Current Transducer LA 305-S/SP19

500 A I_{PN}

For the electronic measurement of currents : DC, AC, pulsed..., with a galvanic isolation between the primary circuit (high power) and the secondary circuit (electronic circuit).



CE



	16236						
EI	ectrical data						
PN	Primary nominal r.m.s. current	500				A	
PN	Primary current, measuring range (0 ± 1000					
P Î	Overload capability during 10 ms			40			k/
I _P Î _P R _M	Measuring resistance @		$\mathbf{T}_{A} = \mathbf{T}_{A}$	-	т	= 85°	
- М			R _{M min}			R _{Mma}	
	with ± 15 V @ ± 600	A _{max}	0	13	0	10	Ω
	@ ± 650	A _{max}	0	8	0	5	Ω
	@ ± 680	A _{max}	0	6	0	3	Ω
	with ± 24 V @ ± 600	A _{max}	3	13	3	10	Ω
	@ ± 950	A _{max}	3	8	3	5	Ω
	@ ± 100	0 A _{max}	3	6	3	3	Ω
SN	Secondary nominal r.m.s. current			142	.8		mA
κ _N	Conversion ratio			1:3500			
v _c [™]	Supply voltage (± 5 %)			± 15 24			١
I _C	Current consumption $28 (@ \pm 24 V)$						_ mA
Ňď	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn					,	° k∖
	R.m.s. voltage for AC isolation test	. 50 Hz. 1	mn	0			
				6 ; < 2.	8		
V	R.m.s. voltage for partial discharges	extinction @	0 10 pC		8		
V		extinction @	0 10 pC		8		k۷
V	R.m.s. voltage for partial discharges	extinction @	0 10 pC				k∖
V _e A	R.m.s. voltage for partial discharges ccuracy - Dynamic performa	extinction @	0 10 pC	\$ < 2.	8		k\ %
V _e A X _G	R.m.s. voltage for partial discharges of ccuracy - Dynamic performation P_{PN} , $T_A = 25^{\circ}C$	extinction @	0 10 pC	± 0. < 0.	8	Max	k\ %
V A X C C	R.m.s. voltage for partial discharges of ccuracy - Dynamic performation \mathbf{P}_{PN} , $\mathbf{T}_{A} = 25^{\circ}$ C Linearity	extinction @	0 10 pC	< 2. ± 0.	8 1 p ľ	Max 0.15	k\ %
v A X _G C	R.m.s. voltage for partial discharges of ccuracy - Dynamic performation \mathbf{P}_{PN} , $\mathbf{T}_{A} = 25^{\circ}C$ Overall accuracy @ \mathbf{I}_{PN} , $\mathbf{T}_{A} = 25^{\circ}C$ Linearity Offset current @ $\mathbf{I}_{P} = 0$, $\mathbf{T}_{A} = 25^{\circ}C$	extinction @	2 10 pC a	 < 2. ± 0. < 0. Ty 	8 1 p ľ ±	0.15	kV % %
V A X G C I O M	R.m.s. voltage for partial discharges of ccuracy - Dynamic performation \mathbf{P}_{PN} , $\mathbf{T}_{A} = 25^{\circ}C$ Linearity Offset current @ $\mathbf{I}_{P} = 0$, $\mathbf{T}_{A} = 25^{\circ}C$ Residual current ¹) @ $\mathbf{I}_{P} = 0$, after an	extinction @	₽ 10 pC a f 3 x I _{PN}	; < 2. ± 0. < 0. ↓ Ty	8 1 p ľ ± ±	0.15 0.30	k∖ % % mA mA
v A X _G C	R.m.s. voltage for partial discharges of ccuracy - Dynamic performation \mathbf{P}_{PN} , $\mathbf{T}_{A} = 25^{\circ}C$ Overall accuracy @ \mathbf{I}_{PN} , $\mathbf{T}_{A} = 25^{\circ}C$ Linearity Offset current @ $\mathbf{I}_{P} = 0$, $\mathbf{T}_{A} = 25^{\circ}C$	extinction @ Ince data overload c - 40°C +	∮ 10 pC a f 3 x I _{PN} 70°C	; < 2. ± 0. < 0. ↓ Ty	8 1 p 1 ± 30 ±	0.15 0.30 0.60	k∨ % mA mA mA
V A X G C L I O M O T	R.m.s. voltage for partial discharges of ccuracy - Dynamic performation \mathbf{I}_{PN} , $\mathbf{T}_A = 25^{\circ}$ C Linearity Offset current @ $\mathbf{I}_P = 0$, $\mathbf{T}_A = 25^{\circ}$ C Residual current ¹) @ $\mathbf{I}_P = 0$, after an Thermal drift of \mathbf{I}_O	extinction @	∮ 10 pC a f 3 x I _{PN} 70°C	$\frac{\pm 0.}{< 0.}$	8 1 2 30 1 2 2 30 2 2 2	0.15 0.30	k∨ % mA mA mA
V Х _G €_ I от I от	R.m.s. voltage for partial discharges of ccuracy - Dynamic performa Overall accuracy @ I_{PN} , $T_A = 25^{\circ}C$ Linearity Offset current @ $I_P = 0$, $T_A = 25^{\circ}C$ Residual current ¹⁾ @ $I_P = 0$, after an Thermal drift of I_O Reaction time @ 10 % of I_{PN}	extinction @ Ince data overload c - 40°C +	∮ 10 pC a f 3 x I _{PN} 70°C	$\frac{\pm 0.}{< 0.}$	8 1 2 30 1 2 2 30 2 2 2	0.15 0.30 0.60	k∨ % mA mA mA
V А С С С С С С С С С С С С С С С	R.m.s. voltage for partial discharges of ccuracy - Dynamic performa Overall accuracy @ I_{PN} , $T_A = 25^{\circ}C$ Linearity Offset current @ $I_P = 0$, $T_A = 25^{\circ}C$ Residual current ¹) @ $I_P = 0$, after an Thermal drift of I_O Reaction time @ 10 % of I_{PN} Response time ²) @ 90 % of I_{PN}	extinction @ Ince data overload c - 40°C +	∮ 10 pC a f 3 x I _{PN} 70°C	÷ < 2. ± 0. < 0. Ty ± 0. < 50 < 1	8 1 9 1 ± 30 ± 1 200	0.15 0.30 0.60	kv % mA mA mA ns
V _e А Х _G € L I _{OM} I _{OM} I _{OT} t _r di/dt	R.m.s. voltage for partial discharges of ccuracy - Dynamic performa Overall accuracy @ I_{PN} , $T_A = 25^{\circ}C$ Linearity Offset current @ $I_P = 0$, $T_A = 25^{\circ}C$ Residual current ¹) @ $I_P = 0$, after an Thermal drift of I_O Reaction time @ 10 % of I_{PN} Response time ²) @ 90 % of I_{PN} di/dt accurately followed	extinction @ Ince data overload c - 40°C +	∮ 10 pC a f 3 x I _{PN} 70°C	± 0. < 0.	8 1 9 30 1 ± ± 1 ± 00	0.15 0.30 0.60 0.80	k∿ % شA mA mA mA mA
V А С С С С С С С С С С С С С С С	R.m.s. voltage for partial discharges of ccuracy - Dynamic performa Overall accuracy @ I_{PN} , $T_A = 25^{\circ}C$ Linearity Offset current @ $I_P = 0$, $T_A = 25^{\circ}C$ Residual current ¹) @ $I_P = 0$, after an Thermal drift of I_O Reaction time @ 10 % of I_{PN} Response time ²) @ 90 % of I_{PN}	extinction @ Ince data overload c - 40°C +	∮ 10 pC a f 3 x I _{PN} 70°C	± 0. < 0.	8 1 9 1 ± 30 ± 1 200	0.15 0.30 0.60 0.80	k∿ % شA mA mA mA ns µs A/µs
V А А Х _G С L ом I от t _{ra} t _r di/dt f	R.m.s. voltage for partial discharges of ccuracy - Dynamic performa Overall accuracy @ I_{PN} , $T_A = 25^{\circ}C$ Linearity Offset current @ $I_P = 0$, $T_A = 25^{\circ}C$ Residual current ¹) @ $I_P = 0$, after an Thermal drift of I_O Reaction time @ 10 % of I_{PN} Response time ²) @ 90 % of I_{PN} di/dt accurately followed	extinction @ Ince data overload c - 40°C +	∮ 10 pC a f 3 x I _{PN} 70°C	± 0. < 0.	8 1 9 30 1 ± ± 1 ± 00	0.15 0.30 0.60 0.80	κ\ % % mA mA mA mA 2,με Α/με
V А I I I I 	R.m.s. voltage for partial discharges of ccuracy - Dynamic performa Overall accuracy @ I_{PN} , $T_A = 25^{\circ}C$ Linearity Offset current @ $I_P = 0$, $T_A = 25^{\circ}C$ Residual current ¹⁾ @ $I_P = 0$, after an Thermal drift of I_O Reaction time @ 10 % of I_{PN} Response time ²⁾ @ 90 % of I_{PN} di/dt accurately followed Frequency bandwidth (- 3 dB) eneral data	extinction @ Ince data overload c - 40°C +	∮ 10 pC a f 3 x I _{PN} 70°C	; < 2. ± 0. < 0. Ty ± 0. < 50 < 1 > 10 DC	8 1 p ± ± ± 200 100	0.15 0.30 0.60 0.80	k\ % % mA mA mA ns µs kHz
V А I I I I 	R.m.s. voltage for partial discharges of ccuracy - Dynamic performa Overall accuracy @ I_{PN} , $T_A = 25^{\circ}C$ Linearity Offset current @ $I_p = 0$, $T_A = 25^{\circ}C$ Residual current ¹⁾ @ $I_p = 0$, after an Thermal drift of I_0 Reaction time @ 10 % of I_{PN} Response time ²⁾ @ 90 % of I_{PN} di/dt accurately followed Frequency bandwidth (- 3 dB) eneral data Ambient operating temperature	extinction @ Ince data overload c - 40°C +	∮ 10 pC a f 3 x I _{PN} 70°C	; < 2. ± 0. < 0. Ty ± 0. ± 0. - 40	8 1 p ± ± ± ± 00 00 100 (- 50)	0.15 0.30 0.60 0.80	k\ % % mA mA mA μs kHz 8/μs
V_{e}^{T}	R.m.s. voltage for partial discharges of ccuracy - Dynamic performa Overall accuracy (a) I_{PN} , $T_A = 25^{\circ}C$ Linearity Offset current (a) $I_P = 0$, $T_A = 25^{\circ}C$ Residual current ¹) (a) $I_P = 0$, after an Thermal drift of I_O Reaction time (a) 10 % of I_{PN} Response time ²) (a) 90 % of I_{PN} di/dt accurately followed Frequency bandwidth (- 3 dB) eneral data Ambient operating temperature Ambient storage temperature	extinction @ Ince data overload c - 40°C + - 50°C +	2 10 pC a f 3 x I _P 70°C 85°C	<pre> < < 2. ± 0. < 0. < 0. Ty ± 0. < 50 < 1 > 10 DC - 40 - 50 </pre>	8 1 p ± ± ± 200 100	0.15 0.30 0.60 0.80	k\ % % mA mA mA ns kHz kHz 35 °C
V А I I I I 	R.m.s. voltage for partial discharges of ccuracy - Dynamic performa Overall accuracy @ I_{PN} , $T_A = 25^{\circ}C$ Linearity Offset current @ $I_p = 0$, $T_A = 25^{\circ}C$ Residual current ¹⁾ @ $I_p = 0$, after an Thermal drift of I_0 Reaction time @ 10 % of I_{PN} Response time ²⁾ @ 90 % of I_{PN} di/dt accurately followed Frequency bandwidth (- 3 dB) eneral data Ambient operating temperature	extinction @ Ince data overload c - 40°C + - 50°C + T, =	2 10 pC a f 3 x I _P , 70°C 85°C 70°C	; < 2. ± 0. < 0. Ty ± 0. ± 0. - 40	8 1 p ± ± ± ± 00 00 100 (- 50)	0.15 0.30 0.60 0.80	kν % mA mA mA mA mA mA s kHz S5 °C Ω
V_{e}^{T}	R.m.s. voltage for partial discharges of ccuracy - Dynamic performa Overall accuracy (a) I_{PN} , $T_A = 25^{\circ}C$ Linearity Offset current (a) $I_P = 0$, $T_A = 25^{\circ}C$ Residual current ¹) (a) $I_P = 0$, after an Thermal drift of I_O Reaction time (a) 10 % of I_{PN} Response time ²) (a) 90 % of I_{PN} di/dt accurately followed Frequency bandwidth (- 3 dB) eneral data Ambient operating temperature Ambient storage temperature	extinction @ Ince data overload c - 40°C + - 50°C + T, =	2 10 pC a f 3 x I _P 70°C 85°C	<pre> < < 2. ± 0. < 0. < 0. Ty ± 0. < 50 < 1 > 10 DC -40 -50 70 </pre>	8 1 p 1 ± ± ± 00 00 100 (-50) + S	0.15 0.30 0.60 0.80	k∨ % mA mA mA ns µs kHz

Notes : ¹⁾ The result of the coercive field of the magnetic circuit

²⁾ With a di/dt of 100 A/µs

³⁾ No guarantee on this value, tests not carried out during production.

Features

- Closed loop (compensated) current transducer using the Hall effect
- Insulated plastic case recognized according to UL 94-V0
- Copyright protected.

Special features

- I_{PN} = 500 A
- I_P = 0 .. ± 1000 A (@ ± 24 V)
- $\mathbf{K}_{N} = 1 : 3500$
- $\mathbf{V}_{c} = \pm 15 ... 24 \ (\pm 5 \%) \ V$
- \mathbf{T}_{A}^{-} = -40°C (-50°C) ³... + 85°C
- Connection to secondary circuit on shielded cable 3 x 0.5 mm²
- Internal shield connected to shielded cable
- Serigraphy with customer specification number
- Railway equipment.

Advantages

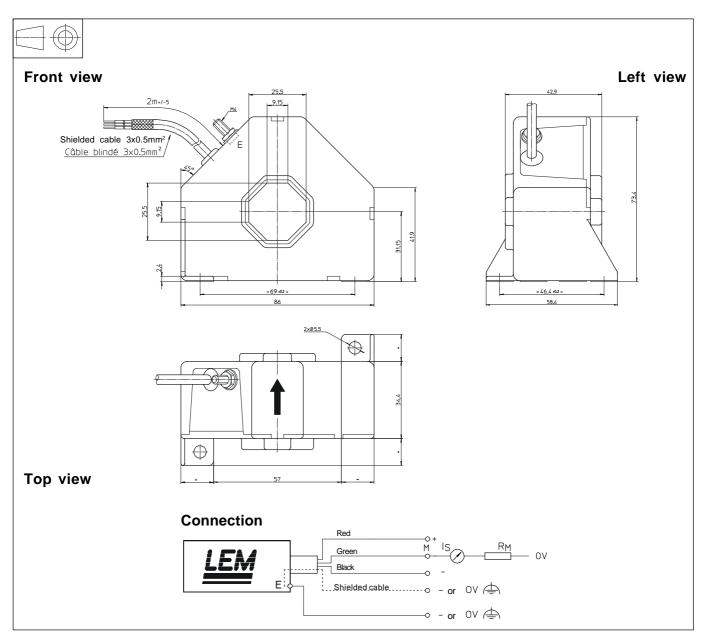
- Excellent accuracy
- Very good linearity
- Low temperature drift
- Optimized response time
- Wide frequency bandwidth
- No insertion losses
- High immunity to external interference
- Current overload capability.

Applications

- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications.

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Dimensions LA 305-S/SP19 (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- General tolerance
- Transducer fastening
 - Fastening torque, max.
- Primary through-hole
- Connection of secondary
- Connection of screen Fastening torque, max.
- ± 0.5 mm
- 2 holes \varnothing 5.5 mm
- 2 M5 steel screws
- 4 Nm or 2.95 Lb. Ft.
- 25.5 x 25.5 mm
- shielded cable 3 x 0.5 mm²
- M4 threaded studs 1.2 Nm or .88 Lb - Ft

Remarks

- $\bullet~{\bf I}_{_{\rm S}}$ is positive when ${\bf I}_{_{\rm P}}$ flows in the direction of the arrow.
- Temperature of the primary conductor should not exceed 100°C.
- Dynamic performances (di/dt and response time) are best with a single bar completely filling the primary hole.

LEM reserves the right to carry out modifications on its transducers, in order to improve them, without previous notice.

单击下面可查看定价,库存,交付和生命周期等信息

>>LEM(莱姆)