



XIQI ELECTRIC

PRODUCE CATALOGUE

**Global Suppliers of Measurement
Instrument for Industry**

AUTHORITY



Brief introduction

Since the company was established in 1992, XIQI has been dedicated to the manufacture and development of industrial automated instruments more than 25 years.

XIQI mainly supplies products of shunt, temperature controller, thermocouple, RTDs, Solid-State Relay and relevant customized products with high quality and competitive price. Our products have gotten the certificates of European CE, ISO9001, RoHS and IATF16949.

After several years development, XIQI has become the leader of Chinese instrument manufacturer with huge domestic market share. Every year, XIQI provides more than one million instruments to clients all over the world. High quality, fast response and the spirit of innovation, responsibility help us earn a good reputation in this industry.

If you are interested in our products or customized service, feel free to contact with us. We are looking forward to forming successful business relationship with you in near future.

OUR FACTORY



Catalogue

Shunt Overview	01
FL-2 Shunt(Standard A)	02
FL-2 Shunt(Standard B)	03
FL-2C Shunt(Patented Type)	04
CG-2 Shunt(Patented Type)	05
FL-2E Precision shunt / resistor	06
FL-2D Shunt (DIN43703 German Standard)	07
FL-13 Shunt (Russian Type)	08
FL-15 Shunt(USA Type)	09
FL-19 Shunt(Welding Machine Type)	10
FL-19Z Shunt(Welding Machine Type B)	11
FL-21 Shunt(Taiwan Type)	12
FL-27 Shunt(0.2/0.1 High Accuracy Type)	13-14
FL-28 Shunt(0.2/0.1 High Accuracy Type B)	15
FL-29 Shunt	16
FL-39 Shunt	17
FL-2F/FL-2S Shunt(Cooling type)	18
FL-P/FL-U Shunt	19

■ 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℃~+60℃
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 ℃; Rated current 50A or more does not exceed 120 ℃.
Function	120% Of Rated Current For 2H

■ Model Standard

FL- A / mV
 ① ② ③ ④

①Shunt ②Design number

- 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

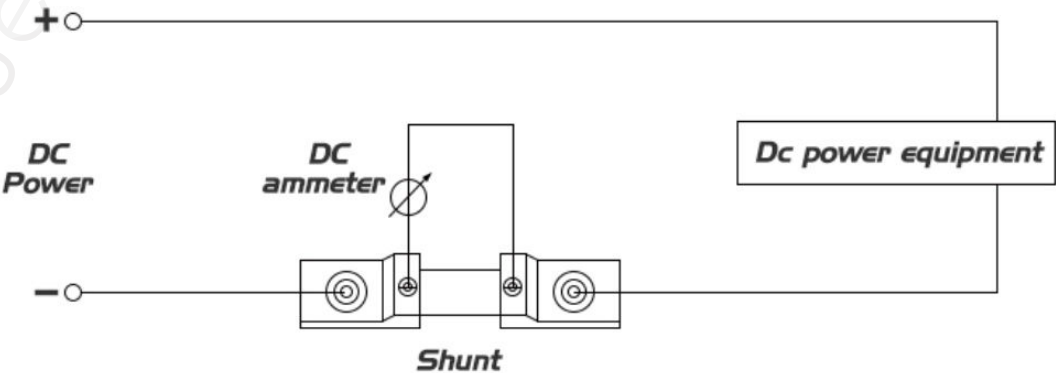
③ Rated current
 1A··· 15000A

④ Voltage Drop(default 75mV)
 10mV··· 800mV

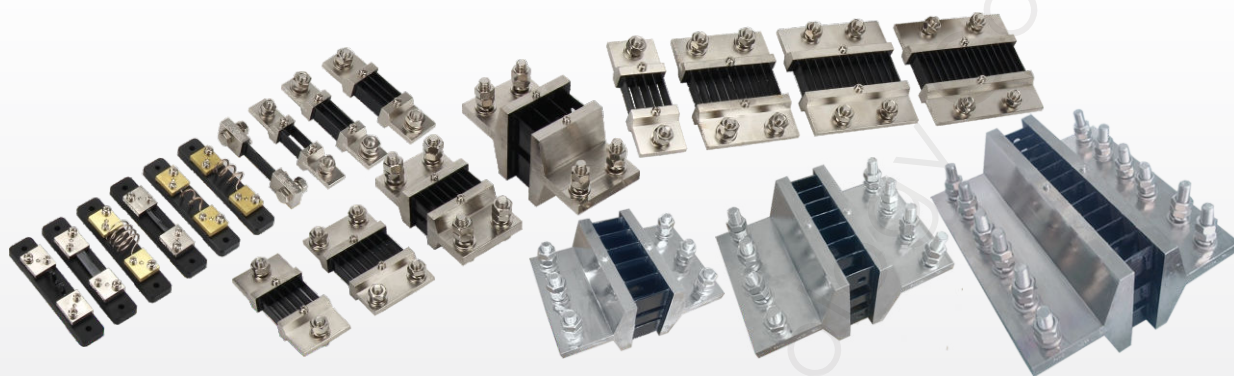
■ Example:
 FL-2 300A/75mV

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.

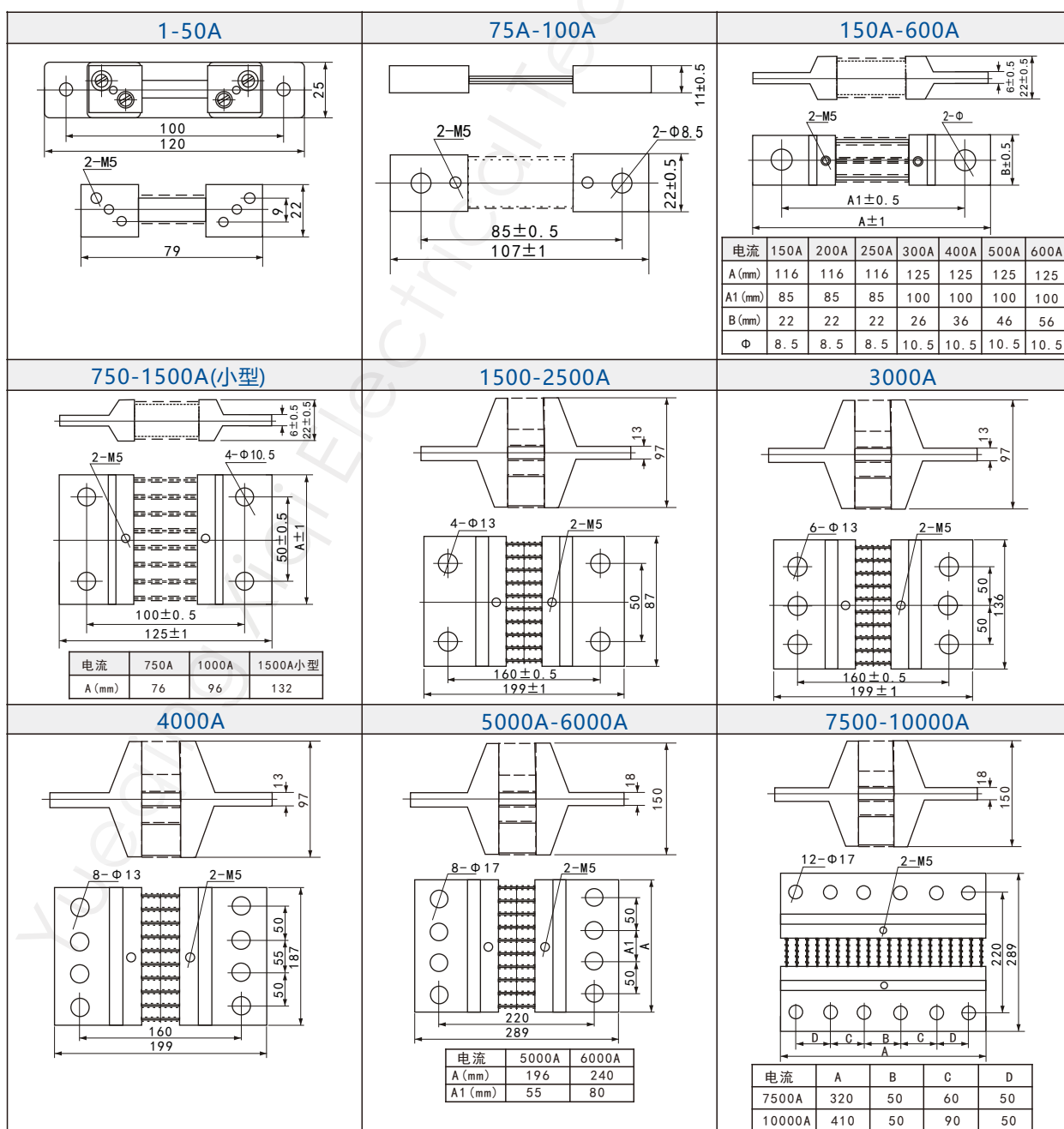
■ Wiring Diagram



■ FL-2 Shunt(Standard A) 1-20000A



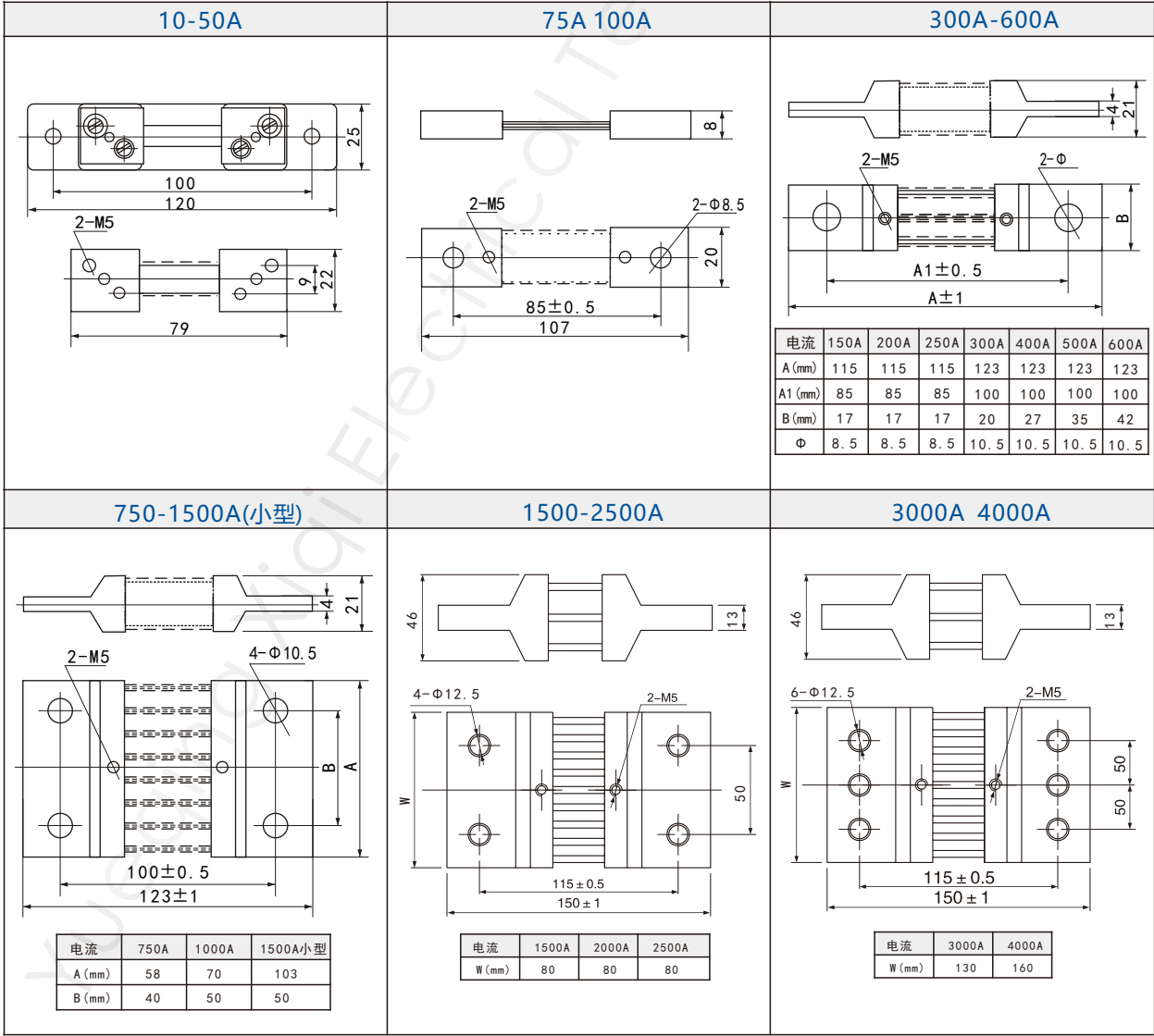
■ Dimension Diagram(75mV)



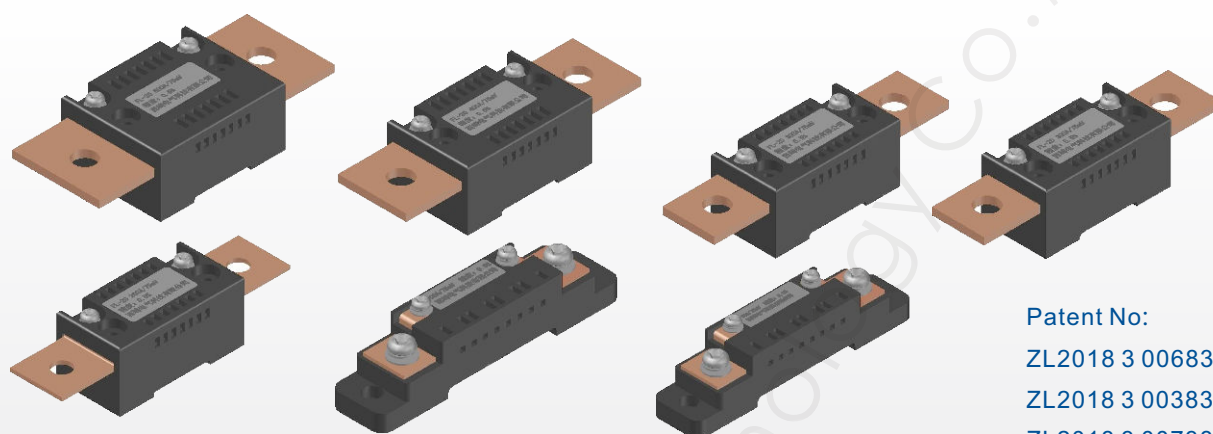
■ FL-2 Shunt(Standard A)



■ Dimension Diagram(75mV)



■ FL-2C Shunt(Patented Type)



Patent No:

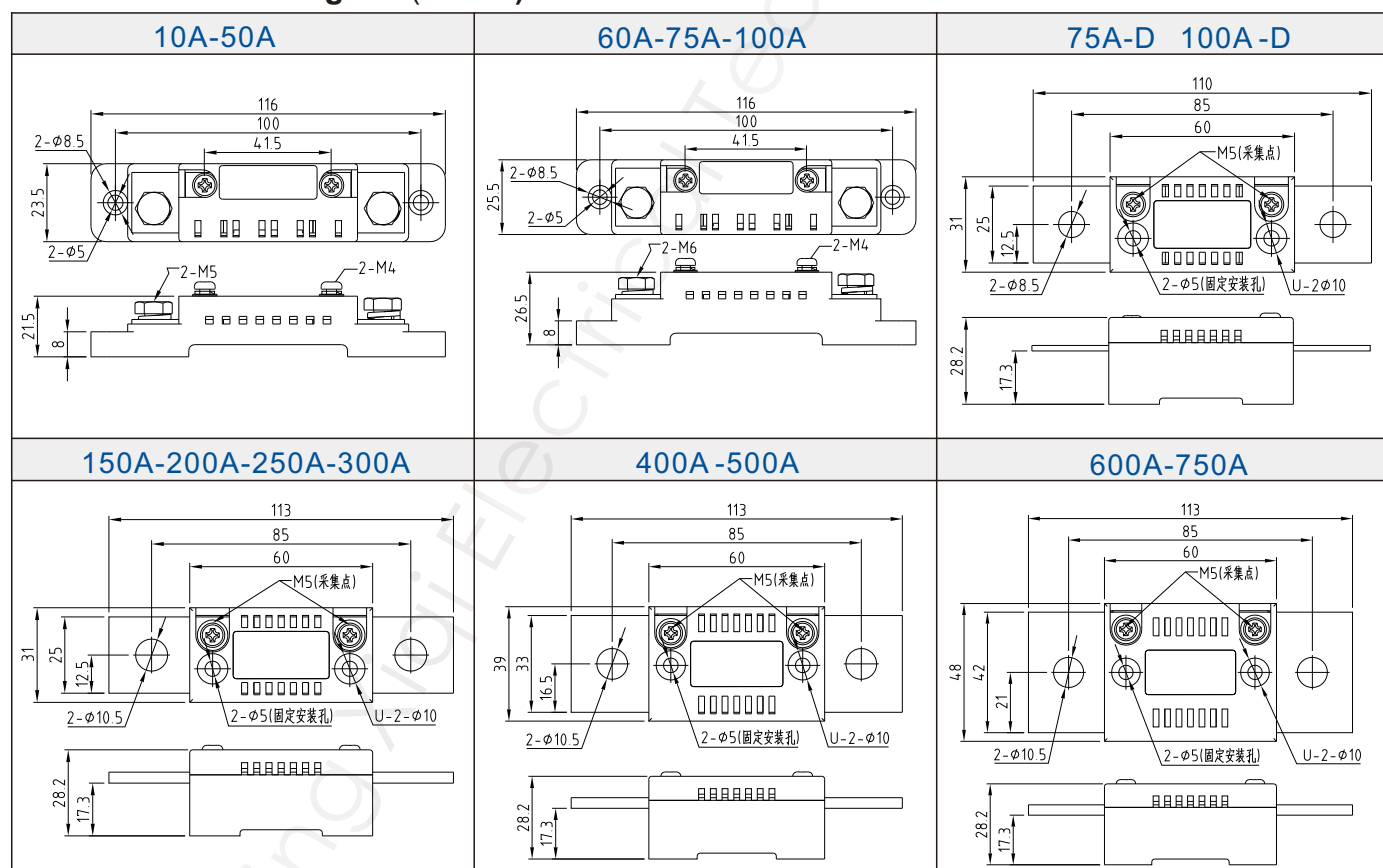
ZL2018 3 0068329.0

ZL2018 3 0038328.6

ZL2018 3 0073892.7

ZL2018 2 0270257.2

■ 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

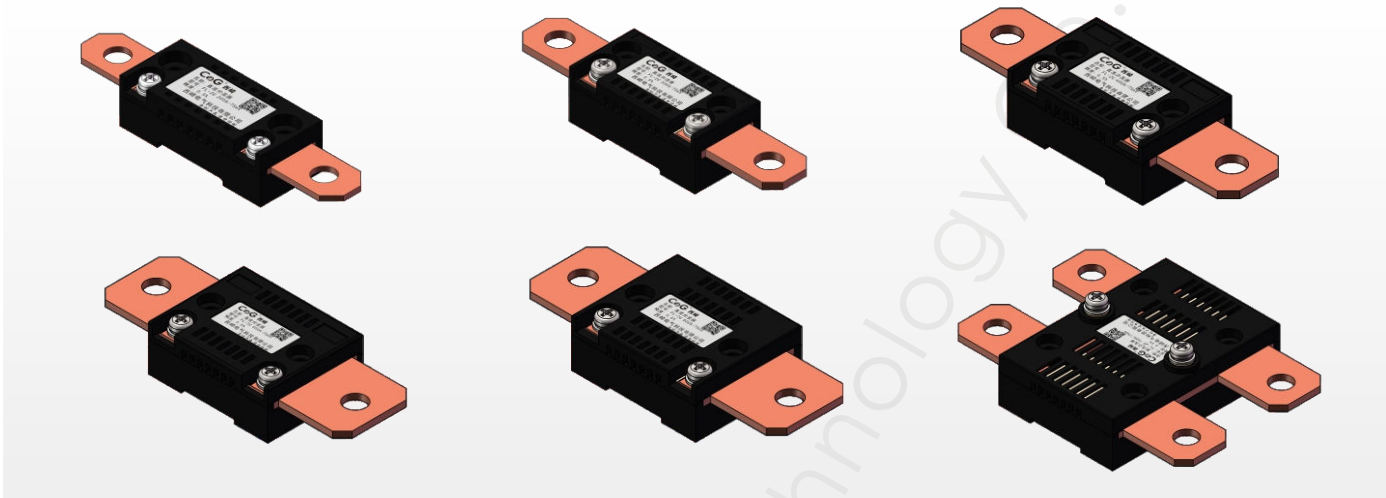
■ Basic parameters

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

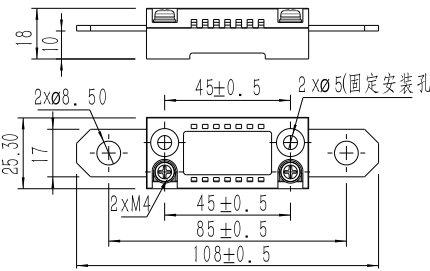
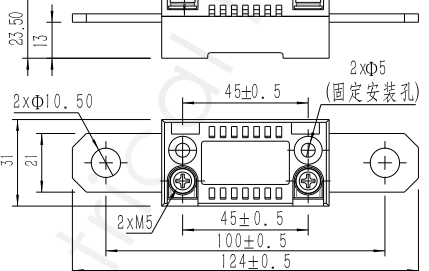
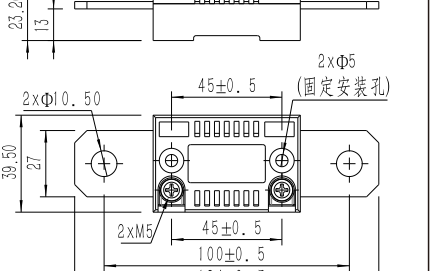
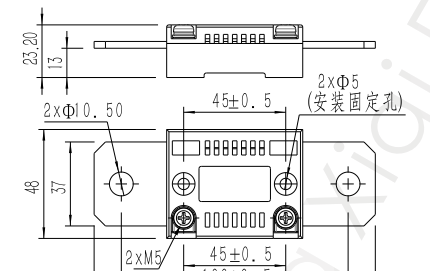
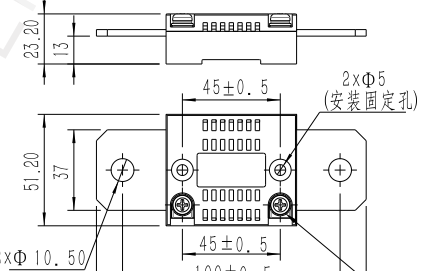
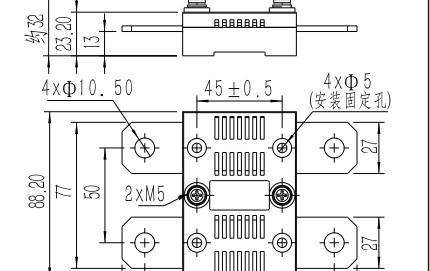
■ Performance Characteristics

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

■ CG-2 Shunt(Patented Type)



■ 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℃ ~ +60℃
Operating RH	≤95% (35℃)
Voltage	75mV
Temp Rise	Not more than 120□
Temp Coef	0 ~ +40PPM/℃
Thermoelectric Potential	Not more than 50% of the level index

■ Application

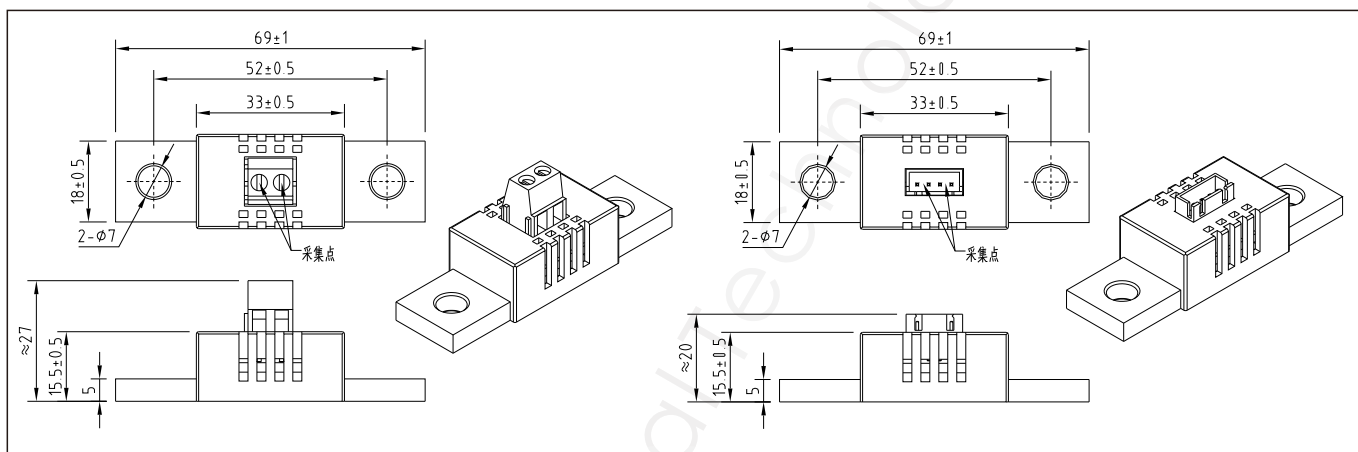
Battery management system, power electronics current detection, inverter, UPS, Motor control and electronic load equipment.

■ 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"

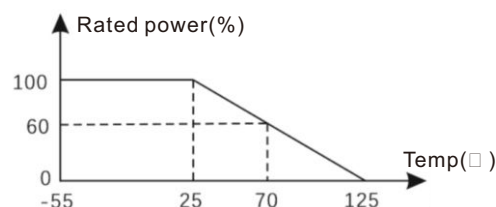
■ Dimension Diagram(75mV)



■ Appearance and structure

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

c. Rated power: The rated power is determined by the power reduction curve in the figure below.



■ Performance Characteristics

Pilot projects	Performance requirements
Accuracy class	±0.5%
Operating Temp	-40℃ ~ +60℃
Operating RH	≤95% (35℃)
Voltage	75mV
Temp Rise	Not more than 120℃
Temp Coef	0 ~ +40PPM/℃
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)

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.

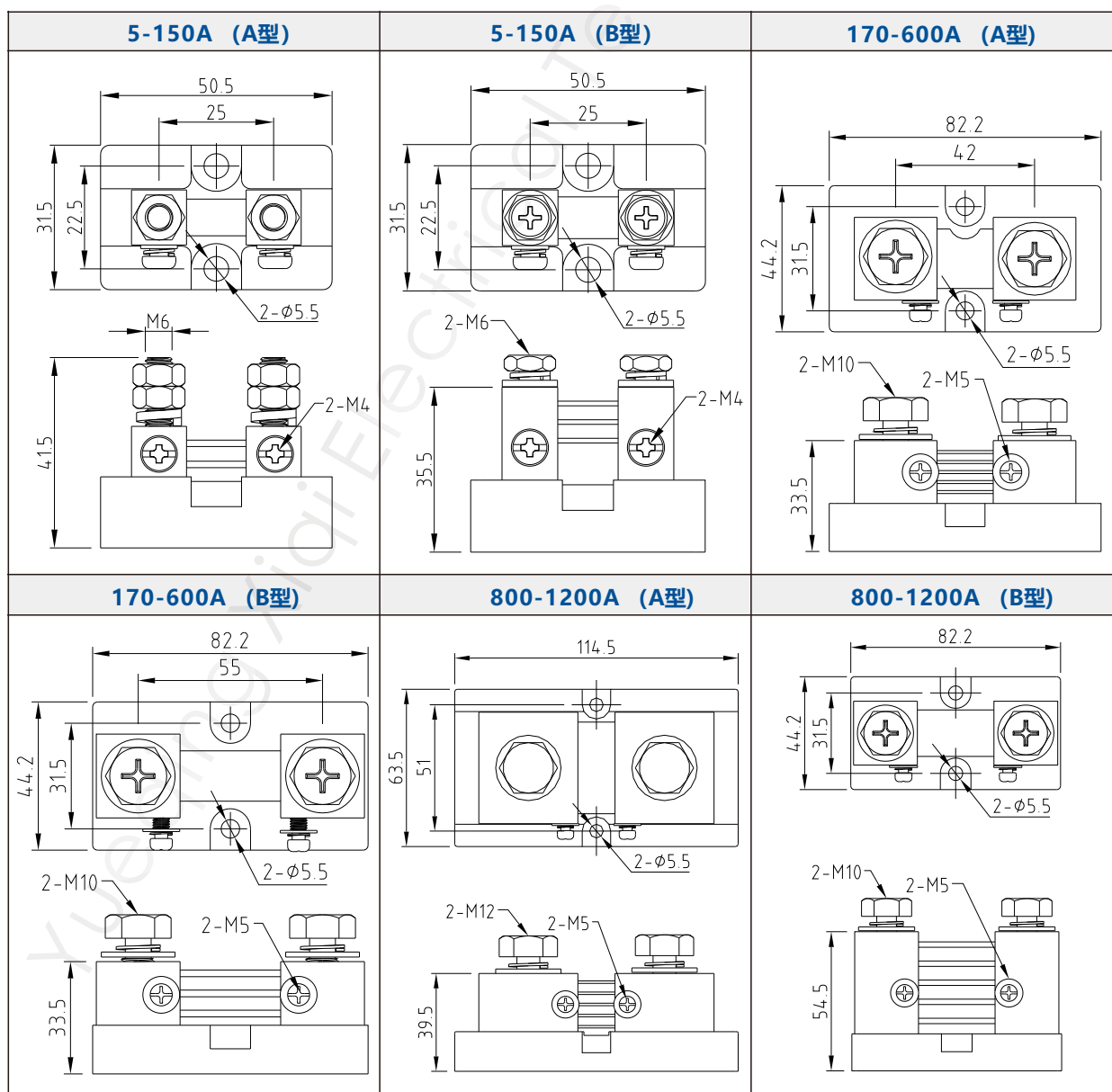
g. Low temperature storage: test 250h, -40 °C, without load. In the test box, test the resistance R_i every 6 hours for a total of 6 times. The resistance value conforms to the level index, and the shunt is not damaged.

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.

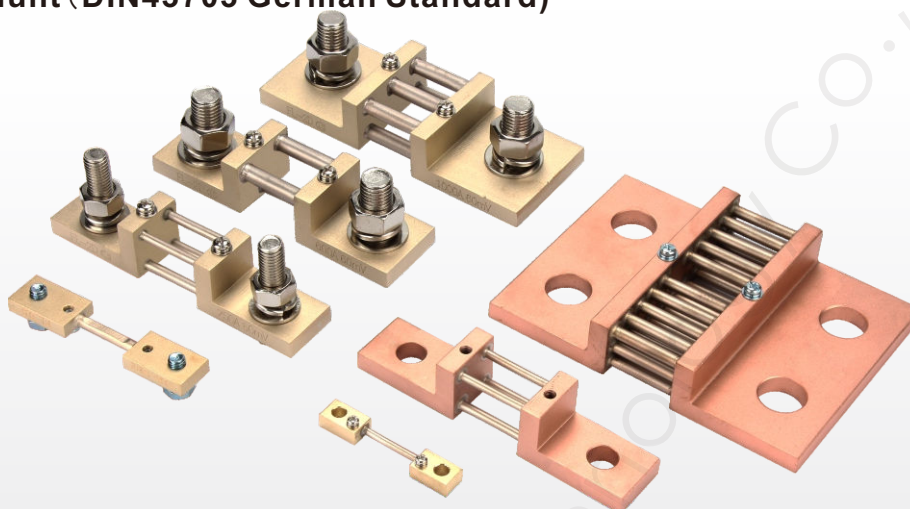
■ **FL-15 Shunt(USA Type)**



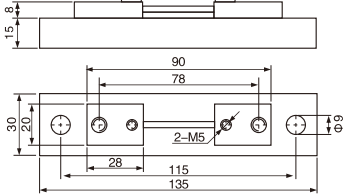
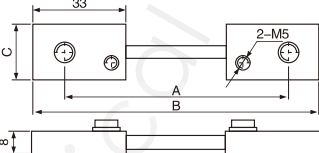
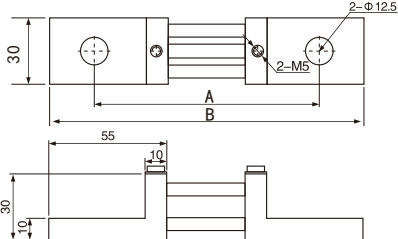
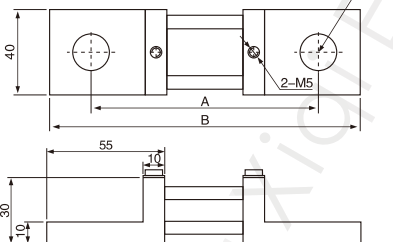
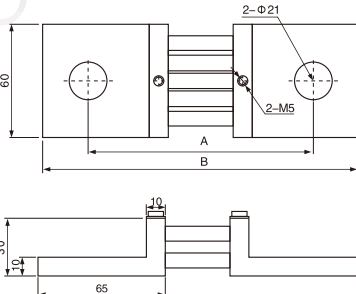
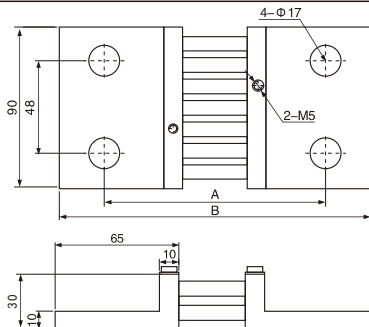
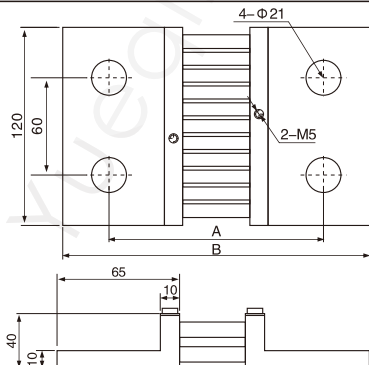
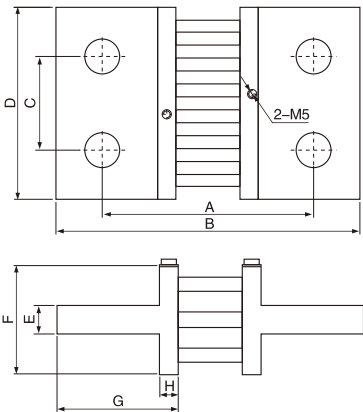
■ **Dimension Diagram(50mV 75mV 100mV)**



■ **FL-2D Shunt (DIN43703 German Standard)**



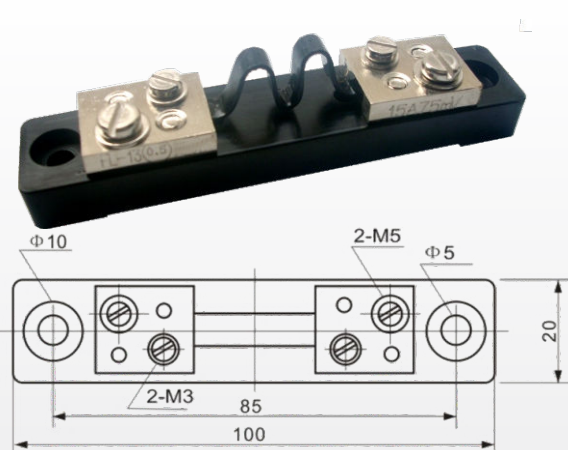
■ **Dimension Diagram(60mV)**

1~25A	30~150A	200~300A																											
	 <table><tr><th>TYPE</th><th>A</th><th>B</th><th>C</th></tr><tr><td>60mV</td><td>80</td><td>100</td><td>20</td></tr><tr><td>100mV</td><td>125</td><td>145</td><td>25</td></tr></table>	TYPE	A	B	C	60mV	80	100	20	100mV	125	145	25	 <table><tr><th>TYPE</th><th>A</th><th>B</th></tr><tr><td>60mV</td><td>105</td><td>145</td></tr><tr><td>100mV</td><td>150</td><td>190</td></tr></table>	TYPE	A	B	60mV	105	145	100mV	150	190						
TYPE	A	B	C																										
60mV	80	100	20																										
100mV	125	145	25																										
TYPE	A	B																											
60mV	105	145																											
100mV	150	190																											
400~800A	1000~1200A	1500~2000A																											
 <table><tr><th>TYPE</th><th>A</th><th>B</th></tr><tr><td>60mV</td><td>105</td><td>145</td></tr><tr><td>100mV</td><td>150</td><td>190</td></tr></table>	TYPE	A	B	60mV	105	145	100mV	150	190	 <table><tr><th>TYPE</th><th>A</th><th>B</th></tr><tr><td>60mV</td><td>115</td><td>165</td></tr><tr><td>100mV</td><td>160</td><td>210</td></tr></table>	TYPE	A	B	60mV	115	165	100mV	160	210	 <table><tr><th>TYPE</th><th>A</th><th>B</th></tr><tr><td>60mV</td><td>115</td><td>165</td></tr><tr><td>100mV</td><td>160</td><td>210</td></tr></table>	TYPE	A	B	60mV	115	165	100mV	160	210
TYPE	A	B																											
60mV	105	145																											
100mV	150	190																											
TYPE	A	B																											
60mV	115	165																											
100mV	160	210																											
TYPE	A	B																											
60mV	115	165																											
100mV	160	210																											
2500A																													
 <table><tr><th>TYPE</th><th>A</th><th>B</th></tr><tr><td>60mV</td><td>115</td><td>165</td></tr><tr><td>100mV</td><td>160</td><td>210</td></tr></table>	TYPE	A	B	60mV	115	165	100mV	160	210																				
TYPE	A	B																											
60mV	115	165																											
100mV	160	210																											

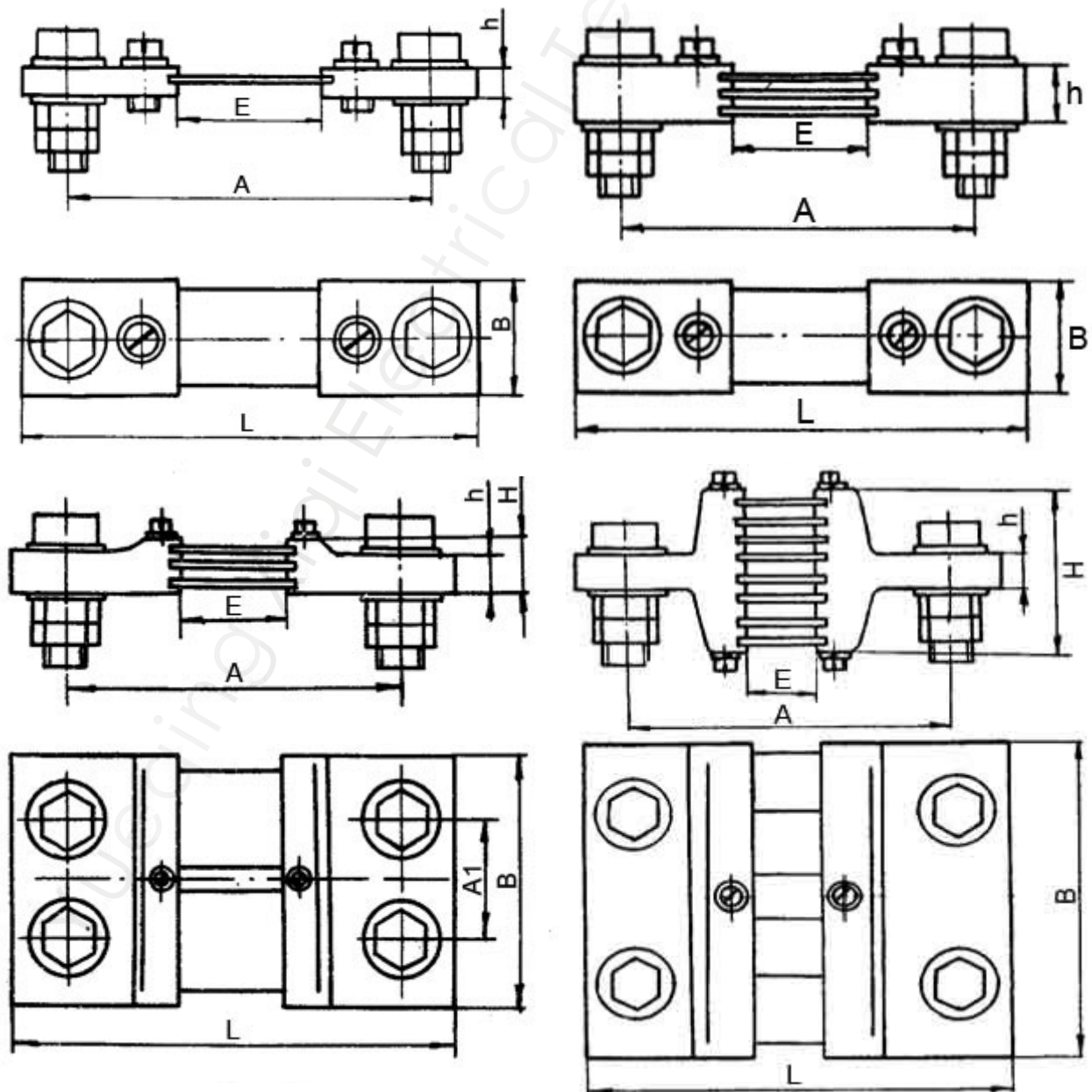
There are many different type sh
please contact us if any require

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

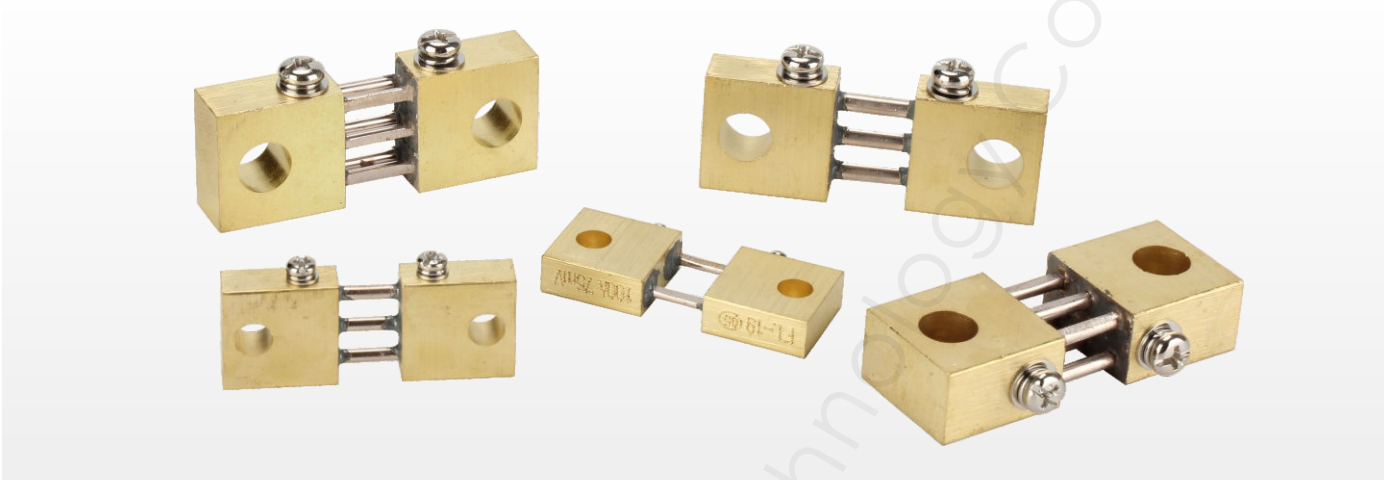
■ FL-13 Shunt (Russian Type)



■ Dimension Diagram(75mV)



■ FL-19 Shunt(Welding Machine Type)



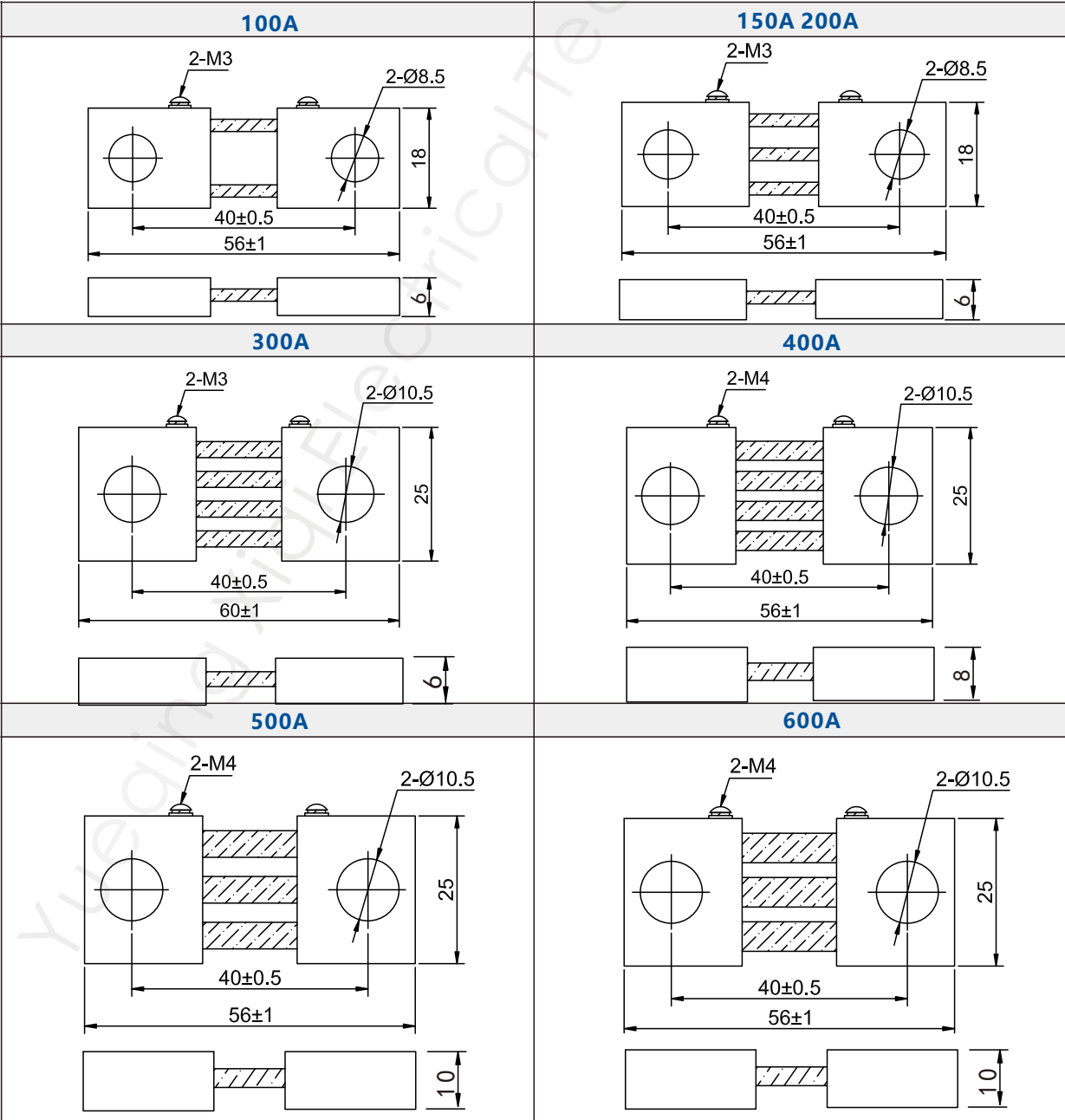
■ Dimension Diagram(75mV)

100A 150A 200A	300A	400A
500A 600A	750A	1000A
1500A		

■ FL-19Z Shunt(Welding Machine Type B)



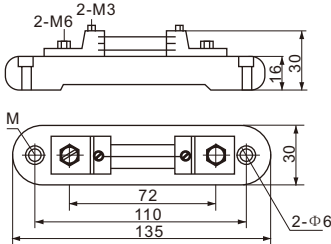
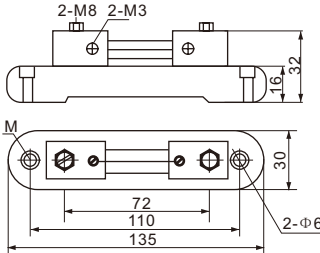
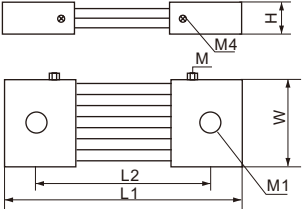
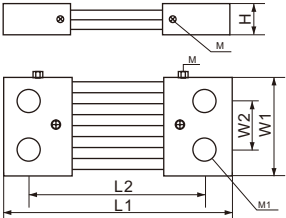
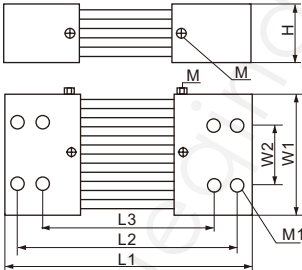
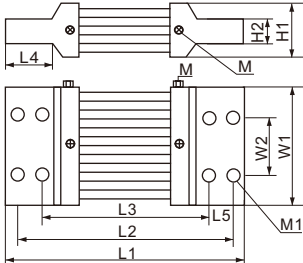
■ Dimension Diagram(75mV)



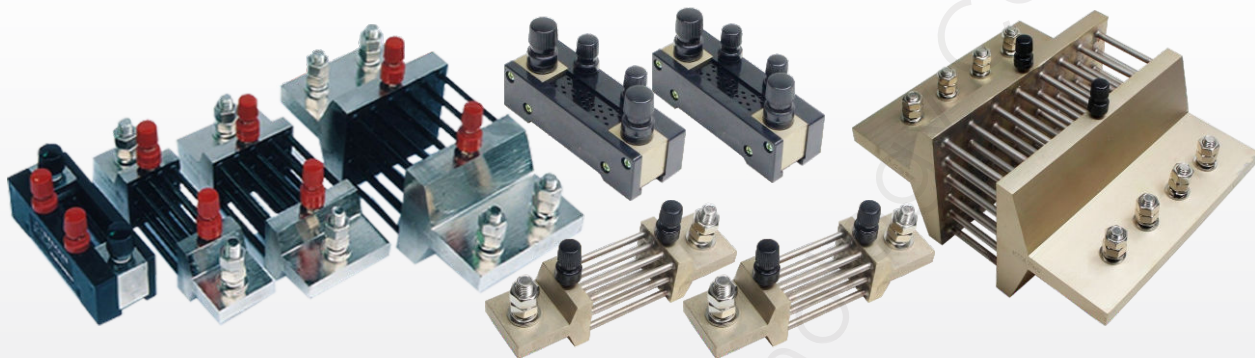
■ **FL-21 Shunt(Taiwan Type)**



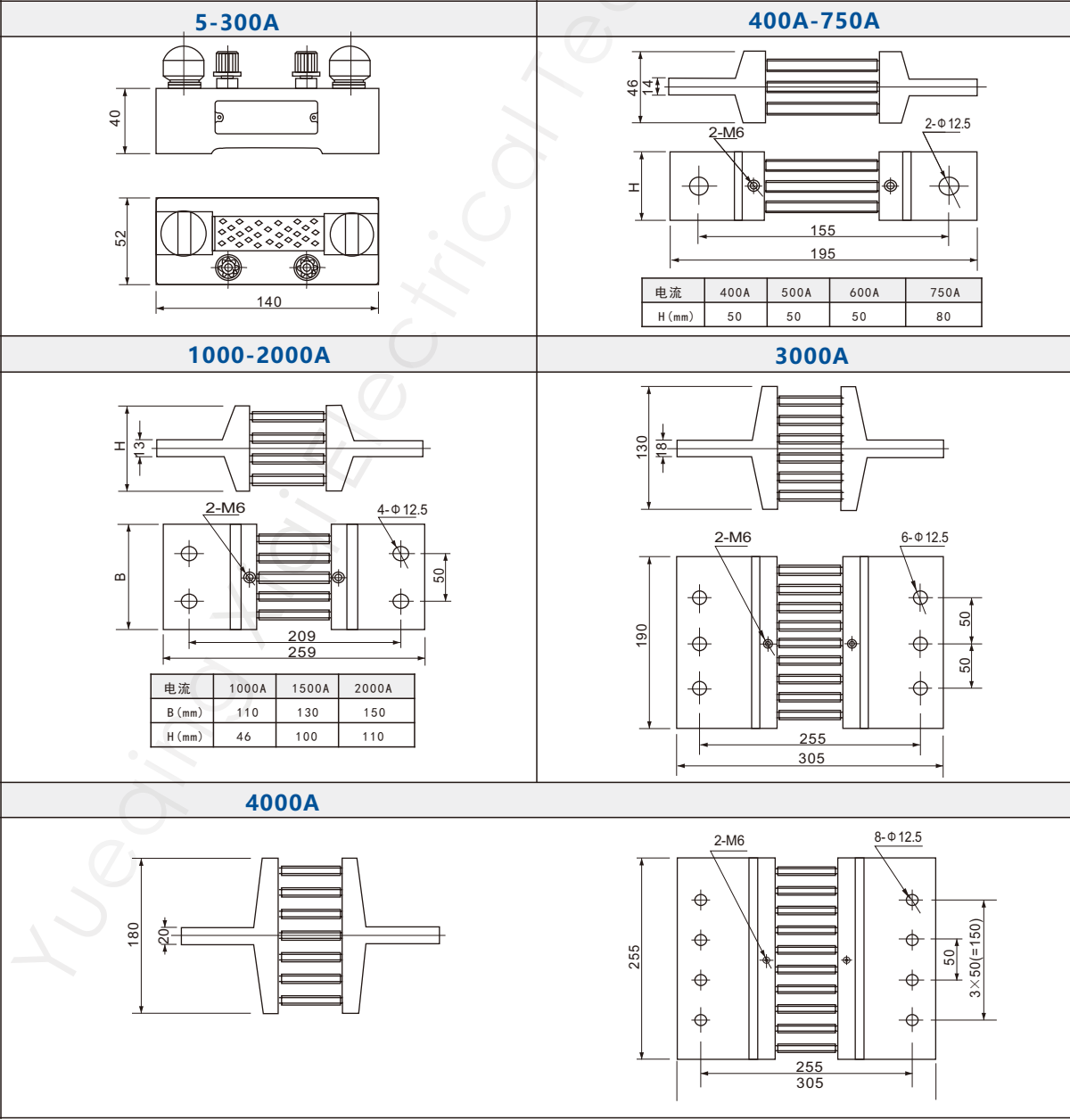
■ **Dimension Diagram(75mV)**

5-125A	150A-200A																																																																																															
																																																																																																
250-600A	800-1500A																																																																																															
 <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	 <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		
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																																																																																											
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																																																																																												
2000-2500A	3000-6000A																																																																																															
 <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	 <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																																																																																														
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																																																																																														
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																																																																																												

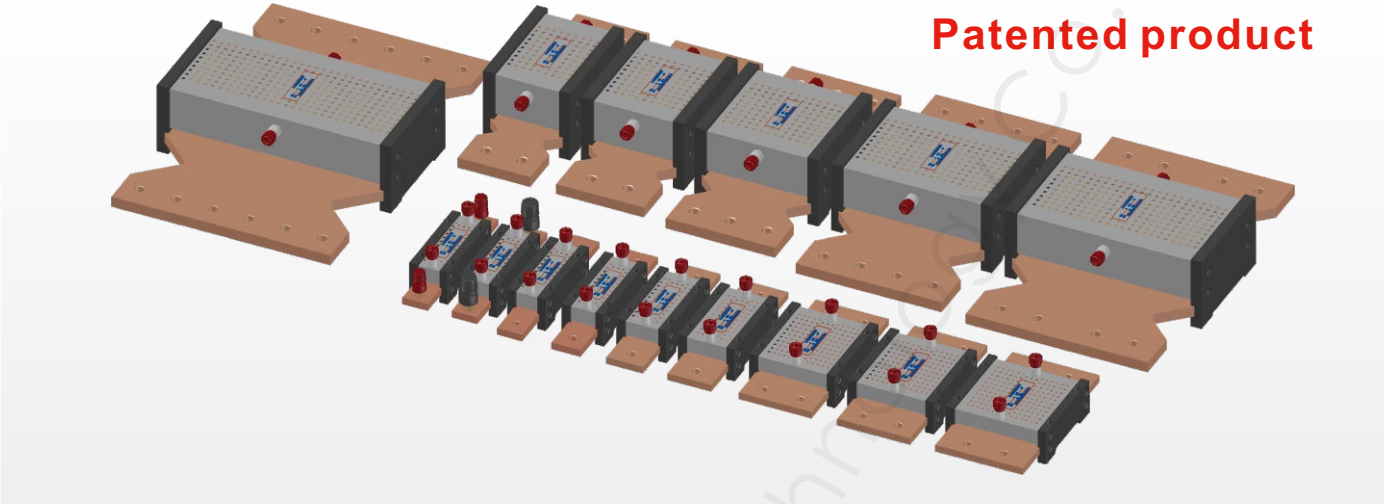
■ FL-27 Shunt(0.2/0.1 High Accuracy Type)



■ Dimension Diagram(75mV)



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



■ 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

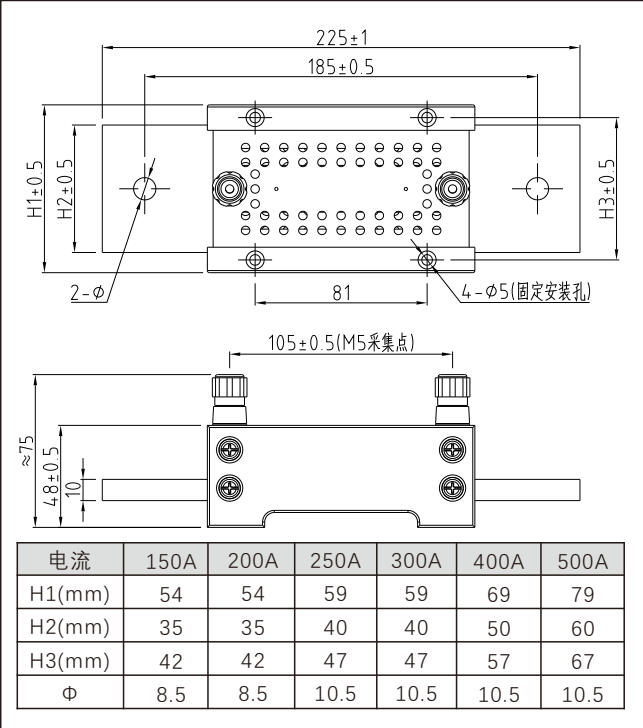
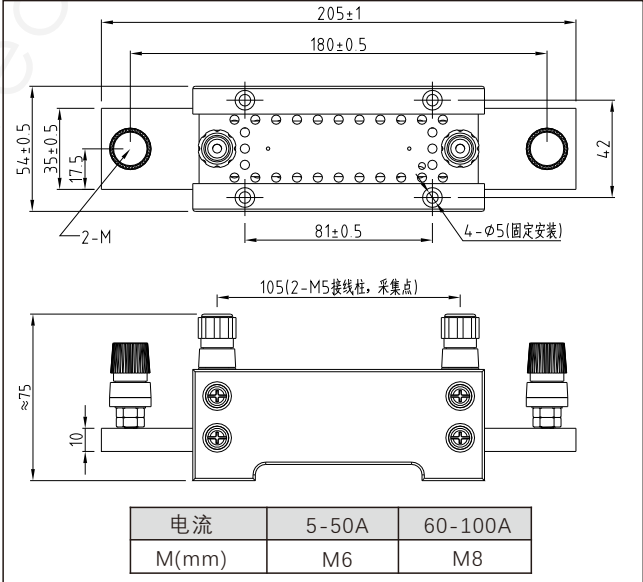
■ Basic parameters

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

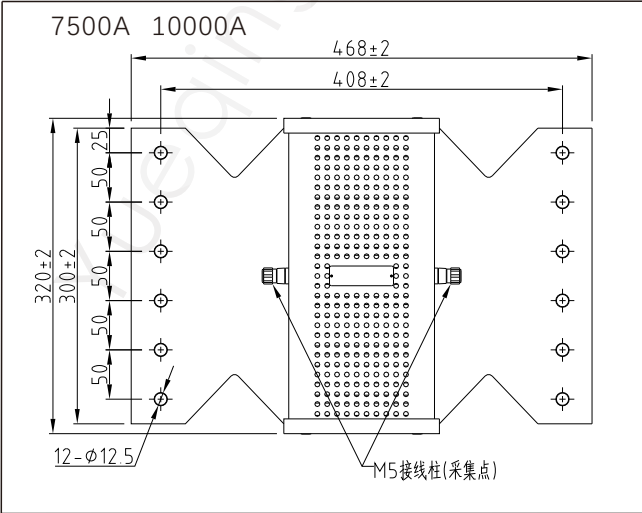
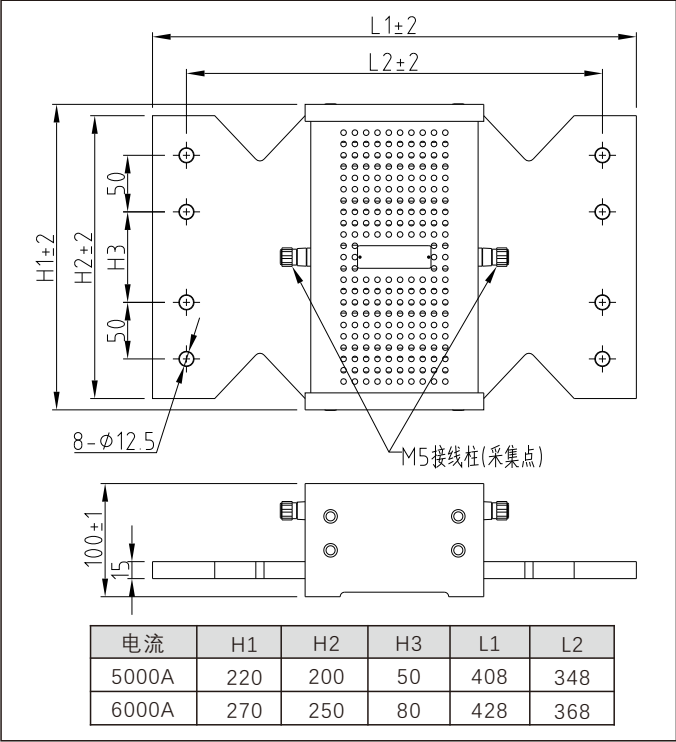
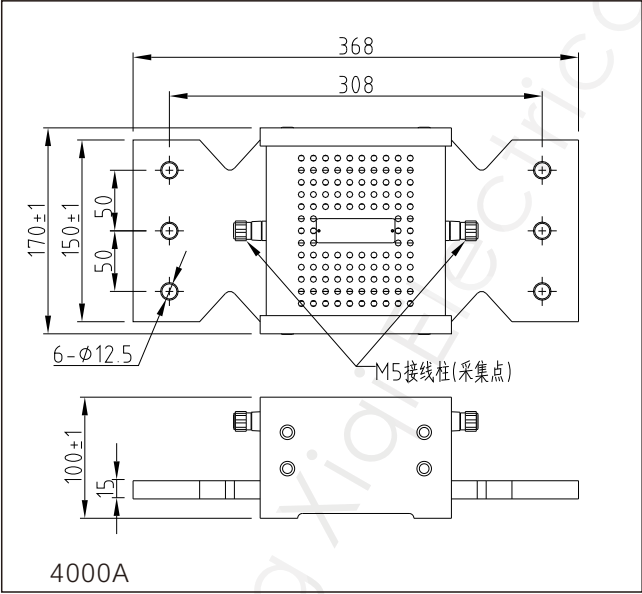
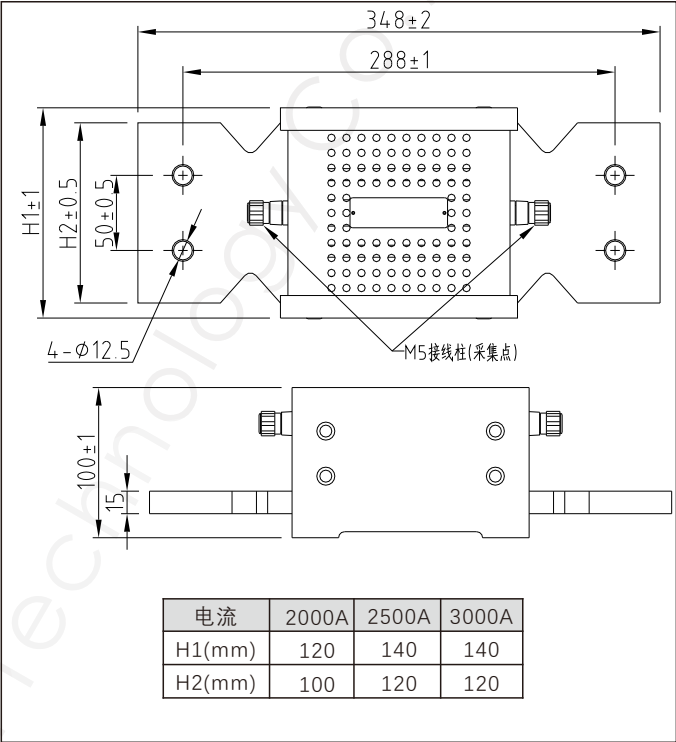
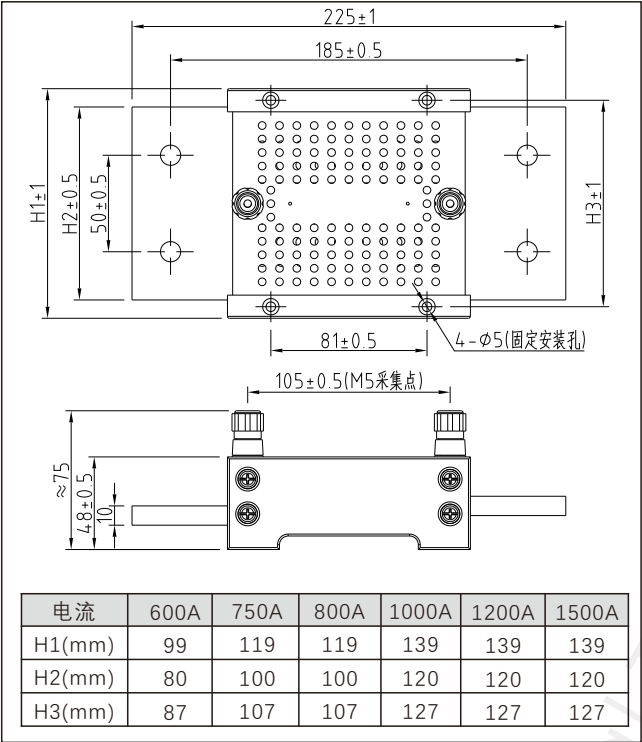
■ Performance Characteristics

Pilot projects	Performance requirements
Accuracy class	±0.1%,±0.2%
Operating Temp	-40℃ ~ +60℃
Operating RH	≤95% (35℃)
Voltage	25mV,30mV,50mV,60mV,75mV...
Temp Rise	Not more than 120℃
Temp Coef	0 ~ +20PPM/℃
Thermoelectric Potential	Not more than 50% of the level index

■ Dimension Diagram(75mV)



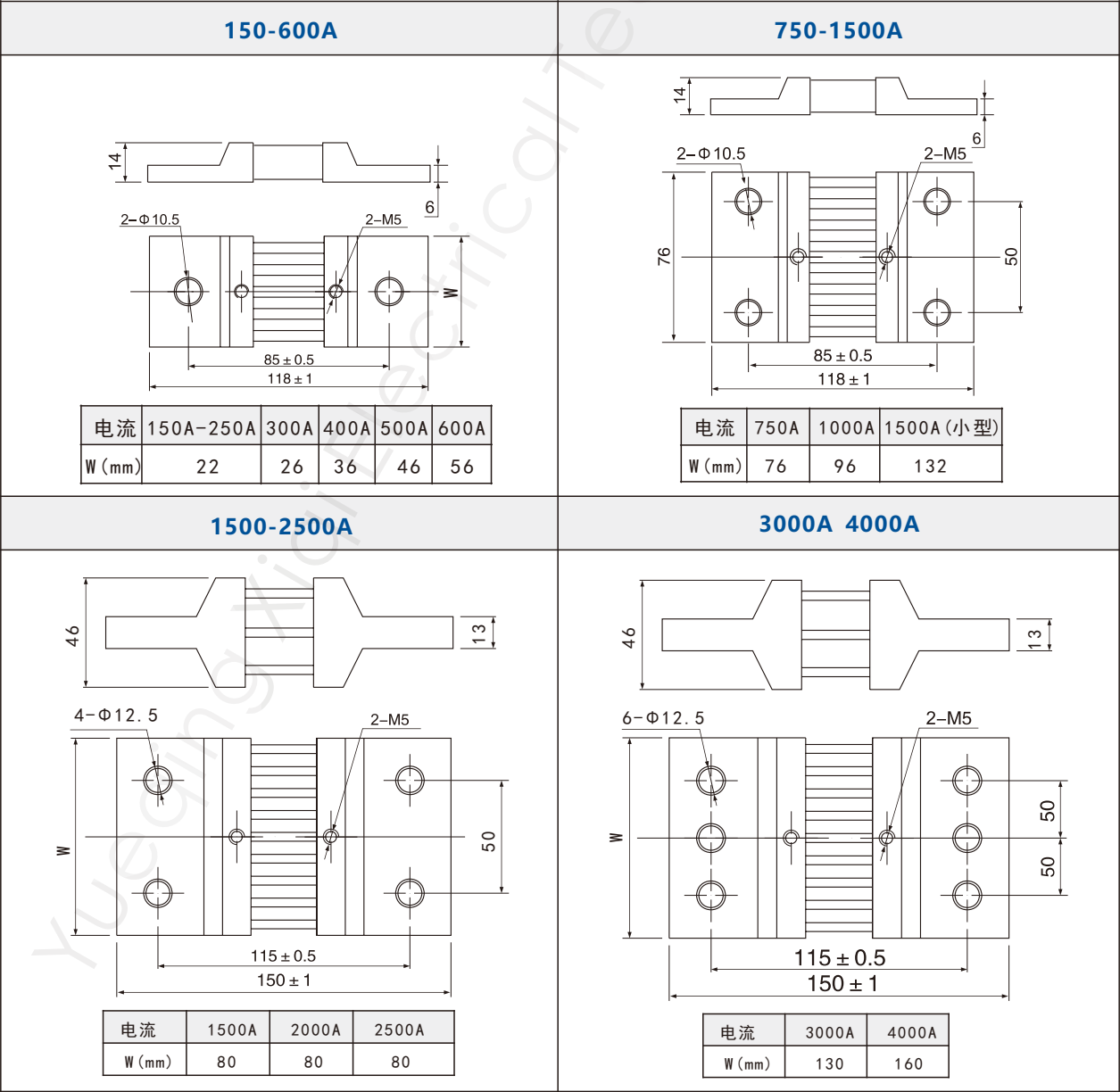
■ Dimension Diagram(75mV)



■ FL-39 Shunt



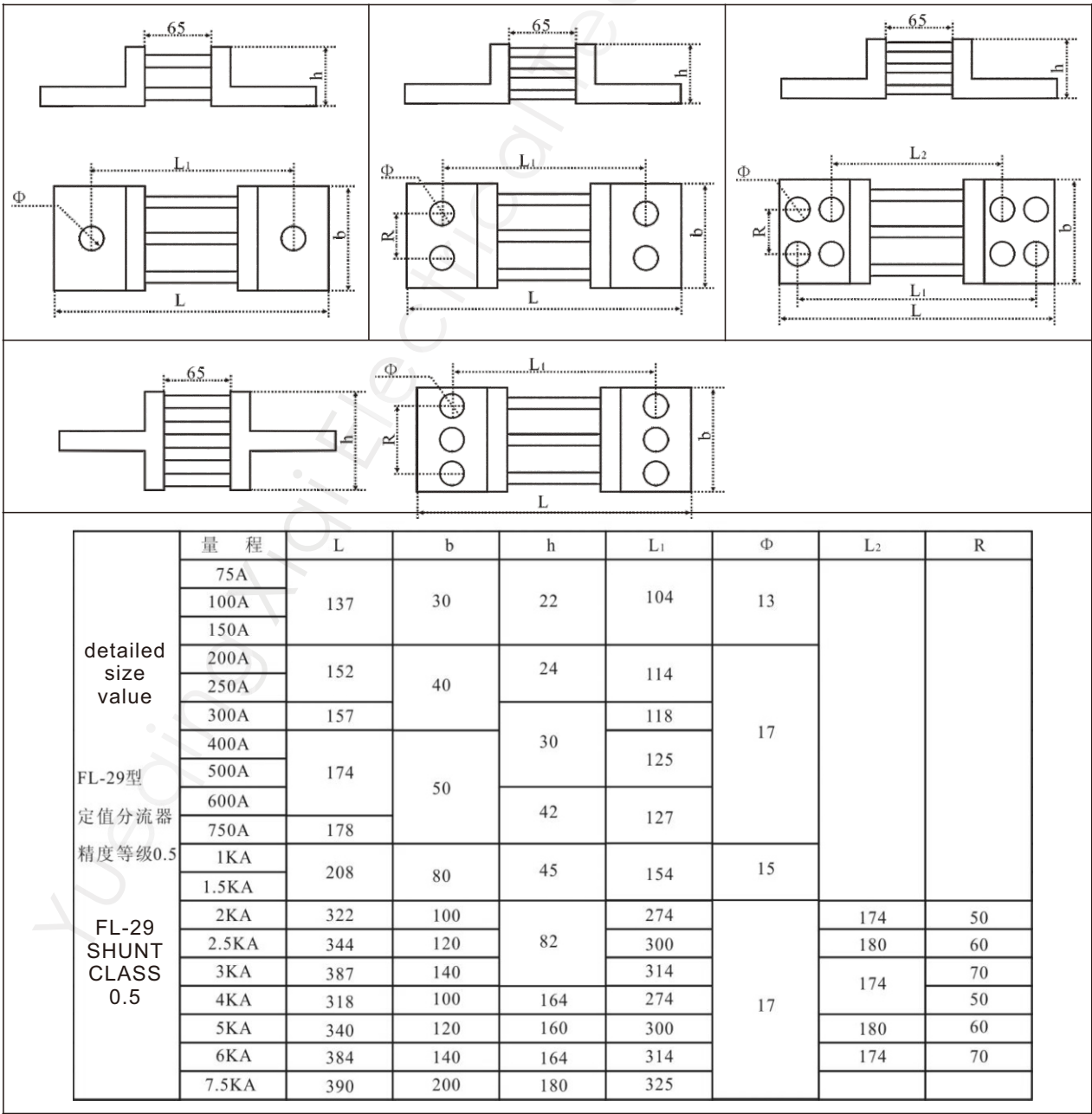
■ Dimension Diagram(75mV)



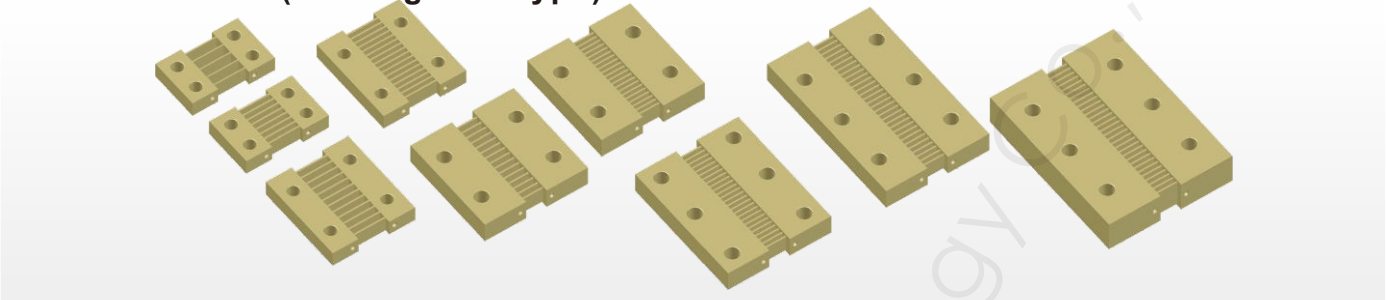
■ FL-29 Shunt



■ Dimension Diagram(75mV)



■ FL-2F Shunt(Cooling wind type)



■ Dimension Diagram(75mV)

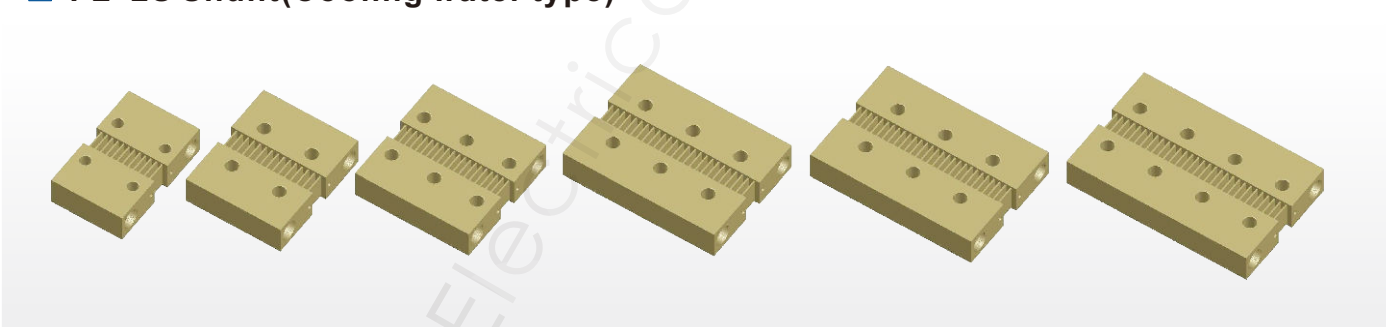
500-4000A

TYPE 75mV	500-1000A	1500-2000A	3000-4000A
L1	80	80	100
L2	60	60	70
W1	50	90	100
W2	25	50	50
H	15	15	20
M	5	5	5
M1	10.5	10.5	10.5

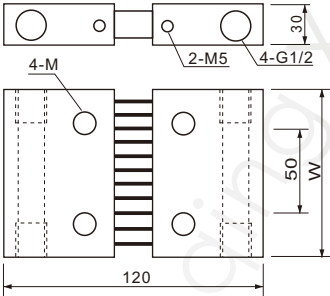
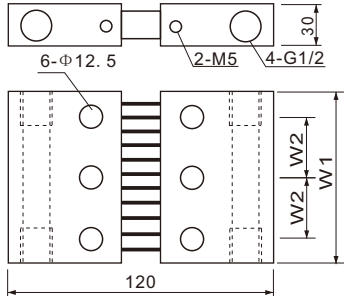
5000-8000A

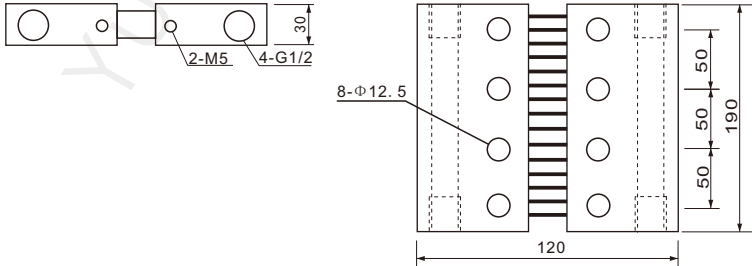
TYPE 75mV	5000A	6000A	8000A
L1	100	100	120
L2	70	70	80
W1	125	160	160
W2	45	50	50
H	20	20	30
M	5	5	5
M1	12.5	12.5	12.5

■ FL-2S Shunt(Cooling water type)



■ Dimension Diagram(75mV)

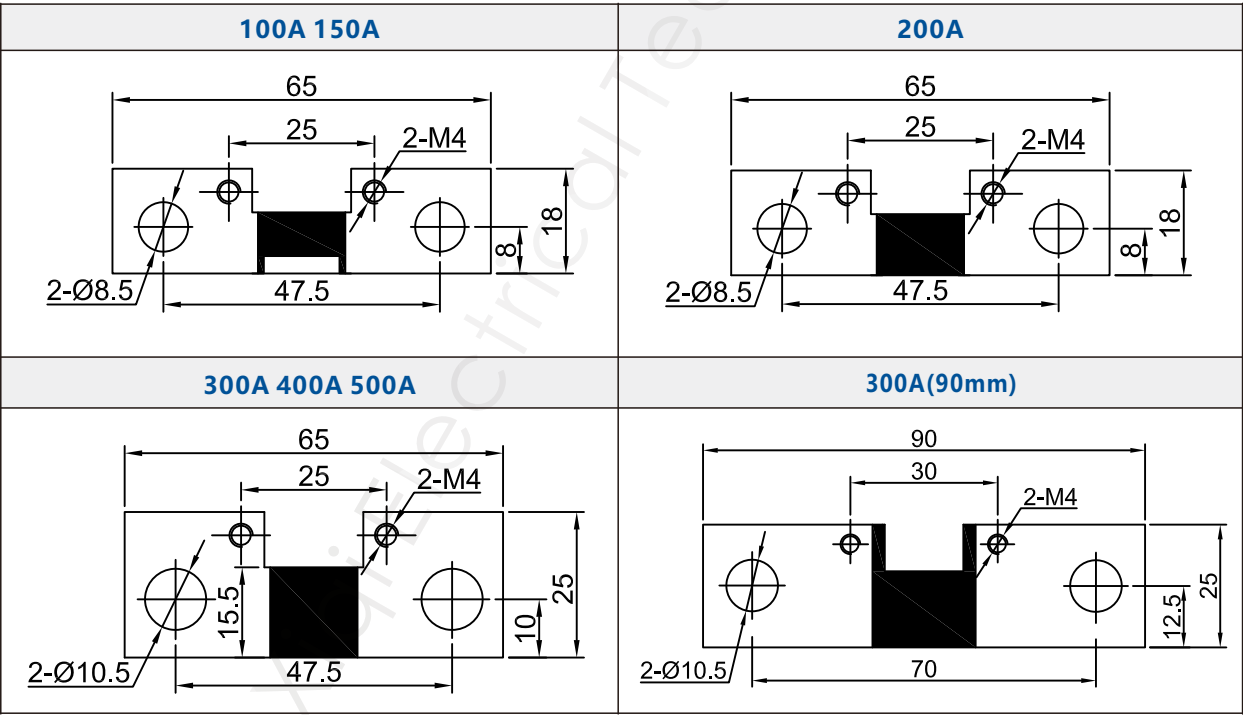
1500-4000A					5000-8000A					
		TYPE 75mV	1500-2000A	3000-4000A			TYPE 75mV	5000A	6000A	8000A
		W	75	100			W1	120	160	170
		M	10.5	12.5			W2	45	50	50

10000A				
				

■ FL-P Shunt



■ Dimension Diagram(75mV)



■ FL-U Shunt

