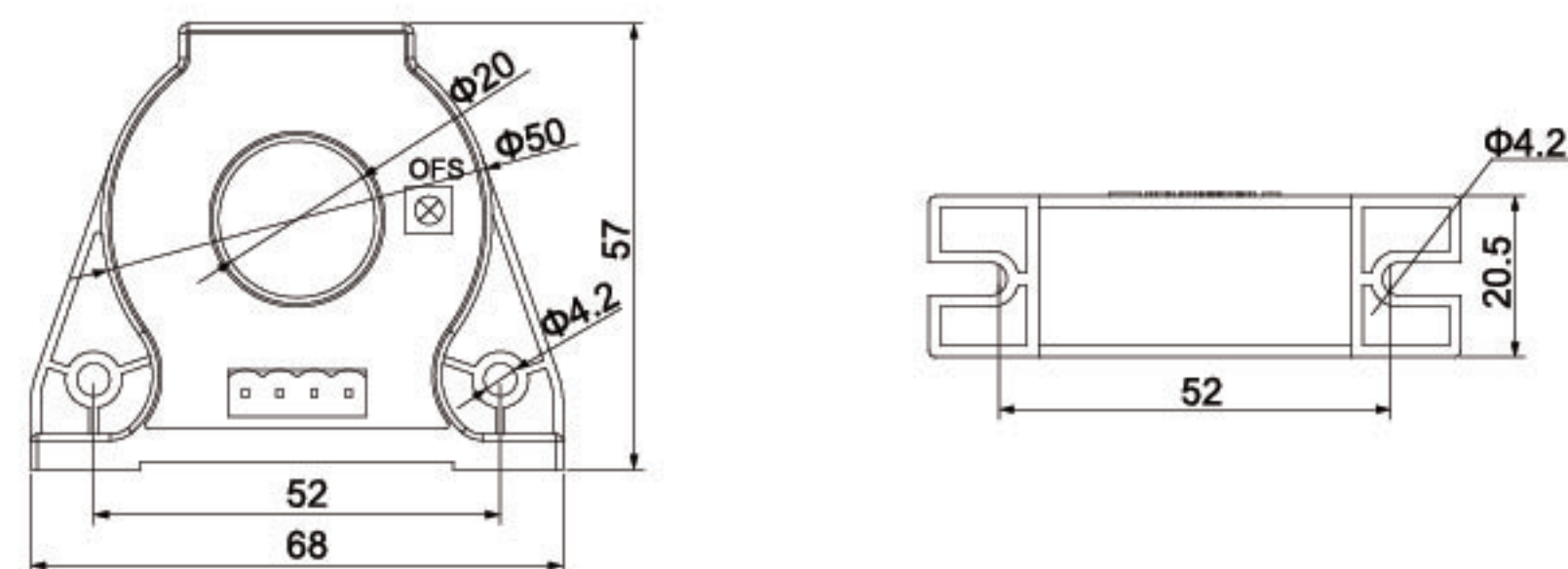
Technical parameters		Data	
		Closed-loop	
		Hall Current	Hall Voltage
Output	Nominal value	Current: 50mA, 100mA, 200mA, 200mA	Current: 50mA
	Zero offset voltage (current)	Voltage: ±0.2mA	Current: ±0.1mA
	Linearity	≤0.2%FS	
Power voltage		±15V ~ ±24V	
Bandwidth		0-100kHz	
Response time		≤1us	≤200us
Dielectric strength		3.5kV AC	12kV AC
Accuracy class		0.5	
Environment	Temperature	-40℃ ~ +85℃	
	Humidity	Up to 95%,no condensing	
	Altitude	≤3500m	

### Specifications

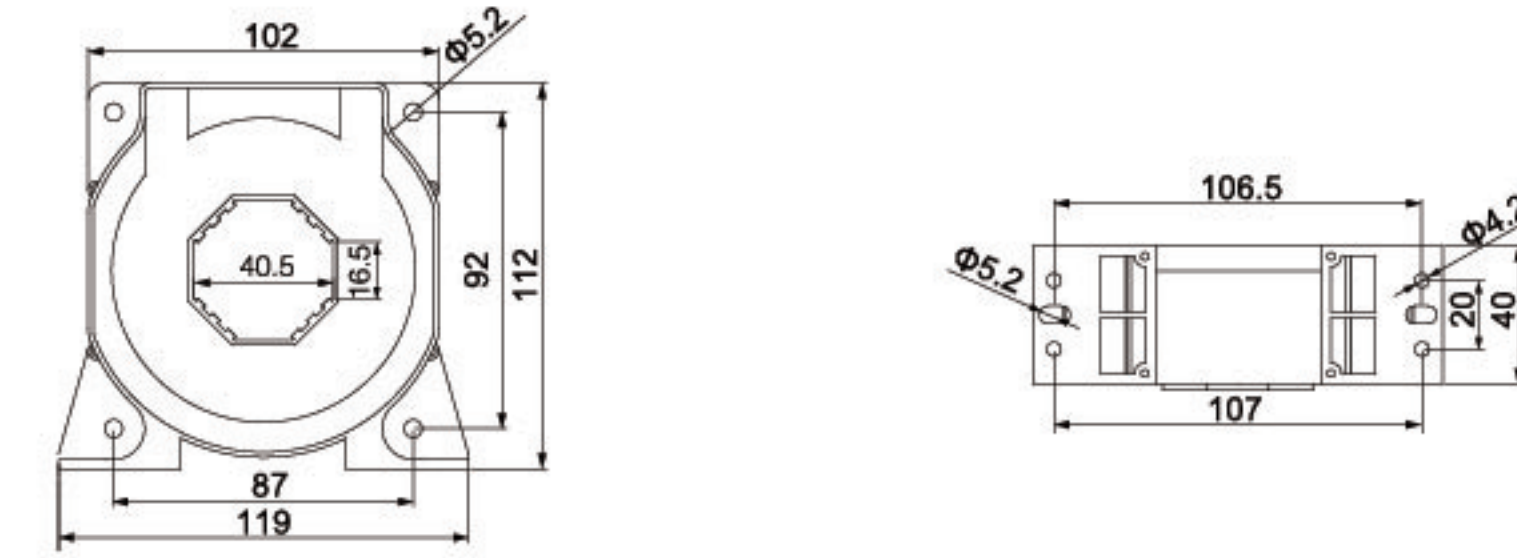
Appearance	Type	Rated Input	Auxiliary Power	Rated Output	Measuring Aperture (mm)
	AHBC-LTA	$\pm (100 \sim 300) \text{ A}$	$\pm 15\text{V} \sim \pm 24\text{V}$	50mA, 100mA	$\phi 20$
	AHBC-LT1005	$\pm 1000\text{A}$	$\pm 15\text{V} \sim \pm 24\text{V}$	200mA	$\phi 40.5$
	AHBC-LF	$\pm 2000\text{A}$	$\pm 15\text{V} \sim \pm 24\text{V}$	400mA	$\phi 60.5$
	AHVS-L100	$\pm 2000\text{V}$	$\pm 15\text{V} \sim \pm 24\text{V}$	50mA	/
	AHVS-LV	$\pm 4000\text{V}$	$\pm 15\text{V} \sim \pm 24\text{V}$	50mA	/

### Spec. and Size (unit: mm)

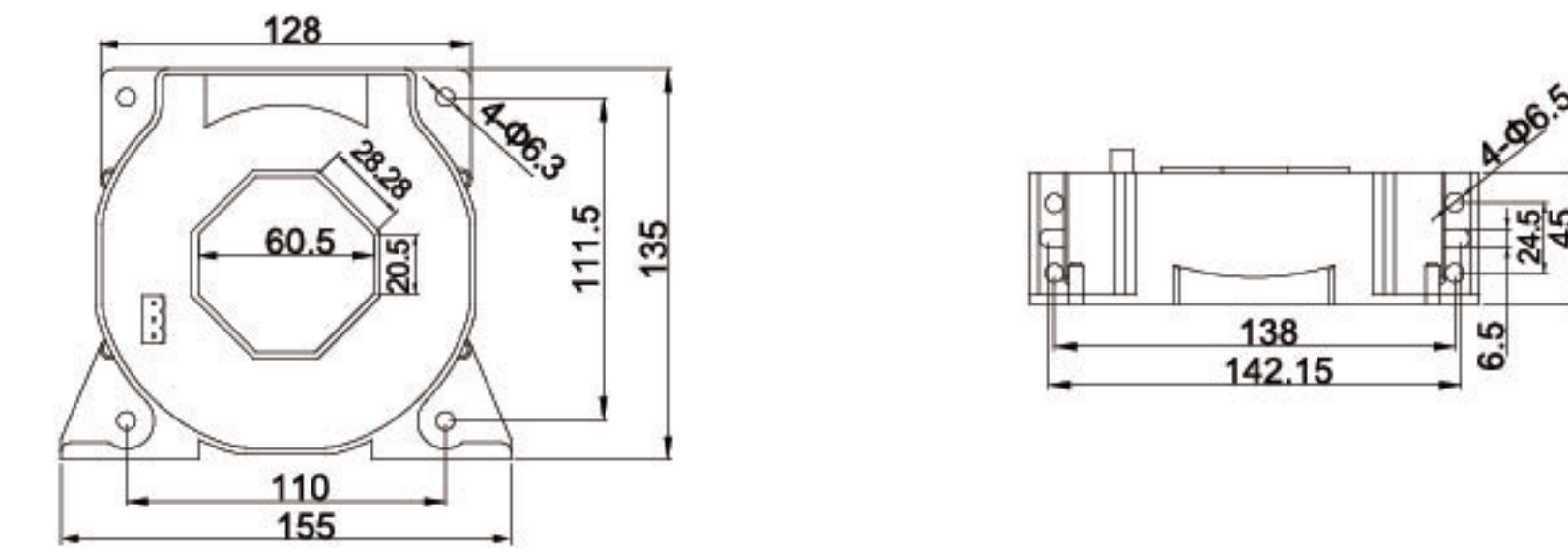
Outline size of AHBC-LTA



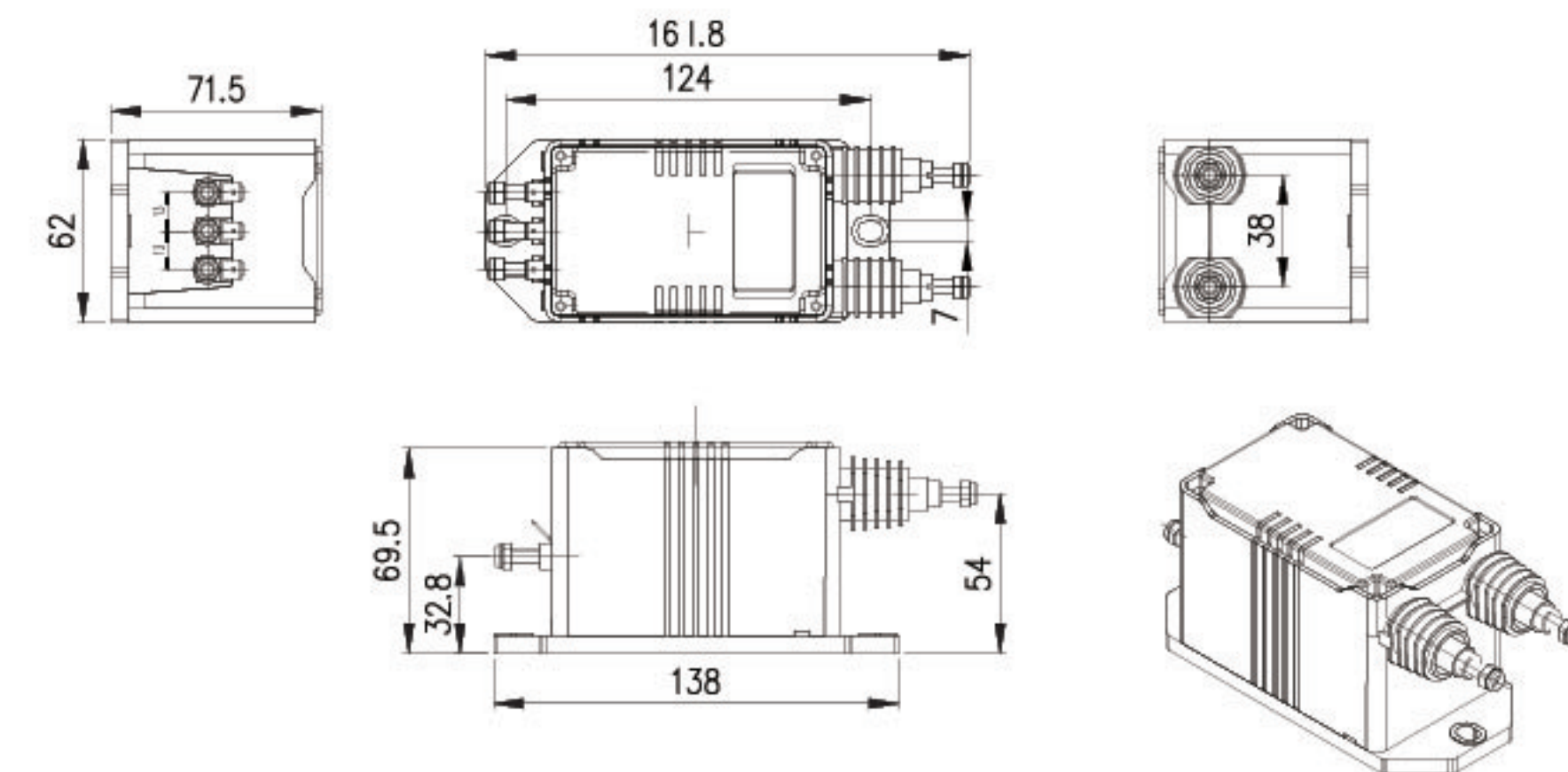
Outline size of AHBC-LT1005



Outline size of AHBC-LF



Outline size of AHVS-L100



Outline size of AHVS-LV

