

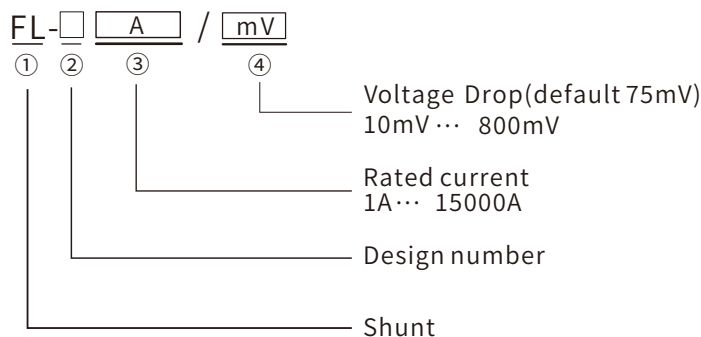
About the DC Shunt

A range of shunts are available to measure DC currents and provide a proportional 50~100mV DC output to safely drive a moving coil instrument, overload protection or other control device. The shunts are accurate to class 0.5 and are suitable for all DC current monitoring applications. The manganin shunts have brass ends and are available to measure currents from 0.1A up to 10000A.

Technical Standard

Color	Black & Silver & Yellow
Current Rating	1 ~ 4000A: 0.5%; 5000 ~ 10000A: 1% (Default)
Operating Temperature	-40°C~+60°C
Voltage Drop	50mV/60mV/75mV/100mV(costomized)
Accuracy Class	0.5/0.2(Customized 0.01)
Material	Copper+Manganin
Overload Capacity	120% Of Rated Current For 2H
Application	Use For DC Digital Amp Meter
The load under the heat:	Temperature stability tends to change, The rated current 50A The following does not exceed 80°C; Rated current 50A or more does not exceed 120°C.
Function	120% Of Rated Current For 2H

Model Standard

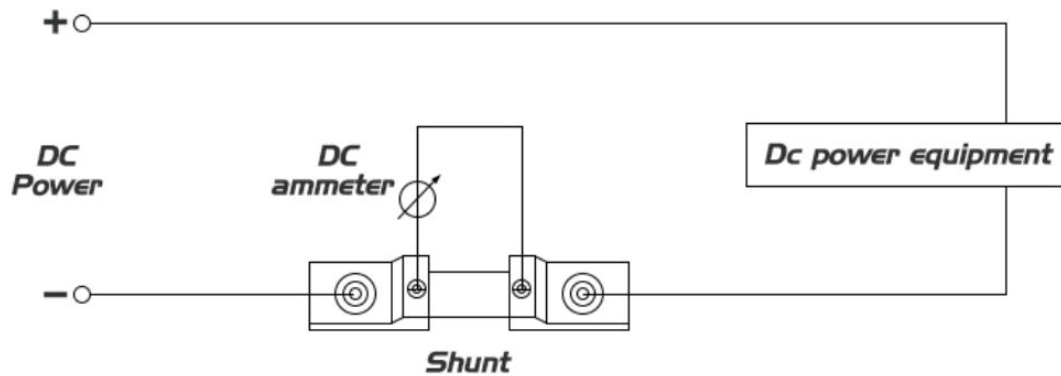


Design Numbers List

2: National Standard A
 2: National Standard B
 2C: Patented Type
 2D: DIN43703 Type
 2F: Cooling Type (Wind)
 2S: Cooling Type (Water)
 13: Russian Type
 15: USA Type
 19: Welding Type
 19: Welding Type(ECO)
 21: Taiwan Export Type
 27: High Accuracy 0.2
 28: High Accuracy 0.1
 29: Bend Type
 39: Middle Type
 U: U Type
 P: Piece Type
 P1: Piece Non-inductive Type
 T1: Round Tube Non-inductive Type

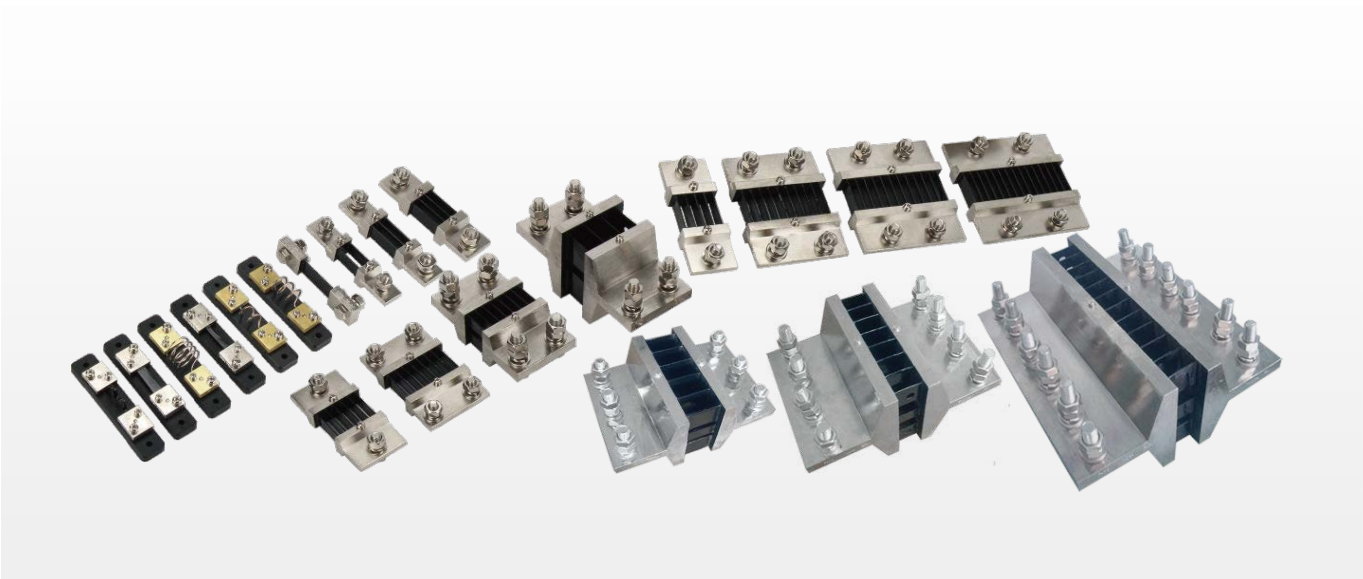
As a manufacturer with nearly 30 years of production experience, and also a famous factory in China. We have quality material suppliers and skilled workers with the good appearance and quality shunt. There are many different type shunts, please contact us if any requirement.

Wiring Diagram

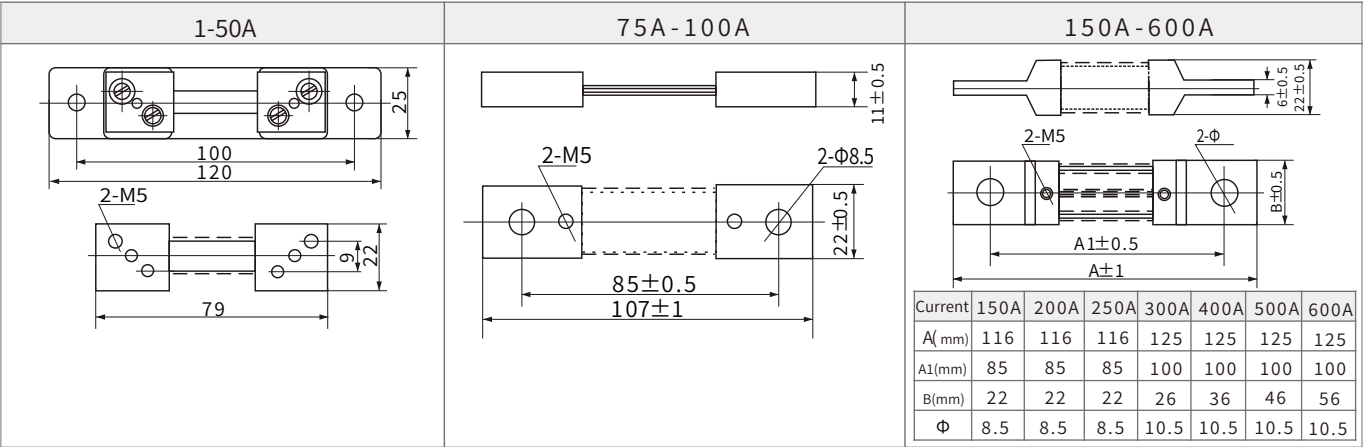


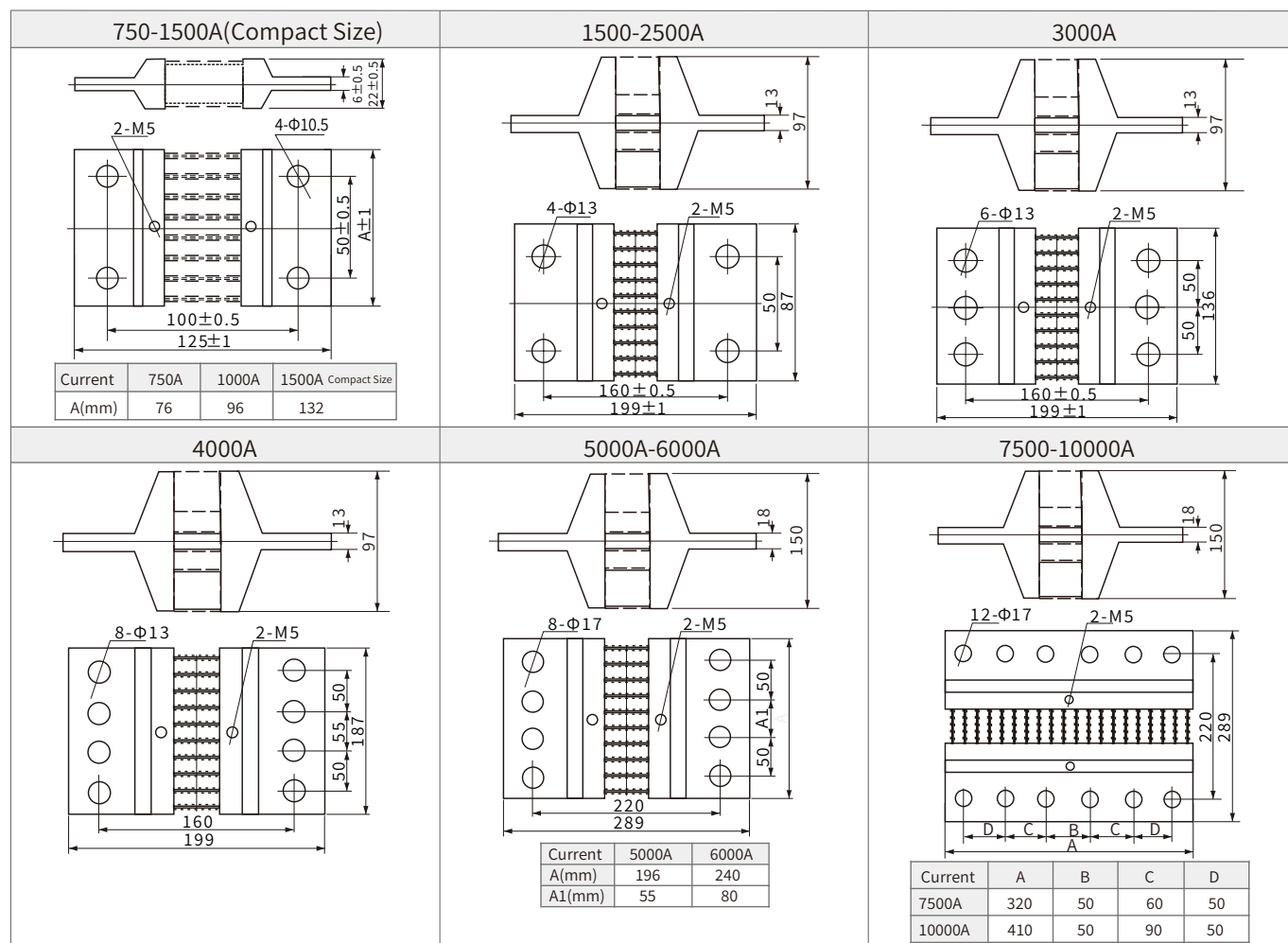
FL-2 Shunt(Standard A) 1-20000A

03



Dimension Diagram(75mV)



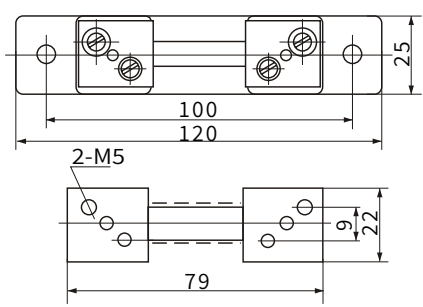
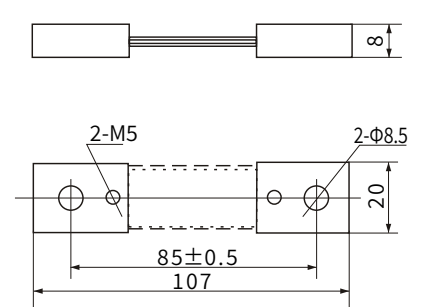
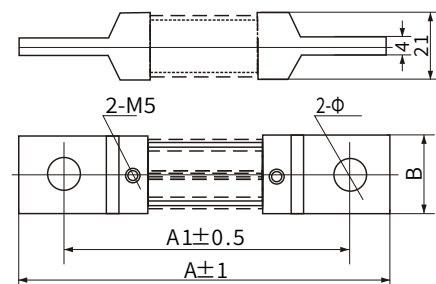
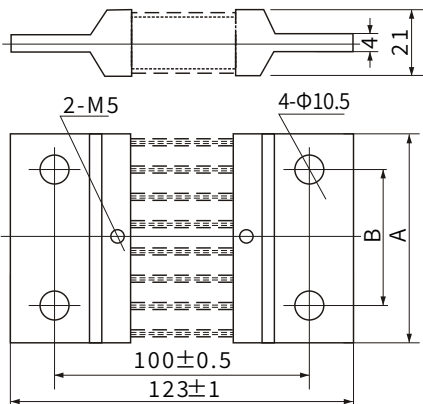
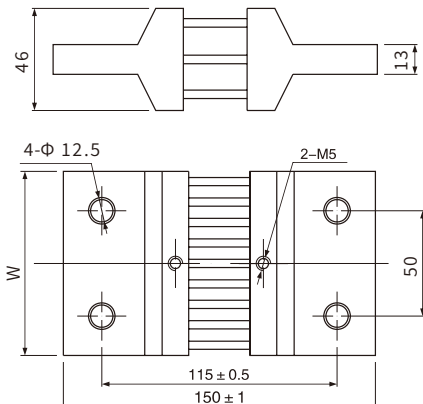
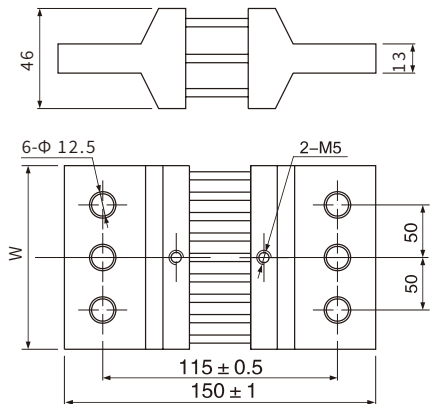


FL-2 Shunt (Standard A)

05

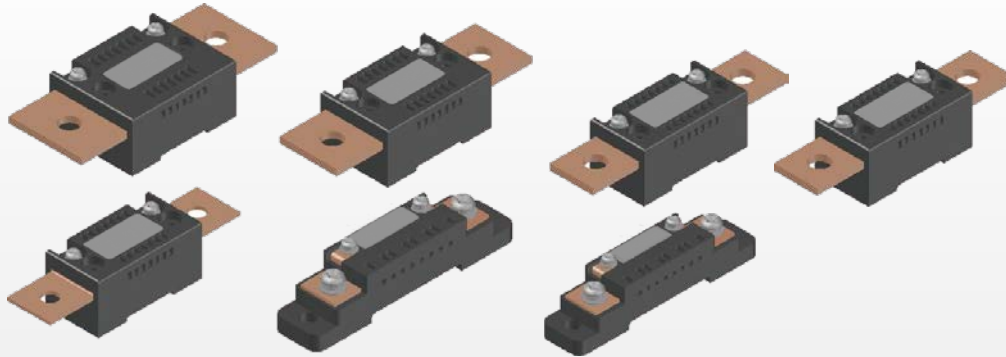


Dimension Diagram(75mV)

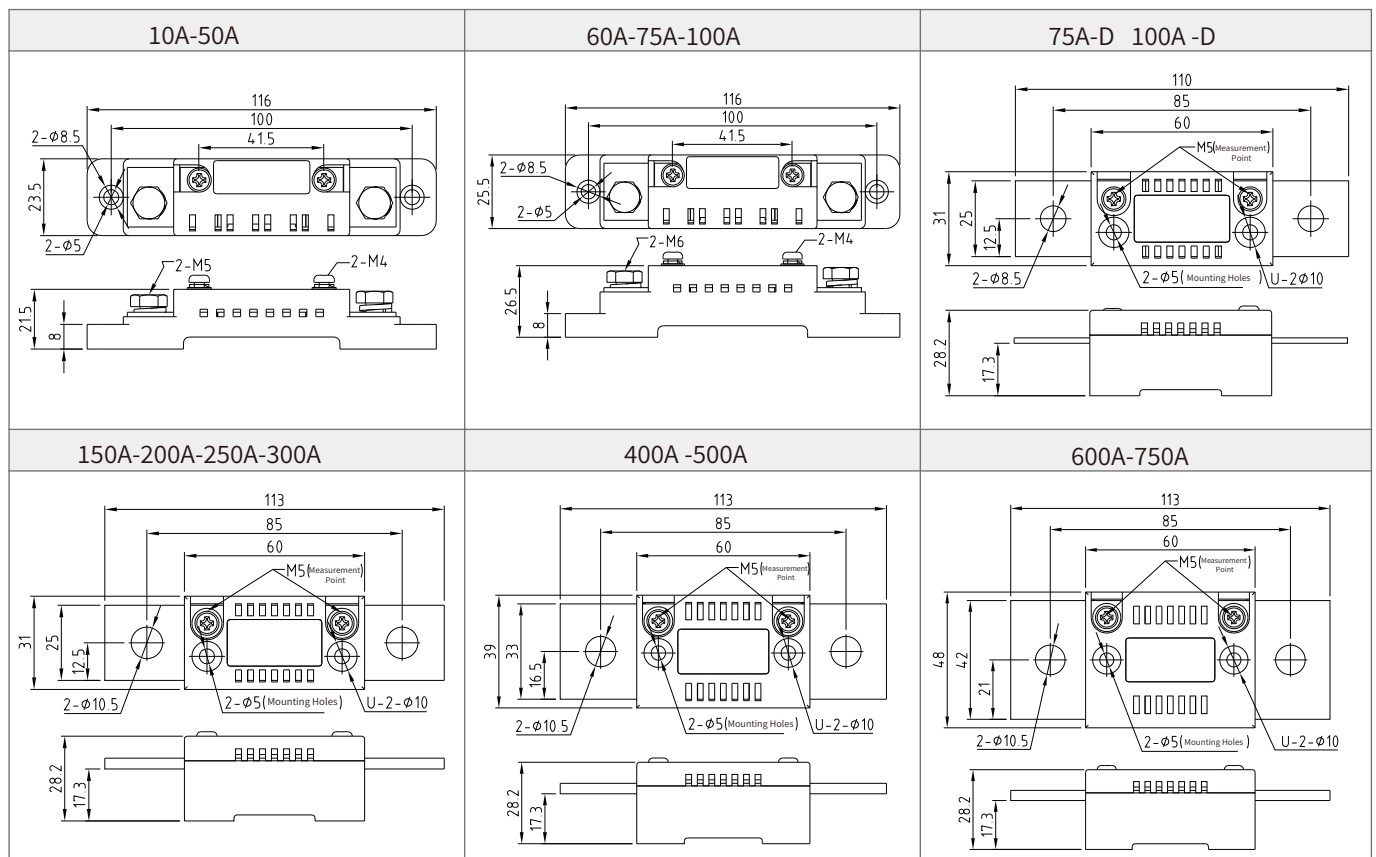
10-50A	75A 100A	300A-600A																																								
		 <table border="1" data-bbox="1029 1134 1466 1293"><thead><tr><th>Current</th><th>150A</th><th>200A</th><th>250A</th><th>300A</th><th>400A</th><th>500A</th><th>600A</th></tr></thead><tbody><tr><td>A(mm)</td><td>115</td><td>115</td><td>115</td><td>123</td><td>123</td><td>123</td><td>123</td></tr><tr><td>A1(mm)</td><td>85</td><td>85</td><td>85</td><td>100</td><td>100</td><td>100</td><td>100</td></tr><tr><td>B(mm)</td><td>17</td><td>17</td><td>17</td><td>20</td><td>27</td><td>35</td><td>42</td></tr><tr><td>Φ</td><td>8.5</td><td>8.5</td><td>8.5</td><td>10.5</td><td>10.5</td><td>10.5</td><td>10.5</td></tr></tbody></table>	Current	150A	200A	250A	300A	400A	500A	600A	A(mm)	115	115	115	123	123	123	123	A1(mm)	85	85	85	100	100	100	100	B(mm)	17	17	17	20	27	35	42	Φ	8.5	8.5	8.5	10.5	10.5	10.5	10.5
Current	150A	200A	250A	300A	400A	500A	600A																																			
A(mm)	115	115	115	123	123	123	123																																			
A1(mm)	85	85	85	100	100	100	100																																			
B(mm)	17	17	17	20	27	35	42																																			
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750-1500A(Compact Size)	1500-2500A	3000A 4000A																																								
 <table border="1" data-bbox="167 1858 550 1955"><thead><tr><th>Current</th><th>750A</th><th>1000A</th><th>1500A Compact Size</th></tr></thead><tbody><tr><td>A(mm)</td><td>58</td><td>70</td><td>103</td></tr><tr><td>B(mm)</td><td>40</td><td>50</td><td>50</td></tr></tbody></table>	Current	750A	1000A	1500A Compact Size	A(mm)	58	70	103	B(mm)	40	50	50	 <table border="1" data-bbox="646 1858 948 1918"><thead><tr><th>Current</th><th>1500A</th><th>2000A</th><th>2500A</th></tr></thead><tbody><tr><td>W(mm)</td><td>80</td><td>80</td><td>80</td></tr></tbody></table>	Current	1500A	2000A	2500A	W(mm)	80	80	80	 <table border="1" data-bbox="1139 1858 1358 1918"><thead><tr><th>Current</th><th>3000A</th><th>4000A</th></tr></thead><tbody><tr><td>W(mm)</td><td>130</td><td>160</td></tr></tbody></table>	Current	3000A	4000A	W(mm)	130	160														
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W(mm)	130	160																																								

FL-2C Shunt(Patented Type)

06



Dimension Diagram (75mV)



Appearance and structure

Structure	Connection block: copper Resistor: 6J13 manganese copper alloy
Surface	Pickling passivation and sandblasting
Case	High temperature flame retardant insulation material

Basic parameters

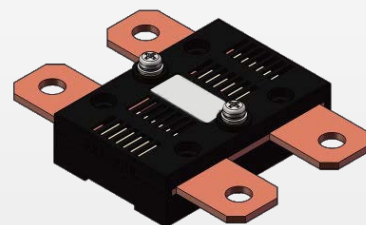
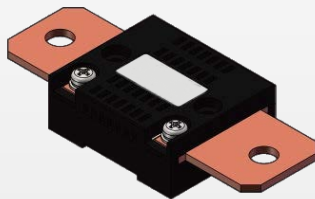
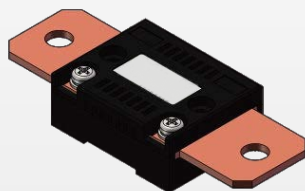
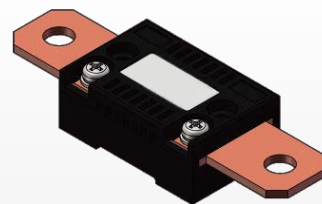
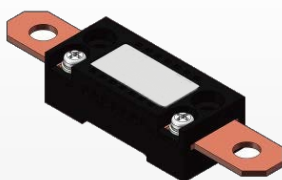
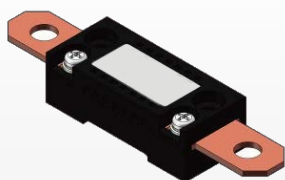
Rated current	10A ~ 750A
Rated voltage	75mV....
Accuracy class	±0.5% (±0.25% customized)

Performance Characteristics

Pilot projects	Performance requirements
Accuracy class	± 0.5%
Operating Temp	- 40°C ~ + 60°C
Operating RH	≤95% (35°C)
Voltage	75mV
Temp Rise	Not more than 120ℓ
Temp Coef	0 ~ + 40PPM /°C
Thermoelectric Potential	Not more than 50% of the level index

FL-2G Shunt(Patented Type)

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Dimension Diagram(75mV)

75A 100A 150A 200A	250A-300A	400A
500A	600A	750A-1000A

Appearance and structure

Structure	Connection block: copper Resistor: 6J13 manganese copper alloy
Surface	Pickling passivation and sandblasting
Case	High temperature flame retardant insulation material

Basic parameters

Rated current	10A~750A
Rated voltage	75mV...
Accuracy class	±0.5% (±0.25% customized)

Performance Characteristics

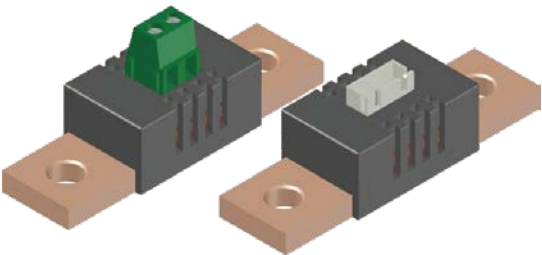
Pilot projects	Performance requirements
Accuracy class	±0.5%
Operating Temp	-40°C~+60°C
Operating RH	≤95% (35°C)
Voltage	75mV
Temp Rise	Not more than 120
Temp Coef	0~+40PPM/°C
Thermoelectric Potential	Not more than 50% of the level index

Application

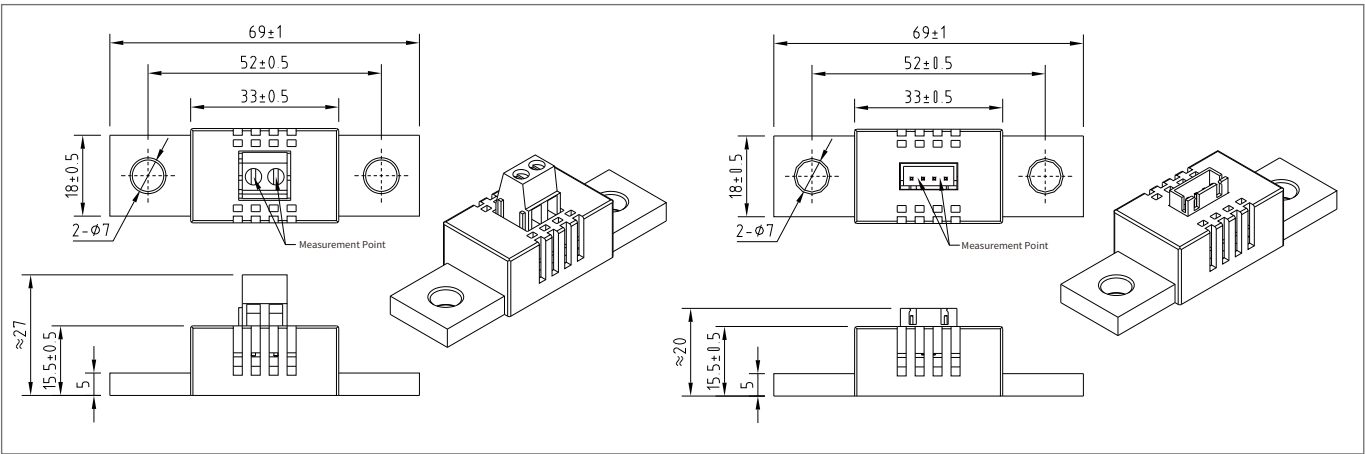
Battery management system, power electronics current detection, inverter, UPS, Motor control and electronic load equipment.

Product standard:

National Standard of the People's Republic of China: GB/T7676-1998 "Direct acting indicating analogue electrical measuring instruments and their accessories".
Professional Standard of the People's Republic of China: JB/T9288-1999 "External Shunt"



Dimension Diagram(75mV)



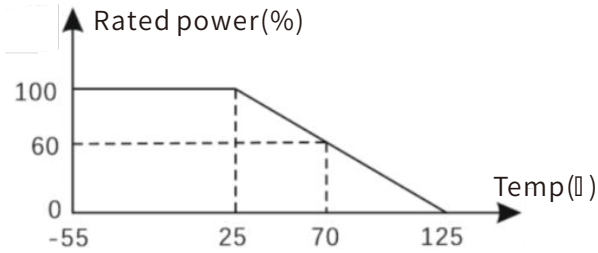
Appearance and structure

Structure	Connection block: copper Resistor: 6J13 manganese copper alloy
Surface	Pickling passivation and sandblasting
Case	High temperature flame retardant insulation material

Performance Characteristics

Pilot projects	Performance requirements
Accuracy class	±0.5%
Operating Temp	- 40°C~+ 60°C
Operating RH	≤95% (35°C)
Voltage	75mV
Temp Rise	Not more than 1200
Temp Coef	0~+40PPM /°C
Thermoelectric Potential	Not more than 50% of the level index

- a. Resistance value: The resistance value of the shunt measured in the above environment is compared with its nominal resistance value. The error must be within the allowable error range.
- b. Rated voltage: The rated voltage refers to the rated continuous operating voltage of the shunt, which can be calculated by the following formula: $U = I \times R$ I: Rated current (A) R: Nominal resistance (Ω) U: Rated voltage (V)
- c. Rated power: The rated power is determined by the power reduction curve in the figure below.



- d. Mechanical shock: At room temperature, perform a mechanical shock test in accordance with GB / T31467.3. Measure the resistance value before and after the test. The resistance value conforms to the level index, and the shunt is not damaged.
- e. Random vibration: At room temperature, perform a random vibration test in accordance with GB / T31467.3. Measure the resistance value before and after the test. The resistance value is in accordance with the grade index, and the appearance of the shunt is not damaged.
- f. High-temperature storage: test 1000h, 80 °C in a high-temperature incubator without load, test the resistance R_i every 11 times for a total of 11 times, and the resistance value changes in accordance with the level index.
- g. Low temperature storage: test 250h, -40 °C, without load. In the test box, test the resistance R_i every 6 hours for a total of 6 times. The resistance value conforms to the level index, and the shunt is not damaged.
- h. Humidity resistance: test T = 24h / cycle (25 °C ~ 65 °C, 90% relative humidity, no load, not required for Step7a / 7b), repeat 16 cycles; test in the test box every 2 cycles The resistance R_i was tested a total of 9 times, and the change in resistance value conformed to the level index.

FL-15 Shunt (USA Type)

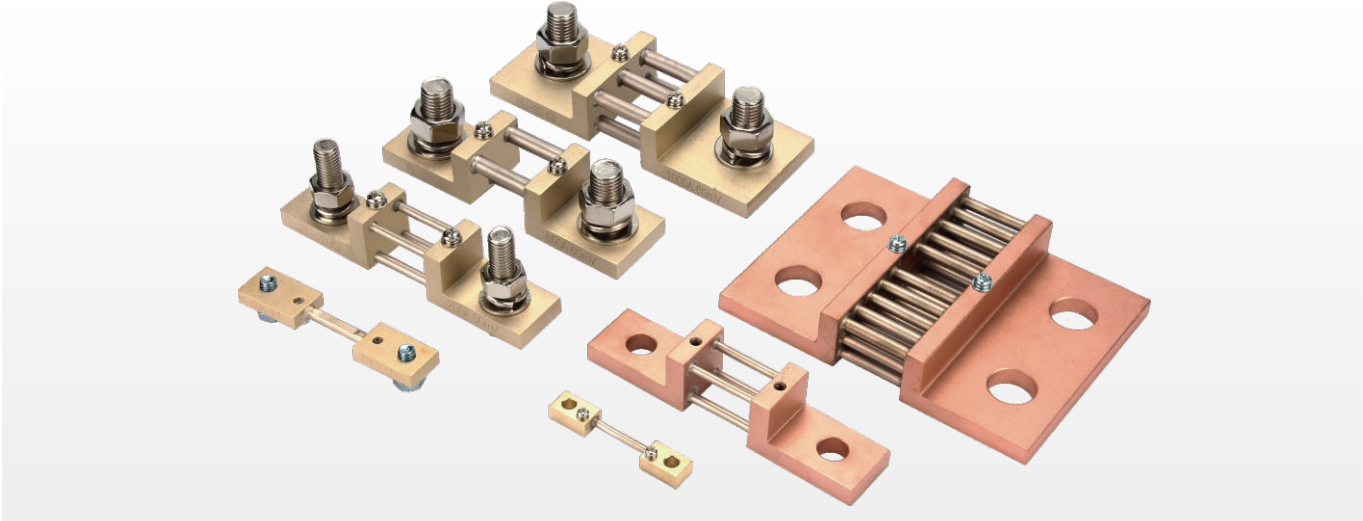


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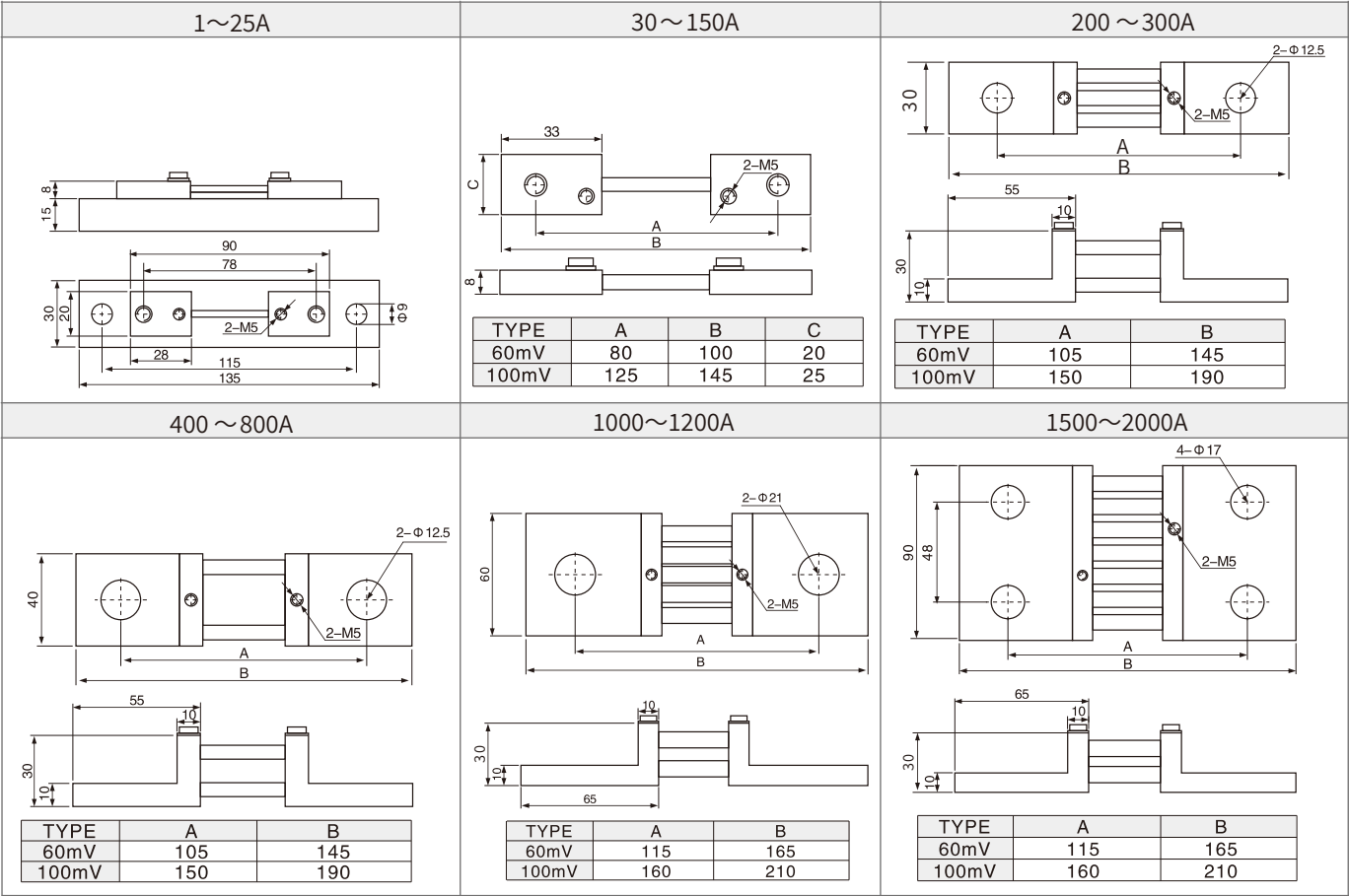
Dimension Diagram(50mV 75mV 100mV)

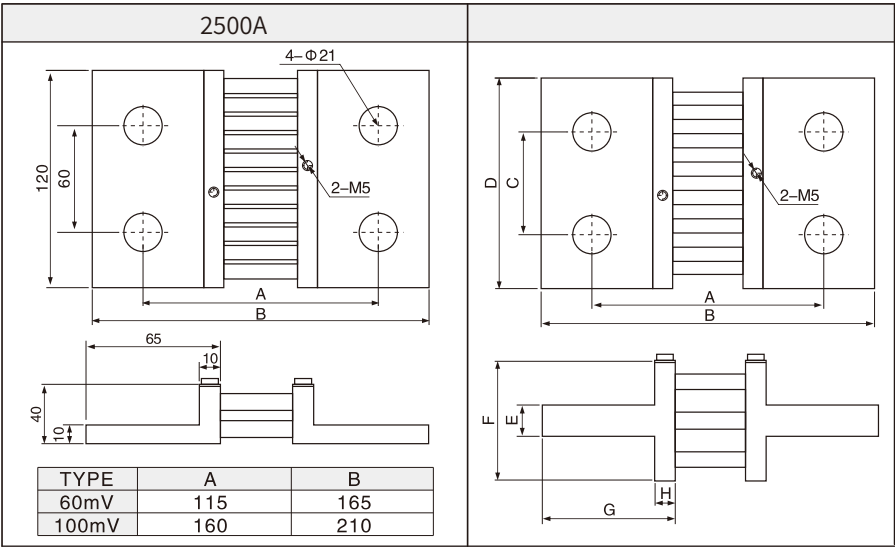
5 - 150A (Type A)	5 - 150A (Type B)	170-600A (Type A)
170-600A (Type B)	800-1200A (Type A)	800-1200A (Type B)

FL-2D Shunt(DIN43703 German Standard)



Dimension Diagram(60mV)

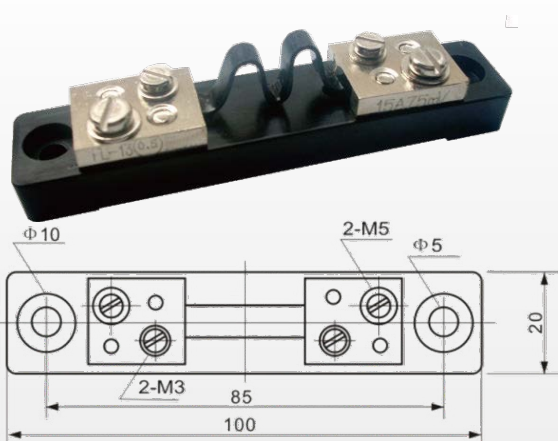




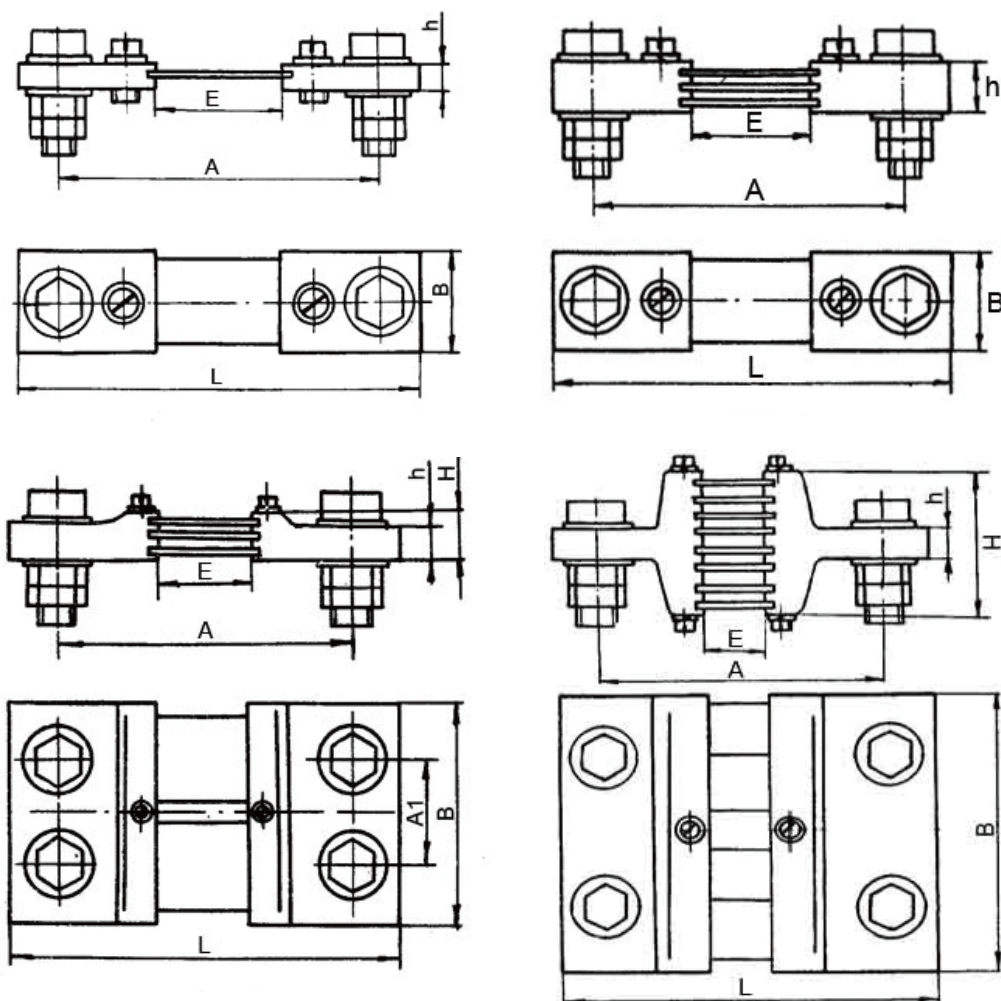
There are many different type shunts, please contact us if any requirement.

FL-2D Shunt(DIN43703 German Standard)

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Dimension Diagram(75mV)

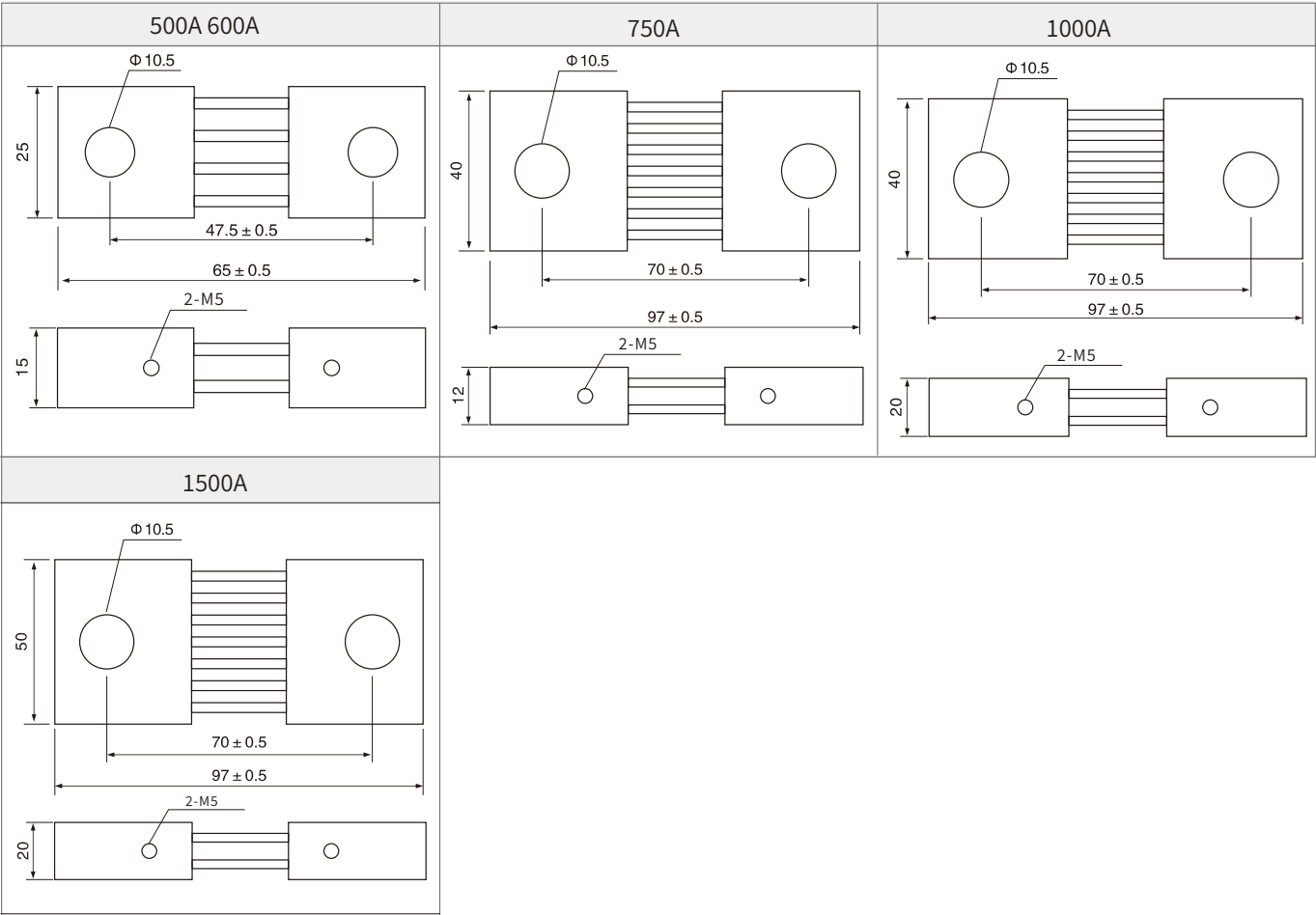


FL-19 Shunt(Welding Machine Type)

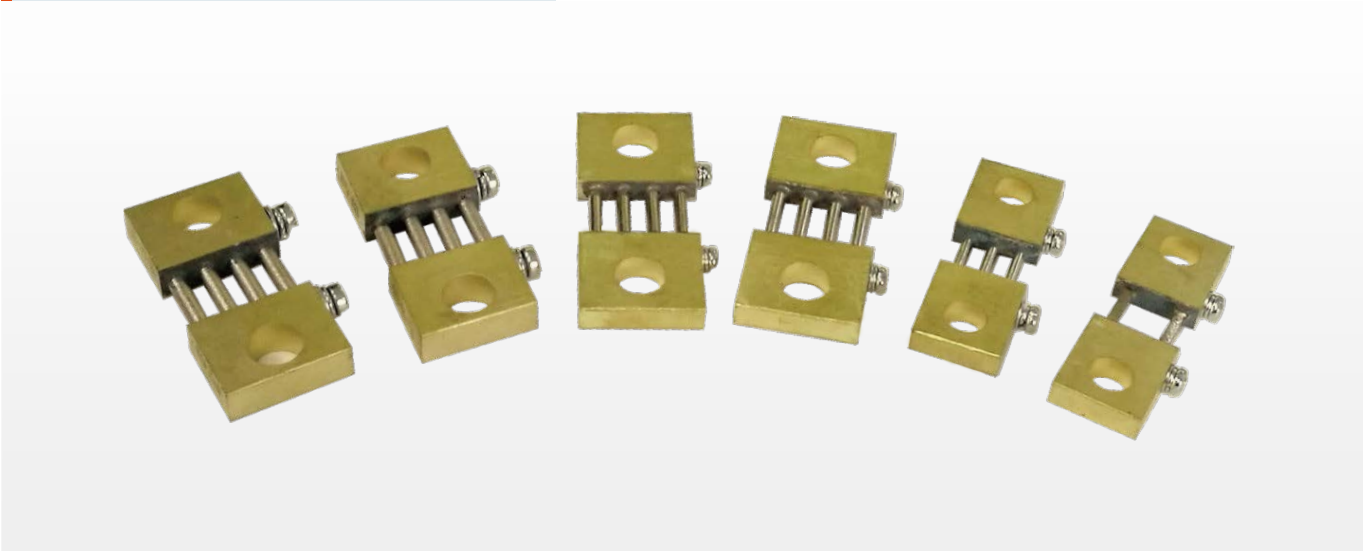


Dimension Diagram(75mV)

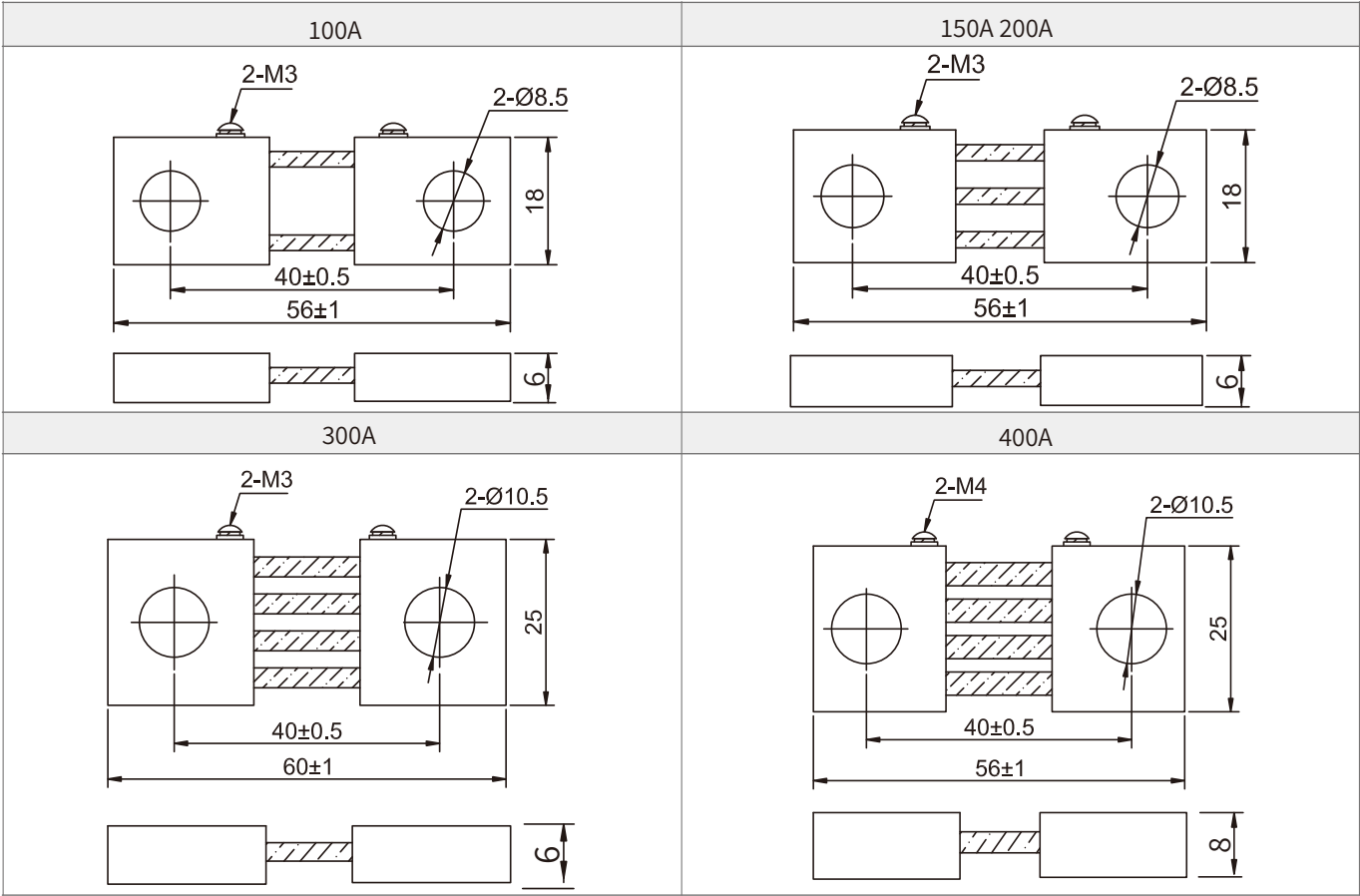
100A 150A 200A	300A	400A

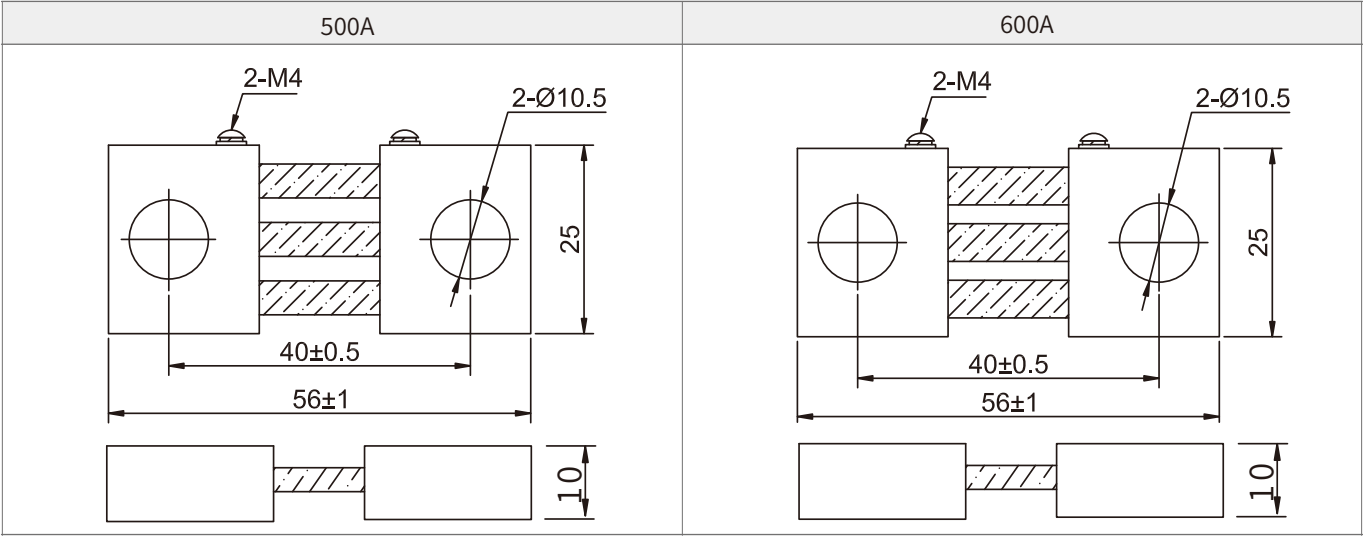


FL-19 Shunt(Welding Machine Type)



Dimension Diagram(75mV)





FL-21 Shunt(Taiwan Type)

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Dimension Diagram(75mV)

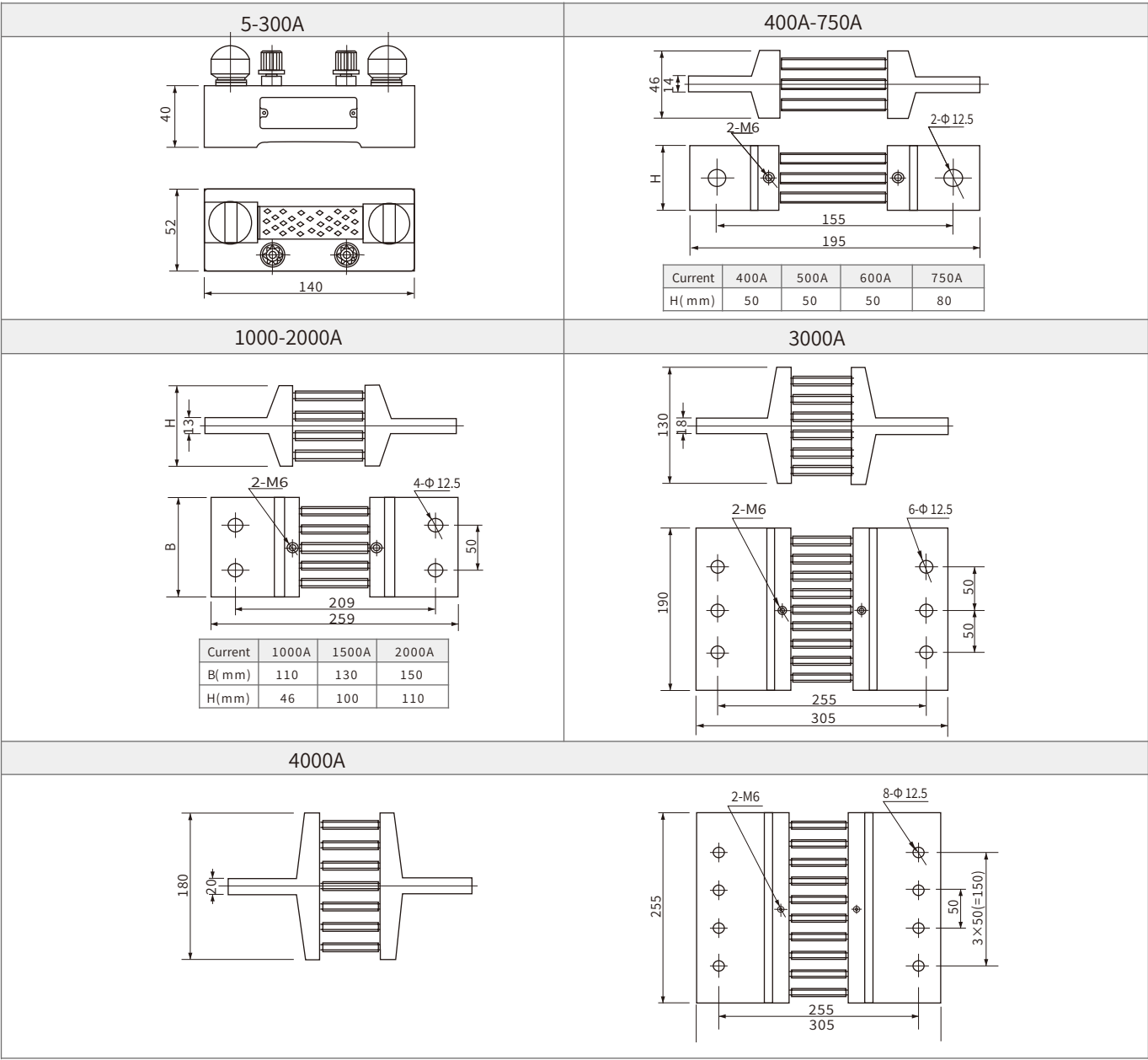
5-125A Technical drawing of the 5-125A shunt. The top view shows a rectangular block with two terminal blocks. Dimensions include 72, 110, 135, 30, 16, and 2-Φ6. The side view shows dimensions 30, 16, and 2-M3. The top view also shows dimensions 2-M6 and 2-M3.	150A-200A Technical drawing of the 150A-200A shunt. The top view shows a rectangular block with two terminal blocks. Dimensions include 72, 110, 135, 30, 16, and 2-Φ6. The side view shows dimensions 30, 16, and 2-M3. The top view also shows dimensions 2-M8 and 2-M3.																																																																																															
250-600A Technical drawing of the 250-600A shunt. The top view shows a rectangular block with two terminal blocks. Dimensions include L1, L2, W, H, M, M1, and M4. The side view shows dimensions L1, L2, W, H, M, M1, and M4. <table><tr><th>TYPE 50mV</th><th>250A</th><th>300A</th><th>400A</th><th>500A</th><th>600A</th></tr><tr><td>L1</td><td>116</td><td>116</td><td>116</td><td>116</td><td>122</td></tr><tr><td>L2</td><td>86</td><td>86</td><td>86</td><td>86</td><td>90</td></tr><tr><td>W</td><td>41</td><td>35</td><td>44</td><td>55</td><td>55</td></tr><tr><td>H</td><td>12</td><td>17</td><td>17</td><td>17</td><td>21</td></tr><tr><td>M</td><td>4</td><td>4</td><td>4</td><td>4</td><td>4</td></tr><tr><td>M1</td><td>13</td><td>13</td><td>13</td><td>13</td><td>13</td></tr><tr><td>Kg</td><td>0.31</td><td>0.37</td><td>0.49</td><td>0.61</td><td>0.77</td></tr></table>	TYPE 50mV	250A	300A	400A	500A	600A	L1	116	116	116	116	122	L2	86	86	86	86	90	W	41	35	44	55	55	H	12	17	17	17	21	M	4	4	4	4	4	M1	13	13	13	13	13	Kg	0.31	0.37	0.49	0.61	0.77	800-1500A Technical drawing of the 800-1500A shunt. The top view shows a rectangular block with two terminal blocks. Dimensions include L1, L2, W2, W1, H, M, M1, and M. The side view shows dimensions L1, L2, W2, W1, H, M, M1, and M. <table><tr><th>TYPE 50mV</th><th>800A</th><th>1000A</th><th>1200A</th><th>1500A</th></tr><tr><td>L1</td><td>122</td><td>159</td><td>161</td><td>159</td></tr><tr><td>L2</td><td>90</td><td>121</td><td>123</td><td>121</td></tr><tr><td>W1</td><td>70</td><td>70</td><td>85</td><td>100</td></tr><tr><td>W2</td><td>35</td><td>35</td><td>45</td><td>49</td></tr><tr><td>H</td><td>21</td><td>21</td><td>21</td><td>21</td></tr><tr><td>M</td><td>4</td><td>4</td><td>4</td><td>4</td></tr><tr><td>M1</td><td>17</td><td>17</td><td>17</td><td>17</td></tr><tr><td>Kg</td><td>0.97</td><td>1.4</td><td>1.7</td><td>2.3</td></tr></table>	TYPE 50mV	800A	1000A	1200A	1500A	L1	122	159	161	159	L2	90	121	123	121	W1	70	70	85	100	W2	35	35	45	49	H	21	21	21	21	M	4	4	4	4	M1	17	17	17	17	Kg	0.97	1.4	1.7	2.3		
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2000-2500A Technical drawing of the 2000-2500A shunt. The top view shows a rectangular block with two terminal blocks. Dimensions include L1, L2, L3, W2, W1, H, M, M1, and M. The side view shows dimensions L1, L2, L3, W2, W1, H, M, M1, and M. <table><tr><th>TYPE 50mV</th><th>2000A</th><th>2500A</th></tr><tr><td>L1</td><td>190</td><td>190</td></tr><tr><td>L2</td><td>165</td><td>165</td></tr><tr><td>L3</td><td>89</td><td>89</td></tr><tr><td>W1</td><td>100</td><td>110</td></tr><tr><td>W2</td><td>50</td><td>55</td></tr><tr><td>H</td><td>38</td><td>38</td></tr><tr><td>M</td><td>4</td><td>4</td></tr><tr><td>M1</td><td>17</td><td>17</td></tr><tr><td>Kg</td><td>4.7</td><td>5.3</td></tr></table>	TYPE 50mV	2000A	2500A	L1	190	190	L2	165	165	L3	89	89	W1	100	110	W2	50	55	H	38	38	M	4	4	M1	17	17	Kg	4.7	5.3	3000-6000A Technical drawing of the 3000-6000A shunt. The top view shows a rectangular block with two terminal blocks. Dimensions include L1, L2, L3, L4, L5, W2, W1, H2, H1, M, M1, and M. The side view shows dimensions L1, L2, L3, L4, L5, W2, W1, H2, H1, M, M1, and M. <table><tr><th>TYPE 50mV</th><th>3000A</th><th>4000A</th><th>5000A</th><th>6000A</th></tr><tr><td>L1</td><td>273</td><td>292</td><td>315</td><td>327</td></tr><tr><td>L2</td><td>232</td><td>253</td><td>271</td><td>283</td></tr><tr><td>L3</td><td>142</td><td>153</td><td>163</td><td>185</td></tr><tr><td>L4</td><td>90</td><td>97</td><td>100</td><td>108</td></tr><tr><td>L5</td><td>45</td><td>50</td><td>54</td><td>55</td></tr><tr><td>W1</td><td>103</td><td>110</td><td>128</td><td>133</td></tr><tr><td>W2</td><td>55</td><td>55</td><td>60</td><td>65</td></tr><tr><td>H1</td><td>64</td><td>82</td><td>106</td><td>115</td></tr><tr><td>H2</td><td>28</td><td>34</td><td>41</td><td>48</td></tr><tr><td>M</td><td>4</td><td>4</td><td>4</td><td>4</td></tr><tr><td>M1</td><td>17</td><td>17</td><td>17</td><td>17</td></tr><tr><td>Kg</td><td>7</td><td>9.5</td><td>15</td><td>19.2</td></tr></table>	TYPE 50mV	3000A	4000A	5000A	6000A	L1	273	292	315	327	L2	232	253	271	283	L3	142	153	163	185	L4	90	97	100	108	L5	45	50	54	55	W1	103	110	128	133	W2	55	55	60	65	H1	64	82	106	115	H2	28	34	41	48	M	4	4	4	4	M1	17	17	17	17	Kg	7	9.5	15	19.2
TYPE 50mV	2000A	2500A																																																																																														
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Kg	7	9.5	15	19.2																																																																																												

FL-27 Shunt(0.2/0.1 High Accuracy Type)

21

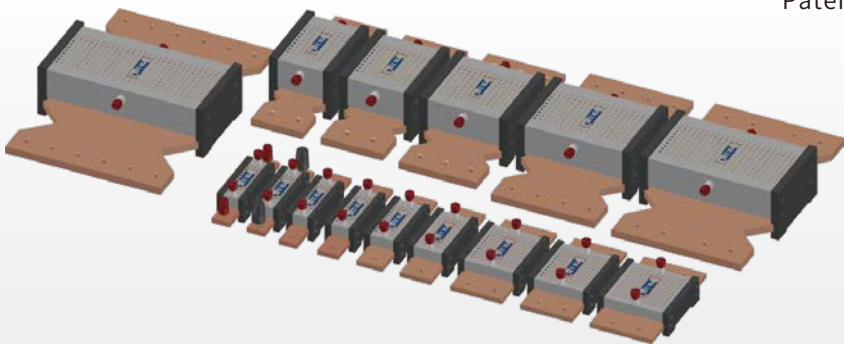


Dimension Diagram(75mV)



FL-28 Shunt(0.2/0.1 High Accuracy Type B)

Patented product



Product Standard:

National Standard of the People's Republic of China: GB/T7676-1998 "Direct acting indicating analogue electrical measuring instruments and their accessories".
Professional Standard of the People's Republic of China: JB/T9288-1999 "External Shunt".

Application

Battery management system, power electronics current detection, inverter, UPS, motor control and electronic load equipment.
It can be used as a laboratory for scientific research units, power supply units, factories, metrology institutes, etc.DC resistance standard use.

Appearance and structure

Structure	Connection block: copper Resistor: 6J13 manganese copper alloy
Surface	Pickling passivation and sandblasting
Case	High temperature flame retardant insulation material

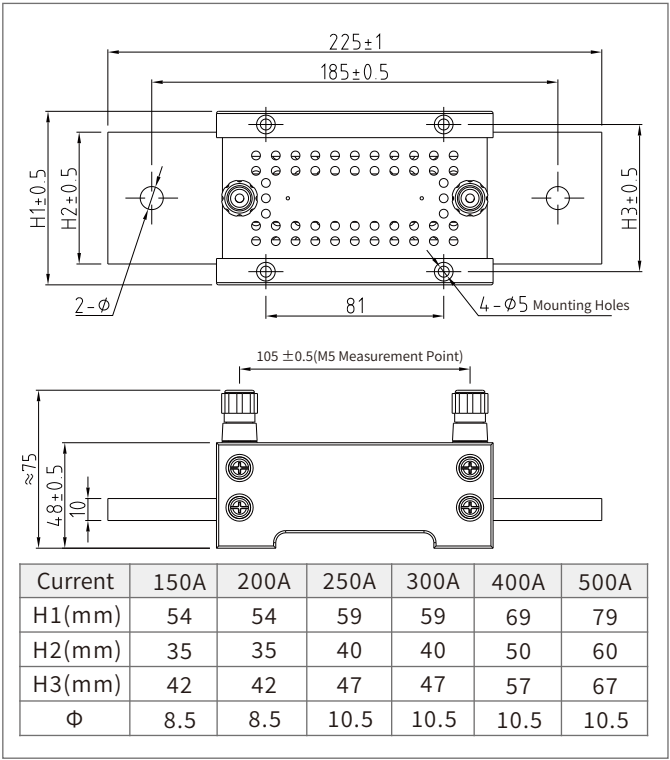
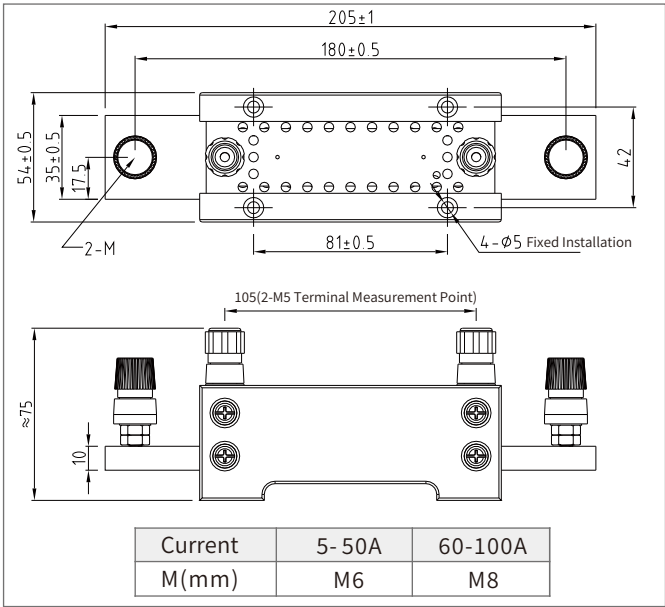
Basic parameters

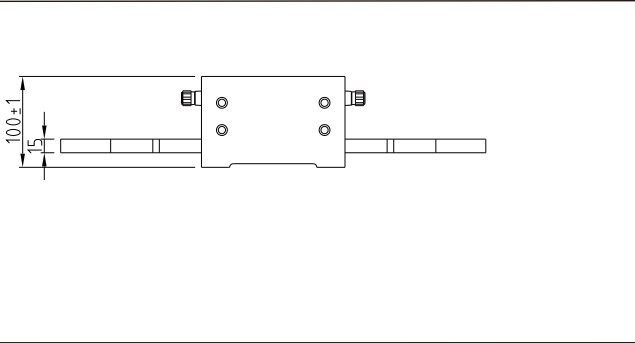
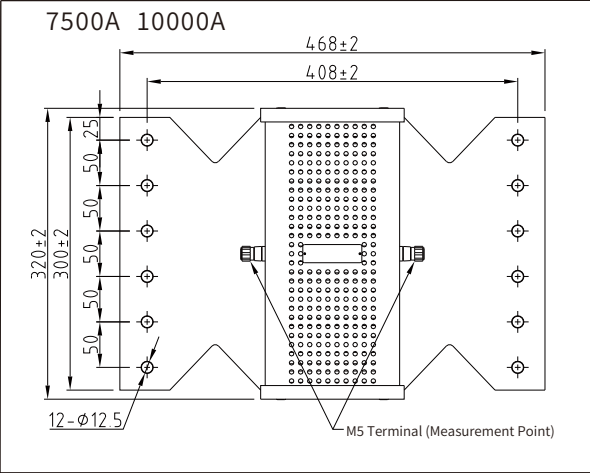
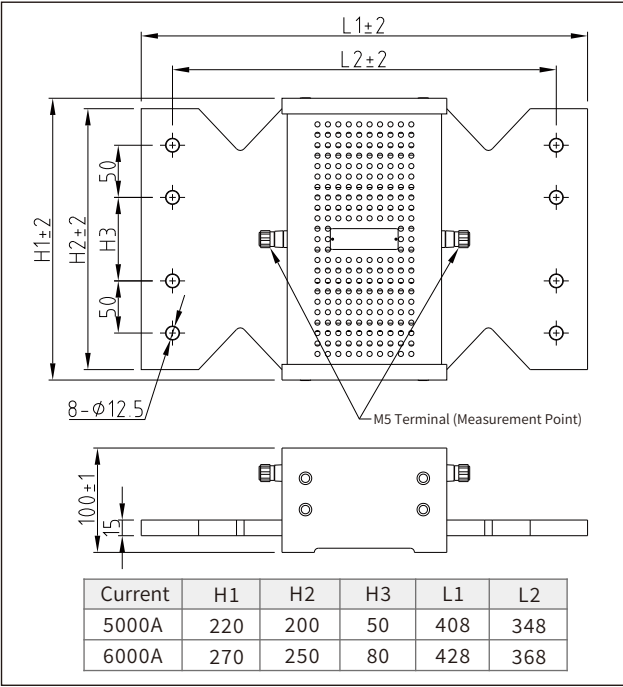
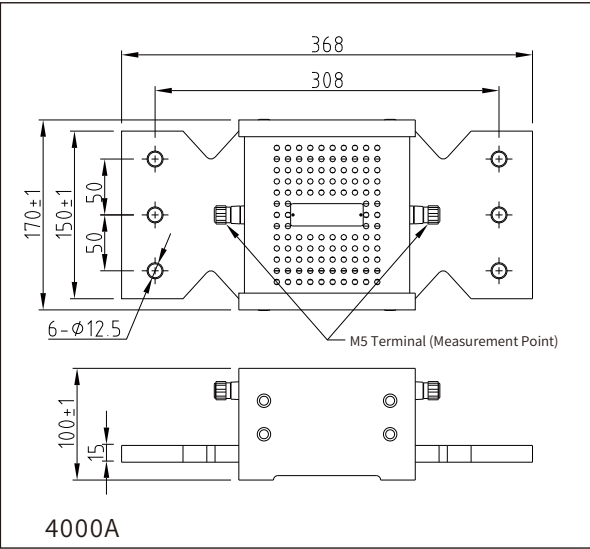
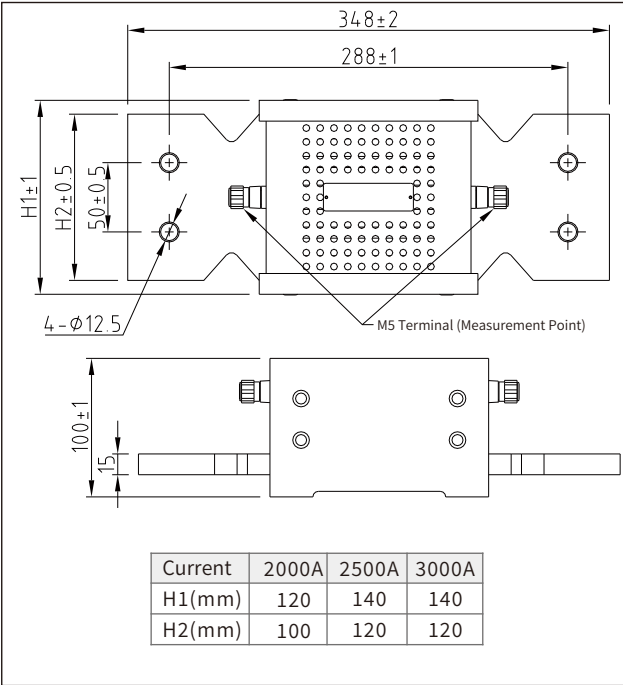
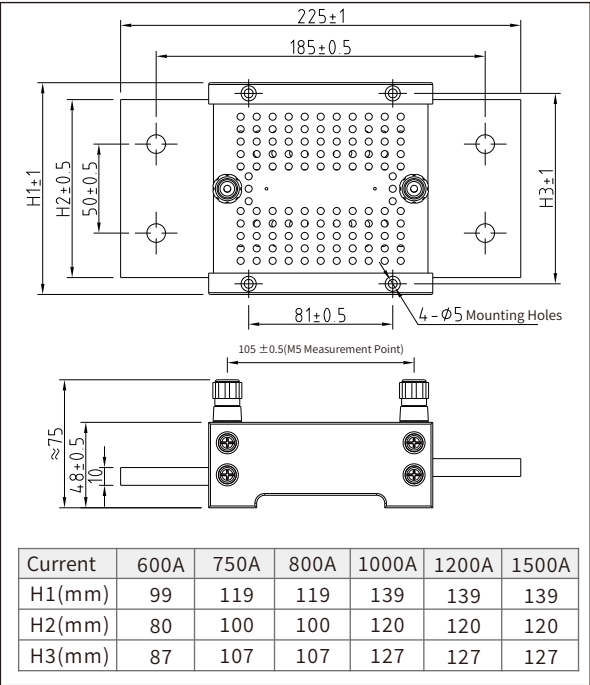
Rated current	5A ~ 10000A
Rated voltage	25mV,30mV,50mV,60mV,75mV...
Accuracy class	±0.1%,±0.2%(±0.05% customized)

Performance Characteristics

Pilot projects	Performance requirements
Accuracy class	$\pm 0.1\%, \pm 0.2\%$
Operating Temp	$-40^{\circ}\text{C} \sim +60^{\circ}\text{C}$
Operating RH	$\leq 95\%$ (35°C)
Voltage	25mV, 30mV, 50mV, 60mV, 75mV...
Temp Rise	Not more than 120°C
Temp Coef	$0 \sim +20\text{PPM}/^{\circ}\text{C}$
Thermoelectric Potential	Not more than 50% of the level index

Dimension Diagram(75mV)



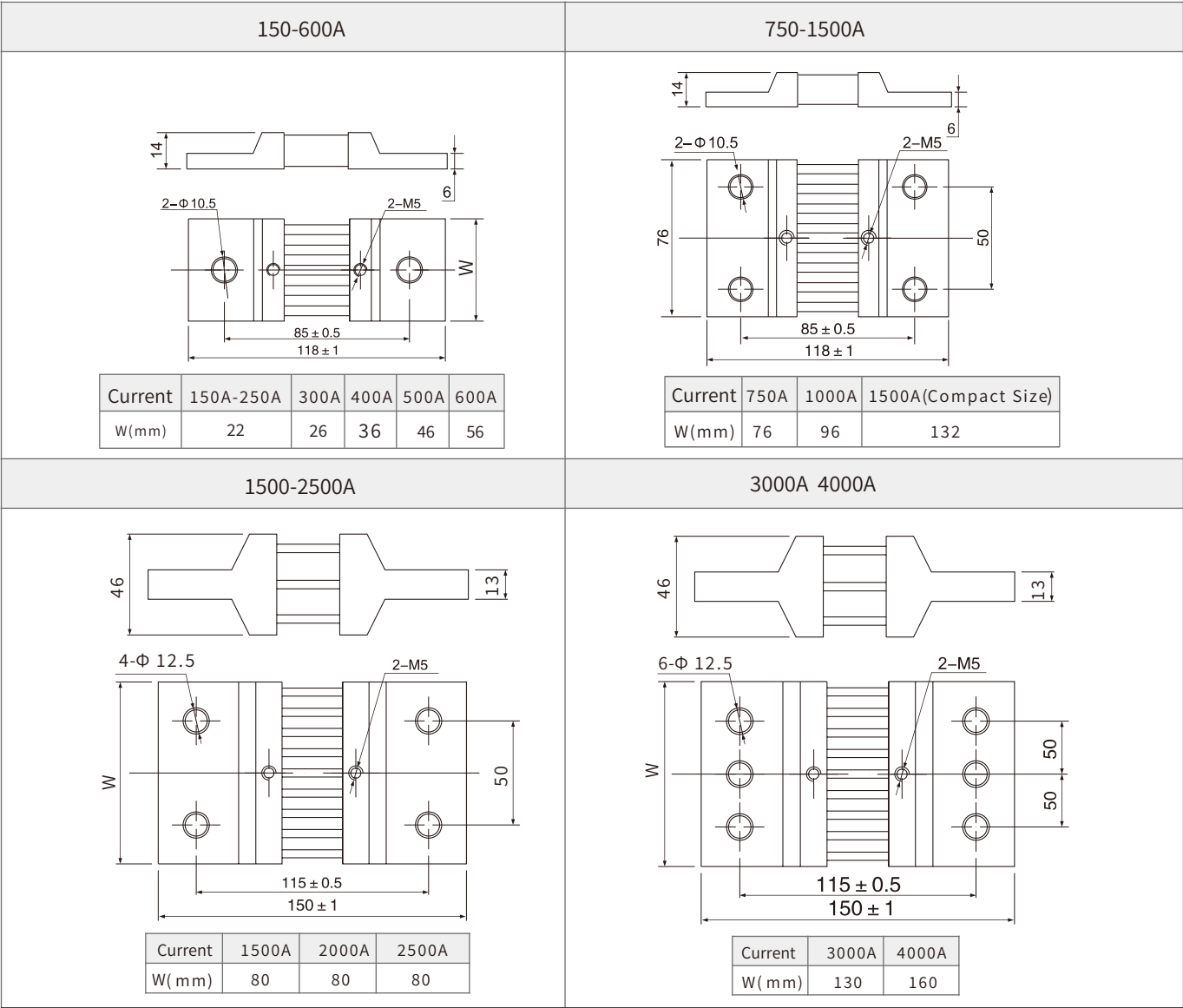


FL-39 Shunt

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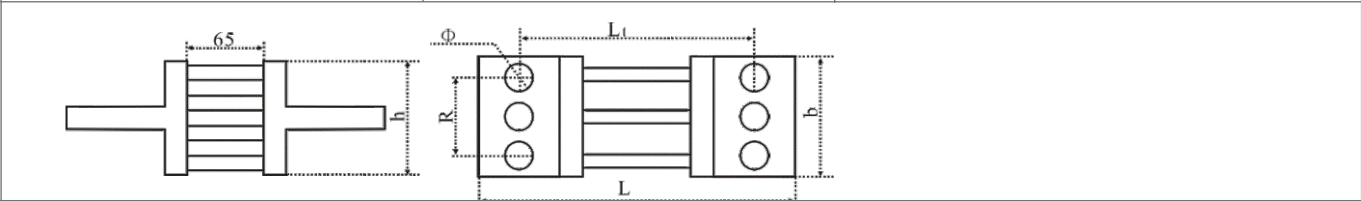
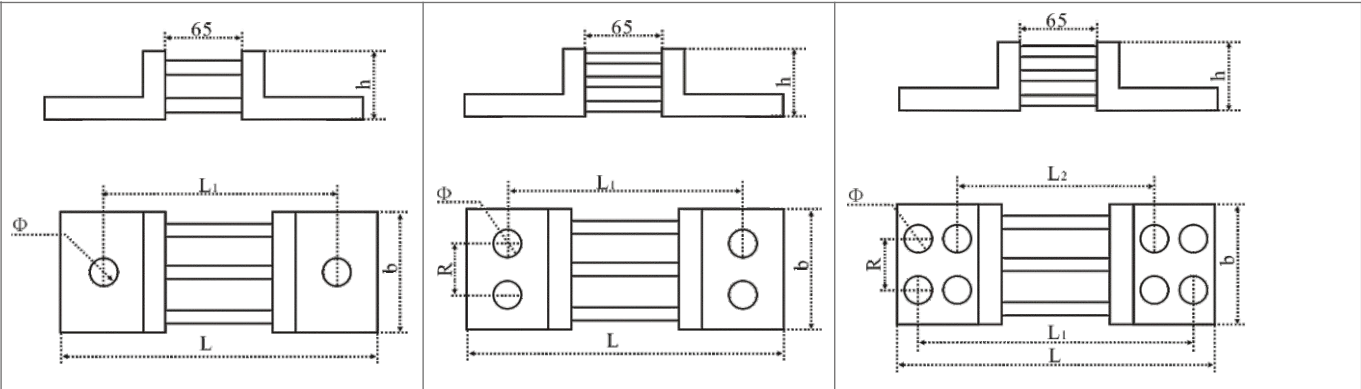
Dimension Diagram(75mV)



FL-29 Shunt



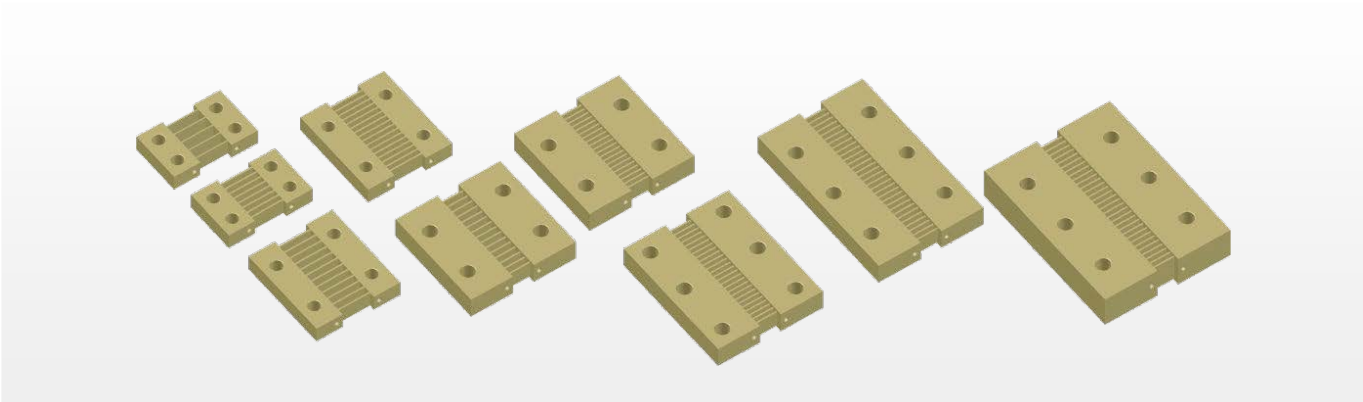
Dimension Diagram(75mV)



detailed size value	Measuring Range	L	b	h	L ₁	Φ	L ₂	R
	75A	137	30	22	104	13		
	100A							
	150A							
	200A	152	40	24	114	17		
	250A							
	300A	157	50	30	118			
	400A	174			42			
	500A			127				
	600A							
	750A	178		80	45	154		
	1KA							
1.5KA								
FL-29 Fixed- Value Shunt, Accuracy Class 0.5	2KA	322	100	82	274	17	174	50
	2.5KA	344	120		300		180	60
	3KA	387	140		314		174	70
	4KA	318	100	164	274			50
	5KA	340	120	160	300		180	60
	6KA	384	140	164	314		174	70
	7.5KA	390	200	180	325			

FL-2F Shunt(Cooling wind type)

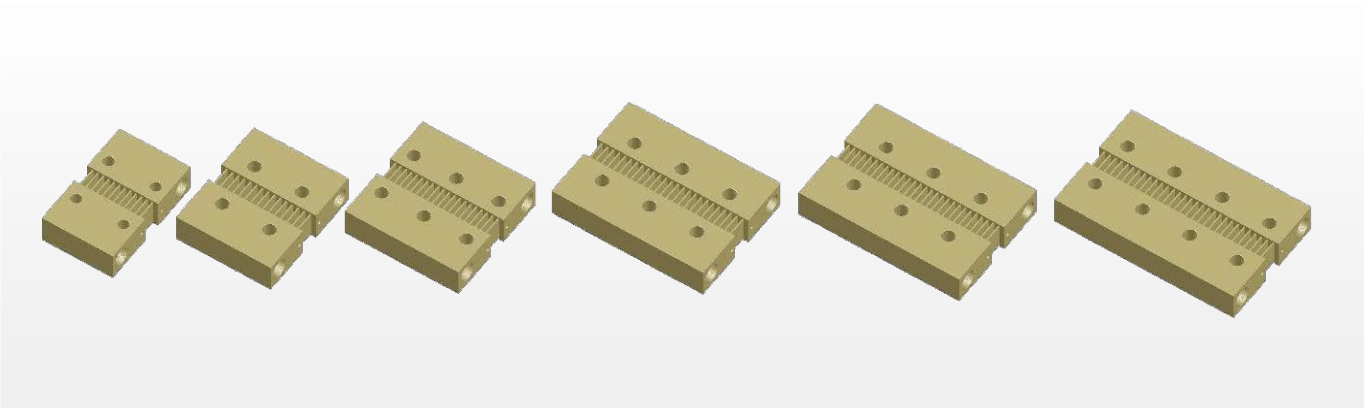
27



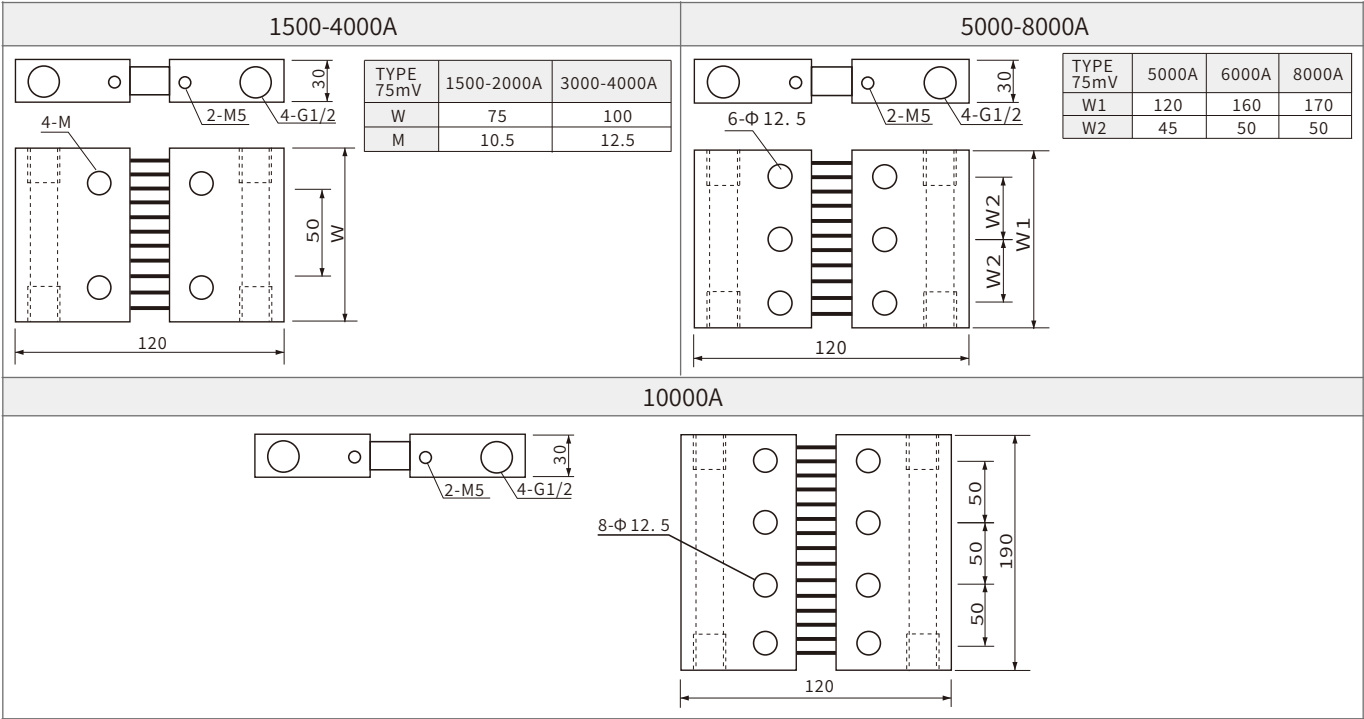
Dimension Diagram(75mV)

500-4000A					5000-8000A				
	TYPE	500-1000A	1500-2000A	3000-4000A		TYPE	5000A	6000A	8000A
	75mV					75mV			
	L1	80	80	100		L1	100	100	120
	L2	60	60	70		L2	70	70	80
	W1	50	90	100		W1	125	160	160
	W2	25	50	50		W2	45	50	50
	H	15	15	20		H	20	20	30
	M	5	5	5		M	5	5	5
	M1	10.5	10.5	10.5		M1	12.5	12.5	12.5

FL-2S Shunt(Cooling water type)



Dimension Diagram(75mV)

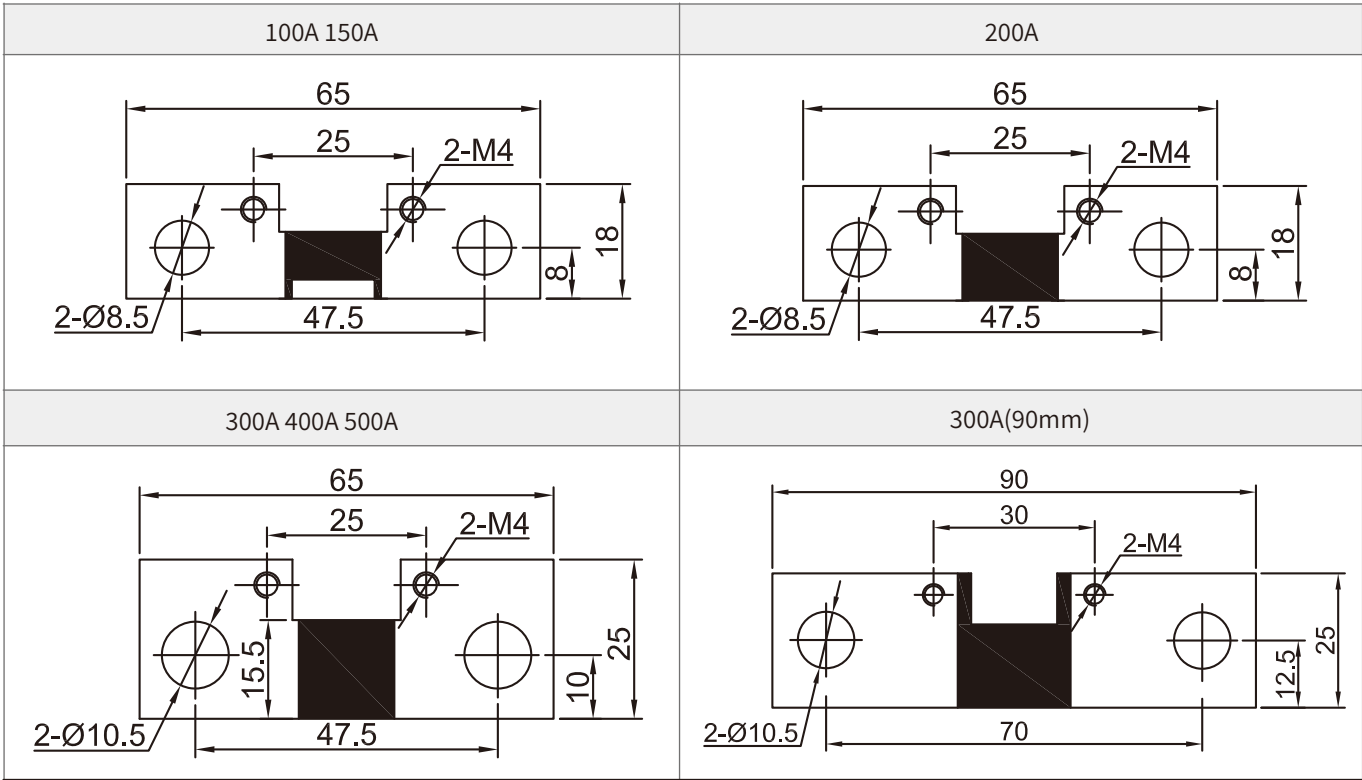


FL-P Shunt

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Dimension Diagram(75mV)



FL-U Shunt

