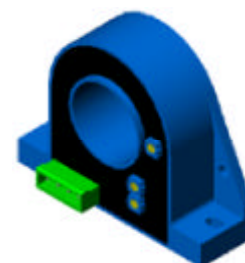


AC/DC Current transducer DHR-C10

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

The transducer for the electronic measurement DC & distorted AC waveforms current, with galvanic isolation between the primary (High power) and the secondary circuits (Electronic circuit). True RMS 0-10V voltage output.



Electrical data

| Primary Nominal DC & AC Current I_{PN} (A.t.RMS) | Primary AC Current Max. Peak Value I_p (A) | Analogue Output Signal V_{OUT} (VDC) | Type |
|---|---|---|---------------------|
| 100 | 600 | 0-10 | DHR 100 C10 |
| 200 | 600 | 0-10 | DHR 200 C10 |
| 300 | 1000 | 0-10 | DHR 300 C10 |
| 400 | 1000 | 0-10 | DHR 400 C10 |
| 500 | 1800 | 0-10 | DHR 500 C10 |
| 600 | 1800 | 0-10 | DHR 600 C10 |
| 1000 | 1800 | 0-10 | DHR 1000 C10 |

| | | | |
|-------|---|-----------|------------|
| R_L | Load resistance | ≥ 10 | k Ω |
| V_C | Supply voltage | +20 .. 50 | V DC |
| I_c | Current Consumption | 30 | mA |
| | Limitation of voltage output (0-10V) | < 14 | V |
| | Overloaded input current (Ampere Turns) | 30000 | At |

Accuracy-Dynamic performance data

| | | | |
|----------|---|-------------|---------------|
| X | Accuracy @ I_{PN} , $T_A = 25^\circ\text{C}$ (without offset) | < ± 1 | % of I_{PN} |
| e_L | Linearity (1% of $I_{PN} \dots \pm I_{PN}$) | < ± 1.0 | % of I_{PN} |
| V_{OE} | Electrical offset voltage, $T_A = 25^\circ\text{C}$ | < ± 1.0 | % of I_{PN} |
| V_{OT} | Thermal drift of V_{OE} (-20..+60 °C) | ± 1 | mV/K |
| | (-40..+70 °C) | ± 2.0 | mV/K |
| TCE_G | Thermal drift of the gain (% of reading) | ± 0.1 | %/K |
| t_r | Response time @ 90% of I_p | < 150 | ms |
| f | Frequency bandwidth ($\pm 1\%$) | DC 20..6000 | Hz |

General data

| | | | |
|-------|-------------------------------|------------|----|
| T_A | Ambient operating temperature | -40 .. +70 | °C |
| T_S | Ambient storage temperature | -40 .. +85 | °C |
| m | Mass | 260 | g |
| | Protection type | IP20 | |
| | UL94 classification | V0 | |

Notes : Installation and maintenance should be done with power supply disconnected.
The operator must have accreditation to install this material.
The users must take care of all protection guarantee against electrical shock.

Features

- VFD and SCR waveforms current measurement
- True RMS output
- Panel mounting
- Eliminates insertion loss

Advantages

- Large aperture for cable up to $\varnothing 32\text{mm}$
- High isolation between primary and secondary circuits
- Easy to mount

Applications

- VFD Controlled Loads:
VFD output indicates how the motor and attached load are operating.
- SCR Controlled Loads:
Accurate measurement of phase angle fired or burst fired (time proportioned) SCRs. Current measurement gives faster response than temperature measurement.
- Switching Power Supplies and Electronic Ballasts:
True RMS sensing is the most accurate way to measure power supply or ballast input power.

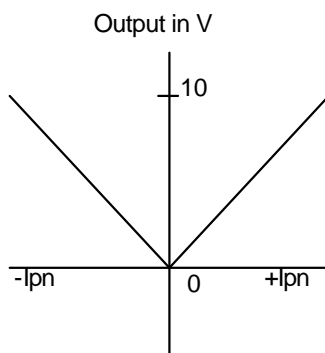
Current Transducer DHR-C10

Isolation characteristics

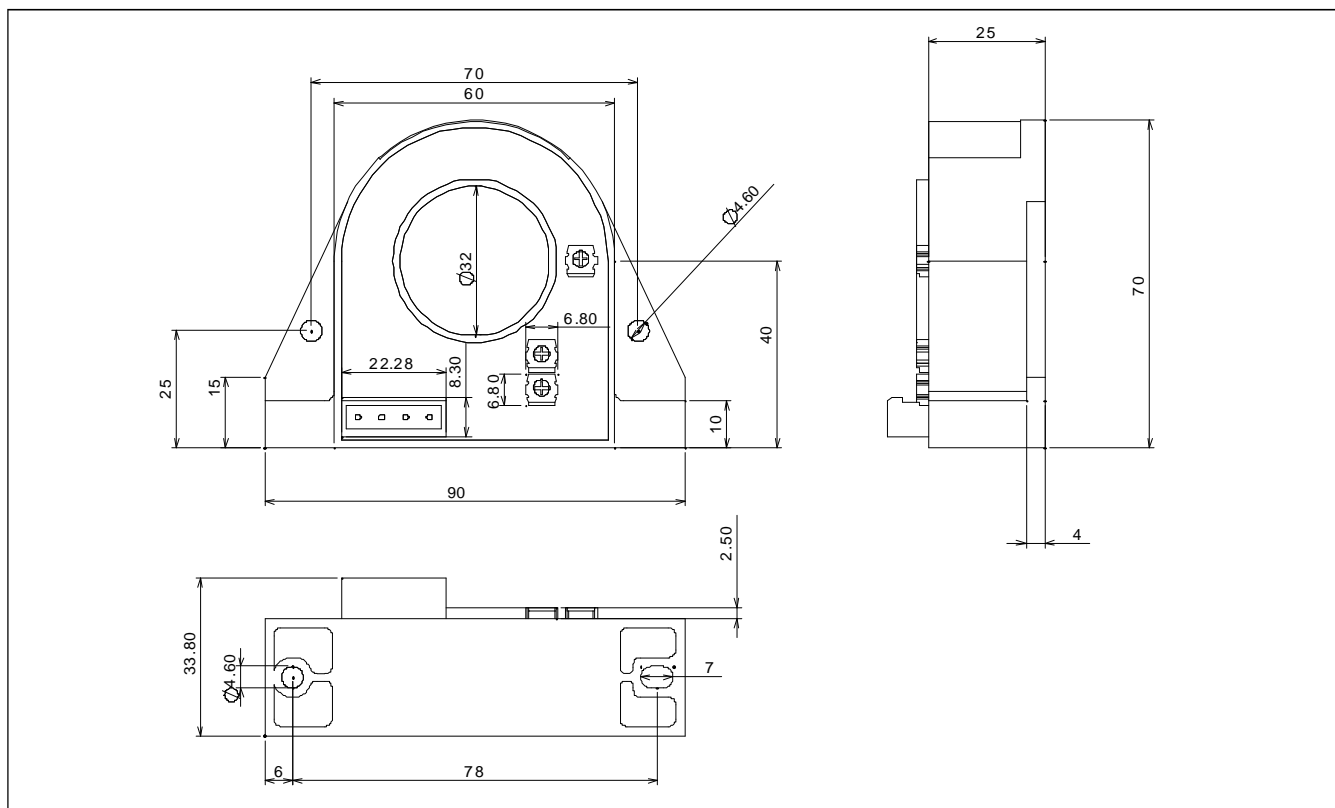
| | | | |
|-------|--|------|----|
| V_b | Rated Voltage with IEC 61010-1 acc. to the 61326 standards and following conditions : - Single insulation - Over voltage category CAT III - Pollution degree PD2 - None uniform field | 1000 | V |
| V_d | R.m.s. voltage for AC insulation test, 50Hz, 1min | 5 | kV |
| dCp | Creepage distance | 11 | mm |
| dCl | Clearance distance | 11 | mm |
| CTI | Comparative tracking index (Group I) | 600 | |

Notes :

Output polarity with DC input

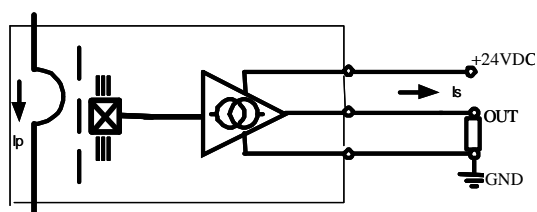
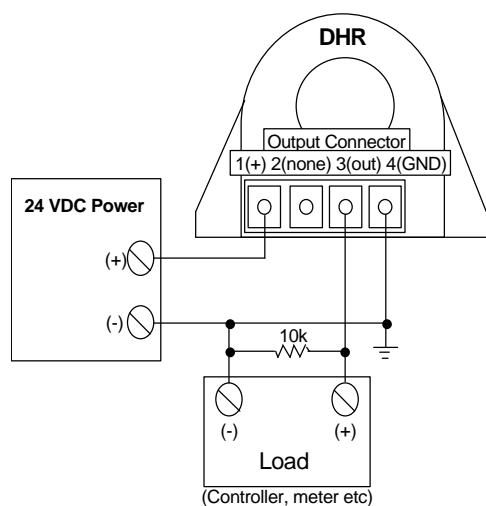


Dimensions DHR-C10 (in mm. 1 mm = 0.0394 inch)



Connections

- Wires up to 2 mm \varnothing



Mechanical characteristics

- General tolerance ± 1 mm
- Primary aperture $\varnothing 32.0$ mm
- Panel mounting 4 holes $\varnothing 4.6$ mm
- Distance between holes 70.0 mm & 78 mm (see above dimensions)

For panel mounting, replace M4 screws by new one (not supplied) with appropriate length to panel's thickness.

Safety



This transducer must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the following manufacturer's operating instructions.



Caution, risk of electrical shock

When operating the transducer, 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.

This transducer is a built-in device, whose conducting parts must be inaccessible after installation.

A protective housing or additional shield could be used.

Main supply must be able to be disconnected.

050526/4