



Installation Instructions

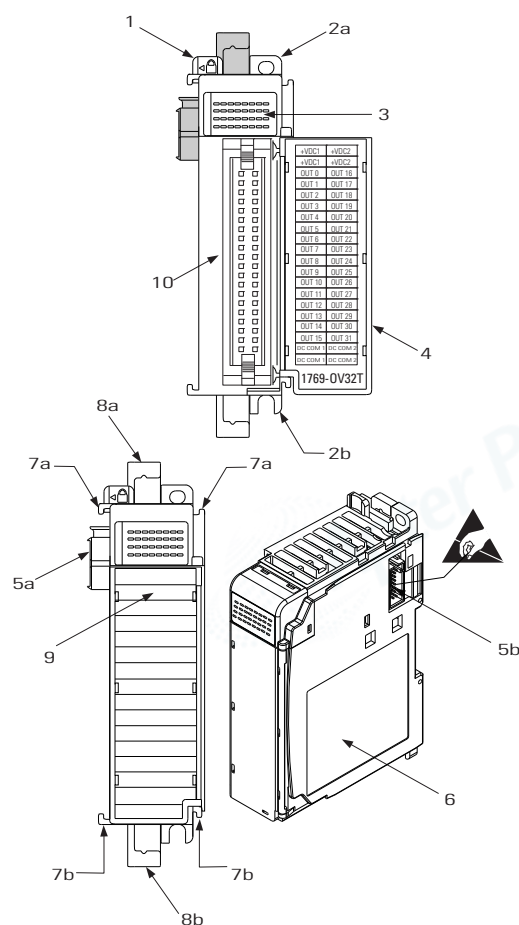
Compact 32-point Solid-state 24V dc Sink Output Module

Catalog Number 1769-OV32T

Use this document as a guide when installing a Compact 32-point solid-state 24V dc sink output module.

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Module Description



Item	Description
1	bus lever (with locking function)
2a	upper panel mounting tab
2b	lower panel mounting tab
3	I/O diagnostic LEDs
4	module door with terminal identification label
5a	movable bus connector with female pins
5b	stationary bus connector with male pins
6	nameplate label
7a	upper tongue-and-groove slots
7b	lower tongue-and-groove slots
8a	upper DIN rail latch
8b	lower DIN rail latch
9	write-on label (user ID tag)
10	MIL-C-83503 connector

31563A-M

Field Wiring Connections

Grounding the Module

This product is intended to be mounted to a well-grounded mounting surface such as a metal panel. Additional grounding connections from the module's mounting tabs or DIN rail (if used), are not required unless the mounting surface cannot be grounded. Refer to *Industrial Automation Wiring and Grounding Guidelines*, Allen-Bradley publication 1770-4.1, for additional information.

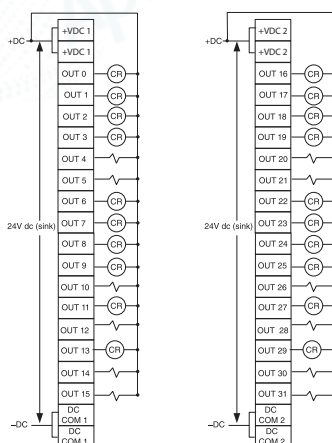
Output Wiring

Basic wiring⁽¹⁾ of output devices⁽²⁾ to the 1769-OV32T is shown below.

ATTENTION



- Miswiring of the module to an AC power sink or applying reverse polarity will damage the module.
- Be careful when stripping wires. Wire fragments that fall into a module could cause damage at power up. Once wiring is complete, ensure the module is free of all metal fragments.



⁽¹⁾ Recommended Surge Suppression - Use a 1N4004 diode reverse-wired across the load for transistor outputs switching 24V dc inductive loads. For additional details, refer to *Industrial Automation Wiring and Grounding Guidelines*, Allen-Bradley publication 1770-4.1.

⁽²⁾ Sinking Output - sink describes the current flow between the I/O module and the field device. Sinking output circuits sink current from sourcing field devices. Field devices connected to the negative side (DC Common) of the field power supply are sinking field devices. Field devices connected to the positive side (+V) of the field supply are sourcing field devices. *Europe*: DC sinking input and sourcing output module circuits are the commonly used options.

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)	230 g (0.51 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)
Vibration	Operating: 10 to 500 Hz, 5G, 0.030 inches maximum peak-to-peak
Shock	Operating: 30G panel mounted (20G 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:	<i>The module has passed testing at the following levels:</i>
ESD Immunity (IEC61000-4-2)	• 4kV contact, 8 kV air, 4 kV indirect
Radiated Immunity (IEC61000-4-3)	• 10 V/m, 80 to 1000 MHz, 80% amplitude modulation
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⁽¹⁾

⁽¹⁾ Conducted Immunity frequency range may be 150 kHz to 30 MHz if the Radiated Immunity frequency range is 30 MHz to 1000 MHz.

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Output Specifications

Specification	1769-0V32T
Voltage Category	24V dc
Operating Voltage Range	10.2V dc to 26.4V dc (sink ⁽¹⁾)
Number of Outputs	32
Bus Current Draw (max.)	220 mA at 5V dc (0.85 W)
Heat Dissipation	4.76 Total Watts (The Watts per point, plus the minimum Watts, with all points energized.)
Signal Delay (max.) – resistive load	Operating voltage < 16V: turn-on = 1.5 ms Operating voltage ≥ 16V: turn-on = 1.0 ms Turn-off = 4.0 ms
Off-State Leakage (max.) ⁽²⁾	1.0 mA at 26.4V dc
On-State Current (min.)	1.0 mA
On-State Voltage Drop (max.)	0.3V dc at 0.5 A
Continuous Current Per Point (max.)	0.5A
Continuous Current Per Common (max.)	2.0A
Continuous Current Per Module (max.)	4.0A
Surge Current (max.) ⁽³⁾	2.0A (Repeatability is once every 2 seconds for a duration of 10 msec.)
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: 1200V ac for 1 sec. or 1697V dc for 1 sec. 75V dc working voltage (IEC Class 2 reinforced insulation)
Isolated Groups	Group 1: outputs 0 to 15 (internally connected to DC COM 1) Group 2: outputs 16 to 31 (internally connected to DC COM 2)
Vendor I.D. Code	1
Product Type Code	7
Product Code	75

⁽¹⁾ Sinking Output - sink describes the current flow between the I/O module and the field device. Sinking output circuits sink current from sourcing field devices. Field devices connected to the negative side (DC Common) of the field power supply are sinking field devices. Field devices connected to the positive side (+V) of the field supply are sourcing field devices. *Europe:* DC sinking input and sourcing output module circuits are the commonly used options.

⁽²⁾ **Typical Loading Resistor** - To limit the effects of leakage current through solid state outputs, a loading resistor can be connected in parallel with your load. Use a 5.6K ohm, ½ watt resistor for transistor outputs, 24V dc operation.

⁽³⁾ Recommended Surge Suppression - Use a 1N4004 diode reverse-wired across the load for transistor outputs switching 24V dc inductive loads. For additional details, refer to Industrial Automation Wiring and Grounding Guidelines, Allen-Bradley publication 1770-4.1.