

1756-OB16I

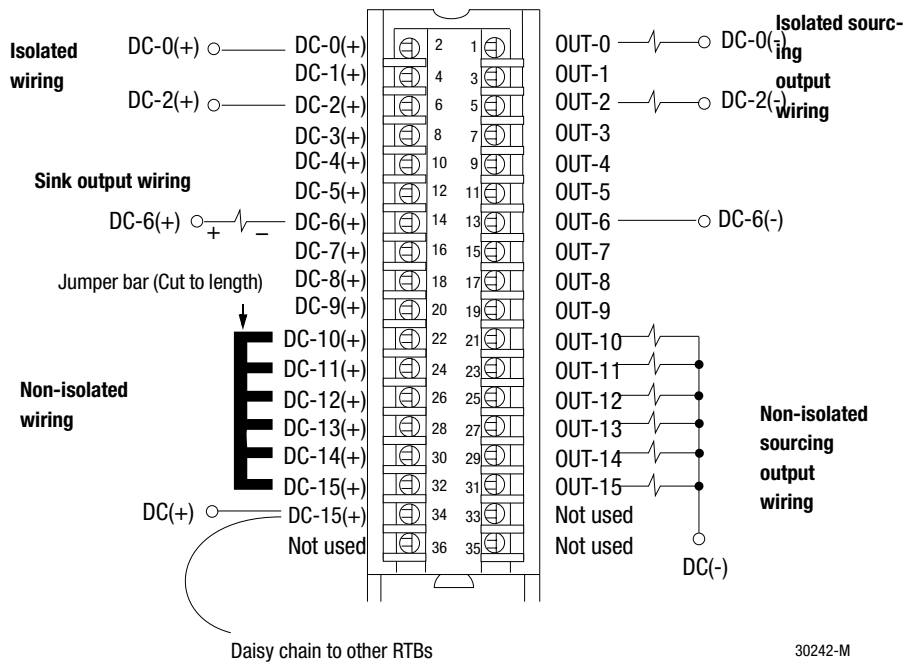
Module features

The following table lists the configurable features this module supports, the default value and the page of the feature's description:

Feature	Default value	Page of description
Communications Format	Output data	6-6
Output State in Program Mode	Off	6-11
Output State in Fault Mode	Disabled	6-11
Transition from Program State to Fault State	Off	6-11

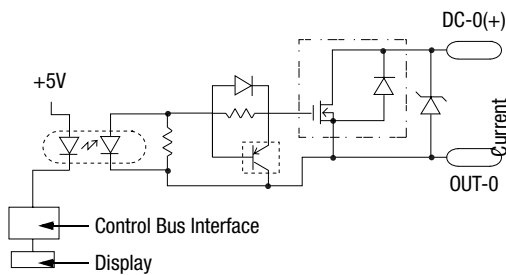
Figure 7.23

- NOTES:
1. All terminals with the same name are connected together on the module. For example, DC(+) can be connected to either terminal marked DC-15.
 2. Do not physically connect more than two wires to a single RTB terminal. When you use the second DC-15(+) terminal to daisy chain to other RTBs, always connect the daisy chain as shown.
 3. Outputs can be wired in a sink or source configuration as shown above.
 4. The **jumper bar** part number is 97739201. Contact your local Rockwell Automation sales representative to order additional jumper bars, if necessary.
 5. If separate power sources are used, do not exceed the specified isolation voltage.



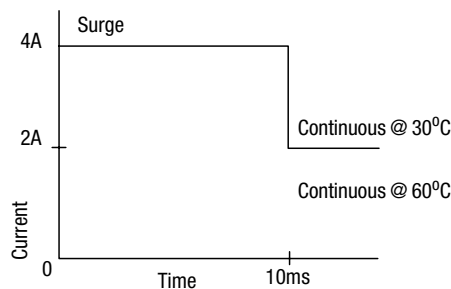
30242-M

Simplified schematic



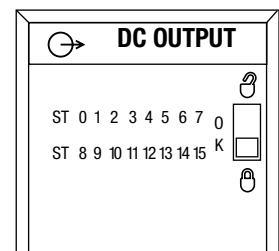
30182-M

Surge Current Chart



40849-M

LED indicator



40457-M

Allen-Bradley 1756-OB16I

1756-OB16I Specifications

Number of Outputs	16 (individually isolated)
Module Location	1756 ControlLogix Chassis
Backplane Current	350mA @ 5.1V dc & 2.5mA @ 24V dc (1.8W Total backplane power)
Maximum Power Dissipation (Module)	3.6W @ 60°C
Thermal Dissipation	12.28 BTU/hr
Output Voltage Range	10-30V dc
Output Current Rating Per Point Per Module	2A maximum @ 30°C & 1A maximum @ 60°C (Linear derating) 8A maximum @ 30°C & 4A maximum @ 60°C (Linear derating)
Surge Current/Point	4A for 10ms each, repeatable every 2s
Minimum Load Current	1mA per point
Maximum On-State Voltage Drop	1.2V dc @ 2A
Maximum Off-State Leakage Current	0.5mA per point
Output Delay Time OFF to ON ON to OFF	1ms maximum 2ms maximum
Scheduled Outputs	Synchronization within 16.7s maximum, reference to the CST
Configurable Fault States/Point	Hold Last State, ON or OFF (OFF is the default)
Configurable States in Program Mode/Point	Hold Last State, ON or OFF (OFF is the default)
Fusing	Not protected - Fused IFM will protect outputs (See publication 1492-2.12). However, the Bulletin 1492 IFM may not be used in any application that requires agency certification of the ControlLogix system. Use of the IFM violates the UL, CSA and FM certifications of this product.
Reverse Polarity Protection	None (If module is wired incorrectly, outputs may be damaged.)
Isolation Voltage Channel to channel User to system	100% tested at 2546V dc for 1s (250V ac maximum continuous voltage) 100% tested at 2546V dc for 1s (250V ac maximum continuous voltage)
Module Keying (Backplane)	Software configurable
RTB Screw Torque (Cage clamp)	4.4 inch-pounds (0.4Nm) maximum
RTB Keying	User defined mechanical keying
Field Wiring Arm and Housing	36 Position RTB (1756-TBCH or TBS6H) ⁽¹⁾
Conductors Wire Size Category	#22 to #14 AWG (0.324 to 2.08 sq. mm) stranded ⁽¹⁾ 3/64 inch (1.2mm) insulation maximum 1 ⁽²⁾ , 3 ⁽³⁾
Screwdriver Blade Width for RTB	1/8 inch (3.2mm) maximum

Environmental Conditions	
Operating Temperature	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 to 60°C (32 to 140°F)
Storage Temperature	IEC 60068-2-1 (Test Ab, Un-packaged Non-operating Cold), IEC 60068-2-2 (Test Bb, Un-packaged Non-operating Dry Heat), IEC 60068-2-14 (Test Na, Un-packaged Non-operating Thermal Shock): -40 to 85°C (-40 to 185°F)
Relative Humidity	IEC 60068-2-30 (Test Db, Un-packaged Non-operating Damp Heat): 5 to 95% non-condensing
Vibration	IEC60068-2-6 (Test Fc, Operating): 2g @ 10-500Hz
Operating Shock	IEC60068-2-27 (Test Ea, Unpackaged shock): 30g
Non-operating Shock	IEC60068-2-27 (Test Ea, Unpackaged shock): 50g
Emissions	CISPR 11: Group 1, Class A
ESD Immunity	IEC 61000-4-2: 6kV contact discharges 8kV air discharges
Radiated RF Immunity	IEC 61000-4-3: 10V/m with 1kHz sine-wave 80%AM from 30MHz to 2000MHz 10V/m with 200Hz 50% Pulse 100%AM at 900MHz
EFT/B Immunity	IEC 61000-4-4: ±4kV at 2.5kHz on power ports ±4kV at 2.5kHz on signal ports
Surge Transient Immunity	IEC 61000-4-5: ±1kV line-line(DM) and ±2kV line-earth(CM) on power ports ±1kV line-line(DM) and ±2kV line-earth(CM) on signal ports
Conducted RF Immunity	IEC 61000-4-6: 10Vrms with 1kHz sine-wave 80%AM from 150kHz to 80MHz
Enclosure Type Rating	None (open-style)
Certifications (when product is marked)	UL UL Listed Industrial Control Equipment CSA CSA Certified Process Control Equipment CSA CSA Certified Process Control Equipment for Class I, Division 2 Group A,B,C,D Hazardous Locations FM FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations CE ⁽⁴⁾ European Union 89/336/EEC EMC Directive, compliant with: EN 50082-2; Industrial Immunity EN 61326; Meas./Control/Lab., Industrial Requirements EN 61000-6-2; Industrial Immunity EN 61000-6-4; Industrial Emissions C-Tick ⁽⁴⁾ Australian Radiocommunications Act, compliant with: AS/NZS 2064; Industrial Emissions EEx ⁽⁴⁾ European Union 94/9/EEC ATEX Directive, compliant with: EN 50021; Potentially Explosive Atmospheres, Protection "n"

(1) Maximum wire size requires extended housing - 1756-TBE.

(2) Use this conductor category information for planning conductor routing as described in the system level installation manual.

(3) Refer to publication 1770-4.1 *Industrial Automation Wiring and Grounding Guidelines*.

(4) See the Product Certification link at www.ab.com for Declarations of Conformity, Certificates, and other certification details.

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