

CURRENT MEAN VALUE CONVERTERS

terminal type PI121

split-core type PI121P

- the signal mean value is calibrated in the corresponding sine wave r.m.s. value
- the 0 to 20mA output is powered from the source of the quantity measured
- the 4 to 20mA output must be powered from the output loop
- direct processing of currents of up to 100A (PI121P)
- rectifying measuring method
- input-to-output isolation: 4000Vr.m.s.
- measuring range: 0 to 120% of rated input
- conversion accuracy: < 0,5%
- compact design
- designed for DIN 35 rail mounting
- low cost

The converters have been designed to convert the AC voltage/current mean value into a unified-range DC current. The converter input includes a current measuring transformer. It is of a coil-type in the PI121 converter and of the split-core-type in the PI121P converter. It isolates the input circuit and feeds the output current loop. The output is full-wave rectified and smoothed out. Both the input and the output circuit are overload-protected.

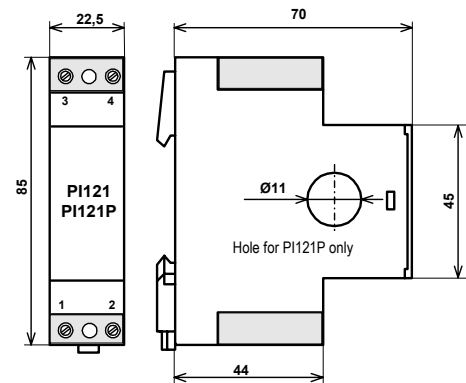
The output is r.m.s. value calibrated for a harmonic distortion factor of 1.1107 (sine wave). This converter is suited for handling inputs whose waveforms are slightly distorted. If frequency converters or other non-linear control elements are to be used in the control system under consideration, the use of true r.m.s. value converters is advisable.



Electrical specifications:

- | | |
|------------------------------------|---|
| - operating temperature range: | -25...+80°C |
| - storage temperature range: | -40...+80°C |
| - power supply: | the converter is powered via the input current loop
the 4 to 20mA output, via the output loop |
| - inputs: | PI121: 1A, 2,5A, 5A AC
PI121P: 50A, 75A and 100A per a split-core pass
other ranges by arrangement
typically 0.5VA |
| - current input power demand: | typically 0.5VA |
| - current input overload capacity: | 2 Inom - 1min, 20 Inom - 1s |
| - output: | 0 to 20mA, 4 to 20mA |
| - output current limit: | typically 35mA (electronic cut-out) |
| - maximum output load: | 500ohm |
| - transfer function: | linear |
| - transfer function maximum error: | < 0.5% |
| - temperature induced error: | < 0.02%/°C |
| - output ripple: | < 0.5% |
| - test voltage: | 4000Vr.m.s. |
| - time constant: | < 0.3s |
| - weight: | 120g |
| - enclosure: | casing: IP40
terminal board: IP10 |

Dimension sketch:



Type tests:

- Standard type test: to ČSN EN 60688
EMC: to ČSN EN 61326-1
Safety: assessed acc. to ČSN EN 61010-1

Terminal designation:

- PI121 1, 2...input terminals
3, 4 output terminals (4 is +)
PI121P no input terminals available (split-core type)
3,4... output terminals (4 is +)

Ordering instructions:

- Your order should include:
- converter type
 - input range
 - output range
 - quantity (No. of pieces)