

# 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 .. ± 75                       | HNC - 050P |
| 100                        | 0 .. ± 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 .. $\pm I_{PN}$ )   | $< \pm 0.5$ %         |
| $I_O$                             | 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°C .. +70°C                                    | $\pm 0.005$ ms/°C     |
| $t_r$                             | Response time @ 90% of $I_p$   | $< 1$ $\mu\text{s}$   |
| $TCE_G$                           | Thermal drift of the gain (% of reading)                               | $< \pm 0.004$ %/°C    |

## Advantages

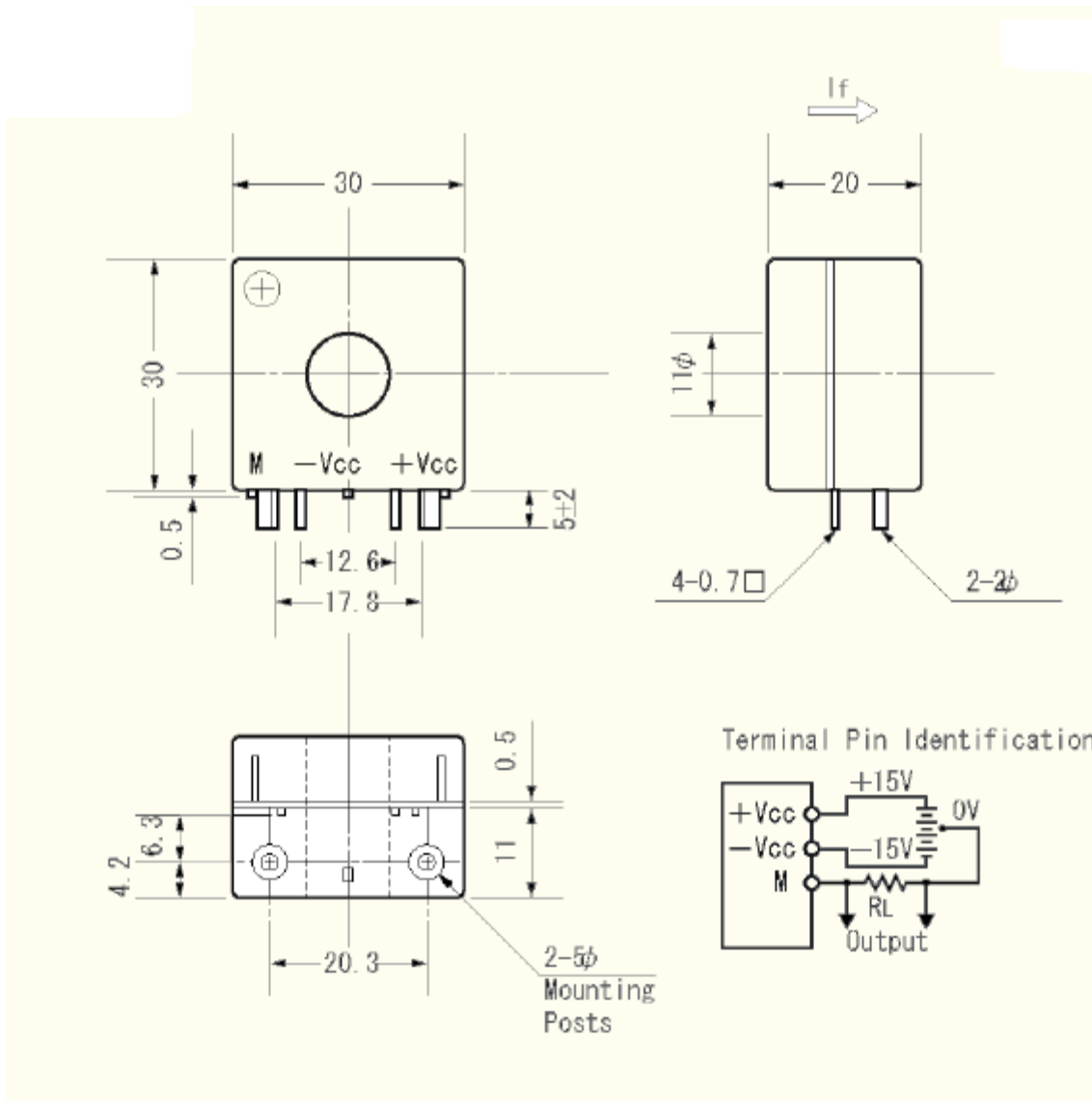
- Easy mounting
- Small size and space saving
- Only one design for wide current ratings range
- High immunity to external interference

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

**HNC- 050 .. 100P**



UNIT: mm