Acrel

【Stock Code：300286.SZ】

# LOW VOLTAGE CURRENT TRANSFORMER



ACREL CO.,LTD

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

# Monitoring Device

## Power Sensor

### 1. AKH-0.66 Series Measurement Current Transformer

- General

Current Transformer (CT) is used to transform 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

- Environment

Operating temperature:-25℃-+50℃

Storage temperature:-40℃-+80℃

Relative humidity, no condensation:90%

- Security factor

FS < 5

- Protection level

IP30

- Rated frequency

50/60Hz

- Accuracy

±3.0%，±1.0%，±0.5%，±0.2%

- Maximum system voltage

720V AC

- Burden

Ranging 0-30VA

- Test voltage

3kV AC(1min)

- Rated secondary current

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

- Rated short-time thermal current

Ith=40~60In

- Rated primary current

Ranging up to 6000A

- Rated dynamic current

Idyn=2.5Ith

- Casing

Non-flammable,polycarbonate self extinguishing ABS

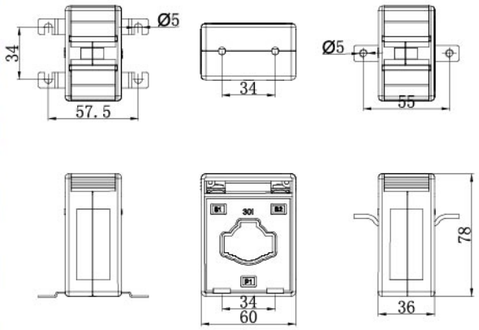
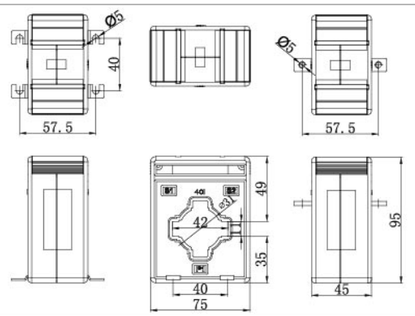
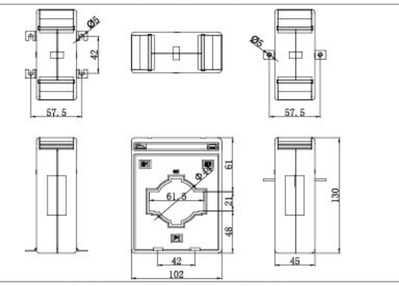
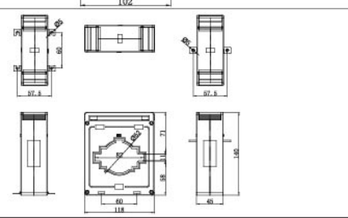
- Continuous overload

120%In

- Terminal marks

Primary P1andP2

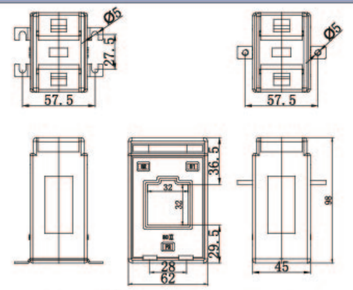
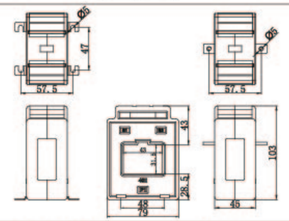
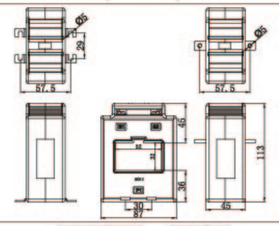
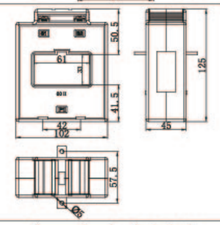
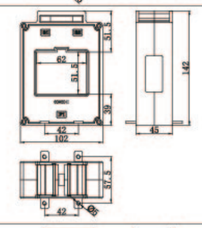
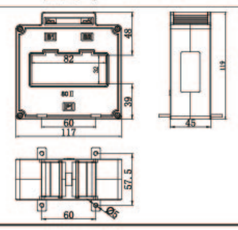
Secondary S1andS2

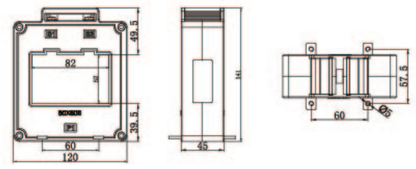
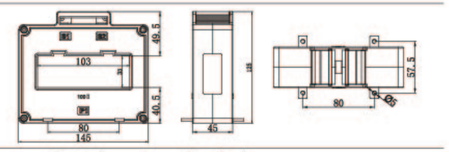
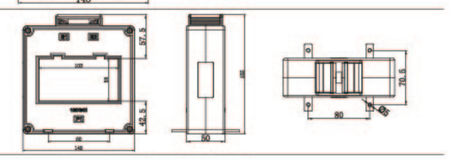
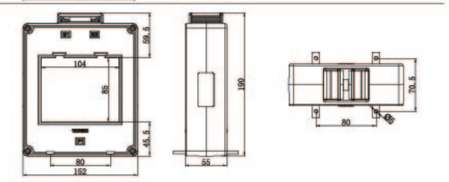
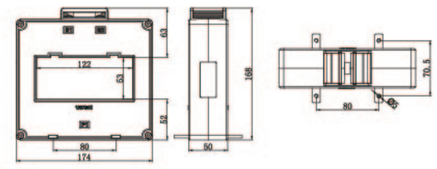
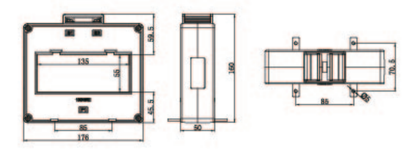
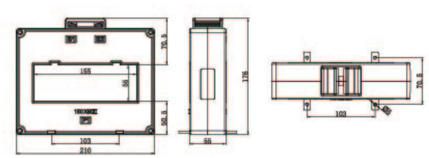
| Type | | Ratio (A) | Burden(VA) Class 0.2 | Class 0.5 | Class 1.0 | Turns | Size(unit：mm) |
|---|---|---|---|---|---|---|---|
|  | 30I | 15/5(1) | | | 1.5 | 5 |  |
| | | 20/5(1) | | | 1.5 | 4 | |
| | | 25/5(1) | | | 1.5 | 3 | |
| | | 30/5(1) | | | 1.5 | 3 | |
| | | 40/5(1) | | | 1.5 | 2 | |
| | | 50/5(1)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





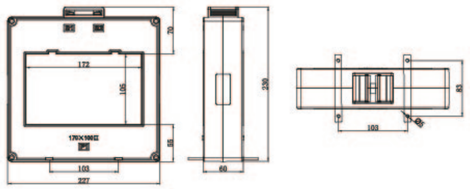
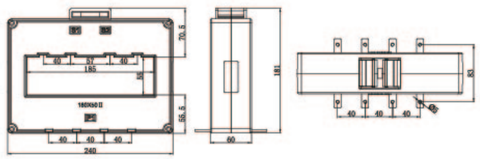
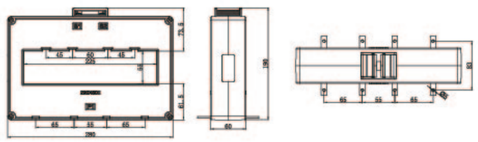
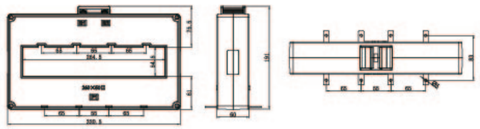
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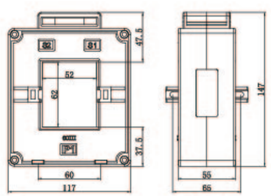
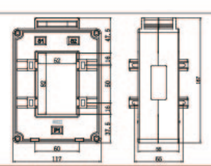
| Type | | Ratio (A) | Burden(VA) Class 0.2 | Class 0.5 | Class 1.0 | Size(unit: mm) |
|---|---|---|---|---|---|---|
|  | 30II | 100/5(1) | | | 1.5 |  |
| | | 150/5(1) | | | 1.5 | |
| | | 200/5(1) | | 1.5 | | |
| | | 250/5(1) | | 3.75 | | |
| | | 300/5(1) | | 5 | | |
| | | 400/5(1) | | 5 | | |
| | | 500/5(1) | | 10 | | |
| | | 600/5(1) | | 10 | | |
|  | 40II | 300/5(1) | | 5 | |  |
| | | 400/5(1) | | 5 | | |
| | | 500/5(1) | | 10 | | |
| | | 600/5(1) | | 10 | | |
| | | 800/5(1) | | 10 | | |
| | | 1000/5(1) | 10 | | | |
|  | 50II | 500/5(1) | | 10 | |  |
| | | 600/5(1) | | 10 | | |
| | | 800/5(1) | | 10 | | |
| | | 1000/5(1) | 10 | | | |
| | | 1200/5(1) | 10 | | | |
| | | 1500/5(1) | 20 | | | |
|  | 60II | 800/5(1) | | 10 | |  |
| | | 1000/5(1) | 10 | | | |
| | | 1200/5(1) | 10 | | | |
| | | 1500/5(1) | 20 | | | |
| | | 2000/5(1) | 20 | | | |
| | | 2500/5(1) | 30 | | | |
|  | 60*50II | 800/5(1) | | 10 | |  |
| | | 1000/5(1) | 10 | | | |
| | | 1200/5(1) | 10 | | | |
| | | 1500/5(1) | 20 | | | |
| | | 2000/5(1) | 20 | | | |
| | | 2500/5(1) | 30 | | | |
|  | 80II | 1000/5(1) | 10 | | |  |
| | | 1200/5(1) | 10 | | | |
| | | 1500/5(1) | 20 | | | |
| | | 2000/5(1) | 20 | | | |
| | | 2500/5(1) | 30 | | | |
| | | 3000/5(1) | 30 | | | |

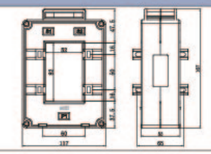
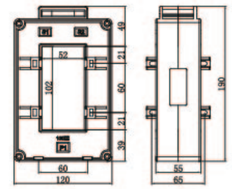
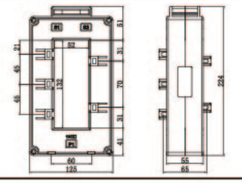
| Type | | Ratio (A) | Burden(VA) Class 0.2 | Class 0.5 | Class 1.0 | Size(unit: mm) |
|---|---|---|---|---|---|---|
|  | 80*50II | 1000/5(1) | 10 | | |  |
| | | 1200/5(1) | 10 | | | |
| | | 1500/5(1) | 20 | | | |
| | | 2000/5(1) | 20 | | | |
| | | 2500/5(1) | 30 | | | |
| | | 3000/5(1) | 30 | | | |
|  | 100II | 1500/5(1) | 20 | | |  |
| | | 2000/5(1) | 20 | | | |
| | | 2500/5(1) | 30 | | | |
| | | 3000/5(1) | 30 | | | |
|  | 100*50II | 1500/5(1) | 20 | | |  |
| | | 2000/5(1) | 20 | | | |
| | | 2500/5(1) | 30 | | | |
| | | 3000/5(1) | 30 | | | |
|  | 100*80II | 1500/5(1) | 20 | | |  |
| | | 2000/5(1) | 20 | | | |
| | | 2500/5(1) | 30 | | | |
| | | 3000/5(1) | 30 | | | |
| | | 4000/5(1) | 30 | | | |
|  | 120*50II | 1500/5(1) | 20 | | |  |
| | | 2000/5(1) | 20 | | | |
| | | 2500/5(1) | 30 | | | |
| | | 3000/5(1) | 30 | | | |
| | | 4000/5(1) | 30 | | | |
| | | 5000/5(1) | 30 | | | |
|  | 130*50II | 1500/5(1) | 20 | | |  |
| | | 2000/5(1) | 20 | | | |
| | | 2500/5(1) | 30 | | | |
| | | 3000/5(1) | 30 | | | |
| | | 4000/5(1) | 30 | | | |
| | | 5000/5(1) | 30 | | | |
|  | 150*50II | 1500/5(1) | 20 | | |  |
| | | 2000/5(1) | 20 | | | |
| | | 2500/5(1) | 30 | | | |
| | | 3000/5(1) | 30 | | | |
| | | 4000/5(1) | 30 | | | |
| | | 5000/5(1) | 30 | | | |

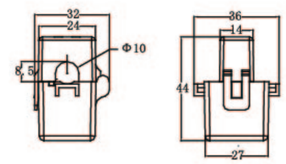
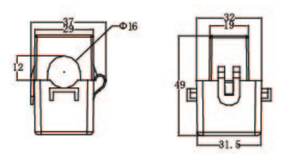
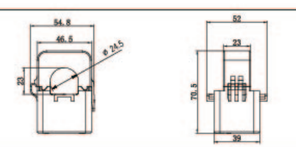


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| Type | | Ratio (A) | Burden(VA) Class 0.2 | Class 0.5 | Class 1.0 | Size(unit: mm) |
|---|---|---|---|---|---|---|
|  | 170*100II | 1500/5(1) | 20 | | |  |
| | | 2000/5(1) | 20 | | | |
| | | 2500/5(1) | 30 | | | |
| | | 3000/5(1) | 30 | | | |
| | | 4000/5(1) | 30 | | | |
| | | 5000/5(1) | 30 | | | |
|  | 180*50II | 2000/5(1) | 20 | | |  |
| | | 2500/5(1) | 30 | | | |
| | | 3000/5(1) | 30 | | | |
| | | 4000/5(1) | 30 | | | |
| | | 5000/5(1) | 30 | | | |
|  | 220*50II | 2000/5(1) | 20 | | |  |
| | | 2500/5(1) | 30 | | | |
| | | 3000/5(1) | 30 | | | |
| | | 4000/5(1) | 30 | | | |
| | | 5000/5(1) | 30 | | | |
|  | 260*50II | 2000/5(1) | 20 | | |  |
| | | 2500/5(1) | 30 | | | |
| | | 3000/5(1) | 30 | | | |
| | | 4000/5(1) | 30 | | | |
| | | 5000/5(1) | 30 | | | |

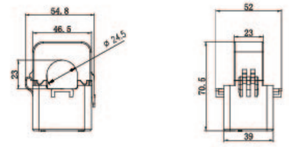
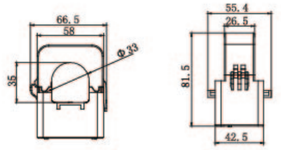
| Type | | Ratio (A) | Burden(VA) Class 0.2 | Class 0.5 | Class 1.0 | Size(unit: mm) |
|---|---|---|---|---|---|---|
|  | 60III | 200/5(1) | | 2.5 | |  |
| | | 300/5(1) | | 2.5 | | |
| | | 400/5(1) | | 5 | | |
| | | 500/5(1) | | 10 | | |
| | | 600/5(1) | | 10 | | |
| | | 800/5(1) | | 10 | | |
| | | 1000/5(1) | 10 | | | |
| | | 1500/5(1) | 15 | | | |
| | | 2000/5(1) | 20 | | | |
| | | 2500/5(1) | 30 | | | |
|  | 80III | 500/5(1) | | 10 | |  |
| | | 600/5(1) | | 10 | | |
| | | 800/5(1) | | 10 | | |
| | | 1000/5(1) | | 10 | | |

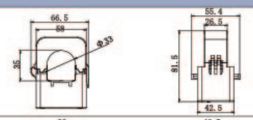
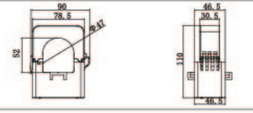
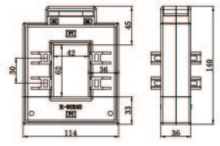
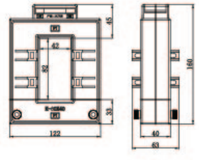
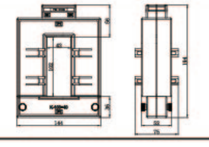
| Type | | Ratio (A) | Burden(VA) Class 0.2 | Class 0.5 | Class 1.0 | Size(unit: mm) |
|---|---|---|---|---|---|---|
|  | 80III | 1500/5(1) | 15 | | |  |
| | | 2000/5(1) | 20 | | | |
| | | 2500/5(1) | 30 | | | |
| | | 3000/5(1) | 30 | | | |
|  | 100III | 1000/5(1) | 10 | | |  |
| | | 1500/5(1) | 15 | | | |
| | | 2000/5(1) | 20 | | | |
| | | 2500/5(1) | 20 | | | |
| | | 3000/5(1) | 30 | | | |
| | | 4000/5(1) | 30 | | | |
| | | 5000/5(1) | 30 | | | |
|  | 130III | 2000/5(1) | 20 | | |  |
| | | 2500/5(1) | 30 | | | |
| | | 3000/5(1) | 30 | | | |
| | | 4000/5(1) | 30 | | | |
| | | 5000/5(1) | 30 | | | |

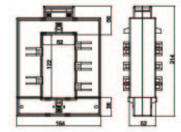
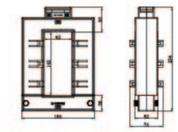
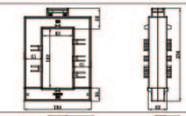
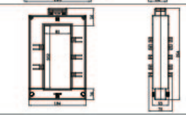
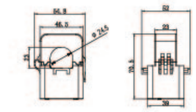
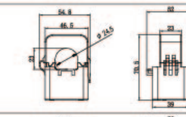
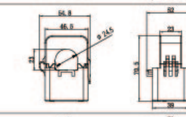
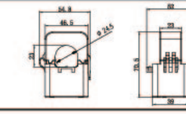
| Type | | Ratio (A) | Burden(VA) Class 0.2 | Class 0.5 | Class 1.0 | Size(unit: mm) |
|---|---|---|---|---|---|---|
|  | K-Φ10 | 5A/1.25mA | | 10 | |  |
| | | (10-20)A/5mA | | 10 | | |
| | | (40-60)A/20mA | | 10 | | |
| | | (5-50) A/333mV | | | 10 | |
| | K-Φ10N | 5A/1.25mA | | 10 | | |
| | | 5A/2.5mA | | 10 | | |
| | | (10-20) A/5mA | | 10 | | |
| | | (40-60) A/20mA | | 10 | | |
|  | K-Φ16 | (20-50)A/10mA | | 10 | |  |
| | | (40-100)A/20mA | | 10 | | |
| | | 100A/40mA | | 10 | | |
| | | (40-100) A/333mV | | 10 | | |
| | K-Φ16N | (20-50) A/10mA | | 10 | | |
| | | (40-100) A/20mA | | 10 | | |
| | | 100A/40mA | | 10 | | |
| | K-Φ24 | (60-200)A/20mA | | 10 | |  |
| | | (100-250)A/40mA | | 10 | | |
| | | 400A/100mA | | 10 | | |
| | | (60-200) A/333mV | | 10 | | |



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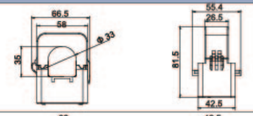
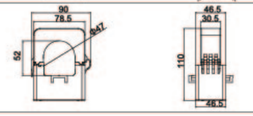
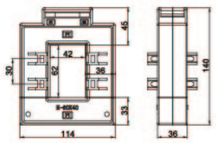
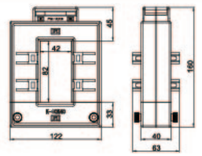
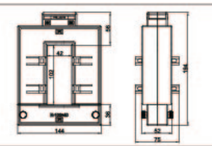
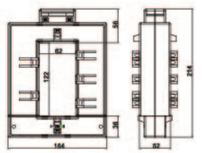
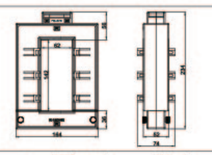
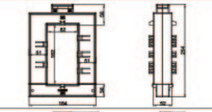
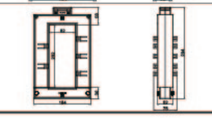
| Type | | Ratio (A) | Burden(VA) | | | Size(unit: mm) |
|---|---|---|---|---|---|---|
| | | | Class 0.2 | Class 0.5 | Class 1.0 | |
|  | K-Φ24 | (150-200)/5(1) | | | 1 |  |
| | | (250-300)/5(1) | | | 1.5 | |
| | K-Φ24N | (60-100) A/20mA | | 10 | | |
| | | (100-250) A/40mA | | 10 | | |
| | | 400A/100mA | | 10 | | |
|  | K-Φ36 | (100-200)A/10mA | | 10 | |  |
| | | (200-400)A/20mA | | 10 | | |
| | | (300-600)A/100mA | | | 10 | |
| | | 400A/40mA | | 10 | | |
| | | 600A/75mA | | 10 | | |
| | | (100-600) A/333mV | | 10 | | |
| | K-Φ36N | (200-400) A/20mA | | 10 | | |
| | | (300-600) A/100mA | | 10 | | |
| | | 400/40mA | | 10 | | |

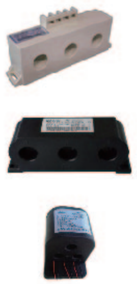
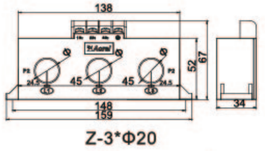
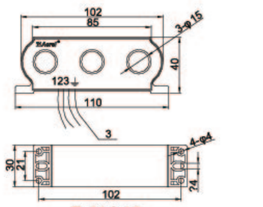
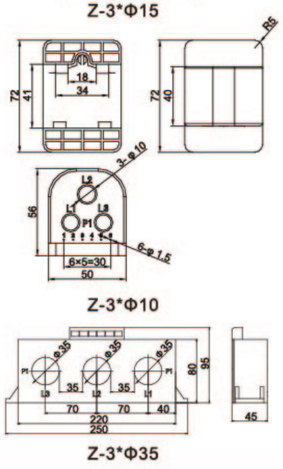
| Type | | Ratio (A) | Burden(VA) | | | Size(unit: mm) |
|---|---|---|---|---|---|---|
| | | | Class 0.2 | Class 0.5 | Class 1.0 | |
|  | K-Φ36 | (300-400)/5(1) | | | 1.5 |  |
| | | (500-600)/5(1) | | 1.5 | | |
| | K-Φ50 | (600-700)/5(1) | | 2.5 | |  |
| | | (800-900)/5(1) | | 5 | | |
| | | 1000/5(1) | | 10 | | |
|  | K-60*40 | 400/5(1) | | 1.5 | |  |
| | | 500/5(1) | | 2.5 | | |
| | | 600/5(1) | | 2.5 | | |
| | | 800/5(1) | | 2.5 | | |
| | | 1000/5(1) | | 5 | | |
| | | 1500/5(1) | | 10 | | |
|  | K-80*40 | 800/5(1) | | 5 | |  |
| | | 1000/5(1) | | 10 | | |
| | | 1500/5(1) | | 10 | | |
| | | 2000/5(1) | | 10 | | |
| | | 3000/5(1) | 10 | | | |
|  | K-100*40 | 1500/5(1) | | 10 | |  |
| | | 2000/5(1) | | 10 | | |
| | | 3000/5(1) | 10 | | | |
| | | 4000/5(1) | 15 | | | |

| Type | | Ratio (A) | Burden(VA) | | | Size(unit: mm) |
|---|---|---|---|---|---|---|
| | | | Class 0.2 | Class 0.5 | Class 1.0 | |
|  | K-120*60 | 1500/5(1) | | 10 | |  |
| | | 2000/5(1) | | 10 | | |
| | | 3000/5(1) | 10 | | | |
| | | 4000/5(1) | 10 | | | |
| | | 5000/5(1) | 10 | | | |
|  | K-140*60 | 2000/5(1) | | 10 | |  |
| | | 3000/5(1) | 10 | | | |
| | | 4000/5(1) | 15 | | | |
| | | 5000/5(1) | 15 | | | |
|  | K-160*80 | 3000/5(1) | 10 | | |  |
| | | 4000/5(1) | 15 | | | |
| | | 5000/5(1) | 15 | | | |
| | K-200*80 | (1000-2000)/5(1) | | 10 | |  |
| | | (2500-3000)/5(1) | 10 | | | |
| | | (4000-5000)/5(1) | 15 | | | |
|  | K-Φ10N | 5A/1.25mA | | 10 | |  |
| | | 5A/2.5mA | | 10 | | |
| | | (10-20) A/5mA | | 10 | | |
| | | (40-60) A/20mA | | 10 | | |
| | K-Φ16N | (20-50) A/10mA | | 10 | |  |
| | | (40-100) A/20mA | | 10 | | |
| | | 100A/40mA | | 10 | | |
| | K-Φ24N | (60-100) A/20mA | | 10 | |  |
| | | (100-250) A/40mA | | 10 | | |
| | | 400A/100mA | | 10 | | |
| | K-Φ36N | (200-400) A/20mA | | 10 | |  |
| | | (300-600) A/100mA | | 10 | | |
| | | 400/40mA | | 10 | | |



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| Type | | Ratio (A) | Burden(VA) | | | Size(unit: mm) |
|---|---|---|---|---|---|---|
| | | | Class 0.2 | Class 0.5 | Class 1.0 | |
|  | K-Φ36 | (300-400)/5(1) | | | 1.5 |  |
| | | (500-600)/5(1) | | 1.5 | | |
| | K-Φ50 | (600-700)/5(1) | | 2.5 | |  |
| | | (800-900)/5(1) | | 5 | | |
| | | 1000/5(1) | | 10 | | |
|  | K-60*40 | 400/5(1) | | 1.5 | |  |
| | | 500/5(1) | | 2.5 | | |
| | | 600/5(1) | | 2.5 | | |
| | | 800/5(1) | | 2.5 | | |
| | | 1000/5(1) | | 5 | | |
| | | 1500/5(1) | | 10 | | |
|  | K-80*40 | 800/5(1) | | 5 | |  |
| | | 1000/5(1) | | 10 | | |
| | | 1500/5(1) | | 10 | | |
| | | 2000/5(1) | | 10 | | |
| | | 3000/5(1) | 10 | | | |
|  | K-100*40 | 1500/5(1) | | 10 | |  |
| | | 2000/5(1) | | 10 | | |
| | | 3000/5(1) | 10 | | | |
| | | 4000/5(1) | 15 | | | |
|  | K-120*60 | 1500/5(1) | | 10 | |  |
| | | 2000/5(1) | | 10 | | |
| | | 3000/5(1) | 10 | | | |
| | | 4000/5(1) | 10 | | | |
| | | 5000/5(1) | 10 | | | |
|  | K-140*60 | 2000/5(1) | | 10 | |  |
| | | 3000/5(1) | 10 | | | |
| | | 4000/5(1) | 15 | | | |
| | | 5000/5(1) | 15 | | | |
|  | K-160*80 | 3000/5(1) | 10 | | |  |
| | | 4000/5(1) | 15 | | | |
| | | 5000/5(1) | 15 | | | |
| | K-200*80 | (1000-2000)/5(1) | | 10 | |  |
| | | (2500-3000)/5(1) | 10 | | | |
| | | (4000-5000)/5(1) | 15 | | | |

| Type | | Ratio (A) | Burden(VA) | | | Size(unit: mm) |
|---|---|---|---|---|---|---|
| | | | Class 0.2 | Class 0.5 | Class 1.0 | |
|  | Z-3*Φ20 | 5-100/5 | | | 1.5 |  |
| | | 150/5 | | | 1.5 | |
| | | 200/5 | | | 1.5 | |
| | | 5-100/1 | | | 2.5 | |
| | | 150/1 | | 1.5 | | |
| | | 200/1 | | 3.75 | | |
| | | 5-200/0.05 | | 5 | | |
| | Z-3*Φ15 | 5-100/0.02 | | 5 | |  |
| | Z-3*Φ10 | 50/0.025 | | 10 | | |
|  | Z-3*Φ35 | 100-150/5 | | 10 | |  |
| | | 200/5 | | 10 | | |
| | | 250/5 | 10 | | | |
| | | 300-450/5 | | | 1.5 | |
| | | 500/5 | | | 1.5 | |
| | | 600-800/5 | | | 1.5 | |
| | | 1000-1250/5 | | | 2.5 | |
|  | | 100-150/1 | | 1.5 | |  |
| | | 200/1 | | 3.75 | | |
| | | 250/1 | | 5 | | |
| | | 300-450/1 | | 5 | | |
| | | 500/1 | | 10 | | |
| | | 600-800/1 | | 10 | | |
| | | 1000-1250/1 | | 10 | | |

## 2. AHKC Series Hall Sensor

### 2.1 Open-loop hall current sensor

- Measuring

  -AC, DC, pulse and other complex current signals

- Features

  -Small package size

  -Low power consumption

  -Extended measuring range







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## • 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: ±5V/±4V | Current: 4-20mA |
| | Zero offset voltage (current) | Voltage: ±20mV | Current:±0.05mA |
| | Offset voltage (current) drift | Voltage: ≤±1.0mV/℃ | Current:±0.04mA/℃ |
| | Linearity | ≤0.2%FS | |
| Power voltage | | DC±15V DC 12V/24V | DC 12V/24V |
| Bandwidth | | 0-20kHz | |
| Response time | | ≤5μs | ≤300ms |
| Dielectric strength | | Permissible 3500VAC between input/output | |
| Accuracy class | | 1.0 | |
| Environment | Temperature | -40℃-+85℃ | |
| | Humidity | Up to 95%,no condensing | |
| | Altitude | ≤3500m | |

## • Specifications

| Appearance | Type | Rated input | Auxiliary Power | Rated Output | Measuring Aperture (mm) | |
|---|---|---|---|---|---|---|
|  | AHKC-EKA | 0~(50-500)A | ±15V | 5V/4V | φ20 | Split |
| | AHKC-EKAA | DC 0~(50-500)A | 12V/24V | 4-20mA | | Split |
|  | AHKC-EKDA | AC 0~(50-500)A | 12V/24V | 4-20mA | | Split |
| | AHKC-EKB | 0~(200-1000)A | ±15V | 5V/4V | φ40 | Split |

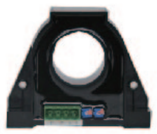
| Appearance | Type | Rated input | Auxiliary Power | Rated Output | Measuring Aperture (mm) | |
|---|---|---|---|---|---|---|
|  | AHKC-EKBA | DC0~(200-1000)A | 12V/24V | 4-20mA | Φ40 | Split |
| | AHKC-EKBDA | AC0~(200-1000)A | 12V/24V | 4-20mA | Φ40 | Split |
| | AHKC-EKC | 0~(500-1500)A | ±15V | 5V/4V | Φ55 | Split |
| | AHKC-EKCA | DC0~(500-1500)A | 12V/24V | 4-20mA | Φ55 | Split |
| | AHKC-EKCDA | AC0~(500-1500)A | 12/24V | 4-20mA | Φ55 | Split |
|  | AHKC-K | 0~(400-2000)A | ±15V | 5V/4V | 64x16 | Split |
| | AHKC-KAA | DC0~(400-2000)A | 12V/24V | 4-20mA | 64x16 | Split |
| | AHKC-KDA | AC0~(400-2000)A | 12V/24V | 4-20mA | 64x16 | Split |
|  | AHKC-H | 0~(500-3000)A | ±15V | 5V/4V | 82x32 | Split |
| | AHKC-KA | 0~(500-5000)A | ±15V | 5V/4V | 104x36 | Split |
| | AHKC-HB | 0~(2000-8000)A | ±15V | 5V/4V | 132x52 | Split |
| | | 0~(10000-20000)A | ±15V | 5V/4V | 132x52 | |
| | | 0~(25000-40000)A | ±15V | 5V/4V | 132x52 | |
|  | AHKC-HBAA | DC0~(2000-8000)A | 12V/24V | 4-20mA | 132x52 | Split |
| | | DC0~(10000-20000)A | 12V/24V | 4-20mA | 132x52 | |
| | | DC0~(25000-40000)A | 12V/24V | 4-20mA | 132x52 | |
|  | AHKC-HBDA | AC0~(2000-8000)A | 12V/24V | 4-20mA | 132x52 | Split |
| | | AC0~(10000-20000)A | 12V/24V | 4-20mA | 132x52 | |
| | AHKC-E | 0~(200-500)A | ±15V | 5V/4V | Φ20 | closed |
| | AHKC-EA | 0~(200-1000)A | +15V | 5V/4V | Φ40 | closed |
| | AHKC-EB | 0~(500-1500)A | +15V | 5V/4V | Φ60 | closed |







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| Appearance | Type | Rated input | Auxiliary Power | Rated Output | Measuring Aperture (mm) | |
|---|---|---|---|---|---|---|
|  | AHKC-LT | 0~(100-800)A | ±15V | 5V/4V | Φ32.5 | closed |
| | AHKC-C | 0~(100-800)A | ±15V | 5V/4V | 31×13 | closed |
| | AHKC-BS | 0~(50-500)A | ±15V | 5V/4V | 20.5×10.5 | closed |
|  | AHKC-BSA | DC0~(50-500)A | 12V/24V | 4-20mA | 20.5×10.5 | closed |
| | AHKC-F | 0~(200-1000)A | ±15V | 5V/4V | 43×13 | closed |
| | AHKC-FA | 0~(200-1500)A | ±15V | 5V/4V | 52×15 | closed |
| | AHKC-HAT | 0~(400-2000)A | ±15V | 5V/4V | 52×32 | closed |

- Spec. and size (unit: mm)

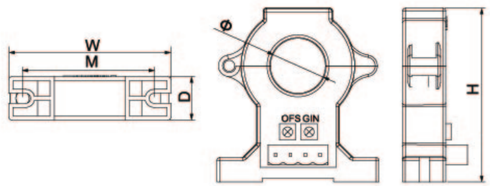



Fig.1

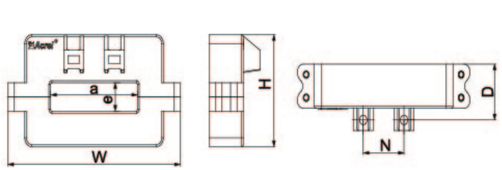



Fig.2

| 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-EKDA | 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-EKBDA | 100 | 102 | 24 | / | / | 40 | 80 | / | Fig.1 |
| AHKC-EKC | 115 | 110 | 27 | / | / | 55.5 | 95.5 | / | Fig.1 |
| AHKC-EKCA | 115 | 110 | 27 | / | / | 55.5 | 95.5 | / | Fig.1 |
| AHKC-EKCDA | 115 | 110 | 27 | / | / | 55.5 | 95.5 | / | Fig.1 |
| AHKC-K | 127 | 63 | 25 | 64 | 16 | / | / | 30 | Fig.2 |
| AHKC-KAA | 127 | 63 | 25 | 64 | 16 | / | / | 30 | Fig.2 |
| AHKC-KDA | 127 | 63 | 25 | 64 | 16 | / | / | 30 | Fig.2 |

| Size \ Specification | Outline size | | | Through size | | | Mounting size | | Figure |
|---|---|---|---|---|---|---|---|---|---|
| | W | H | D | a | e | Φ | M | N | |
| 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 |
| AHKC-HBAA | 204 | 111.5 | 29 | 132 | 52 | / | / | 48×2 | Fig.2 |
| AHKC-HBDA | 204 | 111.5 | 29 | 132 | 52 | / | / | 48×2 | Fig.2 |

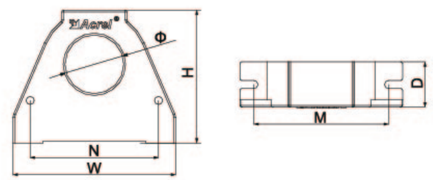



Fig.3

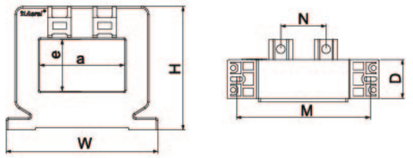



Fig.4

| 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-EA | 100 | 108 | 30 | / | / | 40 | 78 | / | Fig.3 |
| AHKC-EB | 120 | 112 | 30 | / | / | 60 | 98 | / | Fig.3 |
| AHKC-C | 59 | 44 | 19 | 31 | 13 | / | / | / | Fig.4 |
| AHKC-BS | 43 | 32.5 | 19 | 20.5 | 10.5 | / | / | / | Fig.4 |
| AHKC-BSA | 43 | 32.5 | 19 | 20.5 | 10.5 | / | / | / | Fig.4 |
| 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 |

## ➢ 2.2 Closed-loop hall current sensor

- Measuring

-AC, DC, pulse and other complex current signals

- Features

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




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## • Application

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

## • Technical data

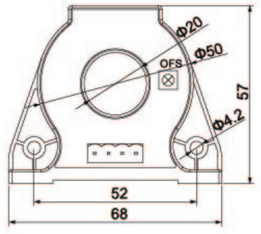
| Technical parameters | | Data | |
|---|---|---|---|
| | | Closed-loop | |
| | | Hall Current | Hall Voltage |
| Output | Nominal value | Current: 50mA, 100mA, 200mA, 200mA | Current: 50mA |
| | Zero offset voltage (current) | Voltage: ±0.2mA | Current:±0.1mA |
| | Linearity | ≤0.2%FS | |
| | Power 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 | |

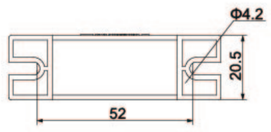
## • Specifications

| Appearance | Type | Rated Input | Auxiliary Power | Rated Output | Measuring Aperture (mm) |
|---|---|---|---|---|---|
|  | AHBC-LTA | (100～300)A | ±15V | 50mA/100mA | Φ20 |
|  | AHBC-LT1005 | ±1000A | ±15V～±24V | 200mA | φ40.5 |
|  | AHBC-LF | ±2000A | ±15V～±24V | 400mA | φ60.5 |

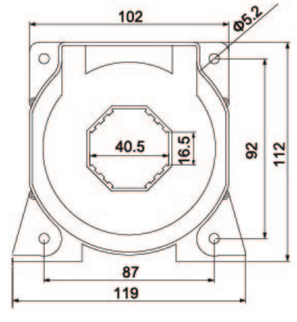
## • Spec. and Size (unit: mm)

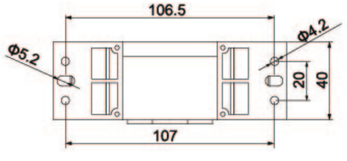
Outline size of AHBC-LTA




Outline size of AHBC-LT1005

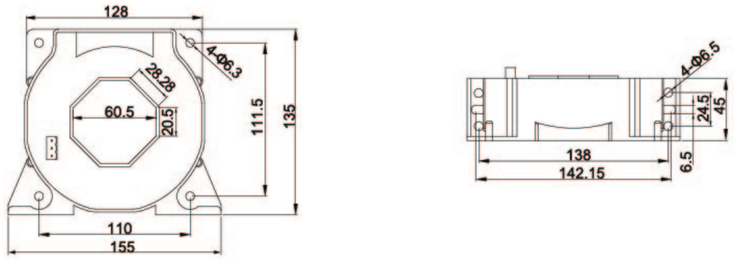





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Outline size of AHBC-LF

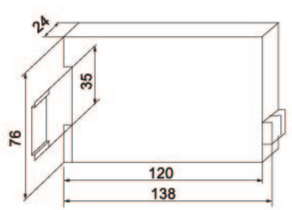



## ➢ 2.3 DC voltage sensor

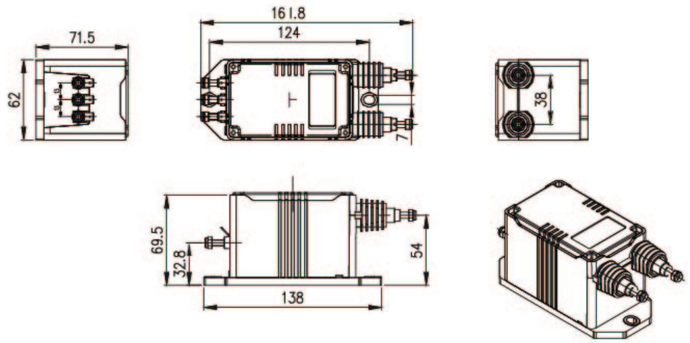
| Appearance | Type | Rated Input | Auxiliary Power | Rated Output | Measuring Aperture (mm) |
|---|---|---|---|---|---|
|  | ACTDS-DV | 100-1500V | 12V/15V/24V | 4~20mAor5V | / |
|  | AHVS-L100 | 50-2500V | ±15V～±24V | 50mA | / |
|  | AHVS-LV | 100-4000V | ±15V～±24V | 50mA | / |

- Spec. and Size (unit: mm)

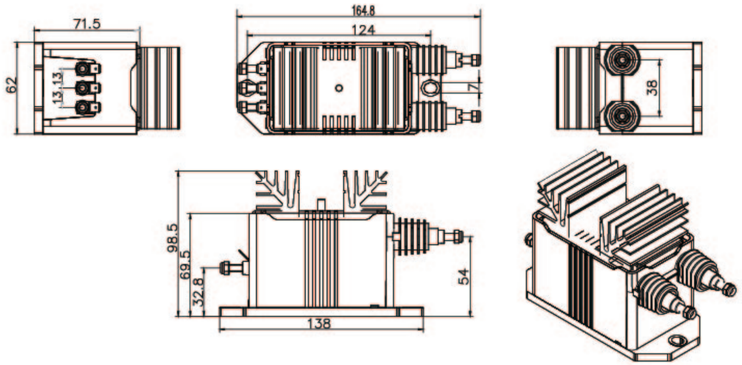
Outline size of ACTDS-DV




Outline size of AHVS-L100




Outline size of AHVS-LV

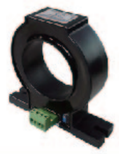



## ➢ 2.4 DC leakage current sensor

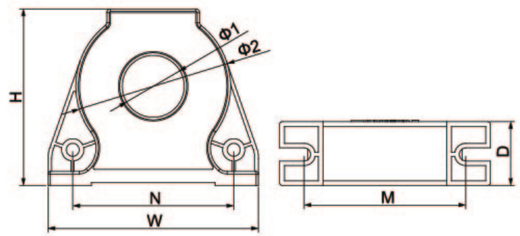
| Appearance | Type | Rated Input | Auxiliary Power | Rated Output | Measuring Aperture (mm) |
|---|---|---|---|---|---|
|  | AHLC-LTA | 10mA~2A | ±15V | 5V | Φ20 |
|  | AHLC-EA | 10mA~2A | ±15V | 5V | φ40 |



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| Appearance | Type | Rated Input | Auxiliary Power | Rated Output | Measuring Aperture (mm) |
|---|---|---|---|---|---|
|  | AHLC-EB | 10mA~2A | ±15V | 5V | φ60 |

• Spec. and size (unit: mm)

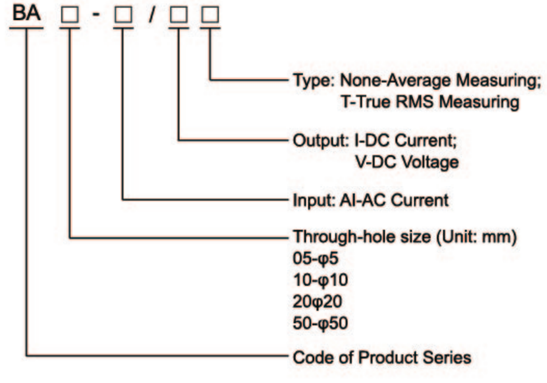



| Size \ Specification | Outline size | | | Through size | Mounting size | | |
|---|---|---|---|---|---|---|---|
| | W | H | D | Φ2 | Φ1 | M | N |
| AHLC-LTA | 68 | 57 | 20 | 50 | 20 | 52 | 52 |
| AHLC-EA | 100 | 108 | 30 | 75 | 40 | 78 | / |
| AHLC-EB | 120 | 112 | 30 | 94 | 60 | 98 | / |

## 3. BA Series Electrical Transducer

### 3.1 BA Current Transducer

• Model Description




• Technical Parameter

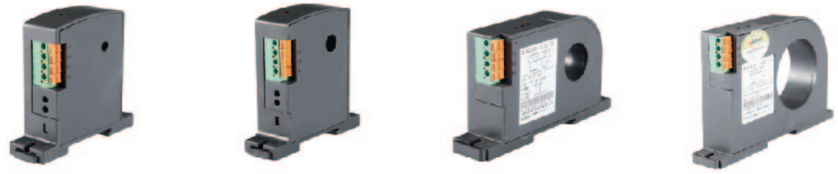
◆ Measuring

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

◆ Application

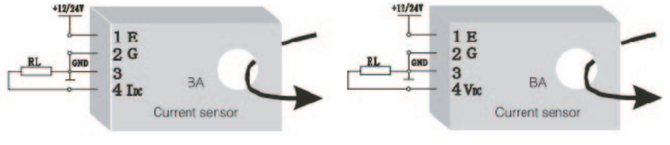
-Industrial automation

◆ 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 | □ | □ | □ | □ | □ |
| | DC24V | □ | □ | □ | □ | □ |
| 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 | Nominal value | 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 | | idt IEC 688:1992 | | | | |

• Wiring

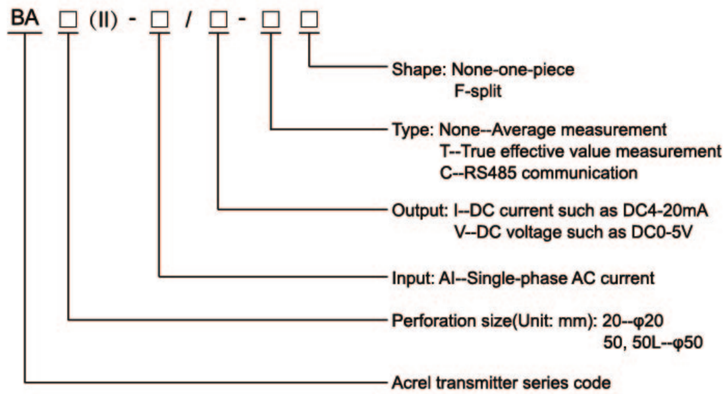





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## ➢ 3.2 Intelligent BA Current Transducer

### • Model Description




### • Technical Parameter

#### ◆ Measuring

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

#### ◆ Characteristic

One-piece shape
Split-type shape
RS485 interface

#### ◆ Application

Industrial automation

#### ◆ Specifications

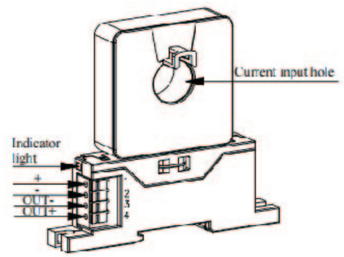




| Technical parameter | | | Index |
|---|---|---|---|
| Accuracy class | | | Class 0.5 |
| Input | Nominal value | BA20(Ⅱ)-AI | Current AC 0.5A, 50A, 200A, etc. AC 0～(0.5～200)A |
| | | BA50(Ⅱ)-AI | Current AC 60A, 300A, 600A, etc. AC 0～(60～600)A |
| | | BA50L(Ⅱ)-AI | Current AC 0.1A, 1A, etc. AC 0～(0.1～1)A |
| | Overload | | Continuous 1.2 times, instantaneous current 10 times/1S |
| | Absorbed power | | ≤1VA |
| | Frequency response | | 25Hz～800Hz, especially suitable for industrial frequency occasions |
| Output | Nominal value | | DC4～20mA, or 0～20mA, 0～5V, 0～10V① etc. |
| | Load Resistance | | When DC12V power supply, current output is ≤250Ω When DC24V power supply, current output is ≤500Ω, When voltage output is ≥1KΩ |
| | Communication | | RS485 interface/Modbus-RTU② |
| Response time | | | ≤400ms |
| Power supply | Voltage | | DC 12V or 24V |
| | Power consumption | | ≤1W |
| Insulation resistance | | | ＞100MΩ |
| Compressive strength | | | Between input/output and power supply 2.0KV/1min, 50Hz |
| Temperature Coefficient | | | -10℃～+55℃, ≤400ppm/℃ |
| Environment | Temperature | | Work: -10℃～+55℃ Storage: -25℃～+70℃ |
| | Humidity | | ≤93%RH, no condensation, no corrosive gas place |
| | Altitude | | ≤2000m |
| Installation method | | | TS35 rail, or use screws to fix the cabinet |

Note: ①0～10V output is only suitable for DC24V power supply;
②The communication function is optional.

### • Wiring




1 —— + The positive pole of the power supply (note that the positive pole and the negative pole of the power supply cannot be reversed)
2 —— - Negative power supply
3 —— OUT- Analog output negative
4 —— OUT+ analog output positive



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## 4. BD Series Electrical Transducer

### • Model Description

BD □ - □ / □

- None: average measurement
  T: true effective value measurement
  C: Communication
- Auxiliary code, showing numbers of output way
  1- Single-way output, omitted
  2- Double-way output
  3- Three-way output
- Function code:
  - AI- Single phase AC current
  - DI- Single phase DC current
  - AV- Single phase AC voltage
  - DV- Single phase DC voltage
  - 3I- Three phase current
  - 3V- 3-phase 3-wire voltage
  - 4V- 3-phase 4-wire voltage
  - 3P- 3-phase 3-wire active power
  - 3Q- 3-phase 3-wire reactive power
  - 4P- 3- phase 4-wire active power
  - 4Q- 3-phase 4-wire reaction power
  - 3P/Q/I- 3-phase 3-wire active power/ reactive power/current combination transmitters
  - 4P/Q/I- 3-phase 4-wire active power/rective power/current combination transmitters
  - 3E- 3-phase 3-wire active electric energy
  - 3RE- 3-phase 3-wire reactive electric energy
  - 4E- 3-phase 4-wire active electric energy
  - 4RE- 3-phase 4-wire reactive electric energy
  - PF- Power factor
  - F- Frequency
- Electric transmitters

### • Technical Parameter

#### ◆ Measuring

-Voltage\Current\Power\Power factor\Frequency

- Measurement of leakage currents

-Overload : 1.2 times of rated value

#### ◆ Communication

-Interface:RS485

-Protocol:Modbus-RTU

#### ◆ Output

Analog Output: DC 0-5V/0-10V/0-20mA/4-20mA

#### ◆ Application

-Power Monitoring

#### ◆ Specifications





| | | | BD-AI<br>BD-AV | BD-3I3<br>BD-3(4)V3 | BD-3(4)P<br>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<br>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 | 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 | | | idt IEC 688:1992 | | | |

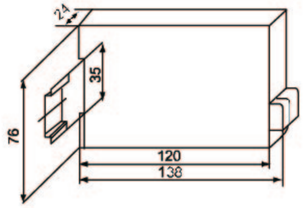
MOTE: "■":Yes "—" :No "□" :Optional



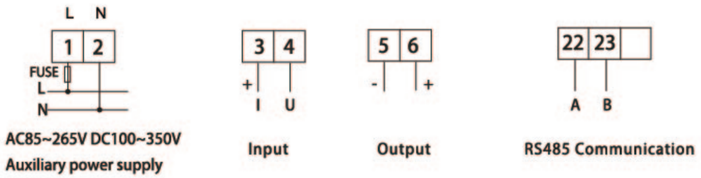
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## • Wiring

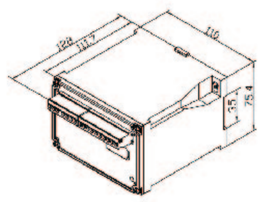
### (1) BD-AI、BD-DI、BD-AV、BD-DV、BD-AI/C

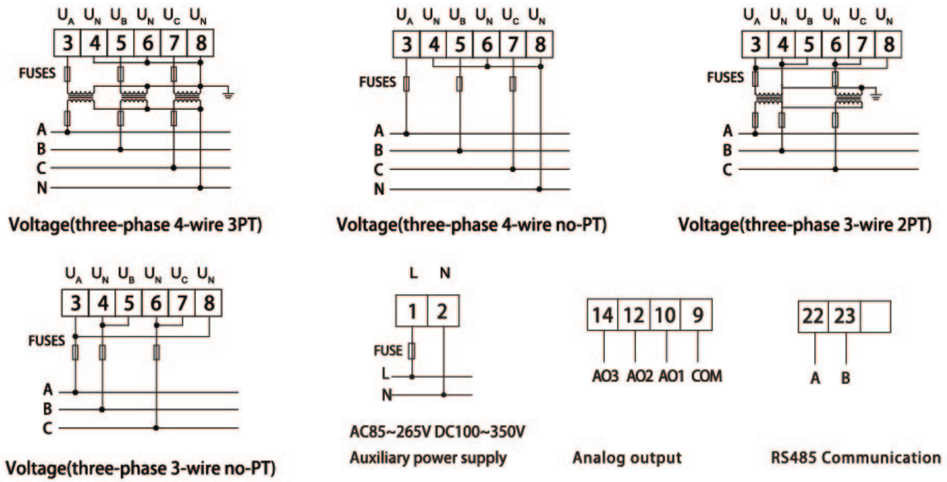




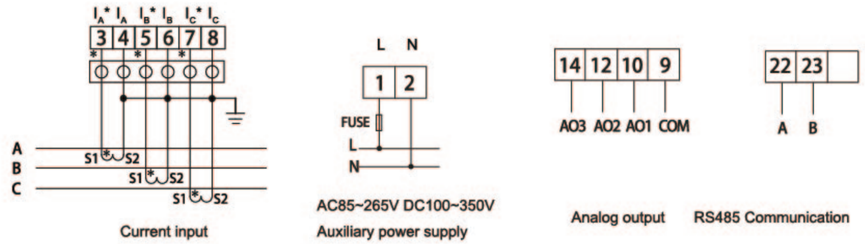




### (2) BD-3I3、BD-3V3、BD-4V3



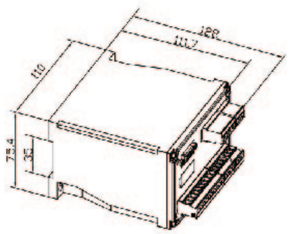




**Voltage transmitters**

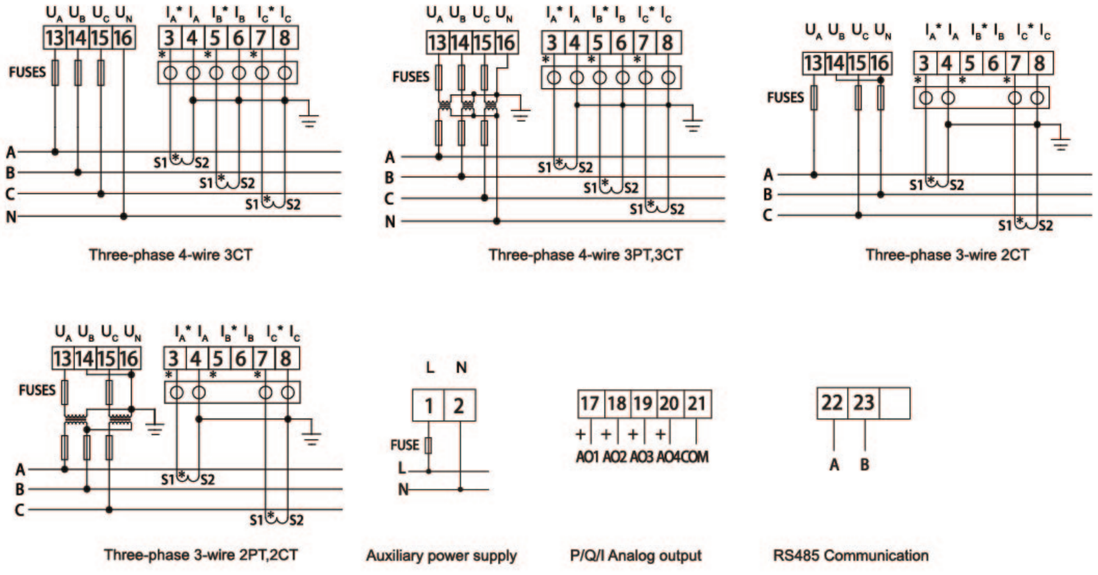



**Current transmitters**

### (3) BD-3P、BD-3Q、BD-3P/Q/I、BD-4P/Q/I、BD-4P、BD-4Q



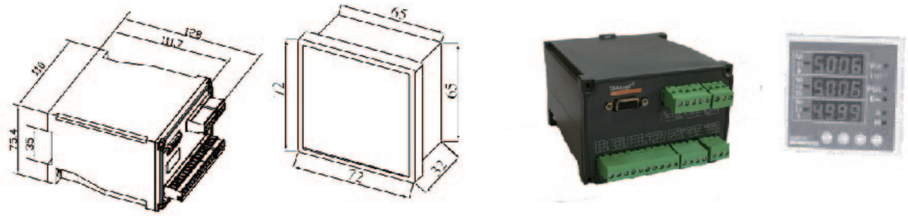


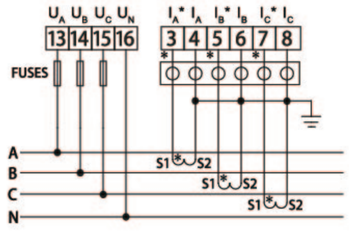





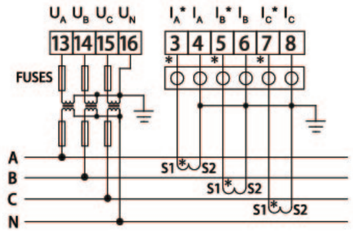

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(4) BD-3E、BD-4E、BD-4EA

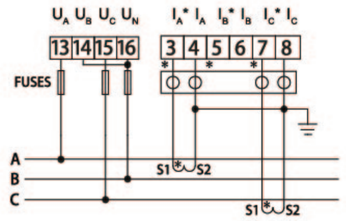


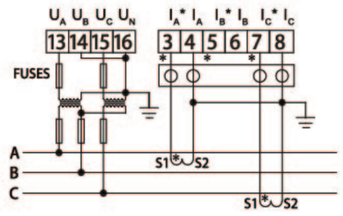

Three-phase 4-wire 3CT



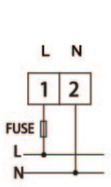

Three-phase 4-wire 3PT,3CT




Three-phase 3-wire 2CT



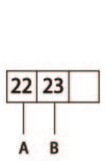

Three-phase 3-wire 2PT,2CT




Auxiliary power supply




P/Q/I Analog output



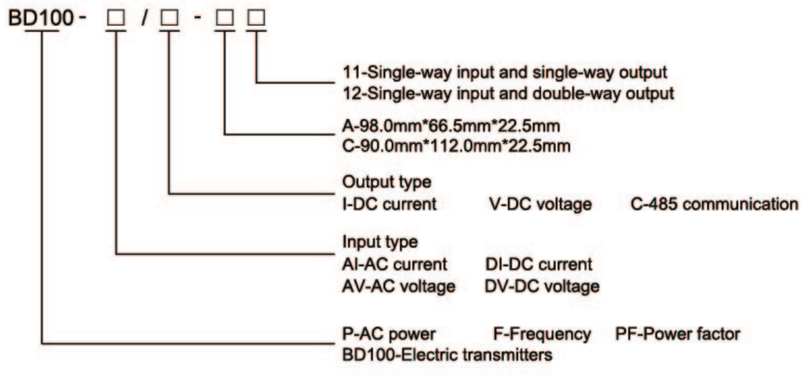

RS485 Communication




Electric energy pulse

## 5. BD100 Series Power Transducer

- Type explanation




- Technical condition

| Technical parameters | Value |
|---|---|
| Input signal | AC current: AC0～1A、AC0～5A<br>AC voltage: AC0～100V、AC0～400V 、AC0～500V<br>Frequency: 45～65Hz<br>AC power: AC 0～2500W<br>DC current: DC 0～1A、DC 0～5A<br>DC voltage: DC0～100V、DC0～500V |
| Output signal | DC0～20mA、DC4～20mA；DC0～5V、DC1～5V、DC0～10V |
| Power supply | DC24V range: DC20V～35V;<br>AC/DC220V range: AC/DC85V～265V |
| Accuracy class | 0.2% |
| Temperature modulus | ≤200ppm/℃ |
| Response time | ≤350ms |
| Isolation voltage | Among input//output//power supply<br>2.0kV/1min, leakage current≤1mA |
| Work /Storage temperature | -20℃～60℃/-25℃～70℃ |
| Humanity | ≤95% (In the place without dew) |
| Protection | IP20 |
| Weight | About 110g（Shape A） About 160g（Shape C） |
| Installation method | TS35 Rail |

- List of selection

| BD100 series electric transmitter | | | | |
|---|---|---|---|---|
| Product model | Input | Output | Auxiliary supply | Channel |
| BD100-AI/I-A11 | AC 0-5A | DC 0-20mA | AC/DC 85~265V | One-in one-out |
| BD100-AI/I-A11 | AC 0-5A | DC 4-20mA | AC/DC 85~265V | One-in one-out |
| BD100-AI/V-A11 | AC 0-5A | DC 0-5V | AC/DC 85~265V | One-in one-out |
| BD100-AI/V-A11 | AC 0-5A | DC 1-5V | AC/DC 85~265V | One-in one-out |
| BD100-AI/V-A11 | AC 0-5A | DC 0-10V | AC/DC 85~265V | One-in one-out |
| BD100-AI/V-A11 | AC 0-5A | DC 2-10V | AC/DC 85~265V | One-in one-out |
| BD100-AV/I-A11 | AC 0-500V | DC 0-20mA | AC/DC 85~265V | One-in one-out |
| BD100-AV/I-A11 | AC 0-500V | DC 4-20mA | AC/DC 85~265V | One-in one-out |
| BD100-AV/V-A11 | AC 0-500V | DC 0-5V | AC/DC 85~265V | One-in one-out |
| BD100-AV/V-A11 | AC 0-500V | DC 1-5V | AC/DC 85~265V | One-in one-out |
| BD100-AV/V-A11 | AC 0-500V | DC 0-10V | AC/DC 85~265V | One-in one-out |
| BD100-AV/V-A11 | AC 0-500V | DC 2-10V | AC/DC 85~265V | One-in one-out |




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| BD100 series electric transmitter | | | | |
|---|---|---|---|---|
| Product model | Input | Output | Auxiliary supply | Channel |
| BD100-DV/I-C12 | DC 0-100V、0-500V | DC 0-20mA | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-DV/I-C12 | DC 0-100V、0-500V | DC 4-20mA | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-DV/V-C12 | DC 0-100V、0-500V | DC 0-5V | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-DV/V-C12 | DC 0-100V、0-500V | DC 1-5V | DC 20~35V<br>AC(DC) 220V | One-in two-out |
| BD100-DV/V-C12 | DC 0-100V、0-500V | DC 0-10V | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-DV/IC-C12 | DC 0-100V、0-500V | DC 0-20mA & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-DV/IC-C12 | DC 0-100V、0-500V | DC 4-20mA & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-DV/VC-C12 | DC 0-100V、0-500V | DC 0-5V & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-DV/VC-C12 | DC 0-100V、0-500V | DC 1-5V & RS485 | DC 20~35V<br>AC(DC) 220V | One-in two-out |
| BD100-DV/VC-C12 | DC 0-100V、0-500V | DC 0-10V & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-DI/I-C12 | DC 0-1A、0-5A | DC 0-20mA | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-DI/I-C12 | DC 0-1A、0-5A | DC 4-20mA | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-DI/V-C12 | DC 0-1A、0-5A | DC 0-5V | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-DI/V-C12 | DC 0-1A、0-5A | DC 1-5V | DC 20~35V<br>AC(DC) 220V | One-in two-out |
| BD100-DI/V-C12 | DC 0-1A、0-5A | DC 0-10V | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-DI/IC-C12 | DC 0-1A、0-5A | DC 0-20mA & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-DI/IC-C12 | DC 0-1A、0-5A | DC 4-20mA & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-DI/VC-C12 | DC 0-1A、0-5A | DC 0-5V & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |

| BD100 series electric transmitter | | | | |
|---|---|---|---|---|
| Product model | Input | Output | Auxiliary supply | Channel |
| BD100-DI/VC-C12 | DC 0-1A、0-5A | DC 1-5V & RS485 | DC 20~35V<br>AC(DC) 220V | One-in two-out |
| BD100-DI/VC-C12 | DC 0-1A、0-5A | DC 0-10V & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-AV/I-C12 | AC 0-100V、0-500V | DC 0-20mA | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-AV/I-C12 | AC 0-100V、0-500V | DC 4-20mA | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-AV/V-C12 | AC 0-100V、0-500V | DC 0-5V | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-AV/V-C12 | AC 0-100V、0-500V | DC 1-5V | DC 20~35V<br>AC(DC) 220V | One-in two-out |
| BD100-AV/V-C12 | AC 0-100V、0-500V | DC 0-10V | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-AV/IC-C12 | AC 0-100V、0-500V | DC 0-20mA & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-AV/IC-C12 | AC 0-100V、0-500V | DC 4-20mA & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-AV/VC-C12 | AC 0-100V、0-500V | DC 0-5V & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-AV/VC-C12 | AC 0-100V、0-500V | DC 1-5V & RS485 | DC 20~35V<br>AC(DC) 220V | One-in two-out |
| BD100-AV/VC-C12 | AC 0-100V、0-500V | DC 0-10V & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-AI/I-C12 | AC 0-1A、0-5A | DC 0-20mA | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-AI/I-C12 | AC 0-1A、0-5A | DC 4-20mA | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-AI/V-C12 | AC 0-1A、0-5A | DC 0-5V | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-AI/V-C12 | AC 0-1A、0-5A | DC 1-5V | DC 20~35V<br>AC(DC) 220V | One-in two-out |
| BD100-AI/V-C12 | AC 0-1A、0-5A | DC 0-10V | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-AI/IC-C12 | AC 0-1A、0-5A | DC 0-20mA & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |


Monitoring Device



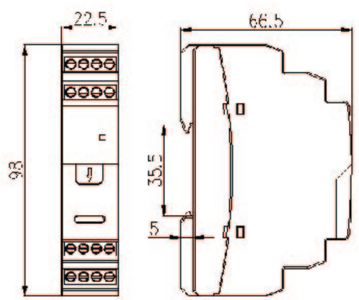
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| BD100 series electric transmitter | | | | |
|---|---|---|---|---|
| Product model | Input | Output | Auxiliary supply | Channel |
| BD100-AI/IC-C12 | AC 0-1A、0-5A | DC 4-20mA & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-AI/VC-C12 | AC 0-1A、0-5A | DC 0-5V & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-AI/VC-C12 | AC 0-1A、0-5A | DC 1-5V & RS485 | DC 20~35V<br>AC(DC) 220V | One-in two-out |
| BD100-AI/VC-C12 | AC 0-1A、0-5A | DC 0-10V & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-P/I-C12 | AC 500V，5A 0-2500W | DC 0-20mA | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-P/I-C12 | AC 500V，5A 0-2500W | DC 4-20mA | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-P/V-C12 | AC 500V，5A 0-2500W | DC 0-5V | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-P/V-C12 | AC 500V，5A 0-2500W | DC 0-10V | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-P/IC-C12 | AC 500V，5A 0-2500W | DC 0-20mA & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-P/IC-C12 | AC 500V，5A 0-2500W | DC 4-20mA & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-P/VC-C12 | AC 500V，5A 0-2500W | DC 0-5V & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-P/VC-C12 | AC 500V，5A 0-2500W | DC 0-10V & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-F/I-C12 | AC 100-500V 45-55Hz | DC 0-20mA | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-F/I-C12 | AC 100-500V 45-55Hz | DC 4-20mA | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-F/V-C12 | AC 100-500V 45-55Hz | DC 0-5V | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-F/V-C12 | AC 100-500V 45-55Hz | DC 0-10V | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-F/IC-C12 | AC 100-500V 45-55Hz | DC 0-20mA & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-F/IC-C12 | AC 100-500V 45-55Hz | DC 4-20mA & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |

| BD100 series electric transmitter | | | | |
|---|---|---|---|---|
| Product model | Input | Output | Auxiliary supply | Channel |
| BD100-F/VC-C12 | AC 100-500V 45-55Hz | DC 0-5V & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-F/VC-C12 | AC 100-500V 45-55Hz | DC 0-10V & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-PF/I-C12 | -1~1 | DC 0-20mA | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-PF/I-C12 | -1~1 | DC 4-20mA | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-PF/V-C12 | -1~1 | DC 0-5V | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-PF/V-C12 | -1~1 | DC 0-10V | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-PF/IC-C12 | -1~1 | DC 0-20mA & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-PF/IC-C12 | -1~1 | DC 4-20mA & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-PF/VC-C12 | -1~1 | DC 0-5V & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |
| BD100-PF/VC-C12 | -1~1 | DC 0-10V & RS485 | DC 20~35V<br>AC/DC 85~265V | One-in two-out |

## • Outline dimension and install

unit: mm




Outline A dimension




Shape A

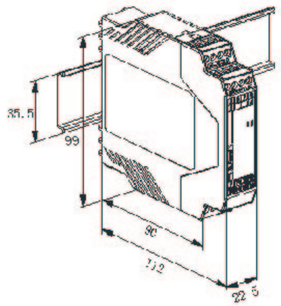






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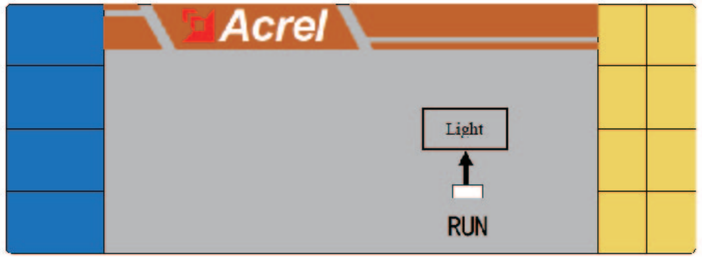
unit: mm




Outline C dimension



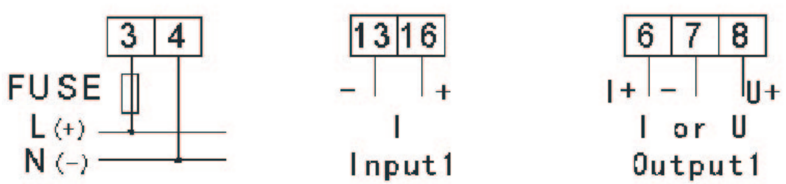
Shape C



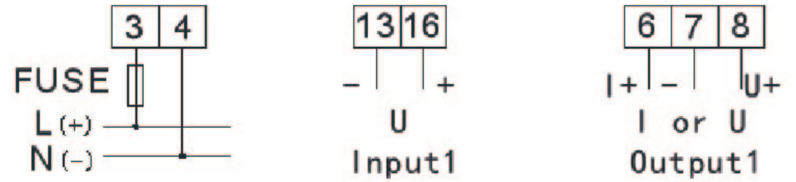

| Light | Green | Red |
|---|---|---|
| Shape A | After power on, the light is always on | / |
| Shape C | After power on, the light flashes once for 1s. After the RS485 communication is successfully connected, the light flashes once every 50ms. | When overvoltage or overcurrent occurs, the red light is on (Overvoltage and overcurrent alarm value is 120% of full scale signal) |

## • Wiring

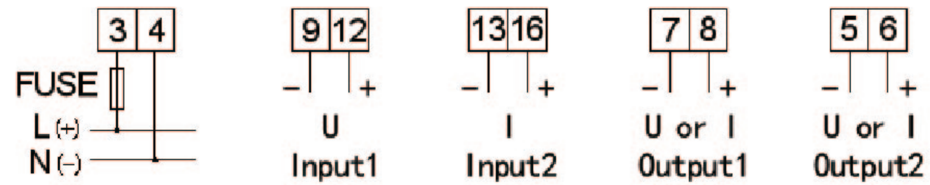
BD100-AI/I-A11、BD100-AI/V-A11



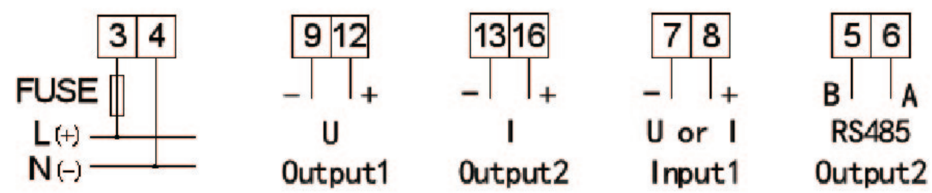

BD100-AV/I-A11、BD100-AV/V-A11




BD100-□/□-C12



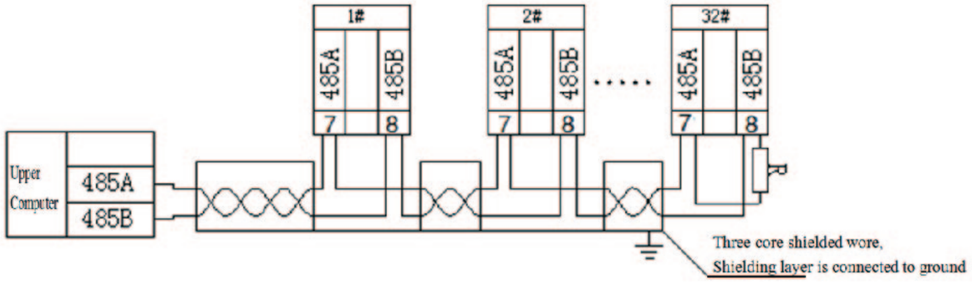

BD100-□/□C-C12






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The wiring example of the communication part is shown in the figure below:
Correct wiring: communication cable shield grounding




## 6. BM series Analog Signal Isolator

### • Model Description

BM □ - □ / □ □

- S-Input Power Supply
- Output: I-Current Analog; II-Double-Current Output
  V-Voltage Analog; IV-Current Voltage;
- S-Input Power Supply
- Input: AV-Alternating Voltage; DV-Direct Voltage;
  AI-Alternating Current; DI-Direct Current
  R-Fixed Resistance; TR-Thermal Resistance;
  VR-Potentio Meter; TC-Thermocouple
- Product Series Code

### • Technical Parameter

| Input form | Input range | Output range | Auxiliary supply | Isolation voltage | Output settings | Other features | Model |
|---|---|---|---|---|---|---|---|
| Direct current | 4-20mA | 4-20mA | / | 2kV | 2-wire 8.5-40VDC | Powered by output circuit | BM-DI/IS |
| Alternating current | 0-1A<br>0-5A | 4-20mA | / | 2kV | 2-wire 8.5-40VDC | Powered by output circuit | BM-AI/IS |
| Direct current | 4-20mA | 4-20mA | / | 2kV | Self-powered by input circuit | | BM-DIS/I |
| | 4-20mA<br>0-5V | 4-20mA | 24VDC | 2kV | Independent two circuits | | BM-DI/II<br>BM-DV/II<br>BM-DI/IV<br>BM-DV/IV |
| | 4-20mA<br>0-20mA | 4-20mA<br>0-20mA | 24VDC | 2kV | 4-wire | | BM-DI/I |
| | | 0-10V;<br>0-5V | | | | | BM-DI/V |
| | 0-20mA | Two relays controlled by setting point | 110/220V AC, DC | 2kV | 2 NO contact groups | | BM-DI/J |
| Direct voltage | 0-10V; 0-5V | 4-20mA | / | 2kV | 2-wire 8.5-40VDC | Powered by output circuit | BM-DV/IS |
| | 0-10V; 0-5V | 4-20mA<br>0-20mA | 24VDC | 2kV | 4-wire | | BM-DV/I |
| | | 0-10 V;<br>0-5 V | | | | | BM-DV/V |
| | 0-10V | Two relays controlled by setting point | 110/220V AC, DC | 2kV | 2 NO contact groups | | BM-DV/J |
| Alternating voltage | 0-125V AC<br>0-250V AC<br>0-450V AC | 4-20mA | / | 2kV | | | |
| Thermal resistance | Pt100<br>0-50℃; 0-100℃;<br>0-150℃; 0-200℃<br>0-250℃; 0-300℃ | 4-20mA<br>0-20mA | / | 2kV | 2-wire 8.5-40VDC | Powered by output circuit | BM-TR/IS |
| | | | 24VDC | 2kV | 4-wire | | BM-TR/I |
| Resistance | 0-100Ω; 0-lkΩ<br>0-5kΩ; 0-10kΩ | 4-20mA | / | 2kV | 2-wire 8.5-40VDC | Powered by output circuit | BM-R/IS |
| Potentiometer | 0 ~350Ω(~10kΩ) | 4-20mA | / | 2kV | 2-wire 8.5-40VDC | Powered by output circuit | BM-VR/IS |



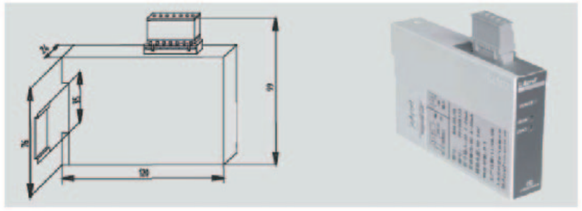




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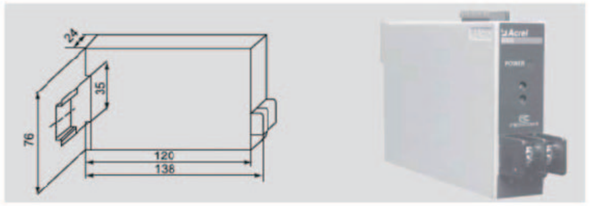
## • Wiring

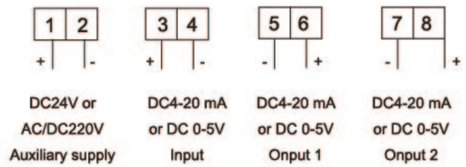
### (1) BM-DI/IS; BM-DV/IS



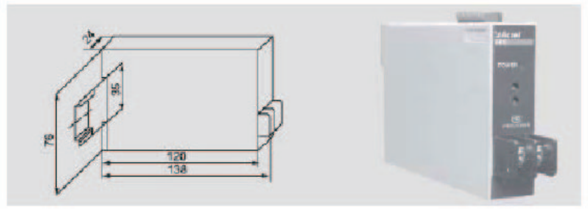


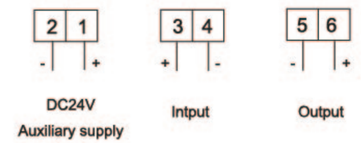

### (2) BM-DI/II; BM-DV/II; BM-DI/VI; BM-DV/VI



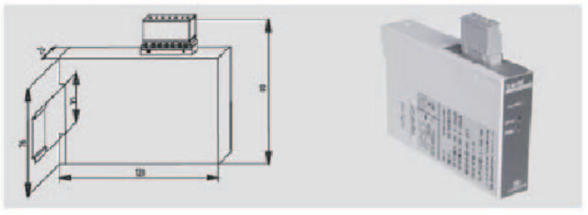


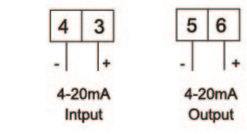

### (3) BM-DI/I; BM-DI/V; BM-DV/I; BM-DV/V



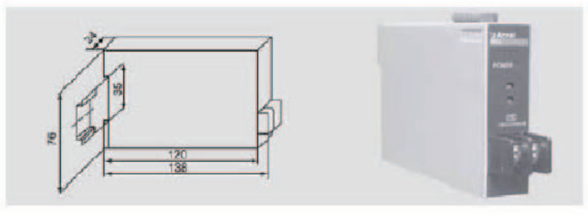


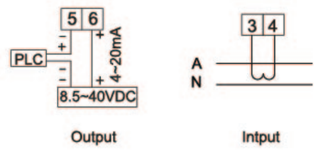

### (4) BM-DIS/I



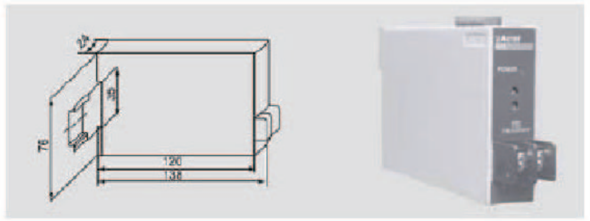


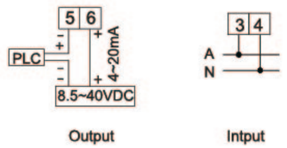

### (5) BM-AI/IS



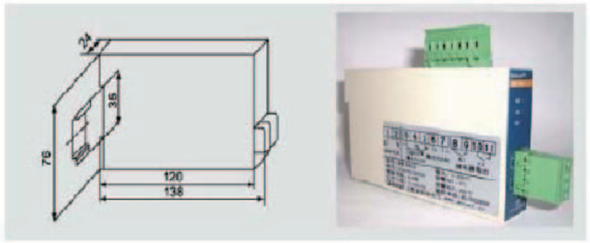


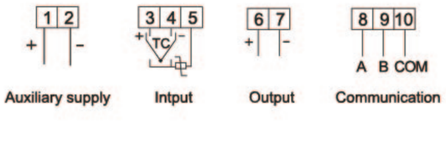

### (6) BM-AV/IS



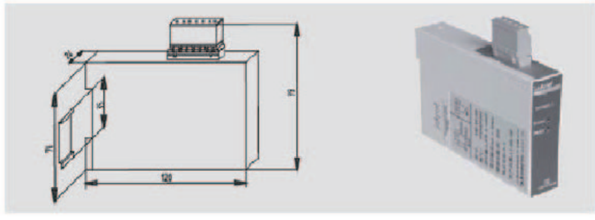


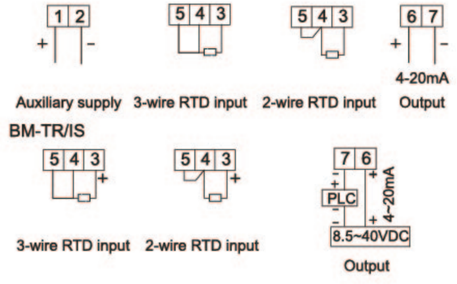

### (7) BM-TC/I; BM-TC/V



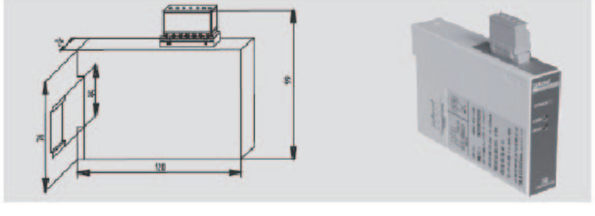


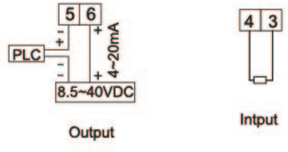

### (8) BM-TR/IS; BM-TR/I; BM-TR/V






### (9) BM-R/IS

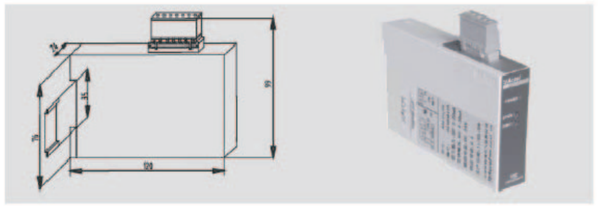


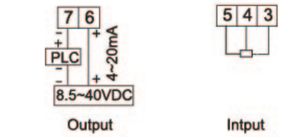




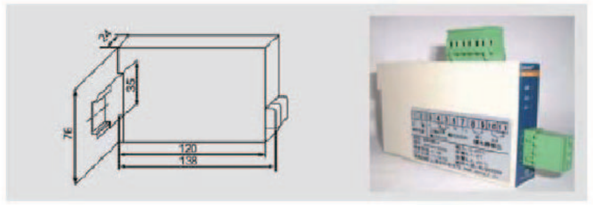

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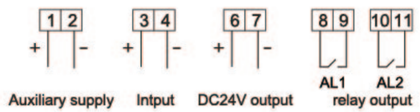
(10) BM-VR/IS



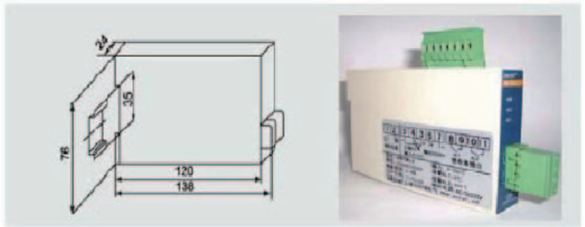


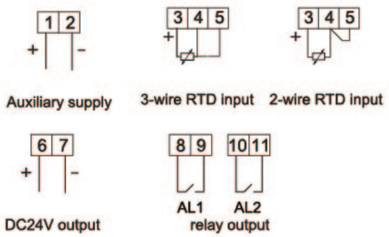

(11) BM-DI/J; BM-DV/J





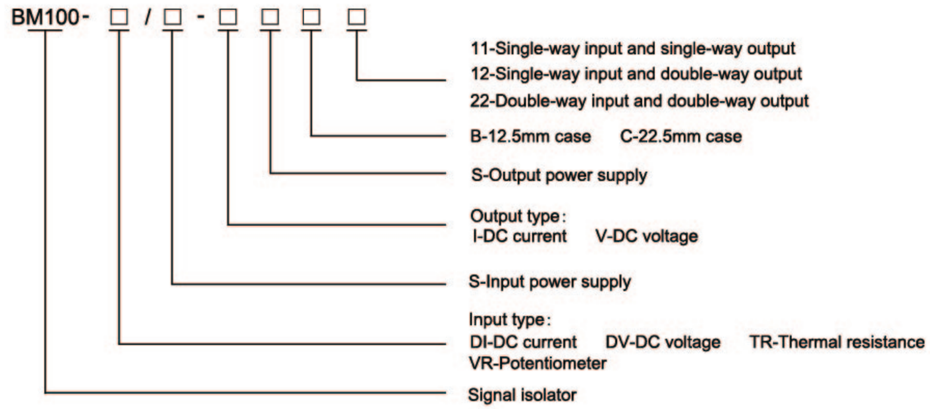

(12) BM-TR/J






## 7. BM100 Series Signal Isolator

### 7.1 Type of products




### 7.2 Technical parameter

| | |
|---|---|
| Channel type | Single-way input and single-way output,<br>single-way input and double-way output,<br>double-way input and double-way output |
| Input type | Current/Voltage/Thermal resistance Pt100/Resistance |
| Input signal | DC 0~20mA /4~20mA<br>DC 0~5V /1~5V /0~10V<br>Pt100(Minimum range: 50℃)<br>0~10KΩ(Minimum range: 1KΩ) |
| Output signal | DC 0~20mA /4~20mA ; Load resistance: ≤550Ω<br>DC 0~5V /1~5V; Load resistance: ≥330KΩ<br>Load resistance: ≥30KΩ(Pt100/Resistance input)<br>DC 0~10V /2~10V; Load resistance: ≥500KΩ<br>Load resistance: ≥30KΩ(Pt100/Resistance input) |
| Transmission accuracy | 0.2% |
| Temperature modulus | 50ppm/℃ (Voltage output: 100ppm/℃) |
| Response time | 5ms to reach 90% of final value<br>(RTD Pt100/resistance input: 1s to reach 90% of final value) |
| Auxiliary supply | 20~35V DC or 85~265V AC/DC |
| Work temperature | -20℃~+60℃ |
| Installation method | TS35 Rail |
| Dielectric strength | ≥1500V AC/1 min (Among input//output//Auxiliary supply) |



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## ➢ 7.3 List of model selection

Ps: The same shape indicates the corresponding input and output.

| Analog signal input | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Current input | | | | | | | | | | | | | | | | | | |
| Type | Channel | | | Input type | | | Input signal | | Output type | | | Output signal | | | | Auxiliary supply | | |
| | 1 In 2 out | 1 In 2 out | 2 In 2 out | 2-wire trans-ducer | 3-wire trans-ducer | Cur-rent source | DC 0~20 mA | DC 4~20 mA | None loop power supply | Input loop power supply | Output loop power supply | DC 0~20 mA | DC 4~20 mA | DC 0/1 ~5V | DC 0/2 ~10V | DC 20 ~35V | AC /DC 85 ~265V | / |
| BM100-DI/I-B11 | ■ | | | ■ | ■ | ■ | ▲ | ■ | ■ | | | ▲ | ■ | | | ■ | | |
| BM100-DI/I-B11 (only current source) | ■ | | | | | ■ | ■ | | ■ | | | | ■ | | | ■ | | |
| BM100-DI/I-C11 | ■ | | | | | ■ | ■ | ■ | ■ | | | ■ | ■ | | | | ■ | |
| BM100-DIS/I-B11 | ■ | | | | | ■ | ■ | ■ | | ■ | | ■ | ■ | | | | | ■ |
| BM100-DI/IS-B11 | ■ | | | | | ■ | ■ | ■ | | | ■ | ■ | ■ | | | | | ■ |
| BM100-DI/I-C12 | | ■ | | ■ | ■ | ■ | ▲ | ■ | ■ | | | ▲ | ■ | | | ■ | ■ | |
| BM100-DI/I-C12 (only current source) | | ■ | | | | ■ | ■ | | ■ | | | ■ | ■ | | | ■ | | |
| BM100-DI/I-C22 | | | ■ | ■ | ■ | ■ | ▲ | ■ | ■ | | | ▲ | ■ | | | ■ | ■ | |
| BM100-DI/I-C22 (only current source) | | | ■ | | | ■ | ■ | | ■ | | | ■ | ■ | | | ■ | | |
| BM100-DIS/I-C22 | | | ■ | | | ■ | ■ | ■ | | ■ | | ■ | ■ | | | | | ■ |
| BM100-DI/IS-C22 | | | ■ | | | ■ | ■ | ■ | | | ■ | ■ | ■ | | | | | ■ |
| BM100-DI/V-B11 | ■ | | | | | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | | |
| BM100-DI/V-C11 | ■ | | | | | ■ | ■ | | ■ | | | | | ■ | ■ | | ■ | |
| BM100-DI/V-C12 | | ■ | | | | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ | |
| BM100-DI/V-C22 | | | ■ | | | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ | |

| Analog signal input | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Voltage input | | | | | | | | | | | | | | |
| Type | Channel | | | Input signal | | | | Output signal | | | | | | Auxiliary supply | |
| | 1 In 2 out | 1 In 2 out | 2 In 2 out | DC 0~5V | DC 1~5V | DC 0~10V | DC 2~10V | DC 0~20 mA | DC 4~20 mA | DC 0~5V | DC 1~5V | DC 0~10V | DC 2~10V | DC 20~35V | AC/DC 85~265V |
| BM100-DV/I-B11 | ■ | | | ■ | | ■ | | ■ | ■ | | | | | ■ | |
| BM100-DV/I-C11 | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ | | | | | | ■ |
| BM100-DV/I-C12 | | ■ | | ■ | | | ■ | ■ | ■ | | | | | ■ | |
| BM100-DV/I-C22 | | | ■ | ■ | | | ■ | ■ | ■ | | | | | ■ | |
| BM100-DV/V-B11 | ■ | | | ■ | ■ | ■ | ■ | | | ■ | ■ | ■ | ■ | ■ | |
| BM100-DV/V-C11 | ■ | | | ■ | ■ | ■ | ■ | | | ■ | ■ | ■ | ■ | | ■ |
| BM100-DV/V-C12 | | ■ | | ■ | | ■ | | | | ■ | ■ | ■ | ■ | ■ | |
| BM100-DV/V-C22 | | | ■ | ■ | | ■ | | | | ■ | ■ | ■ | ■ | ■ | |

| Temperature signal input | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RTD input | | | | | | | | | | | | |
| Type | Channel | | | Input signal | Input range | Output signal | | | | | | Auxiliary supply |
| | 1 In 2 out | 1 In 2 out | 2 In 2 out | PT100 | -200~ 850℃ | DC 0~20 mA | DC 4~20 mA | DC 0~5V | DC 1~5V | DC 0~10V | DC 2~10V | DC 20~35V |
| BM100-TR/I-B11 | ■ | | | ■ | ■ | ■ | ■ | | | | | ■ |
| BM100-TR/I-C12 | | ■ | | ■ | ■ | ■ | ■ | | | | | ■ |
| BM100-TR/I-C22 | | | ■ | ■ | ■ | ■ | ■ | | | | | ■ |
| BM100-TR/V-B11 | ■ | | | ■ | ■ | | | ■ | ■ | ■ | ■ | ■ |
| BM100-TR/V-C12 | | ■ | | ■ | ■ | | | ■ | ■ | ■ | ■ | ■ |
| BM100-TR/V-C22 | | | ■ | ■ | ■ | | | ■ | ■ | ■ | ■ | ■ |

Ps: The minimum range of PT100 input is 50℃.







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| Resistance signal input | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Potentiometer input | | | | | | | | | | | | | |
| Type | Channel | | | Input signal | Input range | | Output signal | | | | | | Auxiliary supply |
| | 1 In 2 out | 1 In 2 out | 2 In 2 out | Potentio -meter | 0~5 KΩ | 0~10 KΩ | DC 0~20 mA | DC 4~20 mA | DC 0~5V | DC 1~5V | DC 0~10V | DC 2~10V | DC 20~35V |
| BM100-VR/I-B11 | ■ | | | ■ | ■ | ■ | ■ | ■ | | | | | ■ |
| BM100-VR/I-C12 | | ■ | | ■ | ■ | ■ | ■ | ■ | | | | | ■ |
| BM100-VR/I-C22 | | | ■ | ■ | ■ | ■ | ■ | ■ | | | | | ■ |
| BM100-VR/V-B11 | ■ | | | ■ | ■ | ■ | | | ■ | ■ | ■ | ■ | ■ |
| BM100-VR/V-C12 | | ■ | | ■ | ■ | ■ | | | ■ | ■ | ■ | ■ | ■ |
| BM100-VR/V-C22 | | | ■ | ■ | ■ | ■ | | | ■ | ■ | ■ | ■ | ■ |

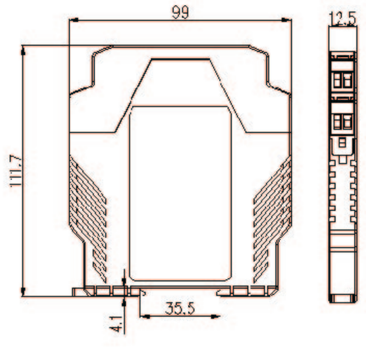
Ps: The minimum range of Potentiometer input is 1k.

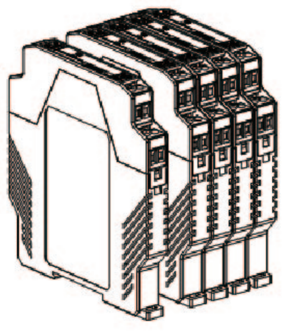
## ➢ 7.4 Install and wiring

### • Outline dimension

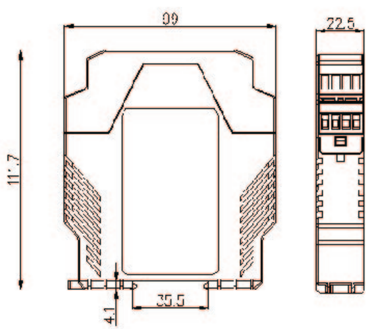
| Product category | Type of products | Outline dimension |
|---|---|---|
| BM100 | BM100-□□/□-B□□ | 99mm*112mm*12.5mm |
| | BM100-□□/□-C□□ | 99mm*112mm*22.5mm |

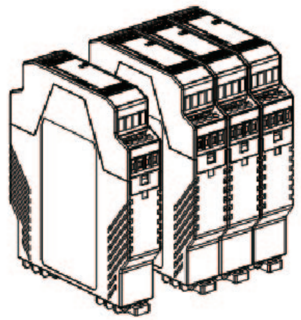
(1) BM100-□□/□-B□□ outline dimension:



(2) BM100-□□/□-C□□ outline dimension:



(3) Schematic diagram of front panel:




Front panel 1: case C, 220V Auxiliary supply




Front panel 2: case C, 24V Auxiliary supply



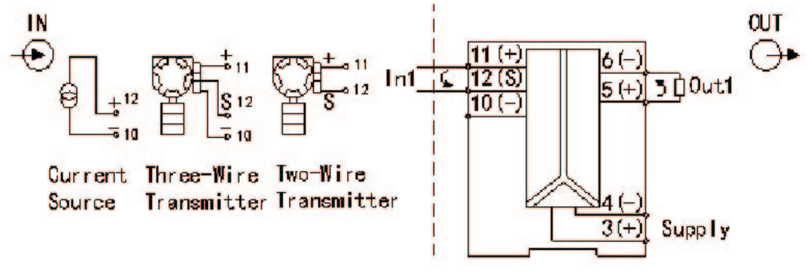

Front panel 3: case B, 24V Auxiliary supply




Front panel 4: case B, loop Auxiliary supply and passive

### • Wiring

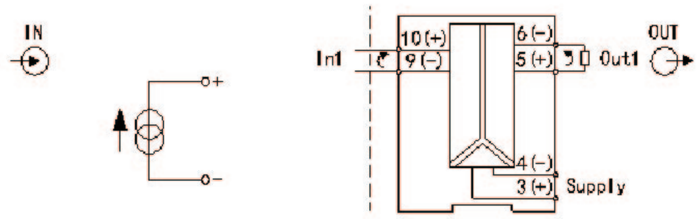
(1) BM100-DI/I-B11 (Auxiliary supply: 24V, with power distribution):



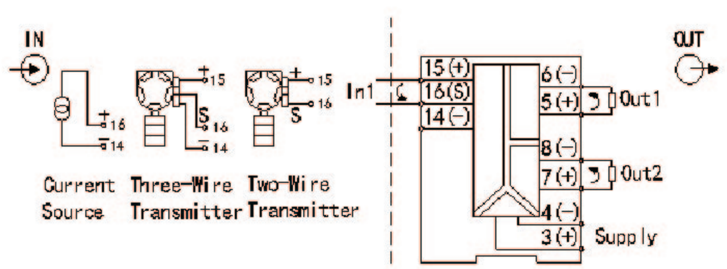



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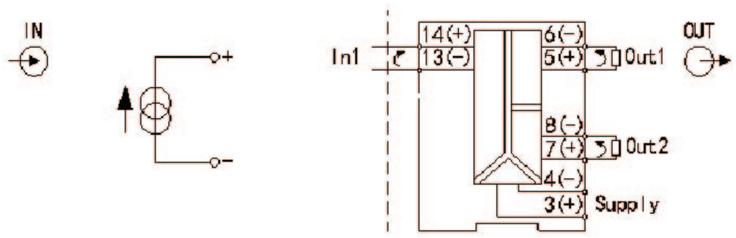
(2) BM100-DI/I-B11 (Auxiliary supply: 24V, with power distribution):



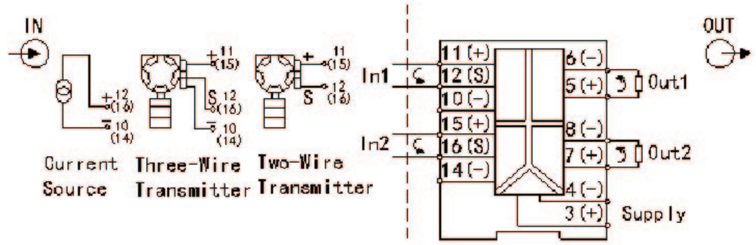

(3) BM100-DI/□-C12 (Auxiliary supply: 24V, with power distribution):



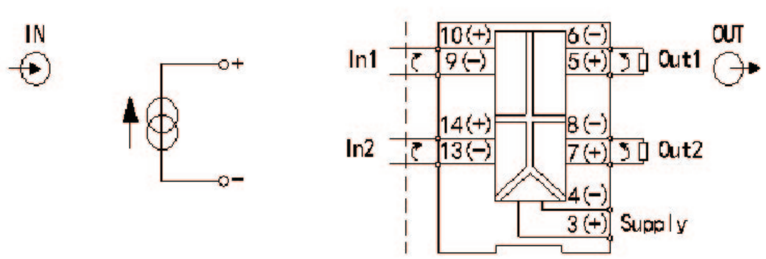

(4) BM100-DI/□-C12 (Auxiliary supply: 24V, only current source input):



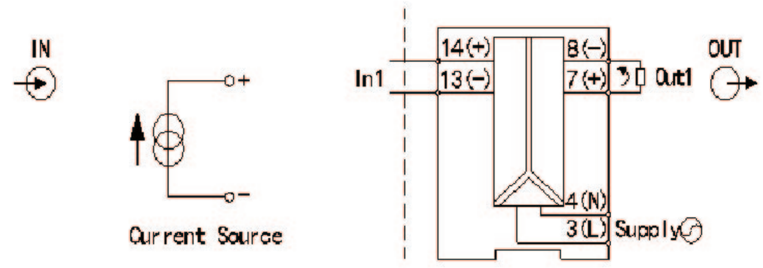

(5) BM100-DI/□-C22 (Auxiliary supply: 24V, with power distribution):




(6) BM100-DI/□-C22 (Auxiliary supply: 24V, only current source input):



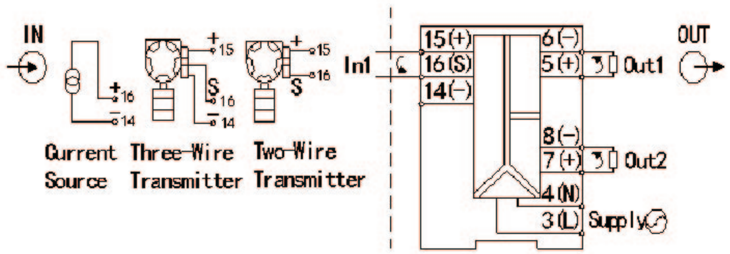

(7) BM100-DI/□-C11(Auxiliary supply : 220V):






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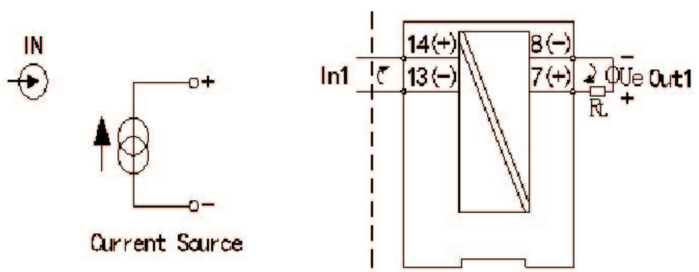
(8) BM100-DI/□-C12(Auxiliary supply : 220V):



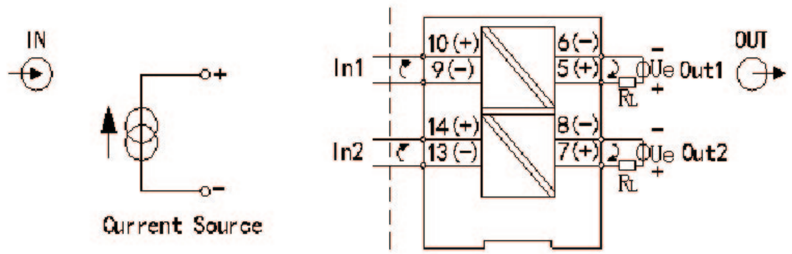

(9) BM100-DI/□-C22(Auxiliary supply : 220V):



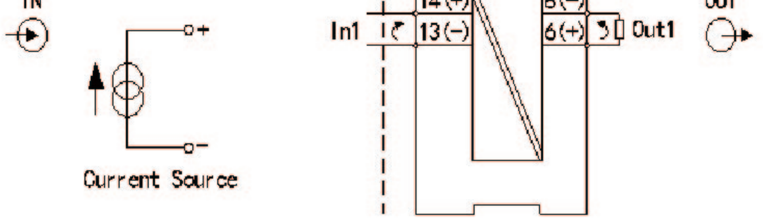

(10) BM100-DI/IS-B11:



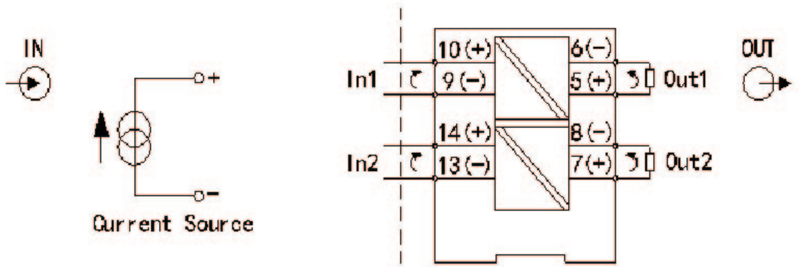

(11) BM100-DI/IS-B22:




(12) BM100-DIS/I-B11:



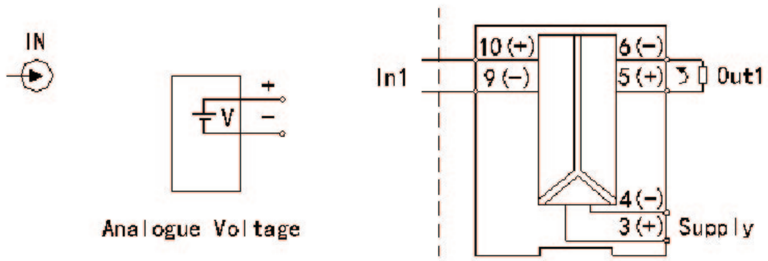

(13) BM100-DIS/I-B22:



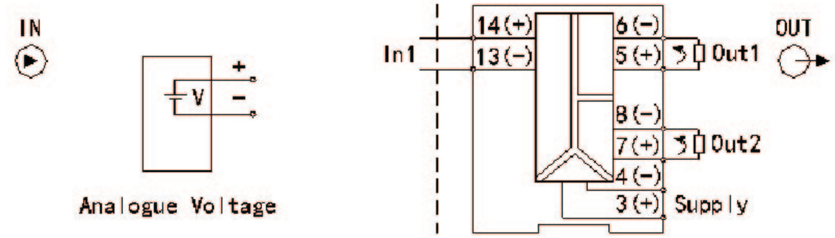



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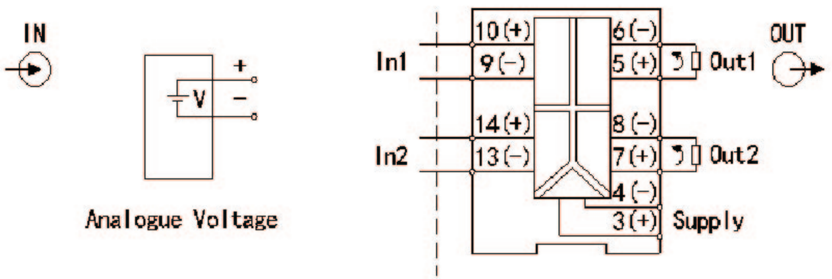
(14) BM100-DV/□-B11:



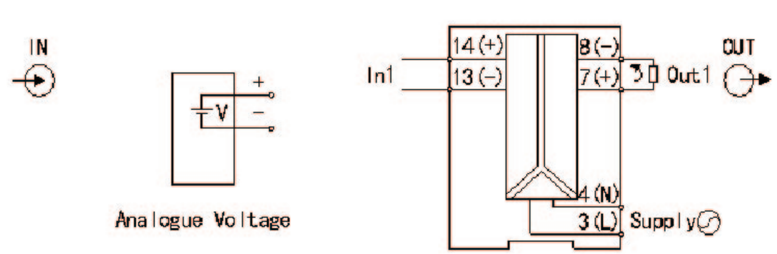

(15) BM100-DV/□-C12:



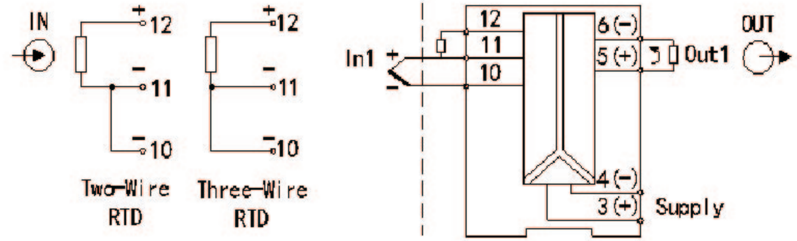

(16) BM100-DV/□-C22:



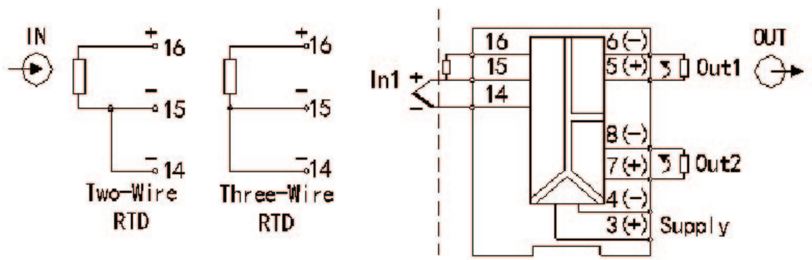

(17) BM100-DV/□-C11(Auxiliary supply : 220V):




(18) BM100-TR/□-B11:




(19) BM100-TR/□-C12:



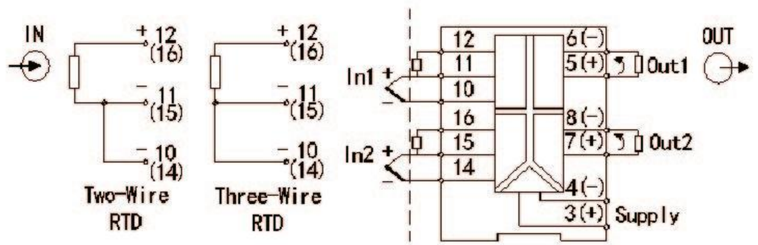




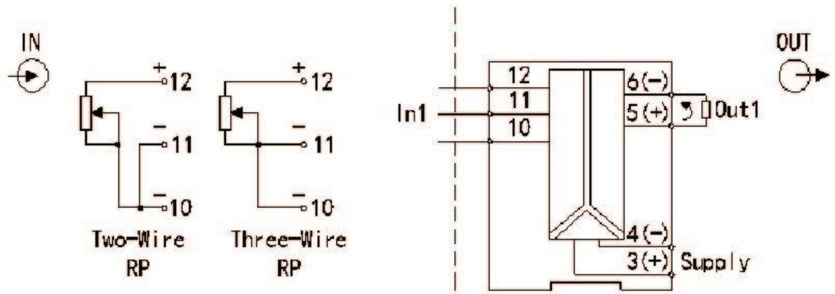



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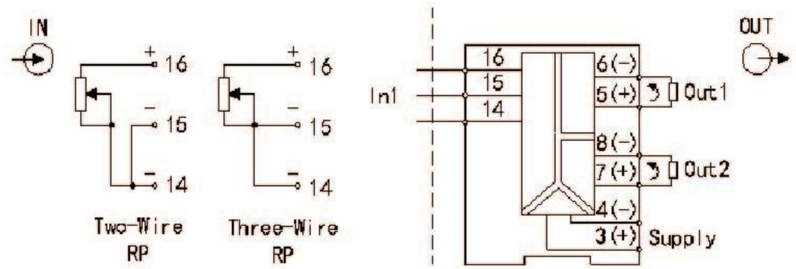
(20) BM100-TR/□-C22:



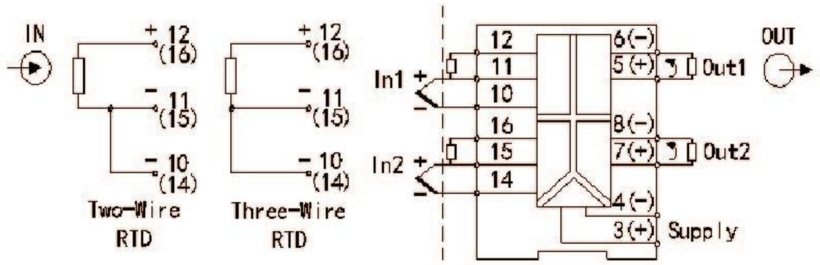

(21) BM100-VR/□-B11:




(22) BM100-VR/□-C12:




(23) BM100-VR/□-C22:






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