Installation Instructions

Compact™ Individually Isolated AC/DC Relay Output Module

(Catalog Number 1769-OW8I, Series B)

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Specifications

General Specifications

Specification	Value
Dimensions	118 mm (height) x 87 mm (depth) x 35 mm (width) height including mounting tabs is 138 mm 4.65 in. (height) x 3.43 in (depth) x 1.38 in (width) height including mounting tabs is 5.43 in.
Approximate Shipping Weight (with carton)	290g (0.64 lbs.)
Storage Temperature	-40°C to +85°C (-40°F to +185°F)
Operating Temperature	0°C to +60°C (32°F to +140°F)
Operating Humidity	5% to 95% non-condensing
Operating Altitude	2000 meters (6561 feet)(1)
Vibration	Operating: 10 to 500 Hz, 5G, 0.030 inches maximum peak-to-peak Relay Operation: 2G
Shock	Operating: 30G panel mounted (20G DIN rail mounted) Relay Operation: 7.5G panel mounted (5G DIN rail mounted) Non-Operating: 40G panel mounted (30G DIN rail mounted)
Agency Certification	• C-UL certified (under CSA C22.2 No. 142) • UL 508 listed • CE and C-Tick 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
Electrical /EMC:	*The module has passed testing at the following levels:*
ESD Immunity (IEC61000-4-2)	• 4kV contact, 8kV air, 4kV indirect
Radiated Immunity (IEC61000-4-3)	• 10 V/m, 80 to 1000 MHz, 80% amplitude modulation, +900 MHz keyed carrier
Fast Transient Burst (IEC61000-4-4)	• 2 kV, 5 kHz
Surge Immunity (IEC61000-4-5)	• 2 kV common mode, 1 kV differential mode
Conducted Immunity (IEC61000-4-6)	• 10V, 0.15 to 80 MHz(2)

(1) For operation above 2000 meters, consult the factory.
(2) Conducted Immunity frequency range may be 150 kHz to 30 MHz if the Radiated Immunity frequency range is 30 MHz to 1000 MHz.

Output Specifications

Specification	1769-OW8I
Voltage Category	AC/DC normally open relay
Operating Voltage Range	5 to 265V ac 5 to 125V dc
Number of Outputs	8
Isolated Groups	8 individually isolated outputs
Bus Current Draw (max.)	125 mA at 5V dc (0.625W) 100 mA at 24V dc (2.4W)
Heat Dissipation	2.83 Total Watts *(The Watts per point, plus the minimum Watts, with all points energized.)*
Signal Delay (max.) – resistive load	turn-on = 10 ms turn-off = 10 ms
Off-State Leakage (max.)	0 mA
On-State Current (min.)	10 mA at 5V dc
Continuous Current per Point (max.)	2.5A (Also see "Relay Contact Ratings" on page 16.)
Continuous Current per Common (max.)	2.5A
Continuous Current per Module (max.)	16A
Power Supply Distance Rating	8 (The module may not be more than 8 modules away from the power supply.)
Output Point to Bus Isolation	Verified by one of the following dielectric tests: 1836V ac for 1 sec. or 2596V dc for 1 sec. 265V ac working voltage (IEC Class 2 reinforced insulation)
Isolated Groups	8: Each point individually isolated from the other.
Group to Group Isolation	Verified by one of the following dielectric tests: 1836V ac for 1 sec. or 2596V dc for 1 sec. 265V ac working voltage (basic insulation) 150V ac working voltage (IEC Class 2 reinforced insulation)
Vendor I.D. Code	1
Product Type Code	7
Product Code	87

Relay Contact Ratings

Volts (max.)	Continuous Amps per Point (max.)	Amperes[1]		Voltamperes		NEMA ICS 2-125
		Make	Break	Make	Break	
240V ac	2.5A	7.5A	0.75A	1800 VA	180 VA	C300
120V ac		15A	1.5A			
125V dc	1.0A	0.22A[2]		28 VA		R150
24V dc	2.0A	1.2A[2]		28 VA		—

(1) **Surge Suppression** - Connecting surge suppressors across your external inductive load will extend the life of the relay contacts. For additional details, refer to Industrial Automation Wiring and Grounding Guidelines, Allen-Bradley publication 1770-4.1.

(2) For dc voltage applications, the make/break ampere rating for relay contacts can be determined by dividing 28 VA by the applied dc voltage. For example, 28 VA/48V dc = 0.58A. For dc voltage applications less than 48V, the make/break ratings for relay contacts cannot exceed 2A.