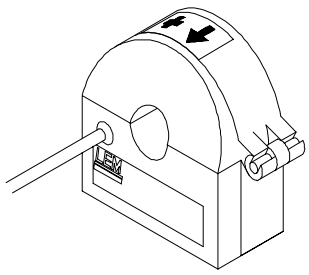
Current Transducer HT 200 to 500-SBD I_{PN} = 200 .. 500 A

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



Electrical data

Type	Primary nominal DC or Rms current I_{PN}	Primary current measuring range I_P
HT 200-SBD	200 A	0 .. ± 400 A
HT 300-SBD	300 A	0 .. ± 600 A
HT 400-SBD	400 A	0 .. ± 800 A
HT 500-SBD	500 A	0 .. ± 1000 A

$\hat{I}_P$	Overload capacity (Ampere Turns)	30000	A
V_{OUT}	Analogue output voltage @ ± I_{PN}	± 5	V
R_L	Load resistance	>10	kΩ
V_C	Supply voltage (± 5 %)	± 15	V
I_C	Current consumption (max)	20	mA
V_b	Rms rated voltage [1]	50	V

Accuracy - Dynamic performance data

X	Accuracy [2] @ I_{PN}, T_A = 25°C, @ ± 15 V	± 1	%
ε_L	Linearity [2]	± 0.5	%
		Max	
V_{OE}	Electrical offset voltage @ I_P = 0, T_A = 25°C	± 20	mV
V_{OM}	Residual offset voltage @ I_P = 0, T_A = 25°C after an overload of 3 x I_{PN}	< 6.25	mV
V_{OT}	Thermal drift of offset voltage T_A = 0 .. + 70°C	± 3.5	mV/°K
$TC\varepsilon_G$	Thermal drift of gain T_A = 0 .. + 70°C	± 0.05	%/°K
t_r	Response time @ 90 % of I_P	< 7	µs
di/dt	di/dt accurately followed	> 50	A/µs
f	Frequency bandwidth (- 3 dB) [3]	DC .. 50	kHz

General data

T_A	Ambient operating temperature	0 .. + 70	°C
T_S	Ambient storage temperature	- 10 .. + 85	°C
m	Mass	160	g

Notes : [1] For use on SELV systems or with insulated conductors on higher rated systems
[2] Excludes the electrical offset
[3] Refer to derating curves in the technical file to avoid excessive core heating at high frequency

Features

- Open loop transducer using Hall Effect
- Panel mounting
- Split core design for easy installation
- Insulated plastic case to UL 94-HB.

Advantages

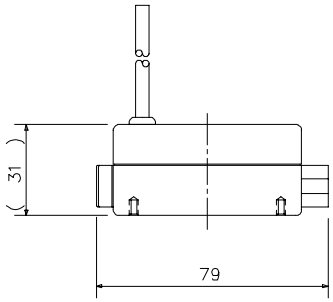
- Very good linearity
- Very good accuracy
- Low temperature drift
- Wide frequency bandwidth
- Very low insertion losses
- High immunity to external interference
- Current overload capability
- Low power consumption
- Wide dynamic range 200 to 500 A in one package.

Applications

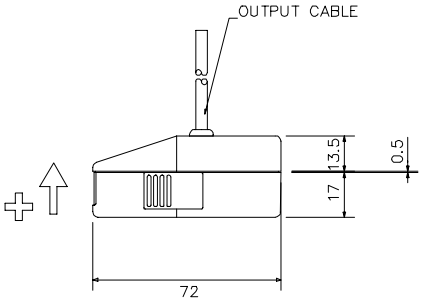
- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptable Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications.

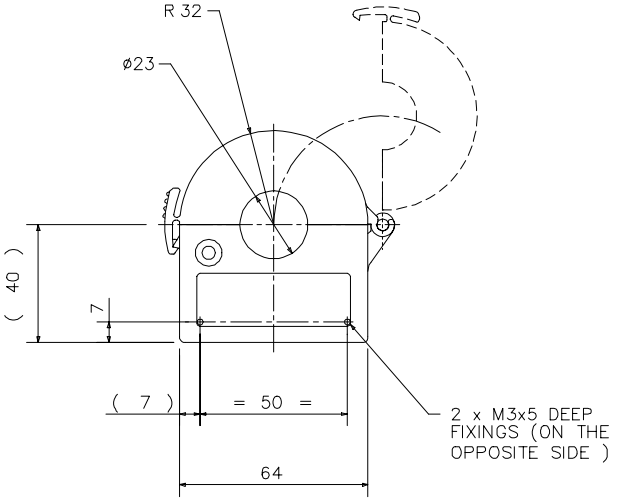
Dimensions HT 200 to 500-SBD (in mm. 1 mm = 0.0394 inch)

Bottom view



Left view





Front view

Secondary terminals

RED	: supply voltage + 15 V
BLUE	: supply voltage - 15 V
WHITE	: output
GREEN	: 0 V
SCREEN	: NC

Mechanical characteristics

• General tolerance	± 0.5 mm
• Primary through-hole	Ø 23 mm
• Connection of secondary	Via 4 core screened PVC cable 1.5 m in length
• Enclosure	Moulded ABS plastic

Remarks

- $\mathbf{V}_{OUT}$ is positive when $\mathbf{I}_P$ flows in the direction of the arrow.
- Temperature of the primary conductor should not exceed 90°C.
- This is a standard model. For different versions (supply voltages, secondary connections, unidirectional measurements, operating temperatures, etc.) please contact us.