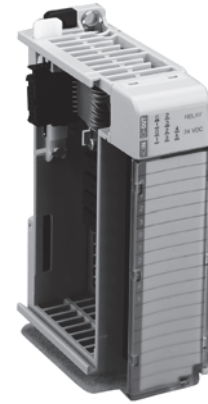


1769 Compact I/O Modules Specifications

Catalog Numbers 1769 Series



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The 1769 Compact I/O™ modules can be used in the following applications:

- With a CompactLogix™ controller
- For expansion I/O in a MicroLogix™ 1500 controller assembly
- In an assembly with a 1769-ADN DeviceNet adapter
- In an assembly with a 1769-AENTR Ethernet adapter.

Unless connected to a MicroLogix 1500 base, each bank of I/O modules must include its own power supply.

Install the I/O modules on a panel with two mounting screws or on a DIN rail. The modules mechanically lock together with a tongue-and-groove design and have an integrated communication bus that is connected from module to module by a moveable bus connector.



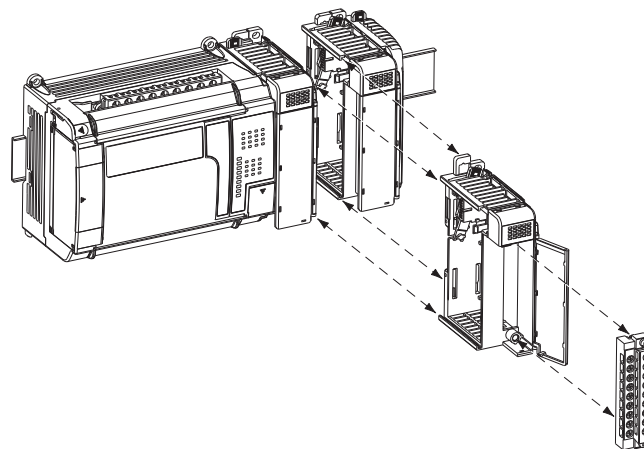
Summary of Changes

This manual contains new and updated information. Changes throughout this revision are marked by change bars, as shown to the right of this paragraph.

Topic	Page
Updated information for Compact I/O modules applications	1
Updated specifications in Table 51	51
Updated description of 1769-ARM module	102

I/O Module Overview

Each I/O module includes a built-in removable terminal block with fingersafe cover for connections to I/O sensors and actuators. The terminal block is behind a door at the front of the module. I/O wiring can be routed from beneath the module to the I/O terminals.



- Once the modules are locked together, the system becomes a rugged assembly.
- Upper and lower tongue-and-groove slots guide the module during installation and secure the module within the system.
- Removable terminal blocks help ease the wiring task.
- Self-lifting, field-wire pressure plates cut installation time.
- The patented bus connector with the lock function enables consistent and system communication.
- A color bar is provided on the front of the module.
- Digital and field circuits are optically isolated.

Available 1769 I/O Modules

I/O Type	Cat. No.	Page	Cat. No.	Page
AC digital	1769-IA8I	6	1769-OA8	57
	1769-IA16	8	1769-OA16	60
	1769-IM12	35		
DC digital	1769-IG16	33	1769-OB8	63
	1769-IQ16	37	1769-OB16	64
	1769-IQ16F	39	1769-OB16P	67
	1769-IQ32	41	1769-OB32	69
	1769-IQ32T	43	1769-OB32T	72
	1769-IQ6XOW4	45	1769-OG16	90
			1769-OV16	92
		1769-OV32T	94	
Contact	1769-OW8	96	1769-OW16	100
	1769-OW8I	98		
Analog	1769-IF4	10	1769-OF2	74
	1769-IF4I	13	1769-OF4	76
	1769-IF4XOF2	16	1769-OF4CI	79
	1769-IF4FXOF2F	19	1769-OF4VI	82
	1769-IF8	24	1769-OF8C	85
	1769-IF16C	28	1769-OF8V	87
	1769-IF16V	30		
	1769-IR6	48		
	1769-IT6	53		
Specialty	1769-ARM	102	1769-BOOLEAN	105
	1769-ASCII	103	1769-HSC	109

Table 1 - Environmental Specifications - 1769 I/O Modules

Attribute	1769-IA8I, 1769-IA16, 1769-IM12, 1769-OA8, 1769-OA16, 1769-IQ16, 1769-IQ16F, 1769-IQ32, 1769-IQ6XOW4, 1769-OB8, 1769-OB16, 1769-OB16P, 1769-OB32, 1769-OV16, 1769-OW8, 1769-OW8I, 1769-OW16 1769-IF4, 1769-IF4XOF2, 1769-IF8, 1769-IF16C, 1769-IF16V 1769-IR6, 1769-IT6 1769-ARM, 1756-HSC	1769-IG16, 1769-IQ32T, 1769-OB32T, 1769-OG16, 1769-OV32T 1769-IF4I, 1769-IF8, 1769-IF16C, 1769-IF16V, 1769-OF2, 1769-OF4CI, 1769-OF4VI, 1769-OF8C, 1769-OF8V, 1769-IF4FXOF2F 1769-ASCII, 1769-BOOLEAN
Temperature, operating IEC 60068-2-1 (Test Ad, Operating Cold), IEC 60068-2-2 (Test Bd, Operating Dry Heat), IEC 60068-2-14 (Test Nb, Operating Thermal Shock)	0...60 °C (32...140 °F)	0...60 °C (32...140 °F)
Temperature, storage IEC 60068-2-1 (Test Ab, Unpackaged Nonoperating Cold), IEC 60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat), IEC 60068-2-14 (Test Na, Unpackaged Nonoperating Thermal Shock)	-40...85 °C (-40...185 °F)	-40...85 °C (-40...185 °F)
Relative humidity IEC 60068-2-30 (Test Db, Unpackaged Nonoperating Damp Heat)	5...95% noncondensing	5...95% noncondensing
Vibration IEC 60068-2-6 (Test Fc, Operating)	Operating: 5 g @ 10...500 Hz Relay operating: 2 g	5 g @ 10...500 Hz
Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	Panel mount 30 g DIN rail mount 20 g	Panel mount 30 g DIN rail mount 20 g
Shock, relay operating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	Panel mount 7.5 g DIN rail mount 5 g	—
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	Panel mount 40 g DIN rail mount 30 g	Panel mount 40 g DIN rail mount 30 g

Allen-Bradley 1769-OV32T

Table 89 - Certifications - 1769-0V16

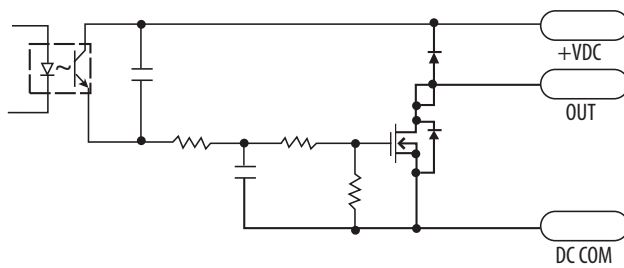
Certification ⁽¹⁾	1769-0V16
c-UL	C-UL certified (under CSA C22.2 No. 142) UL 508 listed Class I, Division 2 Group A,B,C,D Hazardous Locations (UL 1604, C-UL under CSA C22.2 No. 213)
CE	CE compliant for all applicable directives
C-Tick	C-Tick compliant for all applicable directives Australian Radiocommunications Act, compliant with: <ul style="list-style-type: none"> 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.

1769-0V32T

Compact solid-state 24V DC sink, terminated output module

Simplified Output Circuit Diagram



1769-0V32T

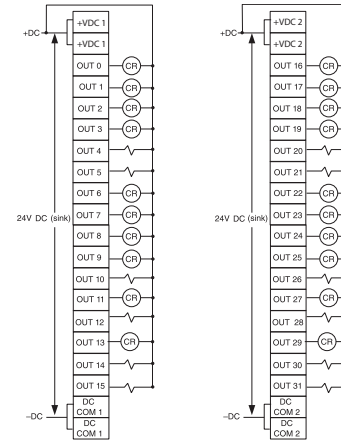


Table 90 - Technical Specifications - 1769-0V32T

Attribute	1769-0V32T
Outputs	32 terminated (16 points/group)
Voltage category	24V DC sink
Operating voltage range	10.2...26.4V DC
Output delay, on	< 16V, 1.5 ms >= 16V, 1.0 ms
Output delay, off	4.0 ms
Bus current draw	5V DC, 0.220 A 24V DC, 0 A
Heat dissipation, max	4.5 W
Off-state leakage current, max ⁽¹⁾	1.0 mA @ 26.4V DC
On-state current, min	1.0 mA
On-state voltage drop, max	0.3V DC @ 0.5 A
Current per point, max	0.5 A
Current per module, max	4.0 A
Surge current ⁽²⁾	2.0 A for 10 ms, repeatable every 2 s

Table 90 - Technical Specifications - 1769-OV32T

Attribute	1769-OV32T
Isolation voltage	Verified by one of the following dielectric tests: 1200V AC for 1 s or 1697V DC for 1 s, output point to bus 75V DC working voltage (IEC Class 2 reinforced insulation)
Weight, approx	450 g (0.992 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)
Replacement connector	1746-N3 (1 connector, 40 terminals)
Vendor ID code	1
Product type code	7
Product code	75
Enclosure type rating	None (open style)

- (1) To limit the effects of leakage current through solid-state outputs, a loading resistor can be connected in parallel with your load. Use a 5.6 k Ω , 1/2 W resistor for transistor outputs, 24V DC operation.
(2) Use a 1N4004 diode reverse-wired across the load for transistor outputs switching 24V DC inductive loads.

Table 91 - Certifications - 1769-OV32T

Certification ⁽¹⁾	1769-OV32T
c-UL	C-UL certified (under CSA C22.2 No. 142) UL 508 listed Class I, Division 2 Group A,B,C,D Hazardous Locations (UL 1604, 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: <ul style="list-style-type: none"> 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.

Allen-Bradley 1769-OV32T