



AUTOMATION UNDER CONTROL

EN

CT-LP40

Loop-powered alternating current transducer

General characteristics

- The product is a 4 - 20 mA loop-powered current transducer (loop-powered 2-wire technology).
- High precision.
- Extremely small footprint.
- Wide configuration range: eight pre-calibrated dip-switch selected scales.
- Extremely low consumption.
- Low output ripple and fast response to variations.
- Auxiliary filter (dip-switch activated) to reduce response speed (start-up damping, unstable loads, etc.).



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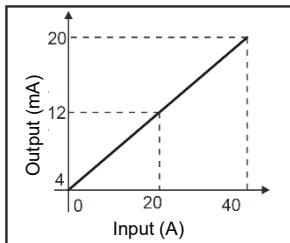
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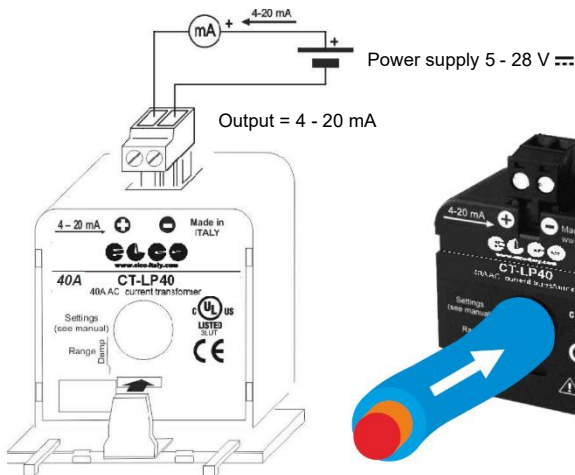
Technical Specifications		
INPUT		
Type of measurement	Average rectified AC	
Capacity	5 A, 10 A, 15 A, 20 A, 25 A, 30 A, 35 A, 40 A (DIP-switch selected).	
Crest factor	2	
Pass-band	20 - 1000 Hz	
Insulation	When using a sheathed conductor, the sheath of the conductor determines the insulation voltage. An insulation of 3 kV~ is guaranteed on bare conductors	
Overload	800 A continuous	
OUTPUT E POWER		
Type	4 - 20 mA, maximum load R = 600 Ω. Terminals ⊕ and ⊖	
Connections	Removable terminal with 5.08 mm pitch for cables up to 2.5 mm²	
Hole diameter	12.3 millimeters	
Power supply	5 - 28 V  (between ⊕ and ⊖)	
Protections	- Polarity reversal. - Overvoltage protection.	
Maximum indication	< 28 mA	
PRECISION (1)		
	Frequency: 40 – 400 Hz	Frequency: 20 – 1000 Hz
Capacity < 5 A	0.1% o.m. + 0.1% o.s.	0.1% o.m. + 0.3% o.s.
Capacity > 5 A	0.2% o.m. + 0.1% o.s.	0.2% o.m. + 0.3% o.s.
Resolution	Infinite.	
Temperature coeff.	< 150 ppm/°C	
EMI error	< 40 μA	
Response speed	- «fast» filter: 100ms - «slow» filter: 2500ms	
Residual Ripple	< 10 μA rms @ 20 mA e 50 Hz	
Self-consumption	< 50 mW	
Note (1)	These acronyms apply: o.m. = of measurement, o.s. = of scale.	
STANDARDS		
	EN60688+A1+A2 EN61000-6-4 (electromagnetic emission, industrial environment) EN61000-6-2 (electromagnetic immunity, industrial environment). EN61010-1 (safety)	

OVERVOLTAGE CATEGORY	
Bare conductor	CAT. III 300 V
Insulated conductor	CAT. III 600 V
ENVIRONMENTAL CONDITIONS	
Protection rating	IP20.
Operating temperature	-20– +70°C.
Storage temperature	-40– +85°C.
Humidity	10 – 90% non - condensing
Altitude	Up to 2000 m above sea level
CASE	
Weight	47 g
Dimensions	41 x 44 x 26 mm (terminal excluded)
Case	PA6, black

DIP-switches											
Input capacity						Filter (*)					
SW 1	1	2	3	Capacity	SW 1	1	2	3	Capacity	SW 1	4
				5 A		↑			25 A		↑
			↑	10 A		↑		↑	30 A		
		↑		15 A		↑	↑		35 A		
		↑	↑	20 A		↑	↑	↑	40 A		

In the table, the  symbol corresponds to the switch in the ON position. The instrument is supplied configured: for 5 A capacity, with 100 ms filter. (*) The filter slows down the response time to about 2.5 s and stabilises the measurement.





Assembly

The device can be mounted in any position, in compliance with the expected environmental conditions. In case of installation on DIN rail, use the accessory supplied.

ATTENTION: high-strength magnetic fields can alter the measurement: avoid proximity to permanent magnetic fields, electromagnets or iron bulks that can induce strong alterations of the magnetic field; if the zero error is greater than the declared error, try a different arrangement or orientation.

Increased sensitivity with multi-turn primary winding

It is possible to increase the sensitivity of the device by simply passing through the hole several times with the measuring current, creating turns with a multiplicative effect: for example, 5 passes, corresponding to 4 turns, with a capacity of 40 A, result in an equivalent sensitivity of 8 A full-scale. With this solution, the turns should be arranged symmetrically in order to preserve instrument accuracy: with 2 turns, make sure to arrange them diametrically opposite to each other, with 4 turns ensure a cross arrangement, with 6 turns 60° spacing etc.



Electrical and electronic waste disposal (applicable in the European Union and other countries operating a separate waste collection policy). The symbol on the product or the packaging indicates that the product cannot be disposed of as household waste. It should be taken to an authorised recycling centre for electrical and electronic waste. By ensuring that the product is disposed of correctly, you will help prevent potential negative impacts on the environment and human health that could result from inappropriate product disposal. Material recycling will contribute to the preservation of natural resources. For more detailed information, please contact your appropriate local office, the waste disposal service or the supplier from which you purchased the product.