

# Current Transducer HNC- 050 .. 100P

$$I_{PN} = 50 \dots 100 \text{ A}$$

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



## Electrical data

| Primary nominal DC current | Primary current measuring range | Type       |
|----------------------------|---------------------------------|------------|
| $I_{PN}$ (A)               | $I_P$ (A)                       |            |
| 50                         | $0 \dots \pm 75$                | HNC - 050P |
| 100                        | $0 \dots \pm 140$               | HNC - 100P |

|          |                                                      | HNC - 050P | HNC - 100P    |          |
|----------|------------------------------------------------------|------------|---------------|----------|
| $R_M$    | Measuring resistance                                 | 60 .. 90   | 60 .. 80      | $\Omega$ |
| $I_{SN}$ | Second nominal current                               | 50         | 50            | mA       |
| $K_N$    | Turns ratio                                          | 1 : 1000   | 1 : 2000      |          |
| $V_C$    | Supply voltage ( $\pm 5\%$ )                         |            | $\pm 15$      | V        |
| $I_C$    | Current consumption                                  |            | $15 + I_{SN}$ | mA       |
| $V_d$    | R.m.s. voltage for AC isolation test, 50/60Hz, 1 min |            | 2.5           | kV       |

## Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- Isolation voltage 2500 V
- Low power consumption

## Accuracy-Dynamic performance data

|          |                                                                        |                                   |
|----------|------------------------------------------------------------------------|-----------------------------------|
| $X$      | Accuracy @ $T_A = 25^\circ\text{C}$                                    | $\pm 1$ % of $I_{PN}$             |
| $e_L$    | Linearity ( $0 \dots \pm I_{PN}$ )                                     | $< \pm 0.5$ %                     |
| $I_O$    | Electrical offset current @ $I_P = 0$ , @ $T_A = 25^\circ\text{C}$     | $\pm 0.2$ mA                      |
| $I_{HC}$ | Hysteresis offset current @ $I_P = 0$ , after an excursion of $I_{PN}$ | $\pm 0.15$ mA                     |
| $I_{OT}$ | Thermal drift of $I_O$ $0^\circ\text{C} \dots +70^\circ\text{C}$       | $\pm 0.005$ ms/ $^\circ\text{C}$  |
| $t_r$    | Response time @ 90% of $I_P$                                           | $< 1$ $\mu\text{s}$               |
| $TCE_G$  | Thermal drift of the gain (% of reading)                               | $< \pm 0.004$ %/ $^\circ\text{C}$ |

## Advantages

- Easy mounting
- Small size and space saving
- Only one design for wide current ratings range
- High immunity to external interference

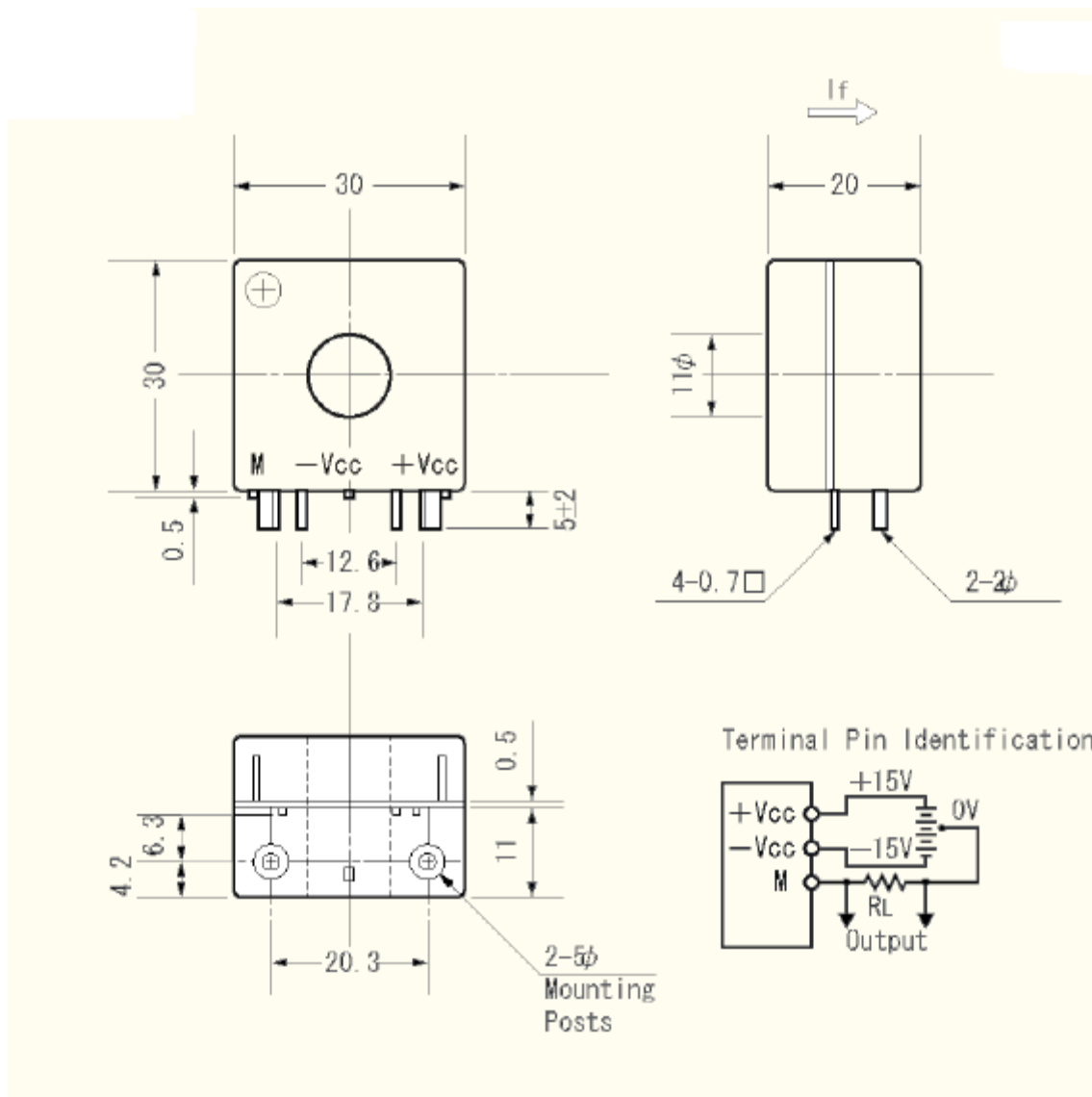
## Applications

- DC motor drives
- Switched Mode Power Supplies (SMPS)
- AC variable speed drives
- Uninterruptible Power Supplies (UPS)
- Battery supplied applications
- Inverters

## General data

|       |                                                      |                                               |
|-------|------------------------------------------------------|-----------------------------------------------|
| $T_A$ | Ambient operating temperature                        | $-10 \dots +80$ $^\circ\text{C}$              |
| $T_S$ | Ambient storage temperature                          | $-15 \dots +85$ $^\circ\text{C}$              |
| $R_S$ | Secondary coil Resistance @ $T_A = 25^\circ\text{C}$ | HNC - 200P 75 $\Omega$ HNC - 300P 95 $\Omega$ |
| $m$   | Mass                                                 | 30 g                                          |

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UNIT: mm