I_{pn} = 500A...2500A

Representative image only

Features

- Isolated plastic case recognized according to UL 94-V0

Advantages

- Easy installation
- Low power consumption
- Small size and space saving
- Only one design for wide current ratings range

Applications

- AC variable speed drives and servo motor drives
- Static converters for DC motor drivers
- Battery supplied applications
- Uninterruptible power supplies (UPS)
- Switched mode power supplies (SMPS)
- Power suppliers for welding applications

Application domain

- Industrial

Standards

- UL508*
- EN50178 (IEC 62477)

Insulation Characteristics

Parameters	Symbol	Value	Units
Dielectric strength between primary and secondary terminals,50Hz, 60 seconds	V_d	4.9	kVrms
Comparative tracking index	CTI	>250	V
Impulse withstand voltage 1.2/50µs	V_v	8.3	kV
Insulation resistance at 500 VDC	R_{IS}	>100	MΩ
Creepage distance		11.50	mm
Clearance distance		11.00	mm

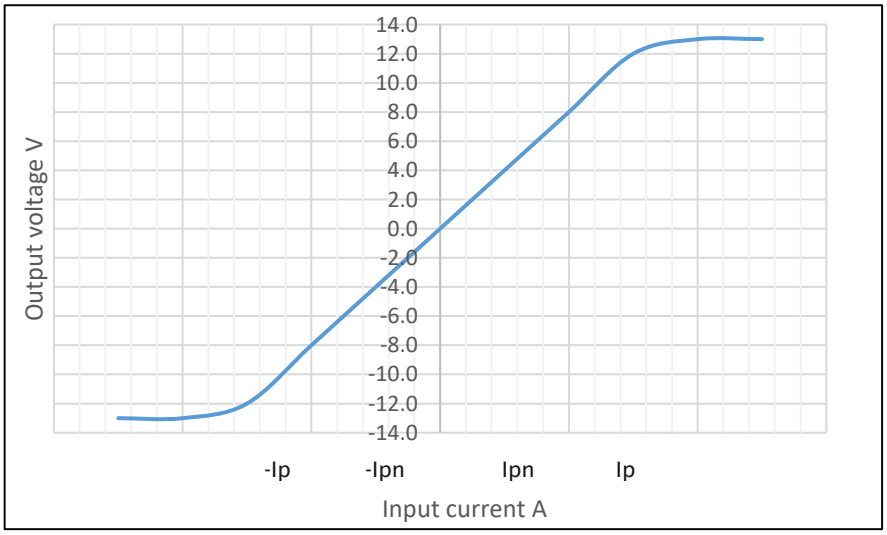
Product Range

Product Code	Primary Nominal Current (I_{pn})	Primary Measuring Range (I_p)
HSM500T01	500A	±1500A
HSM600T01	600A	±1800A
HSM750T01	750A	±2250A
HSM850T01	850A	±2550A
HSM1K0T01	1000A	±3000A
HSM1K5T01	1500A	±4500A
HSM2K0T01	2000A	±5500A
HSM2K5T01	2500A	±5500A

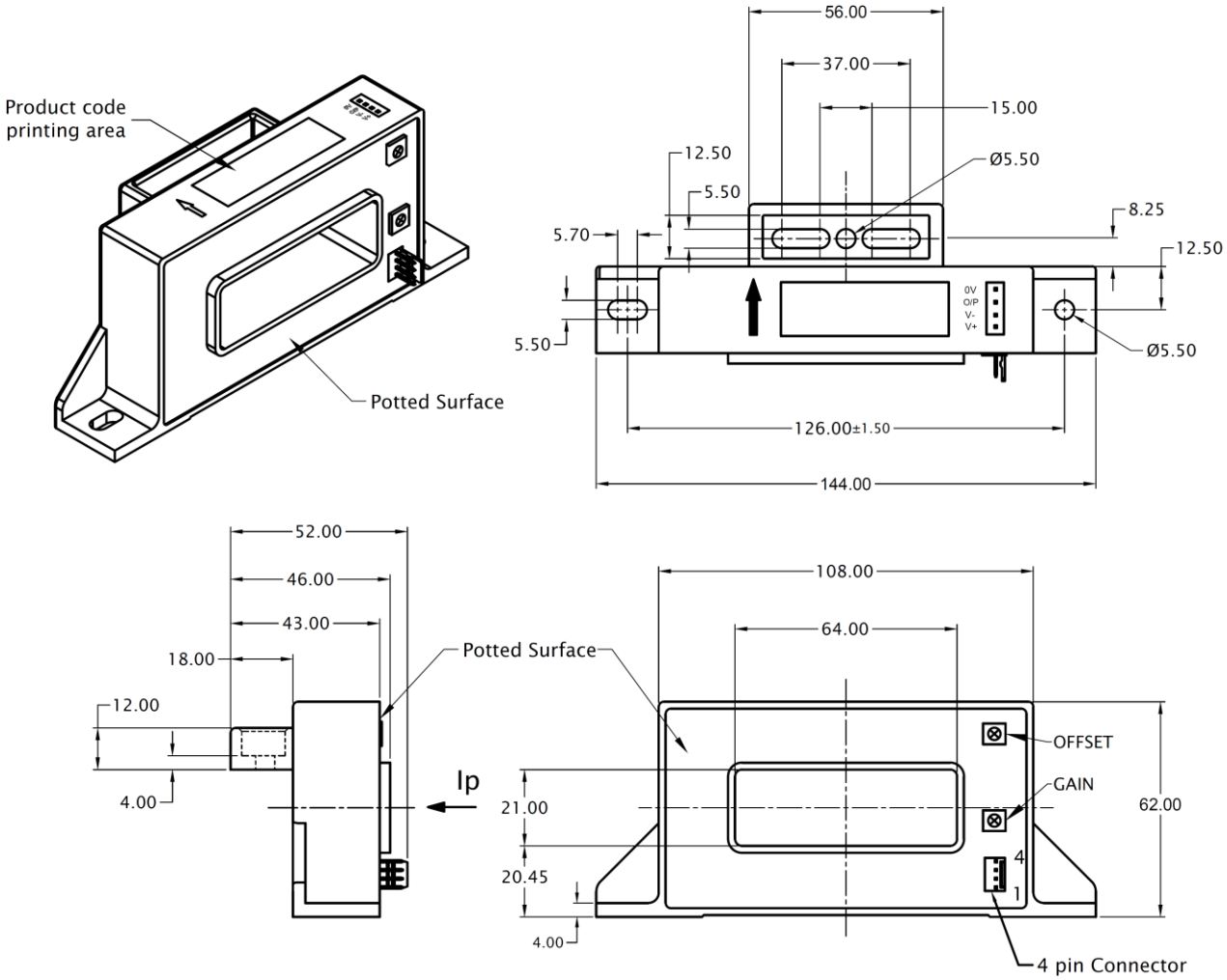
Specifications (Unless otherwise specified temperature is 25°C)

Parameters	Symbol	Condition	Min	Typ	Max	Units
Burden resistance	R_b		10			kΩ
Output voltage	V_{out}	at $\pm I_{pn}$, R_b = 10KΩ,		±4		V
Supply voltage (±5%)	V_s	operating at12V reduces the measuring range		±15		V
Current consumption at I_{pn}	I_c			20		mA
Overall accuracy) At I_{pn} (Excluding offset)	X_G		-1		-1	%
Linearity error (Excluding offset)	Σ_L		-1		+1	%
Output offset voltage	V_{off}		-20		+20	mV
Hysteresis offset voltage	V_{OH}	at I_P = 0 after a primary current of I_{pn}	-30		+30	mV
Temperature coefficient of V_{off}	TV_{Off}	-40 to +85 °C	-1.0		+1.0	mV/K
Temperature coefficient of V_{out}	TV_{OE}	-40 to +85 °C	-0.1		+0.1	%/K
Response time at 90% Of I_{pn}	t_{ra}			5		µs
Frequency bandwidth	BW	-3dB, small signal bw	DC		25	kHz
di/dt accurately followed	di/dt			>50		A/ µs
Ambient operating temperature	T_A		-40		+85	°C
Ambient storage temperature	T_S		-40		+85	°C
Mass	m			430		g

Input & Output Characteristics



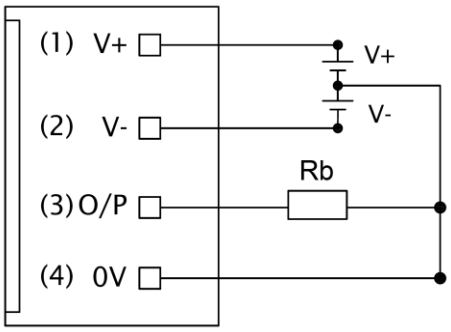
Mechanical dimensions



Tolerance unless otherwise specified

0.5 up to 3 in mm	>3 up to 6 in mm	>6 up to 30 in mm	>30 up to 120 in mm	>120 up to 315 in mm	>315 up to 1000 in mm	ALL DIMENSIONS ARE IN 'mm'	
± 0.20	± 0.30	± 0.50	± 0.80	± 1.20	± 2.0	SCALE -NTS	

Connection diagram



General information

- Connector on the product: Connector header, Part no- 61900411121, Wurth Elektronik.
- Suggested mating connector: Connector housing, Part no- 61900411621, & corresponding pin part no: 61900113722DEC, Wurth Elektronik.
- Sensor mounting: 2 holes X Ø 5.5mm, M5 steel screws, recommended fastening torque 4 N-m.
- It is recommended to centrally locate the current carrying conductor or completely fill the central opening for optimum performance.
- Output is positive when current (Ip) flows in the direction of arrow.
- Ensure proper connection of Power supply to avoid damage to the Sensor.
- Electrohms reserves the right to make modifications on products for improvements without prior notice.
- *Designed to meet UL 508

Safety

- This Sensor 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 Sensor, 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.
- A protective housing or additional shield could be used.
- Disconnecting the main power must be possible
- Over currents (»I_{PN}) can cause an additional voltage offset due to magnetic remanence.
- The temperature of the primary conductor shall not exceed 100 ˚C.
- This Sensors may only be used in electrical or electronic systems which fulfil the relevant regulations (Standards, EMC Requirements)
- Pay attention to protect non-isolated high-voltage current carrying parts against direct contact (e.g. with a protective housing)
- When installing the sensor, ensure that the safe separation (between primary circuit and secondary circuit) is maintained over the whole circuits and their connections.