

**Current Transformers Specification**

General Specification	CP Series	MSQ Series	TP Series	LMK Series
Product Standard	IEC61869-2 ;GB20840.1 ;GB20840.2	IEC61869-2 ;GB20840.1 ;GB20840.2	IEC60044-1 ;GB1208-2006	IEC60044-1 ;GB1208-2006
Rated primary current	5A-2500A	30A-2500A	100A-5000A	1000A-5000A
Rated secondary current	5A	5A	5A	5A
Accuracy Class	0.5	1	0.5,1.0 (Depend on primary current)	0.5
Highest Voltage	0.72KV	0.66KV	0.72KV	0.66KV
Operating frequency	50/60Hz.	50/60Hz.	50/60Hz.	50/60Hz.
Withstand voltage	4kV	3kV	3kV	3kV
Security factor	FS <sub>≤</sub> 5	FS <sub>≤</sub> 5	FS <sub>≤</sub> 5	FS <sub>≤</sub> 5
Case material	UL Flame retardant rating UL94 V-2	UL Flame retardant rating UL94 V-2	UL Flame retardant rating UL94 V-2	UL Flame retardant rating UL94 V-2
Continuous Current	1.2xIn	1.2xIn	1.2xIn	1.2xIn
Insulation test	3 kV/1min	3 kV/1min	3 kV/1min	3 kV/1min
Operating Temperature	-25 to +55 °C	-25 to +55 °C	-10 to +55 °C	-25 to +55 °C
Storage Temperature	-35 to +70 °C	-35 to +70 °C	-10 to +70 °C	-35 to + 70 °C

**Accuracy Class**

Accuracy Class Percentage point	Percentages ration of current for rated current percentage (±%)				
	1%	5%	20%	100%	120%
1.0	-	3	1.5	1	1
0.5	-	1.5	0.75	0.5	0.5
0.2	-	0.75	0.35	0.2	0.2
0.5S	1.5	0.75	0.5	0.5	0.5
0.2S	0.75	0.35	0.2	0.2	0.2

**Current errors and phase shift in protection current transformers(Fault conditions)**

Accuracy Class	Permissible ratio error at various Percentage of rated secondary current ±	Compound error for rated current %
5P	±1	5
10P	±3	10

**Safety Precautions**

- Selected current transformer ratio should not be too large, so as not to affect the accuracy of the product.
- The sum of the resistance of the secondary circuit connection and the internal resistance of the meter shall not exceed the rated load on the nameplate of the transformer.
- When using the current transformer secondary circuit connection and the internal resistance of the meter shall not exceed the rated load on the nameplate of the transformer.
- Transformer should check the polarity of the wiring before use, the primary winding wiring flag is P1 and P2, the secondary winding corresponds to the flag S1 and S2.

**Power loss calculation of cable**

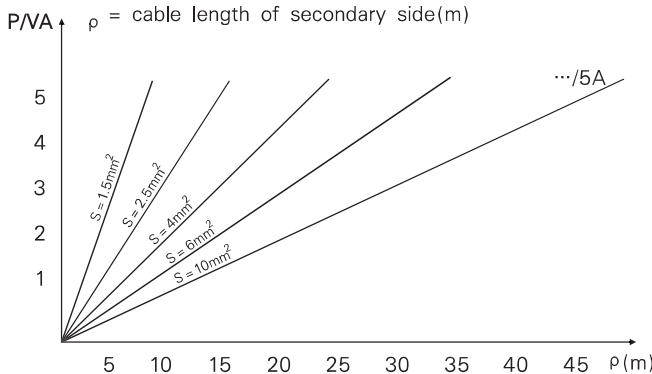
$$P = \frac{I_{sn}^2 \times 2\rho}{S \times 56}$$

I<sub>sn</sub> = secondary

S = cross section of copper cable(mm)

P = power loss(VA)

ρ = cable length of secondary side(m)



**Additional Load Due To Copper Cables (VA) Power Loss(VA) At Secondary Current 5A**

Cable(Cu)	2.5mm <sup>2</sup>	4.0mm <sup>2</sup>	6.0mm <sup>2</sup>	10.0mm <sup>2</sup>
1m	0.36	0.22	0.15	0.09
2m	0.71	0.45	0.30	0.18
3m	1.07	0.67	0.45	0.27
4m	1.43	0.89	0.60	0.36
5m	1.78	1.12	0.74	0.44
6m	2.14	1.34	0.89	0.54
7m	2.50	1.56	1.04	0.63
8m	2.86	1.79	1.19	0.71
9m	3.21	2.01	1.34	0.80
10m	3.57	2.24	1.49	0.89

\* ราคาสินค้าไม่รวมภาษีมูลค่าเพิ่มและราคาอาจเปลี่ยนแปลงได้โดยไม่ต้องแจ้งให้ทราบล่วงหน้า \*



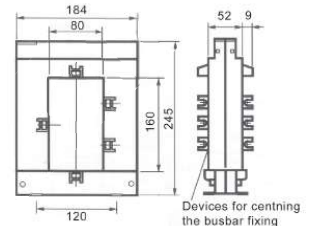
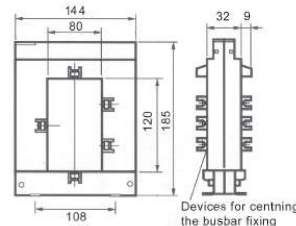
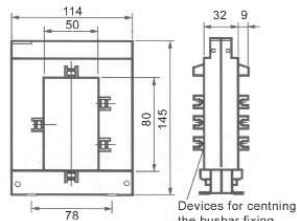
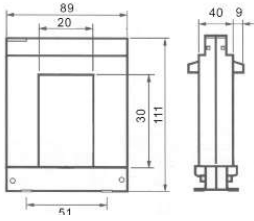
ติดตั้งง่าย ซ่อมบำรุงสะดวก

### SPECIFICATION

- Product Standard : IEC 60044-1;GB1208-2006
- Rated primary current : 100A - 5000A
- Rated secondary current : 5A
- Accuracy Class : 0.5 , 1.0 (Depend on primary current)
- Highest voltage : 0.72Kv
- Operating frequency : 50/60Hz
- Withstand voltage : 3kV
- Security factor :  $FS \leq 5$
- Case material : UL flame retardant rating UL94 V-2
- Continuous current : 1.2xIn
- Insulation test : 3kV/1min
- Operating temperature : -10 to + 55°C
- Storage temperature : -10 to + 70°C

### MAIN FEATURES :

- ✓ ติดตั้งสะดวกไม่ต้องถอดบัสบาร์  
Easy to mounting; no need to remove Busbar
- ✓ ลดเวลาในการตัดไฟเพื่อติดตั้ง ครอบคลุมการใช้งาน  
ด้วยพิกัดกระแสที่หลากหลาย  
Wide range of Primary Current Shorter  
Installation time



TP-23



TP-58



TP-812



TP-816

### TP-Series (Split Core)

รุ่น (Model)	Window	Burden Output	Accuracy Class	Ratio Current (A) Primary / Secondary	Through	Packing		ราคา/ตัว (บาท)
					No.(Turns)	Pc/Box	Pcs/Ctn	
TP-23	20x30 mm.	2.5 VA	1.0	100/5A	1	1	24	2,550.-
		2.5 VA	1.0	150/5A	1	1	24	2,550.-
		2.5 VA	1.0	200/5A	1	1	24	2,650.-
		2.5 VA	1.0	250/5A	1	1	24	2,750.-
TP-58	50x80 mm.	2.5 VA	0.5	250/5A	1	1	24	3,200.-
		2.5 VA	0.5	300/5A	1	1	24	3,300.-
		5 VA	0.5	400/5A	1	1	24	3,450.-
		5 VA	0.5	500/5A	1	1	24	3,570.-
		5 VA	0.5	600/5A	1	1	24	3,700.-
TP-812	80x120 mm.	10 VA	0.5	1000/5A	1	1	12	5,600.-
		10 VA	0.5	1200/5A	1	1	12	5,700.-
		10 VA	0.5	1250/5A	1	1	12	5,700.-
		15 VA	0.5	1500/5A	1	1	12	5,850.-
		15 VA	0.5	1600/5A	1	1	12	5,950.-
TP-816	80x160 mm.	15 VA	0.5	2000/5A	1	1	12	10,900.-
		15 VA	0.5	2500/5A	1	1	12	11,400.-
		20 VA	0.5	3000/5A	1	1	12	11,700.-
		20 VA	0.5	3200/5A	1	1	12	12,000.-
		20 VA	0.5	4000/5A	1	1	12	12,200.-
		20 VA	0.5	5000/5A	1	1	12	12,400.-

\* ราคาสินค้าไม่รวมภาษีมูลค่าเพิ่มและราคาอาจเปลี่ยนแปลงได้โดยไม่ต้องแจ้งให้ทราบล่วงหน้า \*

**SPECIFICATION**

- Product Standard : IEC 60044-1;GB1208-2006
- Rated primary current : 1000A-5000A
- Rated secondary current : 5A
- Accuracy Class : 0.5
- Highest voltage : 0.66kV
- Operating frequency : 50/60Hz
- Withstand voltage : 3kV
- Security factor :  $FS \leq 5$
- Case material : UL flame retardant rating UL94 V-2
- Continuous current :  $1.2 \times I_n$
- Insulation test : 3kV/1min
- Operating temperature :  $-25$  to  $+55^\circ\text{C}$
- Storage temperature :  $-35$  to  $+70^\circ\text{C}$

**MAIN FEATURES :**

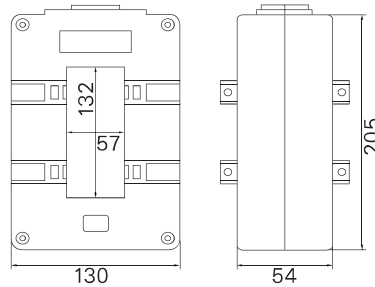
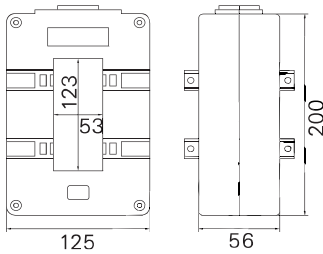
- ✓ มีกระแสขาเข้าให้เลือกใช้ถึง 5000A  
(High primary current)
- ✓ สามารถรับโหลด(Burden) ได้สูงถึง 45VA  
(High burden output)
- ✓ ติดตั้งง่ายด้วยช่องบัสบาร์ขนาดใหญ่พิเศษ  
(Large window size; easy to install busbar)



LMK-120



LMK-130



**LMK-Series**

รุ่น (Model)	Window	Accuracy Class	Burden Output	Current (A)	Through No.(Turns)	Packing Pcs/Ctn	ราคา/ตัว (บาท)
				Primary/Secondary			
LMK-120	123x53 mm.	0.5	25VA	1000/5A	1	10 PCS.	1,050.-
			25VA	1200/5A	1	10 PCS.	1,200.-
			25VA	1250/5A	1	10 PCS.	1,250.-
			25VA	1500/5A	1	10 PCS.	1,300.-
			40VA	1600/5A	1	10 PCS.	1,350.-
			40VA	2000/5A	1	10 PCS.	1,500.-
LMK-130	132x57 mm.	0.5	40VA	2000/5A	1	10 PCS.	1,700.-
			40VA	2500/5A	1	10 PCS.	2,000.-
			45VA	3000/5A	1	10 PCS.	2,200.-
			45VA	3200/5A	1	10 PCS.	2,400.-
			45VA	4000/5A	1	10 PCS.	2,600.-
			45VA	5000/5A	1	10 PCS.	3,000.-

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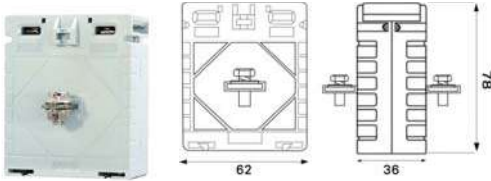
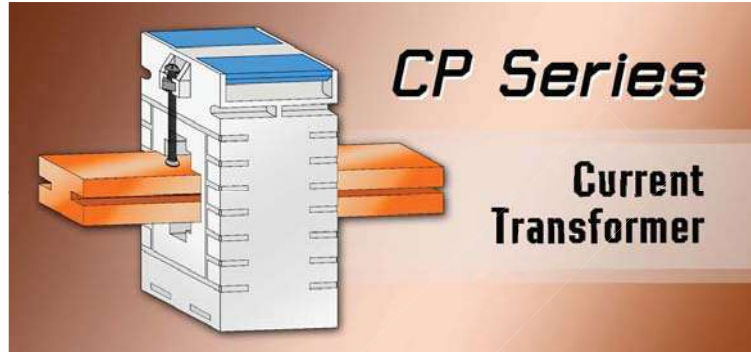


### SPECIFICATION

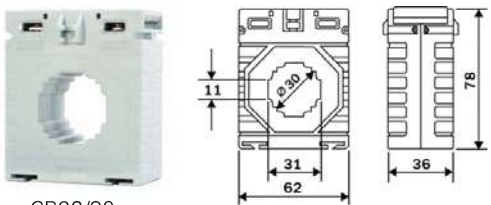
- Product Standard : IEC 61869-2;GB20840.1;GB20840.2
- Rated primary current : 5A-2500A
- Rated secondary current : 5A
- Accuracy Class : 0.5
- Highest voltage : 0.72Kv
- Operating frequency : 50/60Hz
- Withstand voltage : 4kV
- Security factor : FS<sub>≥</sub>5
- Case material : UL flame retardant rating UL94 V-2
- Continuous current : 1.2xIn
- Insulation test : 3kV/1min
- Operating temperature : -25 to + 55 °C
- Storage temperature : -35 to + 70 °C

### MAIN FEATURES :

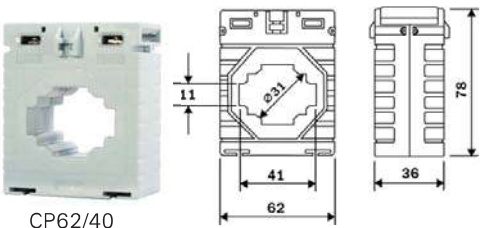
- ✓ มีความแม่นยำสูง (High accuracy)
- ✓ สามารถรับโหลด(Burden) ได้สูงถึง 45VA (High burden output)
- ✓ ขนาดเล็กประหยัดพื้นที่ติดตั้ง (Small size)



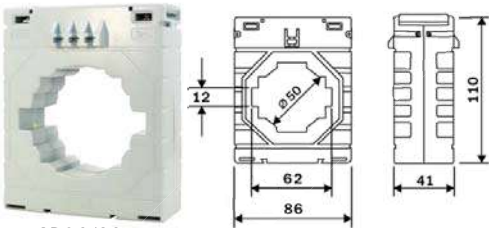
CP62/SW



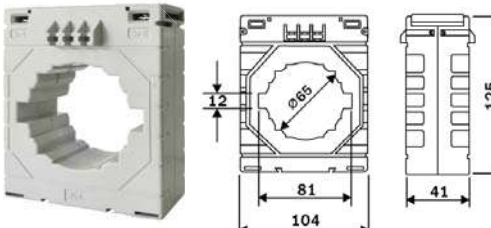
CP62/30



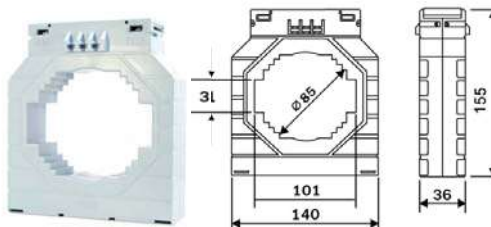
CP62/40



CP86/60



CP104/80



CP140/100

CP-Series						Class 0.5
รุ่น (Model)	Window	Burden Output	Current (A) Primary/Secondary	Through No.(Turns)	Packing Pcs/Ctn	ราคา/ตัว (บาท)
CP62/SW	Wound Primary	5VA	5/5A	-	50	550.-
			10/5A	-	50	
			15/5A	-	50	
			20/5A	-	50	
			30/5A	-	50	
			40/5A	-	50	
			60/5A	-	50	
CP62/30	30x10 mm.	5VA	100/5A	1	50	400.-
			150/5A	1	50	
			200/5A	1	50	
CP62/40	40x10 mm.	5VA	250/5A	1	50	420.-
			300/5A	1	50	
			400/5A	1	50	
CP86/60	60x10 mm.	15VA	400/5A	1	50	510.-
			500/5A	1	50	520.-
			600/5A	1	50	530.-
			800/5A	1	50	600.-
CP104/80	80x10 mm.	10VA	1000/5A	1	20	700.-
		15VA	1200/5A	1	20	760.-
			1500/5A	1	20	860.-
CP140/100	100x30 mm.	30VA	1000/5A	1	20	760.-
			1200/5A	1	20	830.-
			1250/5A	1	20	850.-
			1500/5A	1	20	950.-
			1600/5A	1	20	980.-
			2000/5A	1	20	1,150.-
		45VA	2500/5A	1	20	1,270.-
			3000/5A	1	20	1,530.-

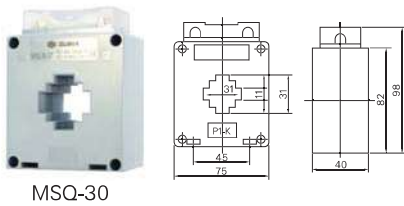
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**SPECIFICATION**

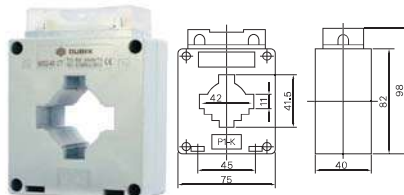
- Product Standard : IEC 61869-2;GB20840.1;GB20840.2
- Rated primary current : 30A-2500A
- Rated secondary current : 5A
- Accuracy Class : 1
- Highest voltage : 0,66Kv
- Operating frequency : 50/60Hz
- Withstand voltage : 3kV
- Security factor :  $FS \leq 5$
- Case material : UL flame retardant rating UL94 V-2
- Continuous current :  $1,2 \times I_n$
- Insulation test : 3kV/1min
- Operating temperature :  $-25$  to  $+55^\circ\text{C}$
- Storage temperature :  $-35$  to  $+70^\circ\text{C}$

**MAIN FEATURES :**

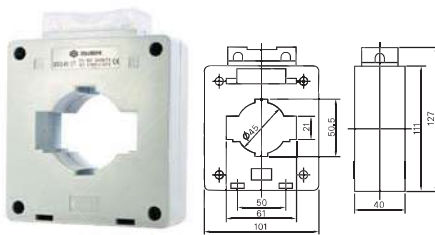
- ✓ มีความแม่นยำที่ดี (Good accuracy)
- ✓ ราคาคุ้มค่า (Economic price)



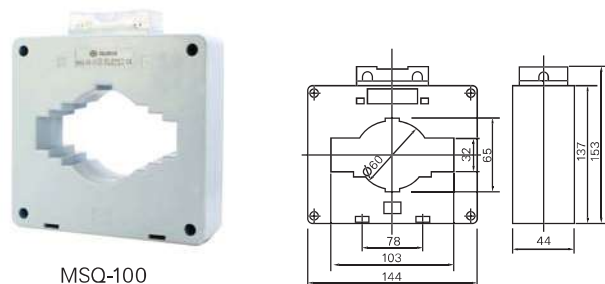
MSQ-30



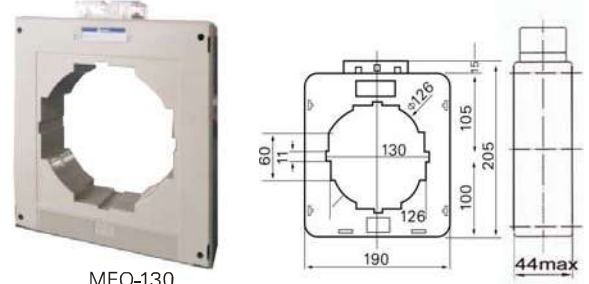
MSQ-40



MSQ-60



MSQ-100



MFO-130

MSQ-Series						Class 1.0
รุ่น (Model)	Window	Burden Output	Current (A)	Through No.(Turns)	Packing Pcs/Ctns	ราคา/ตัว (บาท)
			Primary/Secondary			
MSQ-30	30x10 mm.	2.5VA	30/5A	1	60	210.-
			40/5A	1	60	210.-
			50/5A	1	60	210.-
			60/5A	1	60	210.-
MSQ-30	30x10 mm.	5VA	80/5A	1	60	220.-
			100/5A	1	60	220.-
			125/5A	1	60	220.-
			150/5A	1	60	220.-
			160/5A	1	60	220.-
MSQ-40	40x10 mm.	5VA	200/5A	1	60	230.-
			250/5A	1	60	230.-
			300/5A	1	60	230.-
			400/5A	1	60	230.-
MSQ-60	60x20 mm.	10VA	400/5A	1	40	360.-
			500/5A	1	40	360.-
			600/5A	1	40	360.-
			800/5A	1	40	380.-
MSQ-100	100x30 mm.	15VA	1000/5A	1	20	510.-
			1500/5A	1	20	610.-
			2000/5A	1	20	760.-
			2500/5A	1	20	990.-
MFO-130	130x10 mm.	15VA	5000/5A	1	10	2,300.-

\* ราคาสินค้าไม่รวมภาษีมูลค่าเพิ่มและราคาอาจเปลี่ยนแปลงได้โดยไม่ต้องแจ้งให้ทราบล่วงหน้า \*