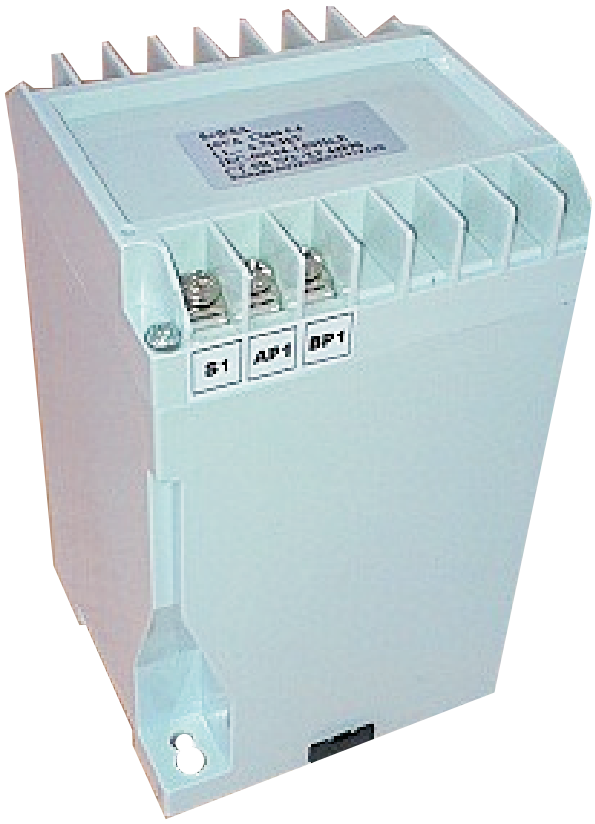
Data Sheet

RISH XMER Sigma



Summation Current Transformer

RISHABH INSTRUMENTS
Measure, Control & Record with a Difference

RISHABH INSTRUMENTS PVT.LTD.
F-31, MIDC, Satpur, Nashik-422 007, India.
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RISH SUMMATION CT : RISH XMER *Sigma*

RISH XMER *Sigma* Summation current transformers are designed to summarize several synchronous Alternating Currents of equal phase relation with any angle of phase difference, They are used to add secondary currents of several main c.t.'s in order to measure with one CT only. The output current again constitutes a standardized quantity. That means the primary currents are not only added but also divided by the number of inputs

.

The secondary circuits of the main C.T.'s are to be connected to the corresponding marked primary terminals of the summation C.T., i.e. each main C.T. feeds with its secondary current a specific portion of the primary winding of the summation C.T. The number of turns of the particular sections of the primary winding must fit in with ratios of the main C.T.'s.

If all main C.T.'s have identical ratios it is irrelevant for their secondary circuits to which section of the primary winding of the summation C.T. They are connected. But, If using unequal main c.t.'s then ratio of each of them has to be specified absolutely. Unused primary connections have to be open circuited as opposed to the short circuiting of secondary connections.

Current addition in summation c.t.'s is always performed by vector addition, which means that it is done under consideration of both vector magnitude and vector phase angle. Under special circumstances the sum of all input currents therefore may even result in zero, a phenomenon which is being used in fault-current measurement. Only when adding unidirectional vectors (vectors having equal phase angle) does the general vector-addition transform to the special case of an arithmetic addition of vector magnitudes (current amounts). Summation c.t.'s are principally used for the summation of currents in the same phase belt.

NOTE- If using unequal main c.t.'s then ratio of lowest primary main c.t. current to the highest one should not exceed 1:8.

Product Features

- Easy Installation.
- Nickel Plated Secondary Terminals with +/- Screws.
- Terminal Protection IP10.
- Rated Short Time Thermal Current-60 X In.
- Dynamic Short circuit Current 2.5 X Ith.
- Highest Voltage of Equipment 720V.
- Instrument Security Factor FS5 & FS10.

Technical Data

Class of accuracy	:	1 & 0.5
Rated burden	:	15 VA
Rated voltage	:	720 V
Rated Frequency	:	50 Hz/60Hz
Rated Primary current Inputs	:	(2.....8) X 5A
Rated secondary current	:	5A
Working temperature range	:	-25°C to +40° C
High voltage test	:	3kVeff ,50 Hz, 1min.
Insulation Class	:	E (max.120°C)
Case	:	made of non flammable plastic

Applicable Standard

IEC-61869-1&2 / IEC-60044-1

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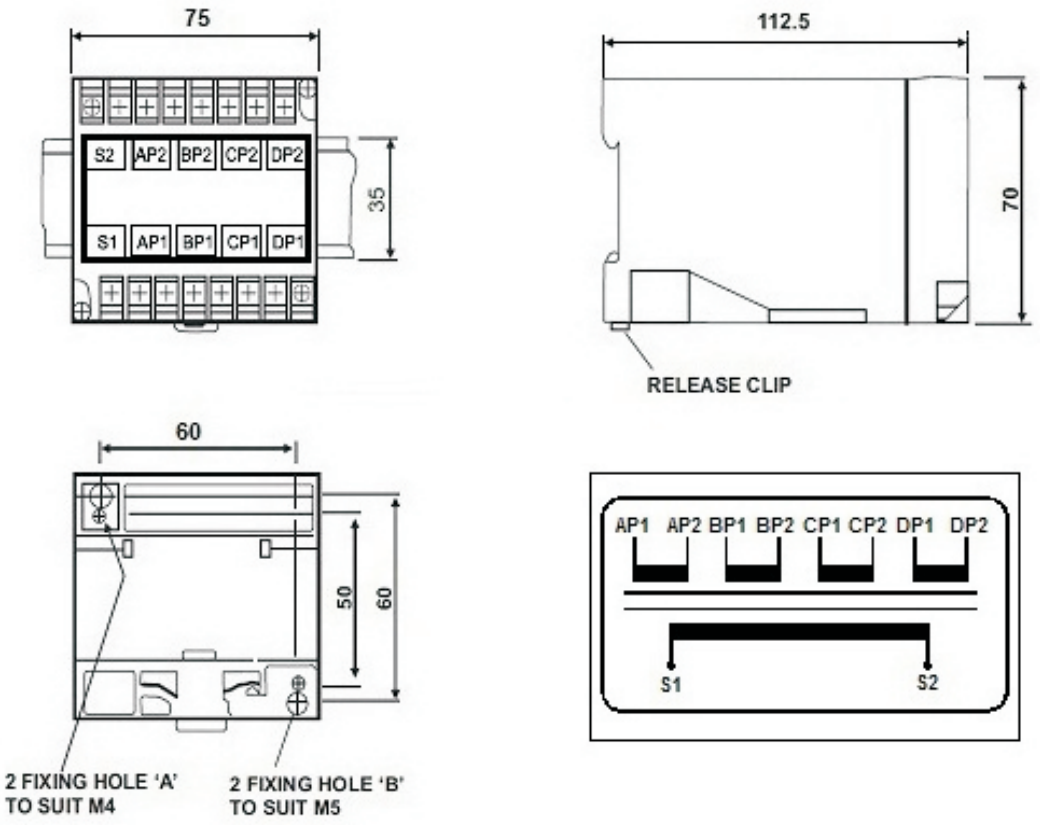
Rish Xmer *Sigma* 75



Primary Current	Class	
	1	0.5
5+5	5VA	5VA
	10VA	10VA
	15VA	15VA
	20VA	-
	25VA	-
5+5+5	5VA	5VA
	10VA	10VA
	15VA	15VA
	20VA	-
	25VA	-
5+5+5+5	5VA	5VA
	10VA	10VA
	15VA	15VA
	20VA	-
	25VA	-

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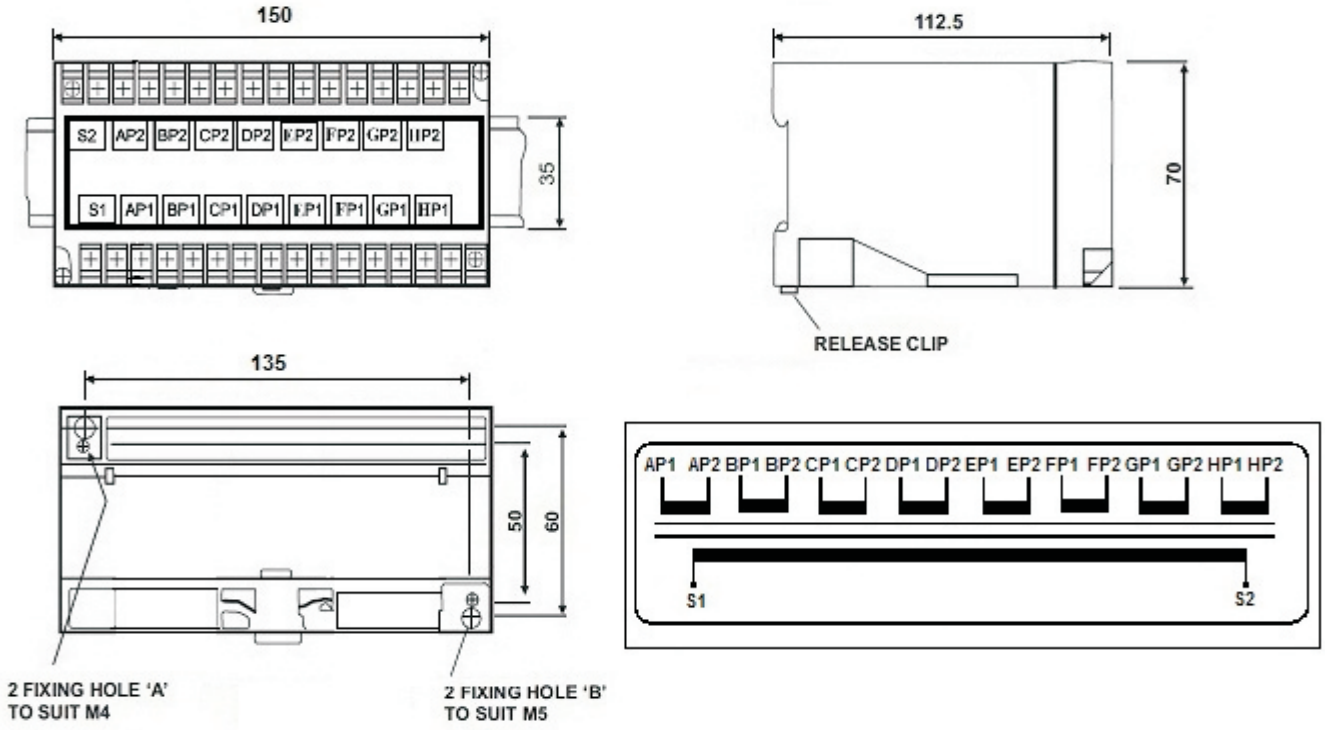
Rish Xmer *Sigma* 150



Primary Current	Class	
	1	0.5
5+5+5+5+5	5VA	5VA
	10VA	10VA
	15VA	15VA
	20VA	-
	25VA	-
5+5+5+5+5+5	5VA	5VA
	10VA	10VA
	15VA	15VA
	20VA	-
	25VA	-
5+5+5+5+5+5+5	5VA	5VA
	10VA	10VA
	15VA	15VA
	20VA	-
	25VA	-
5+5+5+5+5+5+5+5	5VA	5VA
	10VA	10VA
	15VA	15VA
	20VA	-
	25VA	-

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Guidance for Ordering Summation Current Transformer

- Example:

Main Transformer Ratio

500/5A
400/5A
300/5A

Total Current = 1200/5A

Burden – 1 Ammeter

Required Active performance of the Current Transformer.

Ammeter	1.5VA
Measurement Conductor Loss	1.5VA
Consumption in Summation CT	4.0VA
Total VA	7.0VA

The Individual Main transformer must provide it's VA Share from this 7.0VA .

Consideration must also be given to the respective power loss between main transformer and the summation transformer including other possible losses.

1.Main Transformer 500/5A (500/1200) X 7 = 2.92VA + additional Losses
2.Main Transformer 400/5A (400/1200) X 7 = 2.33VA + additional Losses
3.Main Transformer 300/5A (300/1200) X 7 = 1.75VA + additional Losses

The VA values of the Main Transformer are to be rounded up to the corresponding values in Our Chart

Ordering Information

- Example

Class of accuracy	:	1 & 0.5
Rated Primary current inputs	:	5+5+5
Rated ratios of main C.T.'s	:	As per requirement
Rated secondary current	:	5A
Rated Burden	:	15A

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