

1769-0F4CI

Compact current output, individually isolated analog module

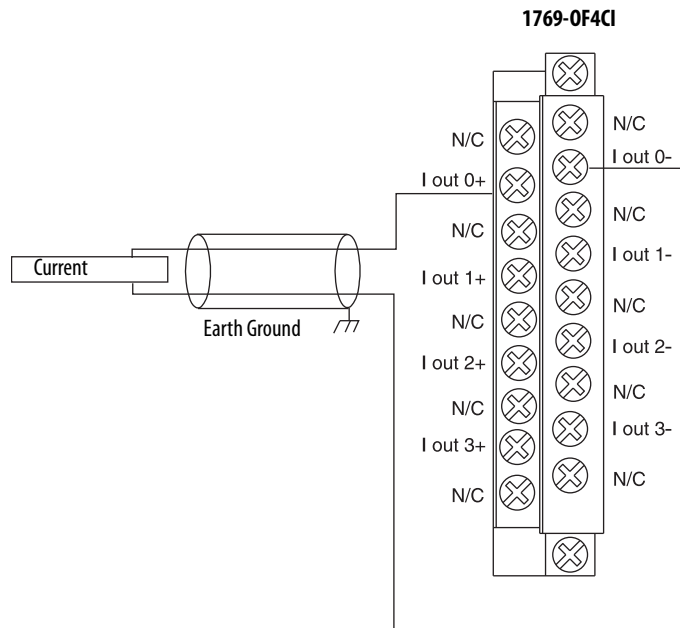


Table 77 - Technical Specifications - 1769-0F4CI

Attribute	1769-0F4CI
Outputs	4 differential, individually isolated
Output range	0...20 mA 4...20 mA
Full scale range ⁽¹⁾	0...21 mA 3.2...21 mA
Resolution	16 bits (unipolar) 0...20 mA: 15.91 bits, 0.323 μ A/bit 4...20 mA: 15.59 bits, 0.323 μ A/bit
Bus current draw	5V DC, 145 mA 24V DC, 120 mA
Heat dissipation, max	2.68 W
Conversion rate (all channels), max	110 ms
Limited voltage/current ⁽²⁾	< 2.9 ms
Resistive load on current output	0...500 Ω (includes wire resistance)
Inductive load (current outputs), max	0.1 mH
Field calibration	None required
Accuracy ⁽³⁾	$\pm 0.35\%$ full scale @ 25 $^{\circ}$ C (77 $^{\circ}$ F)
Accuracy drift with temperature	$\pm 0.0058\%$ FS per $^{\circ}$ C
Output ripple ⁽⁴⁾	$\pm 0.05\%$ @ 0...50 kHz
Nonlinearity	$\pm 0.05\%$
Repeatability ⁽⁵⁾	$\pm 0.05\%$
Module error	$\pm 0.55\%$
Output impedance	>1 M Ω
Open and short-circuit protection	Yes

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Attribute	1769-OF4CI
Short-circuit protection, max	21 mA
Output overvoltage protection	Yes
Output response at system powerup and power down	No current glitch
Rated working voltage ⁽⁶⁾	30V AC/30V DC
Isolation voltage	500V AC or 710V DC for 1 min (qualification test), output group to bus 30V AC/30V DC working voltage (IEC Class 2 reinforced insulation)
Weight, approx	270 g (0.60 lb)
Dimensions (HxWxD), approx	118 x 35 x 87 mm (4.65 x 1.38 x 3.43 in.) Height with mounting tabs 138 mm (5.43 in.)
Slot width	1
Module location	DIN rail or panel mount
Power supply	1769-PA2, 1769-PB2, 1769-PA4, 1769-PB4
Power supply distance rating	8 modules
Terminal screw torque	0.68 N•m (6 lb•in)
Retaining screw torque	0.46 N•m (4.1 lb•in)
Wire size	(22...14 AWG) solid (22...16 AWG) stranded
Wire type	Cu-90 °C (194 °F)
Recommended cable	Belden 8761 (shielded)
Replacement terminal block	1769-RTBN18 (1 per kit)
Replacement door label	1769-RL2 (2 per kit)
Replacement door	1769-RD (2 per kit)
Vendor ID code	1
Product type code	10
Product code	45
Input words	6
Output words	5
Configuration words	32
Enclosure type rating	None (open style)

- (1) The over- or under-range flag comes on when the normal operating range (over/under) is exceeded. The module continues to convert the analog input up to the maximum full scale range. The flag automatically resets when within the normal operating range.
- (2) Step response is the time between when the D/A converter was instructed to go from minimum to full range until the device is at 63% of full range.
- (3) Includes offset, gain, nonlinearity, and repeatability error terms.
- (4) Output ripple is the amount that a fixed output varies with time, which assumes a constant load and temperature.
- (5) Repeatability is the ability of the input module to register the same reading in successive measurements for the same input signal.
- (6) Rated working voltage is the maximum continuous voltage that can be applied at the input terminal, including the input signal and the value that floats above ground potential. For example, a 10V DC input signal and 20V DC potential above ground at the input terminal.

Environmental Specifications - 1769-OF4CI

Attribute	1769-OF4CI
Temperature, storage	-40...85 °C (-40...185 °F)
Temperature, operating	0...60 °C (32...140 °F)
Relative humidity	5...95% noncondensing
Altitude, operating	2000 m (6561 ft)
Vibration, operating	10...500 Hz, 5 g, 0.030 in. peak-to-peak
Shock, operating	30 g, 11 ms panel-mounted (20 g, 11 ms DIN rail-mounted)

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Attribute	1769-0F4CI
Shock, nonoperating	40 g panel-mounted (30 g DIN rail-mounted)
Radiated and conducted emissions IEC 61000-6-4 CISPR 11	Group 1, Class A
ESD immunity IEC 61000-4-2	4 kV contact 8 kV air 4 kV indirect
Radiated immunity IEC 61000-4-3	10V/m, 80...1000 MHz, 80% amplitude modulation
Burst, fast transient IEC 61000-4-4	2 kV, 5 kHz
Surge immunity IEC 61000-4-5	1 kV galvanic gun
Conducted immunity ⁽¹⁾ IEC 61000-4-6	10V DC, 0.15...80 MHz

(1) Conducted immunity frequency range can be 150...30 MHz if the Radiated immunity frequency range is 30...1000 MHz.

Table 78 - Certifications - 1769-0F4CI

Certification ⁽¹⁾	1769-0F4CI
c-UL	C-UL certified (under CSA C22.2 No. 142) UL 508 listed UL listed for Class I, Division 2 Group A,B,C,D Hazardous Locations (ANSI/ISA 12.12.01-2007, 120-01, C-UL under CSA C22.2 No. 213)
CE	CE compliant for all applicable directives
C-Tick	C-Tick compliant for all applicable directives Australian Radiocommunications Act, compliant with: • AS/NZS CISPR 11; Industrial Enclosure

(1) When marked. See the Product Certification link at <http://www.rockwellautomation.com/global/certification/overview.page> for Declarations of Conformity, Certificates, and other certification details.