

Current Transducer LTC 500-S

For the electronic measurement of currents: DC, AC, pulsed..., with galvanic separation between the primary circuit and the secondary circuit.





I_{PN}	Primary nominal RMS	500		
I_{PM}	Primary current, measuring range @ ±24 V		0 ±1200	
R_{M}	Measuring resistance		$R_{ m M\ min}$	$R_{ m M\ ma}$
	with ±15 V	@ ±500 A _{max}	0	50
		@ ±900 A	0	7

@ ±500 A max Ω with ±24 V 0 110 @ ±1200 A _{max} 0 20 Ω Secondary nominal RMS current 125 mA $I_{\rm SN}$ $N_{\rm p}/N_{\rm s}$ Turns ratio 1:4000

 $U_{\rm c}$ Supply voltage (±5 %) Current consumption I_{C}

Electrical data

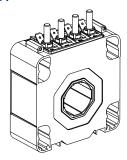
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Accuracy	y - Dy	ynamic	perform	ance	data

$\varepsilon_{\mathrm{tot}}$	Total error @ I_{PN} , T_{A} = 25 °C	< ±0.6	%
$\varepsilon_{\rm L}$	Linearity error	< 0.1	%
		Max	
I_{O}	Offset current @ I_P = 0, T_A = 25 °C	±0.5	mA
$I_{{\sf O}T}$	Temperature variation of $I_{\rm O}$ = -40 °C +85 °C	±0.8	mA
t _{D 90}	Delay time to 90 % of the final output value for $I_{\rm PN}$ st	ep 1) < 1	μs
BW	Frequency bandwidth (-1 dB)	DC 100	kHz

General data

T_{A} T_{Ast}	Ambient operating temperature Ambient storage temperature	-40 +85 -45 +90	°C
$R_{\rm S}$	Resistance of secondary winding @ $T_{\rm A}$ = 85 °C	47	Ω
m	Mass Standards	400 EN 50155: 20 EN 50121-3-2	

500 A



Features

Α

Α

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Ω

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 $R_{
m M\ max}$ 50

<35(@±24V)+I_s mA

±15 ... 24

- Closed loop (compensated) current transducer using the Hall
- · Insulating plastic case recognized according to UL 94-V0.

Advantages

- Excellent accuracy
- Very good linearity
- Low temperature drift
- Optimized response time
- Wide frequency bandwidth
- No insertion losses
- High immunity to external interference
- · Current overload capability.

Applications

- · Single or three phase inverter
- Propulsion and braking chopper
- Propulsion converter
- Auxiliary converter
- Battery charger.

Application Domain

· Railway (fixed installations and onboard).

Notes: 1) For a $di/dt = 100 \text{ A/}\mu\text{s}$

2) Additional information available on request.

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In	sulation coordination		
$U_{\rm d}$	RMS voltage for AC insulation test, 50 Hz, 1 min	12 ¹⁾ 1.5 ²⁾	kV kV
U_{t}	Partial discharge RMS test voltage ($q_{\rm m}$ < 10 pC) $^{\rm 3)}$	> 2.8 Min	kV
$d_{\rm Cp}$	Creepage distance	50	mm
d_{CI}	Clearance	44	mm
CTI	Comparative tracking index (group I)	600	

Notes: 1) Between primary and secondary + shield

Safety

This transducer must be used in limited-energy secondary circuits according to IEC 61010-1.



This transducer must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the manufacturer's operating instructions.



Caution, risk of electrical shock

When operating the transducer, certain parts of the module can carry hazardous voltage (eg. primary busbar, power supply).

Ignoring this warning can lead to injury and/or cause serious damage.

This transducer is a build-in device, whose conducting parts must be inaccessible after installation.

A protective housing or additional shield could be used.

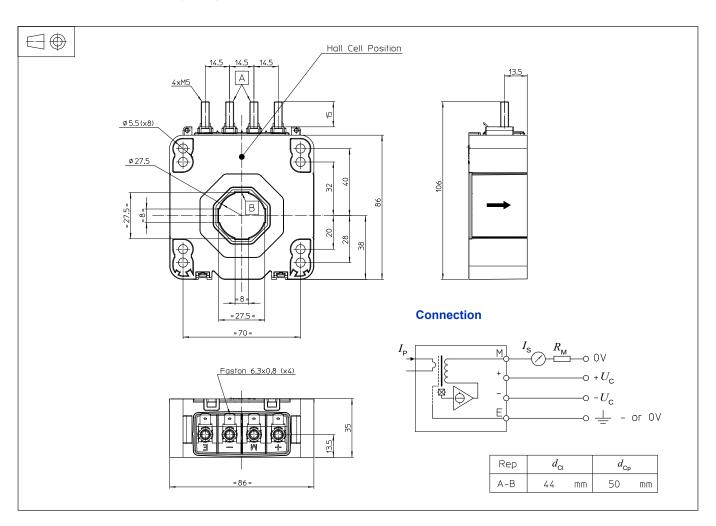
Main supply must be able to be disconnected.

²⁾ Between secondary and shield

³⁾ Test carried out with a busbar Ø 25 mm centred in the through-hole.



Dimensions LTC 500-S (in mm)



Mechanical characteristics

General tolerance

Transducer fastening

Recommended fastening torque 3.4 Nm

• Primary through-hole

Connection of secondary Recommended fastening torque 2.2 Nm

±1 mm

8 holes Ø 5.5 mm

4 M5 steel screws

Ø 27.5 mm

4 M5 threaded studs

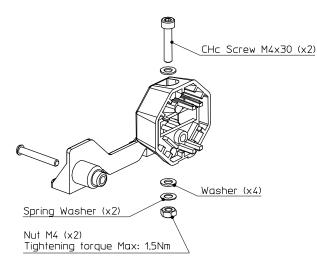
Faston 6.3 × 0.8 mm

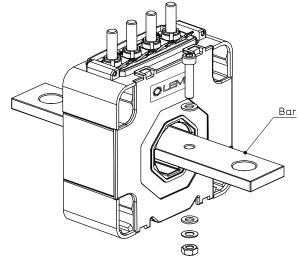
Remarks

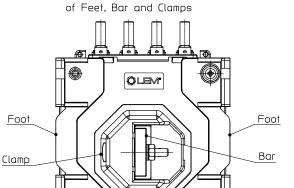
- I_{S} is positive when I_{P} flows in the direction of the arrow.
- Temperature of the primary conductor should not exceed 100 °C.
- Installation of the transducer must be done unless otherwise specified on the datasheet, according to LEM Transducer Generic Mounting Rules. Please refer to LEM document N°ANE120504 available on our Web site: https://www.lem.com/en/file/3137/download/.
- Dynamic performances (di/dt and delay time) are best with a single bar completely filling the primary hole.
- This is a standard model. For different versions (supply voltages, turns ratios, unidirectional measurements...), please contact us.



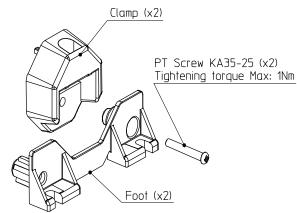
LTC 500-S / Mechanical adaptation accessories







Other possibilities of assembly



Accessories	References
Busbar Kit * (busbar : 155 × 25 × 6 mm)	93.34.41.100.0
Busbar Kit * (busbar : 112 × 25 × 6 mm)	93.34.41.101.0
Busbar Fastening Kit **	93.34.41.200.0
Feet fixing Kit ***	93.34.43.100.0

- including all the necessary for its mounting such as screws, washers, nuts, 2 clamps, busbar.
- ** as with * but without the busbar.
- *** including screws and 2 feet.



RMS voltage value for partial discharge extinction depends on the busbar. Refer to the datasheet of the corresponding product.

单击下面可查看定价,库存,交付和生命周期等信息

>>LEM(莱姆)