

Coreless Coil Current Transducer

RH 100 .. 1000-S

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

$$I_{PN} = 100 \dots 1000 \text{ A}$$



Electrical data

Primary nominal r.m.s. current		Type	
I_{PN} (A)			
100		RH 100-S	
200		RH 200-S	
500		RH 500-S	
1000		RH 1000-S	
V_{OUT}	Output voltage(r.m.s) @ $\pm I_{PN}$, $R_L = 10 \text{ k}\Omega$, $T_A = 25^\circ\text{C}$	4	V
V_C	Supply voltage ($\pm 5 \%$)	± 15	V
V_d	R.m.s. voltage for AC isolation test, 50/60Hz, 1 mn	> 2.5	kV
I_C	Current consumption	15	mA
R_{IS}	Isolation resistance@ 500 V DC	> 500	M Ω
R_L	Load resistance	≥ 100	K Ω

Features

- No magnetic core
- Rogowski Coil principle
- Highly accurate integration circuit
- Voltage output

Advantages

- Wide sensing range
- Wide frequency range
- Quick response
- No hysteresis error
- No insertion impedance
- Small size and lightweight

Accuracy-Dynamic performance data

e_L	Linearity ($0 \dots \pm I_{PN}$)	$\leq \pm 0.5$	% of I_{PN}
V_{OE}	Electrical offset voltage, $T_A = 25^\circ\text{C}$	± 5	mV
V_{OT}	Thermal drift of V_{OE}	$\leq \pm 0.3$	mV/K
TCE_G	Thermal drift of the gain (% of reading)	± 0.03	%/K
t_r	Response time @ 90% of I_p	1	μs
f	Frequency bandwidth ($\pm 3 \text{ dB}$)	20Hz .. 100KHz	

General data

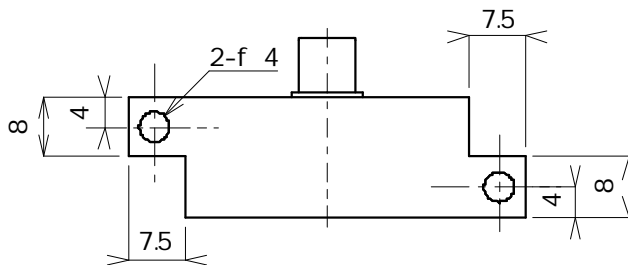
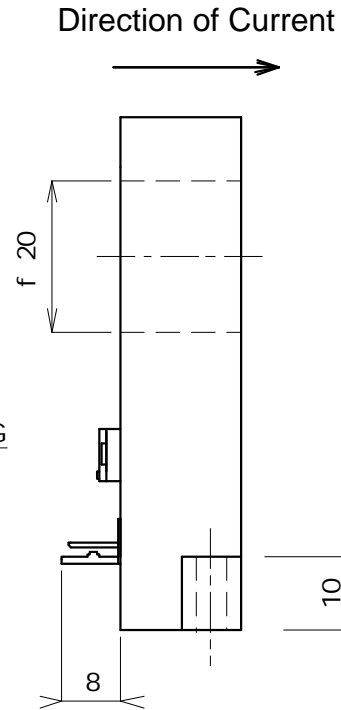
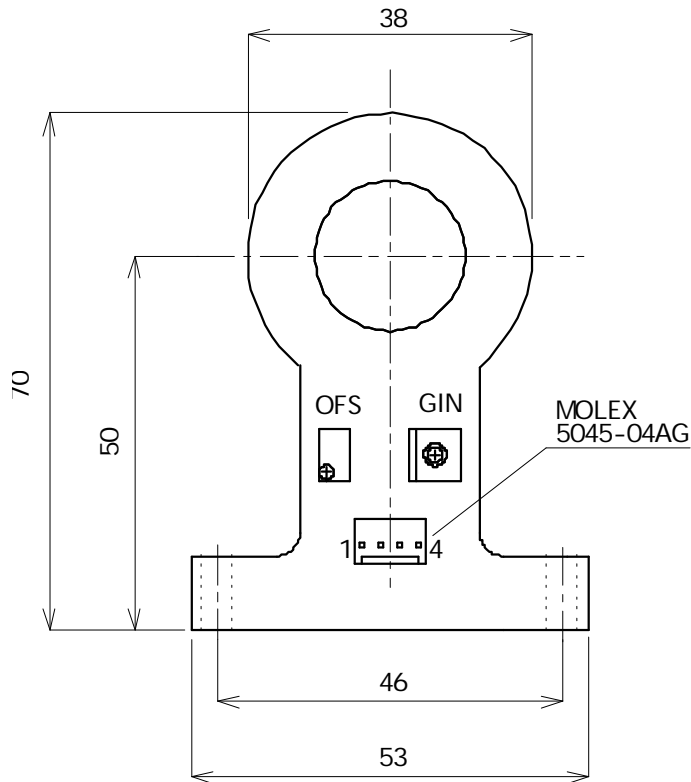
T_A	Ambient operating temperature	-10 .. +75	$^\circ\text{C}$
T_S	Ambient storage temperature	-15 .. +80	$^\circ\text{C}$
m	Mass	45	g
	Min. internal creepage distance/clearance	$\varnothing 20 \pm 0.5$	mm

Applications

- Observing complicated current waveforms
- High speed and high current sensing such as IGBT
- Welding
- Power unit
- Electric power regulator
- Discharge tube
- Antenna
- Monitoring for irruptive current

Notes :

RH 100 .. 1000-S (in mm)



Terminal Pin Identification

- 1... + V_{CC}
- 2... - V_{CC}
- 3... OUTPUT
- 4... GND