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*The Company can modify the specification at any time without having to give notice.*



# CURRENT TRANSFORMERS

## TECHNICAL FEATURES

- ABS self-extinguishing case
- Current: to the secondary 5A (1A and other on request)  
Working frequency: 50/60Hz
- Dynamic nominal current of short circuit ( $I_{din}$ ): 2,5 1 ter during 1 sec.  
Max peak value the C.T. can bear having the secondary in short circuit.
- Thermal nominal current of short circuit ( $I_{ter}$ ): 40-80 IpN during 1 sec.  
Max effective value with secondary in short circuit.
- Standing overcurrent: 1,2 In.
- Voltage insulating reference: 0,72KV (1,2KV) max voltage value.
- Testing voltage: 3KV (6KV) at 50/60 HZ during 1 min.  
Max voltage value, between primary and secondary.
- Saturation factor (SF) or ratio between primary current value (that cause the magnetic core saturation), and the nominal current value.

The lower is the N value and the higher is the instrument protection.

- Working Temperature: -25+50C
  - Storage Temperature: -40+80C
  - Max temperature of the passing cable: 70C
  - Relative Humidity: 90% without condensing
  - Insulation : on air ,E class
  - Protection degree: IP30 (CEIOEN 60529)
  - Construction: according to CEI 38-1. IEC 185, VDE 0414
  - ✓ TAB, TAP series are with sealing terming terminal covers
  - ✓ TAF series is with protected faston caps & din rail fixing
  - ✓ MFO series is with protected terminals
  - ✓ RCT series is with insulated wires output.
- P.S: \*other values on request

## • CONNECTIONS

PRIMARY P1(K) input-P2(L) output

SECONDARY s1 (4) INPUT - s2 (4) output.

**TABLE OF THE VOLTAGE DROP BETWEEN C.T. AND READING INSTRUMENT CABLES**

Wire section In mm²	For secondary 5A						For secondary 1A					
VOLT												
	1m	2m	4m	6m	8m	10m	10m	20m	40m	60m	80m	100m
1,5	0,58	1,15	2,31	3,46	4,62	5,77	0,23	0,46	0,92	1,39	1,85	2,31
2,5	0,36	0,71	1,43	2,14	2,86	3,57	0,14	0,29	0,57	0,86	1,14	1,43
4	0,22	0,45	0,89	1,89	1,79	2,24	0,09	0,18	0,36	0,54	0,71	0,89
6	0,15	0,30	0,60	1,34	1,19	1,49	0,06	0,12	0,24	0,36	0,48	0,60
10	0,09	0,18	0,36	0,54	0,7	0,89	0,04	0,07	0,14	0,21	0,29	0,36

For high voltage drop we suggest the use of current transducers (see our catalogue).

## GENERAL FEATURES

The current transformers (C.T.) are used for reducing the line current to a secondary value of 5A or 1A

For applications on electronic cards we made C.T. having secondary values:

✓ n A.C. current, 50mA- 60mA-100mA-200mA

✓ in A.C. voltage, 2V-5V-10V

✓ in D.C. voltage, 10V

The C.T. are composed by iron cores at oriented grains and -

-they can be toroidal or rectangular, the number of turns has been calculated according to the secondary current.

Insulation between core and winding has been made by thermoplastic insulating materials.

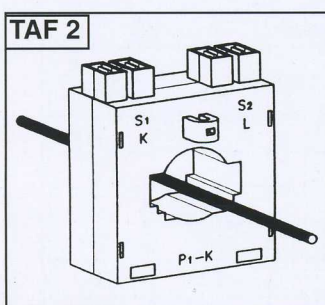
Testing of technical features of our production is made singularly by S.I.T. certificated equipments.

• Wound primary executions: for primary current low values or when it is necessary an high power with C.T. low dimensions.

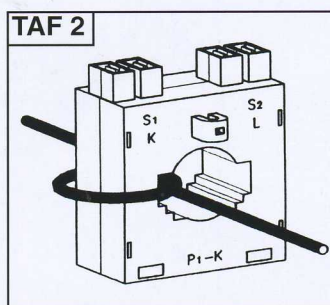
• Primary passing executions: for other primary current values.

## CURRENT TRANSFORMERS EXAMPLE OF USE

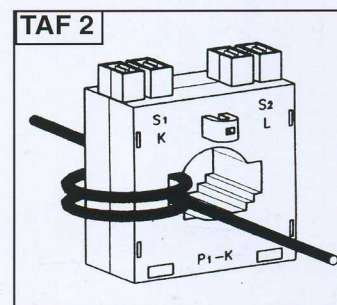
The number of passages of the primary cable does not modify the technical features or the precision class, but it reduces the primary current value at a parity of secondary current.



300/5A standard



300/5A 2 Loops=150/5A



300/5A 3 Loops=100/5A



# PASSING CABLE CURRENT TRANSFORMERS

TAF 1

Cable $\phi$ 22 mm
-----------------------

Primary current	burden	
	cl.0,5	cl.1,0
/5A	VA	VA
40		1
50		1
60		1
80	1,5	3
100	1,5	3
150	1,5	3

TAF 2

Cable $\phi$ 23 mm	bus bar $\square$ 30×10mm 25×12.5mm 20×15mm
-----------------------	------------------------------------------------------

Primary current	burden	
	cl.0,5	cl.1,0
/5A	VA	VA
60		1
80		1
100		1
150		1
200	1,5	3
250	1,5	3
300	1,5	3
400	2	3

TAF 3

bus bar $\square$ 40×10mm 30×20mm 25×25mm
----------------------------------------------------

Primary current	burden	
	cl.0,5	cl.1,0
/5A	VA	VA
200	2	4
250	2,5	5
300	4	6
400	5	8
500	6	10
600	6	12
800	8	15
1000	10	20

TAC 1

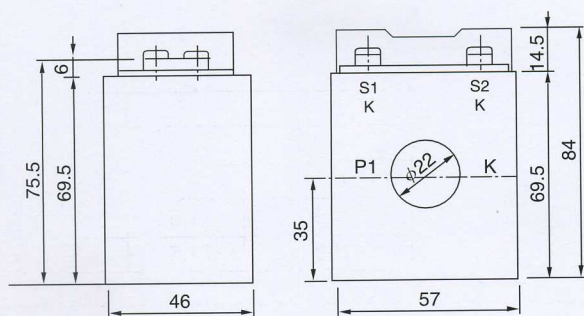
Cable $\phi$ 23 mm	bus bar $\square$ 30×10mm 25×12.5mm 20×15mm
-----------------------	------------------------------------------------------

Primary current	burden	
	cl.0,5	cl.1,0
/5A	VA	VA
40		1
50		1
60		1
80	1,5	3
100	1,5	3
150	1,5	3

# CURRENT TRANSFORMER

**TAB 0**

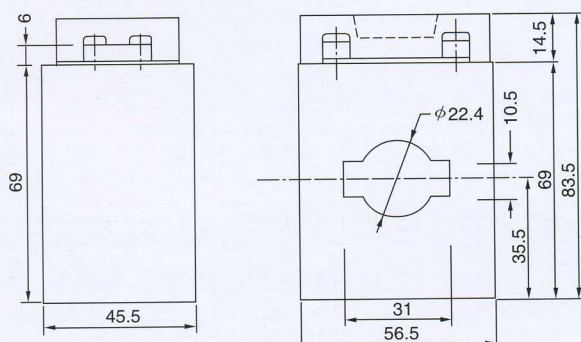
Cable  $\phi$   
22 mm



Primary current	burden	
	cl.0,5	cl.1,0
/5A	VA	VA
40	-	1
50	-	1,5
60	-	1,5
80	-	2
100	2	4
150	3	6
200	4	8
250	5	10

**TAB 1**

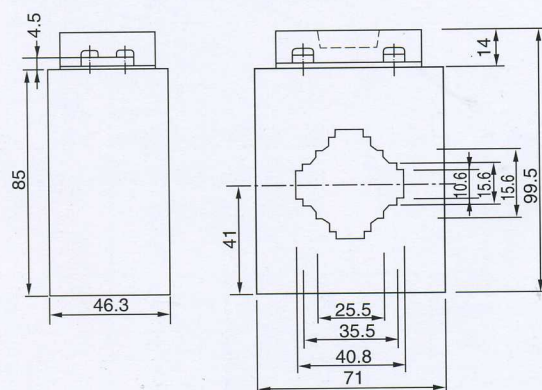
Cable  $\phi$  bus bar ☐  
23 mm 30×10mm



Primary current	burden	
	cl.0,5	cl.1,0
/5A	VA	VA
50	-	1
60	-	1
80	-	1,5
100	-	1,5
150	1	2
200	2	4
250	3	6
300	3	6
400	5	10
500	8	12
600	10	15

**TAB 2**

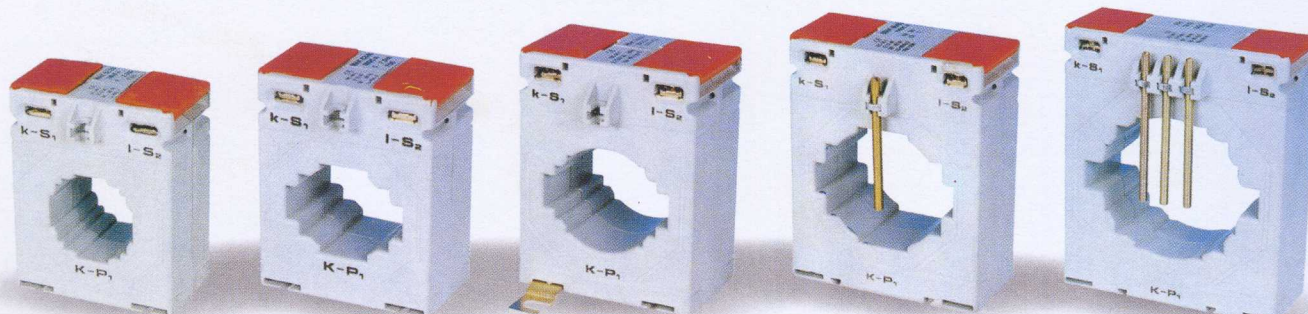
Cable  $\phi$  bus bar ☐  
33 mm 40×10mm  
35×10mm  
25×10mm



Primary current	burden	
	cl.0,5	cl.1,0
/5A	VA	VA
100	-	2
150	1	3
200	2	4
250	2,5	5
300	4	6
400	5	8
500	6	10
600	6	12
800	8	15
1000	10	20



# CURRENT TRANSFORMER



**CTP 30/11**

**CTP 40/11**

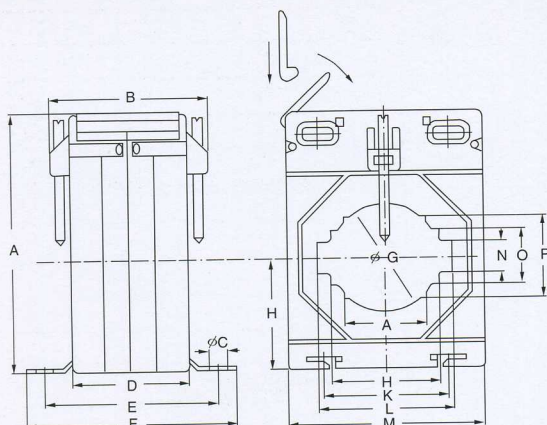
**CTP 50/12**

**CTP 60/12**

**CTP 80/12**

## OUTLINE DRAWING OF CTP30/11 TO CTP80/12

Dimensions in mm.



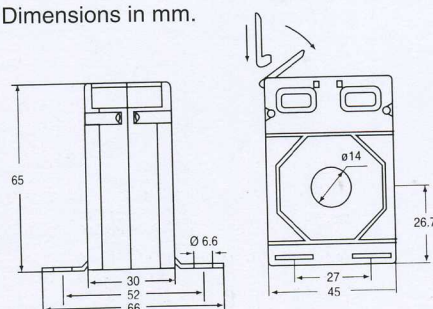
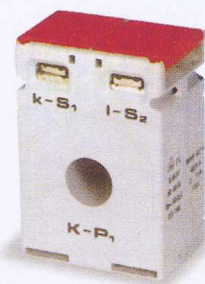
## DIMENSION OF CASE UNIT: M/M

Model	A	B	C	D	E	F	G	H	K	L	M	N	O	P
CTP 30/11	78	47	6.6	35	57	71	30.5	33	31	44	62	11	21	26
CTP 40/11	78	47	6.6	35	57	71	31	33	40.5	44	62	11	21	31
CTP 50/12	98	61	6.6	45	67	81	41	42	47	51	74	12.5	21	31
CTP 60/12	110	56	6.6	40	62	76	51	49	61	68	86	12.5	31	51
CTP 80/12	126	56	6.6	40	62	76	65	57	81	86	104	12.5	31	61

Model	Rated Current(A) Primary/Secondary	Rated burden (VA)	Accuracy Class (CL)	Rated Voltage	Rated Frequency
CTP30/11	50/5A-300/5A	1.5-5	1.0-0.5	720V	50/60Hz
CTP40/11	150/5A-800/5A	1.5-10	1.0-0.5	720V	50/60Hz
CTP50/12	250/5A-1000/5A	5-10	1.0-0.5	720V	50/60Hz
CTP60/12	250/5A-1500/5A	5-10	1.0-0.5	720V	50/60Hz
CTP80/12	300/5A-2000/5A	5-15	1.0-0.5	720V	50/60Hz

## OUTLINE DRAWING OF CTP-14

Dimensions in mm.



Secondary current: 5A      Security Factor: FS-5  
Frequency: 50-60Hz      High voltage test: 4KV<sub>eff</sub>, 50Hz, 1min  
Rated voltage: 720V      Weight: 200-250gr

Rated Current(A) Primary/Secondary	30/5A-40/5A	50/5A	60/5A	75/5A-80/5A	100/5A
Accuracy Class	3	1.0	1.0	1.0	1.0
burden(VA)	1	1	1.5	1.5	1.5



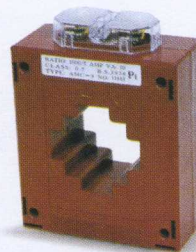
## CURRENT TRANSFORMER



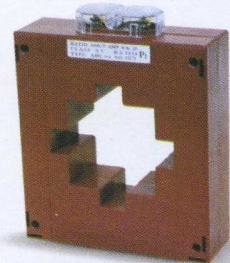
**SCT-30**



**SCT-40**



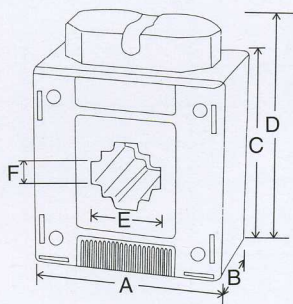
**SCT-60**



**SCT-100**

This type current transformer is made according to BS3938 with ABS non-combustible plastic case.

### Outline drawing of SCT.TYPE

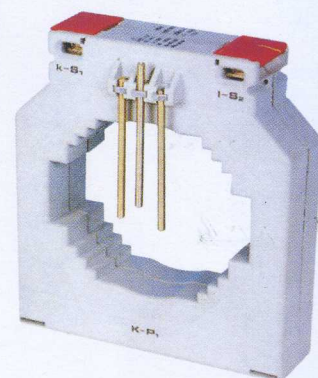
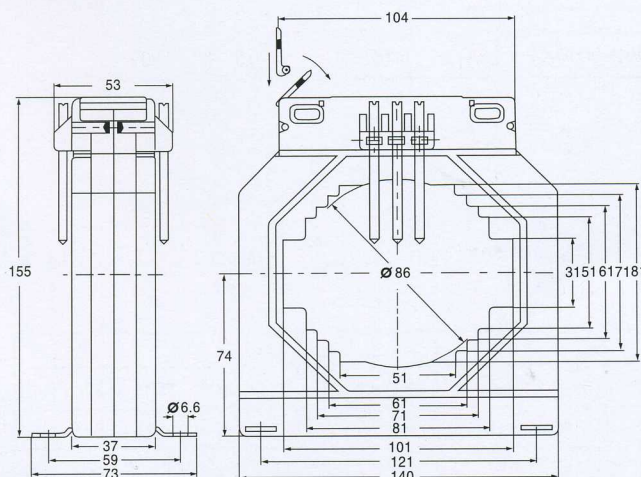


Model	Rated Current(A) Primary/Secondary	Busbar Hole Dimension (mm)	Rated Burden (VA)	Accuracy Class (CL)	Rated Voltage	Rated Frequency
SCT-30	50/5A-300/5A	30×10	1-7.5	0.5 1.0	660V	50/60Hz
SCT-40	200/5A-800/5A	40×10	5-10	0.5 1.0	660V	50/60Hz
SCT-60	400/5A-1200/5A	60×20	10-15	0.5 1.0	660V	50/60Hz
SCT-100	1000/5A-3000/5A	100×20	10-15	0.5 1.0	660V	50/60Hz

Model	A	B	C	D	E	F
SCT-30	85	53	95	112	30	10
SCT-40	85	53	95	112	40	10
SCT-60	111	53	131	148	60	20
SCT-100	155	53	174	192	100	20

### OUTLINE DRAWING OF CTP100/31

Dimensions in mm.



**CTP100/31**

Rated current(A)  
Primary/Secondary current: 1000/5A-4000/5A  
Rated burden: 15VA~40VA  
Accuracy Class: 0.2~1.0  
Rated voltage: 720V  
Operating frequency: 50-60Hz



# CURRENT TRANSFORMERS FOR AMMETERS.(LOW VOLTAGE)



**MFO-30**



**MFO-40**



**MFO-60**

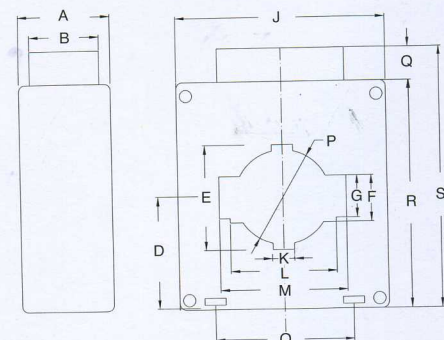
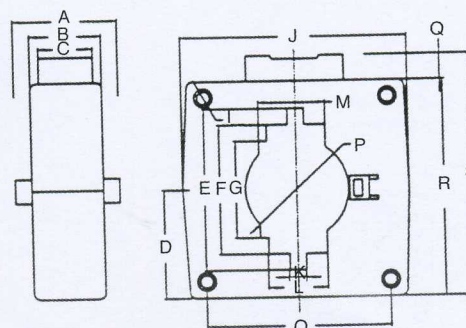


**MFO-100**

MOTD	MFO-30		MFO-40		MFO-60		MFO-100	
RATIO	POWER	CLASS	POWER	CLASS	POWER	CLASS	POWER	CLASS
50/5A	2VA*	1A						
60/5A	2VA*	1A						
75/5A	2,5VA*	1A						
100/5A	2,5VA*	1A						
125/5A	2,5VA*	1A						
150/5A	3VA*	1A						
200/5A	5VA	1	3VA*	1A				
250/5A	5VA	1	3VA*	1A				
300/5A	5VA	1	5VA	1				
400/5A	5VA	1	5VA	1				
500/5A	5VA	1	5VA	1	7,5VA	1		
600/5A					7,5VA	1		
700/5A					7,5VA	1		
750/5A					7,5VA	1		
800/5A					7,5VA	1		
1000/5A					7,5VA	1	10VA	1
1200/5A					10VA	1	10VA	1
1500/5A					10VA	1	10VA	1
2000/5A							10VA	1
2500/5A							10VA	1
3000/5A							10VA	1

**MFO-100**

**MFO-30 ~ MFO-60**



MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
MFO-30	43.5	31		41.8	30.5	20.5	10.7			75	10.7	20.5	30.5	48		16.5	82.5	99	
MFO-40	43.5	31		41.8	41.5	13.3	10.5			75	13.5	30.6	41.5	48	31	16.5	82.5	99	
MFO-60	43.5	31		53.4	50.2	22.2	20.7			99	10.7	50.5	60.3	65	45.8	16	108	124	
MFO-100	64	44	31	67	100	80	60	8		140	10.5	35.8	41	110	63.4	16.5	133.5	150	



## CURRENT TRANSFORMER



### ECT-30 Indoor cast-resin insulated CT

Primary current: 30-300A  
Secondary current: 5A  
Frequency: 50-60Hz  
Rated burden: 10VA, 15VA  
Class: 0.2, 0.5s, 0.5, 1.0

### ECT-30A Indoor cast-resin insulated CT

Primary current: 30-200A  
Secondary current: 5A  
Frequency: 50-60Hz  
Rated burden: 5VA, 10VA, 15VA  
Class: 0.2, 0.5s, 0.5, 1.0

**RCT-15-4**



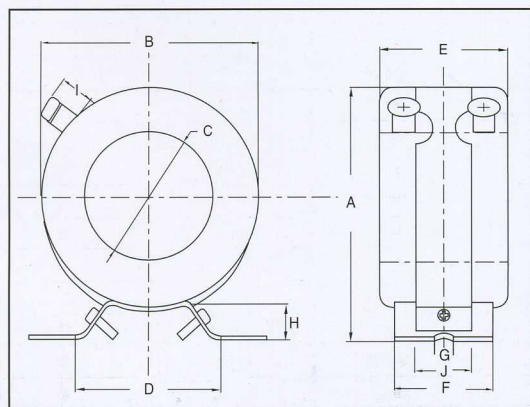
**RCT-15-3**



**RCT-15-2**



**RCT-15-1**

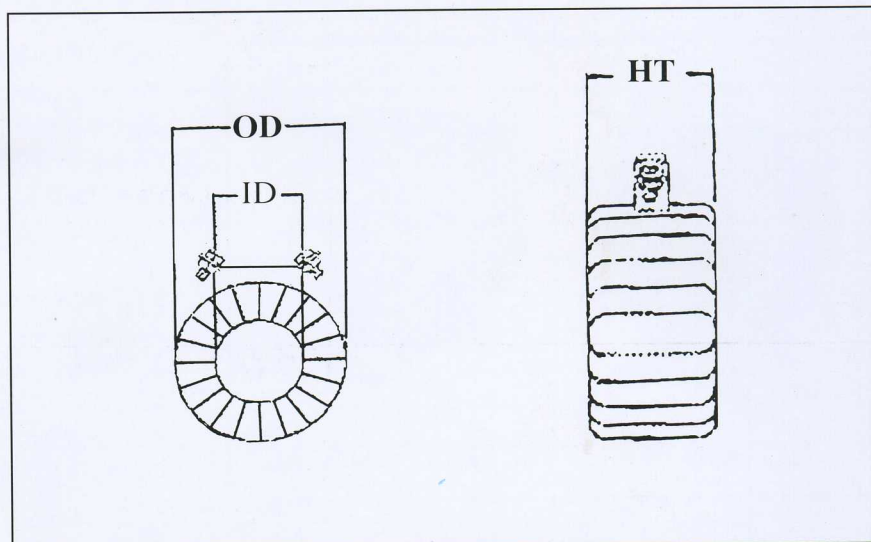


Model	Primary Current Rating(Amp)	Sec Current(A)	Burden (VA)	Accuracy Strength	Power	Weight
RCT-51-1	20~300	5	5~10	1.0	40	0.8
RCT-15-2	400~600	5	15	1.0	40	1
RCT-15-3	800~1200	5	15	1.0	40	1.3
RCT-15-4	1600~3000	5	15	1.0	40	2

Model	A	B	C	D	E	F	G	H	I	J
RCT-15-1	92	78	35	67	55	45	8	17	14	25
RCT-15-2	116	100	60	67	57	45	8	17	15	25.5
RCT-15-3	150	135	91	67	59	45	8	17	15	26.2
RCT-15-4	178	160	110	72	60	45	8	19	16	26.7



## MR CURRENT TRANSFORMERS



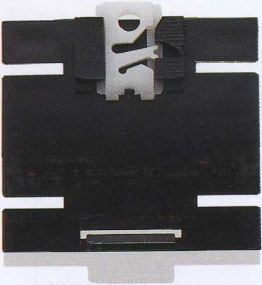


### MR series:

Class: 0.5 1.0 3.0

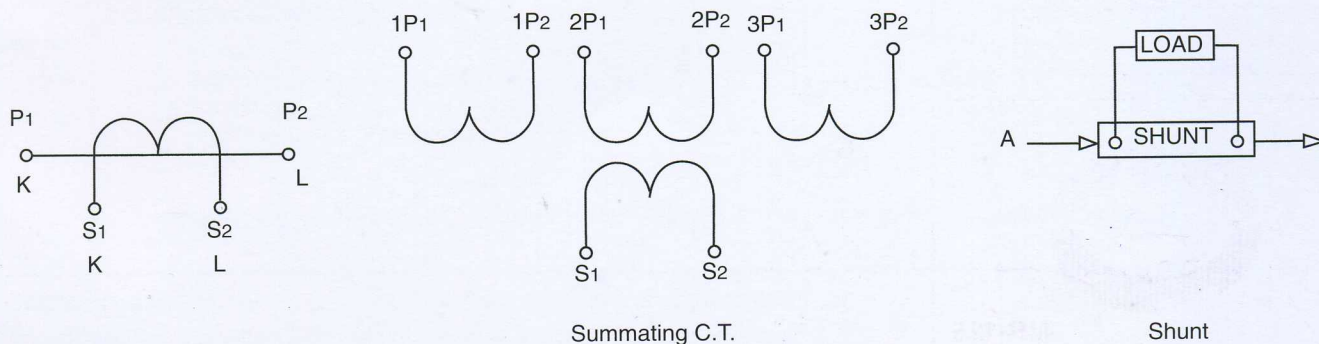
TYPE	SPECIFICATION	ID(mm)	OD(mm)	HT(mm)
MR-28	30/5A-60/5A	28	70	40
MR-42	100/5A-250/5A	42	80	30
MR-45	300/5A	45	80	30
MR-60	400/5A-600/5A	60	100	30
MR-85	800/5A-1600/5	85	120	20
MR-125	2000/A-5000/5	125	165	20



## ACCESSORIES

	<p><b>STAB</b></p> <p>Support for C.T. for DIN rail (TAB-MFO)</p>
	<p><b>STAF</b></p> <p>Support for C.T. for DIN rail (TAF)</p>
	<p><b>STAC</b></p> <p>Adapter for changing in screw the TAF fasten caps.</p>
	<p><b>STAP</b></p> <p>Protection for secondary output contacts of TAB-MFO</p>

### CONNECTING DRAWING





## SHUNT FOR D.C.

### GENERAL FEATURES

The shunts are used to reduce the continuous to voltage values that can be read by the measure instruments.

The voltage drop standard values are:

- 50mV
- 60mV
- 75mV
- 100mV

With high connecting distances from instrument, We suggest to use shunt with voltage drop higher than 60mV 50mV.

The shunts are built in manganin with brass support, welded each other using materials containing silver.

Those with voltage drop of 60mV 50mV are tropicalized while for higher values they are passivated.

During use the shunt overheat proportionally to the current that passes through.

For this reason we use one or more manganin bars, to be able to allow an higher heat dissipation.

For the same reason it is better to place the shunt horizontally.

Connections must be clean and tightened to be able to avoid connection voltage drops.

### TECHNICAL FEATURES

Accuracy class:0,5

Surcharge current: 1,2 In continuous

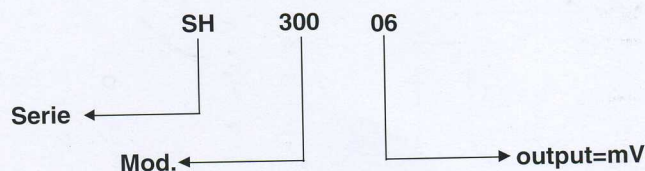
Surcharge during 5 seconds:

From 10A	to	500A	10In
From 600A	to	2,000A	5In
From 2,500A	to	10,000A	2In

*The ranges indicated are for shunts with output 60 mV 50 mV.  
For higher outputs A and B ranges increase respectively:*

Output	A-B
50 mV	26 mm
60 mV	26 mm
75 mV	30 mm

### EXAMPLE OF ORDER



Output 06=60mV, 05=50mV 075=75mV 10=100mV 15=150mV 20=200mV