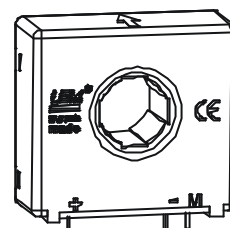


Current Transducer LF 205-P

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).



$$I_{PN} = 200 \text{ A}$$



Electrical data

I_{PN}	Primary nominal r.m.s. current	200	A
I_P	Primary current, measuring range	0 .. ± 420	A
R_M	Measuring resistance @	$T_A = 70^\circ\text{C}$ $T_A = 85^\circ\text{C}$ $R_{M \min}$ $R_{M \max}$ $R_{M \min}$ $R_{M \max}$	
	with $\pm 12 \text{ V}$	@ $\pm 200 \text{ A}_{\max}$	0 71 0 69 Ω
		@ $\pm 420 \text{ A}_{\max}$	0 14 0 12 Ω
	with $\pm 15 \text{ V}$	@ $\pm 200 \text{ A}_{\max}$	0 100 23 98 Ω
		@ $\pm 420 \text{ A}_{\max}$	0 28 23 26 Ω
I_{SN}	Secondary nominal r.m.s. current	100	mA
K_N	Conversion ratio	1 : 2000	
V_C	Supply voltage ($\pm 5 \%$)	$\pm 12 \dots 15$	V
I_C	Current consumption @ $\pm 15 \text{ V}$	$17 + I_S$	mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	3.5	kV

Accuracy - Dynamic performance data

X_G	Overall accuracy @ I_{PN} , $T_A = 25^\circ\text{C}$	± 0.5	%
e_L	Linearity	< 0.1	%
I_O	Offset current @ $I_P = 0$, $T_A = 25^\circ\text{C}$	Typ Max	
I_{OM}	Residual current ¹⁾ @ $I_P = 0$, after an overload of $3 \times I_{PN}$	± 0.2	mA
I_{OT}	Thermal drift of I_O - $40^\circ\text{C} \dots +85^\circ\text{C}$	± 0.12 ± 0.4	mA
t_{ra}	Reaction time @ 10 % of $I_{P \max}$	< 500	ns
t_r	Response time ²⁾ @ 90 % of $I_{P \max}$	< 1	μs
di/dt	di/dt accurately followed	> 100	A/ μs
f	Frequency bandwidth (- 3 dB)	DC .. 100	kHz

General data

T_A	Ambient operating temperature	- 40 .. + 85	$^\circ\text{C}$
T_S	Ambient storage temperature	- 40 .. + 90	$^\circ\text{C}$
R_S	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	33	Ω
	@ $T_A = 85^\circ\text{C}$	35	Ω
m	Mass	58	g
	Standards ³⁾	EN 50178	

Features

- Closed loop (compensated) current transducer using the Hall effect
- Insulated 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

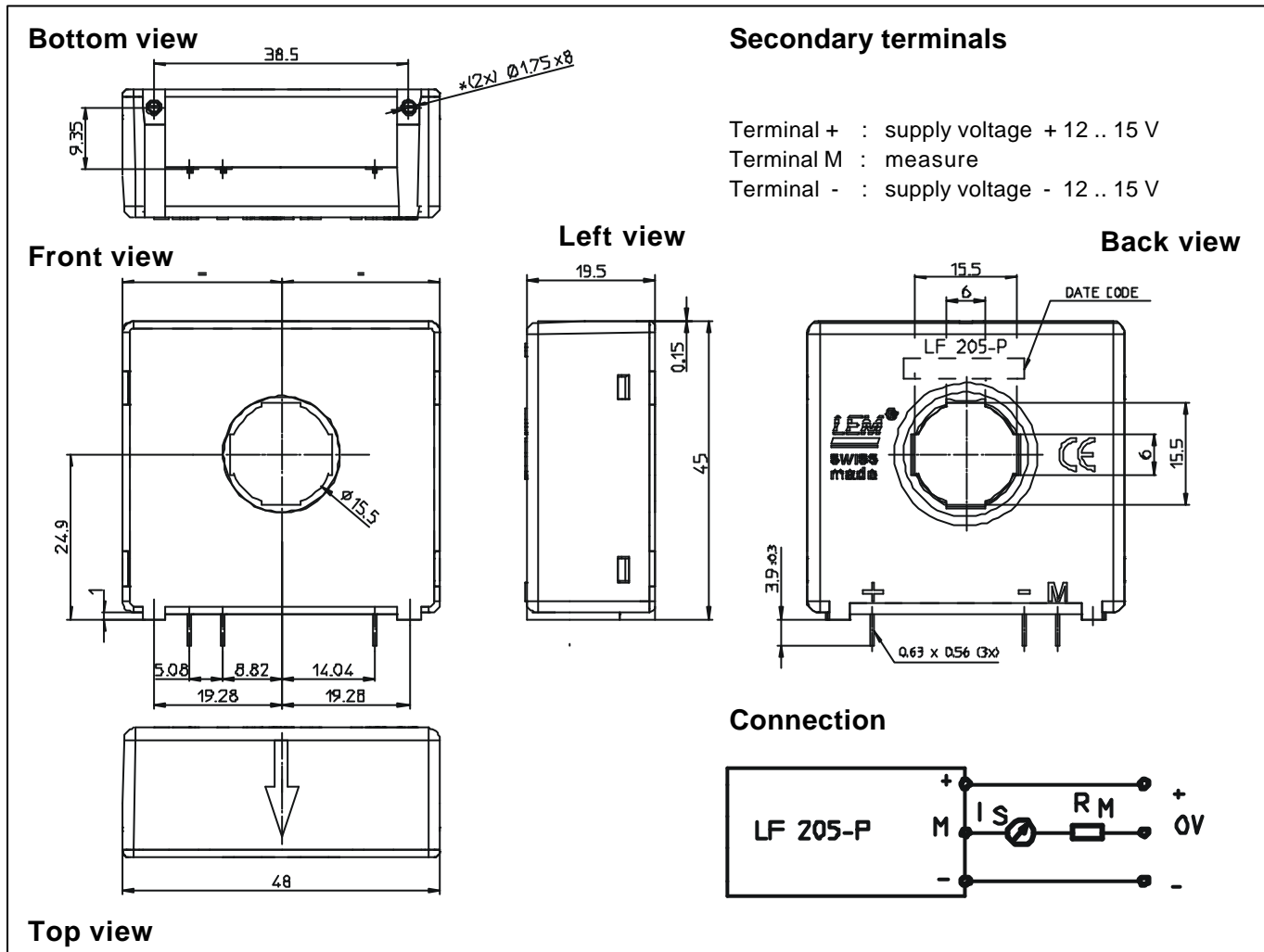
- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications.

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

²⁾ With a di/dt of 100 A/ μs

³⁾ A list of corresponding tests is available.

Dimensions LF 205-P (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- General tolerance ± 0.2 mm
- Fastening & secondary connection 3 pins 0.63x0.56 mm
Recommended PCB hole Ø 0.9 mm
- Primary through-hole Ø 15.5 mm
- Supplementary fastening 2 holes Ø 1.75 mm
Recommended PCB hole 2.4 mm
Recommended screws KA22 x 6
LEM code 47.30.60.006.0

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.
- Dynamic performances (di/dt and response 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.