

Specifications

Table 12 - General Specifications - 1769-IT6

Attribute	1769-IT6
Dimensions (HxDxW), approx.	118 x 87 x 35 mm (4.65 x 3.43 x 1.38 in.) height including mounting tabs is 138 mm (5.43 in.)
Shipping weight (with carton), approx.	276 g (0.61 lb)
Storage temperature	-40...85 °C (-40...185 °F)
Operating temperature	0...60 °C (32...140 °F)
Operating humidity	5...95% noncondensing
Operating altitude	2000 m (6561 ft)
Vibration, operating	10...500 Hz, 5 g, 0.030 in. peak-to-peak
Vibration, relay operation	2 g
Shock, operating	30 g, 11 ms panel mounted (20 g, 11 ms DIN rail mounted)
Shock, relay operation	7.5 g panel mounted (5 g DIN rail mounted)
Shock, nonoperating	40 g panel mounted (30 g DIN rail mounted)
System power-supply distance rating	8 (The module may not be more than 7 modules away from a system power supply.)
Recommended cable	Belden 8761 (shielded) for millivolt inputs Shielded thermocouple extension wire for the specific type of thermocouple you are using. Follow thermocouple manufacturer's recommendations.
Agency certification	C-UL certified (under CSA C22.2 No. 142) UL 508 listed CE compliant for all applicable directives
Hazardous environment class	Class I, Division 2, Hazardous Location, Groups A, B, C, D (UL 1604, C-UL under CSA C22.2 No. 213)
Radiated and conducted emissions	EN50081-2 Class A

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Electrical /EMC	The module has passed testing at the following levels.
ESD immunity (IEC61000-4-2)	4 kV contact, 8 kV air, 4 kV indirect
Radiated immunity (IEC61000-4-3)	10 V/m , 80...1000 MHz, 80% amplitude modulation, 900 MHz keyed carrier
Fast transient burst (IEC61000-4-4)	2 kV, 5 kHz
Surge immunity (IEC61000-4-5)	1kV galvanic gun
Conducted immunity (IEC61000-4-6)	10V, 0.15 to 80MHz ⁽¹⁾ ⁽²⁾

⁽¹⁾ Conducted immunity frequency range may be 150 kHz...30 MHz if the radiated immunity frequency range is 30...1000 MHz.

⁽²⁾ For grounded thermocouples, the 10V level is reduced to 3V.

Table 13 - Input Specifications - 1769-IT6

Attribute	1769-IT6
Number of inputs	6 input channels plus 2 CJC sensors
Bus current draw, max	100 mA at 5V DC 40 mA at 24V DC
Heat dissipation	1.5 total W (The Watts per point, plus the minimum Watts, with all points energized.)
Converter type	Delta Sigma
Response speed per channel	Input filter and configuration dependent. See Effects of Filter Frequency on Channel Step Response on page 47.
Rated working voltage ⁽¹⁾	30V AC/30V DC
Common mode voltage range ⁽²⁾	±10V max per channel
Common mode rejection	115 dB (min) at 50 Hz (with 10 Hz or 50 Hz filter) 115 dB (min) at 60 Hz (with 10 Hz or 60 Hz filter)
Normal mode rejection ratio	85 dB (min) at 50 Hz (with 10 Hz or 50 Hz filter) 85 dB (min) at 60 Hz (with 10 Hz or 60 Hz filter)
Cable impedance, max	25 W (for specified accuracy)
Input impedance	>10 MW
Open-circuit detection time	7 ms to 2.1s ⁽³⁾
Calibration	The module performs autocalibration upon powerup and whenever a channel is enabled. You can also program the module to calibrate every five minutes.
Non-linearity (in percent full scale)	±0.03%
Module error over full temperature range (0...60 °C (32...140 °F))	See page 86 .
CJC sensor accuracy	±0.3 °C (±0.54 °F)
CJC accuracy	±1.0 °C (±1.8 °F)
Overload at input terminals, max	±35V DC continuous ⁽⁴⁾
Input group to bus isolation	720V DC for 1 min (qualification test) 30V AC/30V DC working voltage
Input channel configuration	Via configuration software or the user program (by writing a unique bit pattern into the module's configuration file). Refer to your controller's user manual to determine if user program configuration is supported.