

# Current and Voltage Controls

## Current Transformer, 1-Phase AC

### Types MI 5, MI 20, MI 100, MI 500



- 1-phase current metering transformer for use with control relays types: S 178, S 180, S 1821, S 1822, SM 115, SY 115, H 479
- Measuring ranges:
  - MI 5: 0.5 - 5 AAC
  - MI 20: 2 - 20 AAC
  - MI 100: 10 - 100 AAC
  - MI 500: 50 - 500 AAC

### Product Description

AC current transformers for voltage (0.4 - 4 V<sub>p</sub>) is proportional to measured current. Output

### Ordering Key MI 500

Type \_\_\_\_\_  
Input current \_\_\_\_\_

### Type Selection

Input current	Type no.
5 AAC	MI 5
20 AAC	MI 20
100 AAC	MI 100
500 AAC	MI 500

### Input Specifications

	MI 5	MI 20	MI 100	MI 500
<b>Current range</b>	0.5 - 5 AAC	2 - 20 AAC	10 - 100 AAC	50 - 500 AAC
<b>Max. current</b> (continuously)	20 AAC	50 AAC	250 AAC	750 AAC
<b>Max. overload current</b> (t = 30 s)	40 AAC	85 AAC	325 AAC	1000 AAC
<b>Rated insulation voltage</b>				
Input-output	1000 VAC <sub>rms</sub>	1000 VAC <sub>rms</sub>	1000 VAC <sub>rms</sub>	1000 VAC <sub>rms</sub>
<b>Overvoltage category</b>	IV (IEC 60664)	IV (IEC 60664)	IV (IEC 60664)	IV (IEC 60664)
<b>Pollution degree</b>	3 (IEC 60664)	3 (IEC 60664)	3 (IEC 60664)	3 (IEC 60664)
<b>Dielectric strength</b>				
Dielectric voltage	6 kVAC <sub>rms</sub>	6 kVAC <sub>rms</sub>	6 kVAC <sub>rms</sub>	6 kVAC <sub>rms</sub>
Rated impulse withstand volt.	12 kV (1.2/50 μs)	12 kV (1.2/50 μs)	12 kV (1.2/50 μs)	12 kV (1.2/50 μs)
<b>Power consumption</b>	< 100 mW/5 A	< 100 mW/20 A	< 0.5 W/100 A	< 6 W/500 A

### Output Specifications

	MI 5	MI 20	MI 100	MI 500
<b>Voltage output</b>				
(T <sub>A</sub> = 20°C, R <sub>L</sub> = 9.5 kΩ)	0.4 - 4 V <sub>p</sub>	0.4 - 4 V <sub>p</sub>	0.4 - 4 V <sub>p</sub>	0.4 - 4 V <sub>p</sub>
<b>Output impedance</b>	< 700 Ω	< 200 Ω	< 40 Ω	< 10 Ω
<b>Tolerance of output voltage</b>				
@ rated input current	± 5%	± 5%	± 5%	± 5%
<b>Temperature variation</b>	± 0.1% per °C	± 0.1% per °C	± 0.1% per °C	± 0.1% per °C
<b>Rated insulation voltage</b> (cable)	250 VAC <sub>rms</sub>	250 VAC <sub>rms</sub>	250 VAC <sub>rms</sub>	250 VAC <sub>rms</sub>



## General Specifications

Ambient temperature	- 20° to + 60°C (- 4° to + 140°F)
Connection cable	2 m PVC, 2 x 0.25 mm <sup>2</sup>
Weight	<b>MI 5, MI 20</b> 70 g <b>MI 100, MI 500</b> 270 g
Material/colour	ABS, light grey
Approval	UL

## Mode of Operation

The metered conductor is drawn through the central hole of the current metering transformer. Drawing the conductor through the hole several times makes it possible to meter currents below the nominal range.

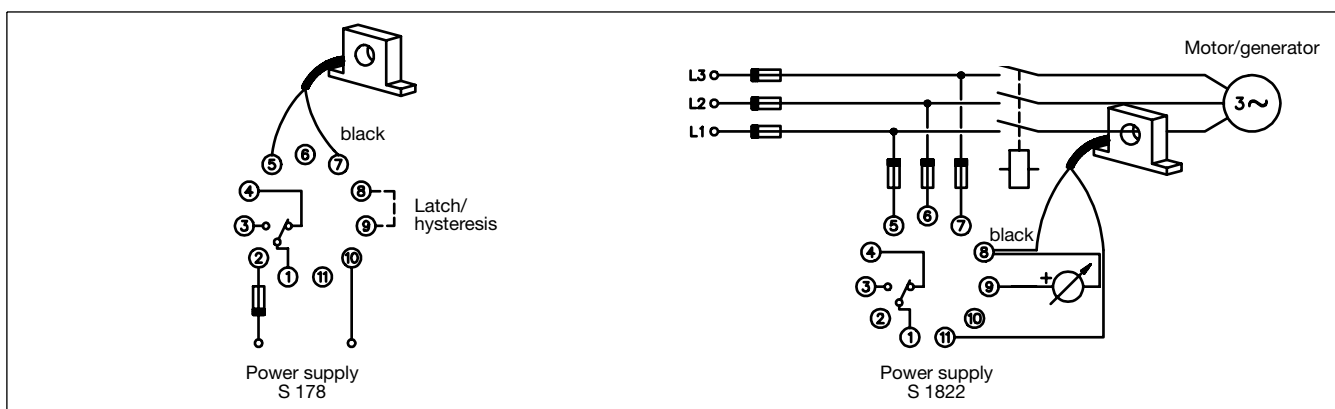
former will register 50 A when the current in the conductor is 10 A.

In amplitude and phase the output voltage is proportional to the phase current metered.

4 V<sub>p</sub> will then be equal to the rms-value of the nominal phase current.

If the conductor is drawn through the central hole e.g. 5 times, the metering trans-

## Wiring Diagrams



## Dimensions

