

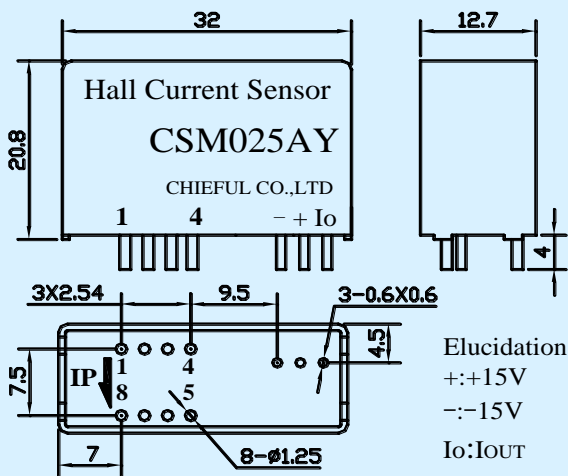
# CSM025AY Hall-effect Current Sensor Series



Closed loop current sensor based on the principle of Hall-effect. It can be used for measuring AC,DC,pulsed and mixed current.

| Electrical characteristics |  |  |                        |       |
|----------------------------|--|--|------------------------|-------|
| Type                       | CSM025AY                                 |  |                        |       |
| $I_{PN}$                   | Primary nominal input current            | 25                                     |                        | A     |
| $I_P$                      | Measuring range of primary current       | 0~±36                                  |                        | A     |
| $I_{SN}$                   | Secondary nominal output current         | 25                                     |                        | mA    |
| $K_N$                      | Conversion ratio                         | 1-2-3-4:1000                           |                        |       |
| $R_M$                      | Measuring resistance ( $V_C = \pm 15V$ ) | $I_P = \pm 25A$ 54~360                 | $I_P = \pm 36A$ 68~190 | $R_M$ |
| $V_C$                      | Supply voltage                           | ±12~±15(±5%)                           |                        | V     |
| $I_C$                      | Current consumption                      | $V_C = \pm 15V$                        | 10+ $I_s$              | mA    |
| $V_D$                      | Insulation voltage                       | AC/50Hz/1min                           | 2.5                    | kV    |
| $\epsilon_L$               | Linearity                                | <0.2                                   |                        | %FS   |
| X                          | Accuracy                                 | $T_A = 25^\circ C$ $V_C = \pm 15V$     | <±0.7                  | %     |
| $I_0$                      | Zero offset current                      | $T_A = 25^\circ C$                     | <±0.15                 | mA    |
| $I_{OM}$                   | Residual current                         | $I_P \rightarrow 0$                    | <±0.15                 | mA    |
| $I_{OT}$                   | Thermal drift of $I_0$                   | $I_P = 0$ $T_A = -25 \sim +70^\circ C$ | <±0.5                  | mA    |
| $T_R$                      | Response time                            | <1                                     |                        | µs    |
| f                          | Frequency bandwidth(-1dB)                | DC~100                                 |                        | kHz   |
| $T_A$                      | Ambient operating temperature            | -25~+70                                |                        | °C    |
| $T_S$                      | Ambient storage temperature              | -40~+100                               |                        | °C    |
| $R_P$                      | Primary coil resistance                  | $T_A = 25^\circ C$                     | ≤1.25                  | mΩ    |
| $R_S$                      | Secondary coil resistance                | $T_A = 70^\circ C$                     | 40                     | Ω     |
| $R_{IS}$                   | Isolation resistance                     | $T_A = 25^\circ C$                     | ≥1500                  | MΩ    |
|                            | Standard                                 | Q/3201CHGL02-2007                      |                        |       |

## Dimensions of drawing (mm) Connection



| Conversion ratio | $I_{PN}(A)$ | $I_P(A)$ | $I_{SN}(mA)$ | Primary connection              |
|------------------|-------------|----------|--------------|---------------------------------|
| 1:1000           | 25          | 36       | 25           | 8 ○ ○ ○ ○ 50UT<br>IN1 ○ ○ ○ ○ 4 |
| 2:1000           | 12          | 18       | 24           | 8 ○ ○ ○ ○ 50UT<br>IN1 ○ ○ ○ ○ 4 |
| 3:1000           | 8           | 12       | 24           | 8 ○ ○ ○ ○ 50UT<br>IN1 ○ ○ ○ ○ 4 |
| 4:1000           | 6           | 9        | 24           | 8 ○ ○ ○ ○ 50UT<br>IN1 ○ ○ ○ ○ 4 |

**Remarks**

Incorrect connection may lead to the damage of the sensor.

$I_{SN}$  is positive when the  $I_P$  flows in the direction of the arrow.