

RMS calculation type current converter

Converter of AC current detection and DC 4-20mA output (Common of power supply 2 wires type)

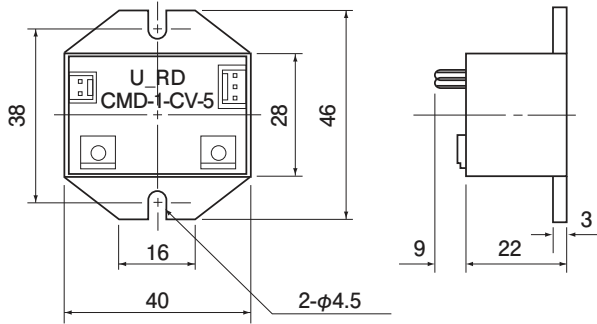


Model CMD-1-CV-5

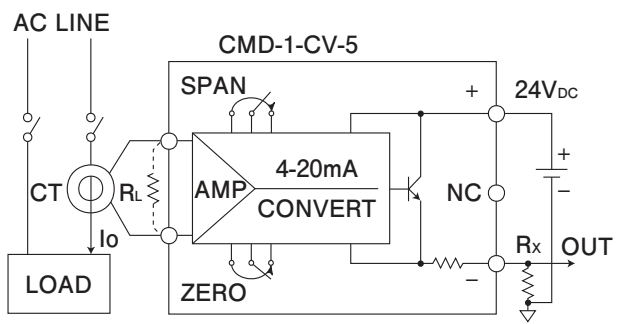
[Features]

- Module to convert current data to 4 ~ 20mA for instrumentation with the combination with dedicated current sensor
- Possible to construct economical instrumentation system with small size, light weight, and low price
- Possible to apply each current value by the choice of applied current sensor or change of condition setting

[Outline drawing]



[Connection]



[Specification] Ta=25°C

Model	CMD-1-CV-5		
Power supply	24VDC±5% (Less than 40mA)		
Rating current	5 ~ 50A (by combination with CT)		
Output current	4 ~ 20mADC/0 ~ rating current (load resistor 100 ~ 600Ω, 250Ω typical, common of power supply 2 wires type)		
Linearity	±0.5%:FS		
Temperature characteristic	±0.02% / °C : FS		
Response time	0.5s / 0→FS (typ)		
Output ripple	Within 0.3% of output (50Hz sine wave) (typ)		
Operating temperature	-20°C ~ +75°C, ≤85%RH		
Screw torque	0.7N · m		
Mass	approximately 17g		
[Applied current sensor]	Model	Applied current	Over load strength 250% continuous
	CTL-12-5R-1	0 ~ 5Arms	
	CTL-12-25R-1	0 ~ 25Arms	
	CTL-12-50R-1	0 ~ 50Arms	
(Common outline dimension with CTL-12 series standard products)			

[Remark]

- Accessories... 1 pair each
Input connector: molex 5051-02
Output connector: molex 5051-03
- When applying to small current, sensitivity to be N times with N turns of detected wire into aperture of current sensor
- When enlarging applied current, connect resistor (R_L) to output of current sensor in parallel
(Example of enlarging current with CTL-12-5R-1)

ex1: Rating 10A, R _L =400Ω
ex2: Rating 20A, R _L =133.3Ω
ex3: Rating 100A, R _L =21.2Ω
- Over current beyond 1000% cause internal circuit failure even though instant. Please connect bi-directional clamping device of 5~10V to output of sensor in parallel
- When setting any value of applied current, please choose any model in standard current sensor, and connect R_L as

$$E_o = K \cdot I_o \cdot R_L / n = 1V_{rms}$$