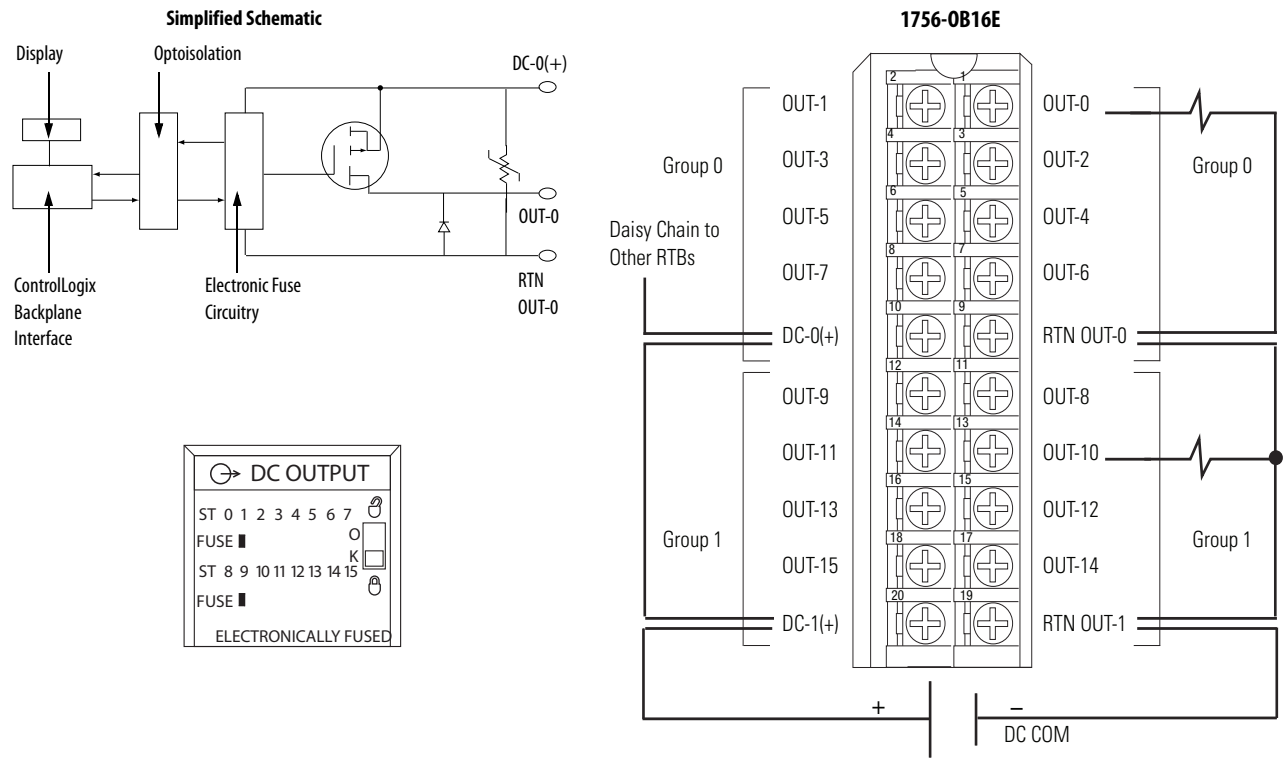
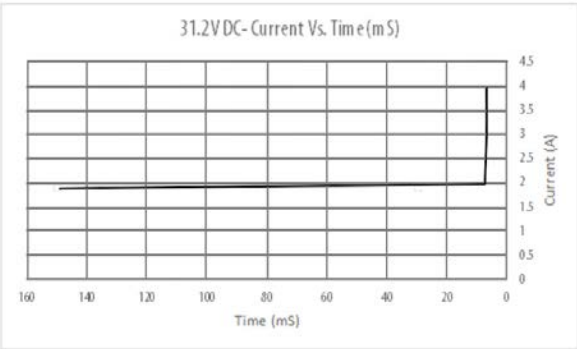
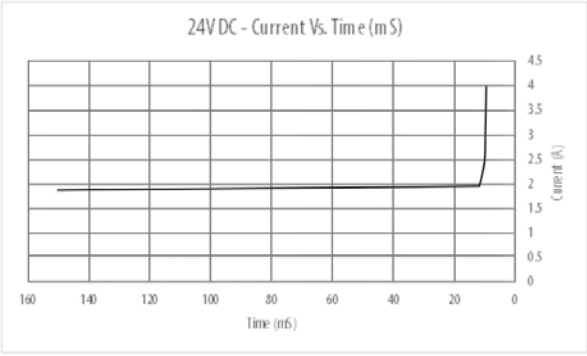
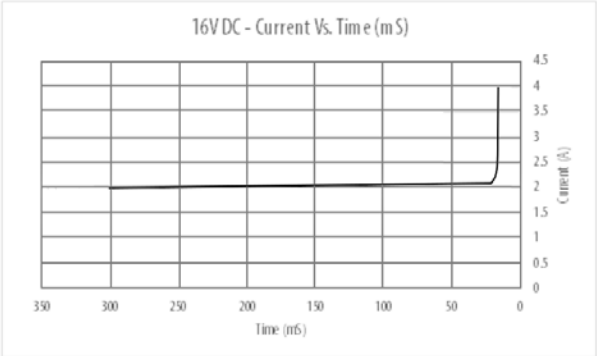
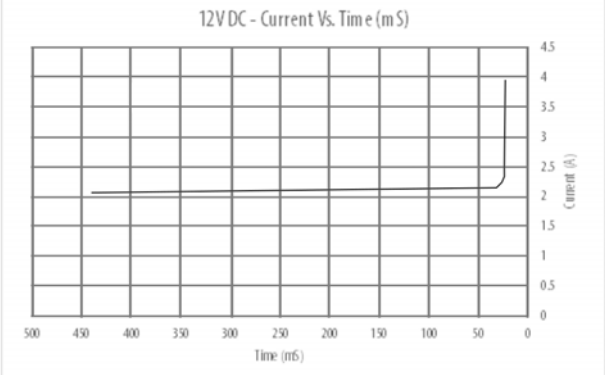
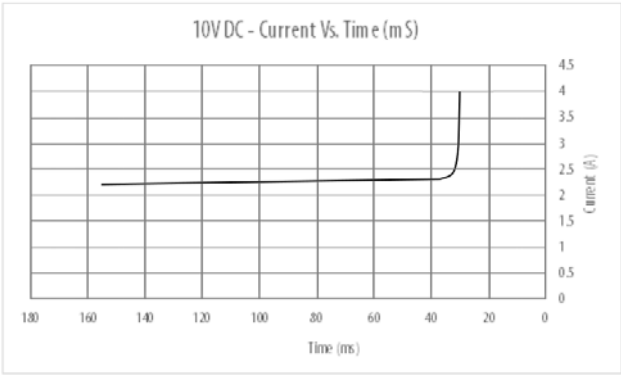


1756-OB16E

ControlLogix DC (10...31.2V) electronically fused output module



Surge Current Charts



Technical Specifications - 1756-OB16E

| Attribute               | 1756-OB16E                               |
|-------------------------|------------------------------------------|
| Outputs                 | 16 electronically fused (8 points/group) |
| Voltage category        | 12/24V DC source                         |
| Operating voltage range | 10...31.2V DC                            |
| Output delay time       |                                          |
| Off to On               | 70 $\mu$ s nom/1 ms max                  |
| On to Off               | 360 $\mu$ s nom/1 ms max                 |
| Current draw @ 5.1V     | 250 mA                                   |
| Current draw @ 24V      | 2 mA                                     |
| Total backplane power   | 1.32 W                                   |
| Power dissipation, max  | 4.1 W @ 60 °C (140 °F)                   |
| Thermal dissipation     | 13.98 BTU/hr                             |

**Technical Specifications - 1756-OB16E (continued)**

| Attribute                                | 1756-OB16E                                                                                                                                                                      |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Off-state leakage current per point, max | 1 mA per point                                                                                                                                                                  |
| On-state voltage drop, max               | 400 mV DC @ 1 A                                                                                                                                                                 |
| Current per point, max                   | 1 A @ 60 °C (140 °F)                                                                                                                                                            |
| Current per module, max                  | 8 A @ 60 °C (140 °F)                                                                                                                                                            |
| Surge current per point, typical         | 2 A for 10 ms per point, repeatable every 2 s @ 0 °C (32 °F) @ 24V DC                                                                                                           |
| Load current, min                        | 3 mA per point                                                                                                                                                                  |
| Scheduled outputs                        | Synchronization within 16.7 s max, reference to the Coordinated System Time                                                                                                     |
| States in Fault mode per point           | Hold last state, On or Off (Off is default)                                                                                                                                     |
| States in Program mode per point         | Hold last state, On or Off (Off is default)                                                                                                                                     |
| Isolation voltage                        | 250V (continuous), basic insulation type, outputs-to-backplane, and output group-to-group<br>No isolation between individual group outputs<br>Routine tested @ 1350V AC for 2 s |
| Module keying                            | Electronic, software configurable                                                                                                                                               |
| Fusing                                   | Electronically fused per group                                                                                                                                                  |
| Removable terminal block                 | 1756-TBNH<br>1756-TBSH                                                                                                                                                          |
| RTB keying                               | User-defined mechanical                                                                                                                                                         |
| Slot width                               | 1                                                                                                                                                                               |
| Wire category                            | 1 <sup>(1)</sup>                                                                                                                                                                |
| North American temperature code          | T4                                                                                                                                                                              |
| IEC temperature code                     | T4                                                                                                                                                                              |
| Enclosure type                           | None (open-style)                                                                                                                                                               |

(1) Use this conductor category information for planning conductor routing as described in the system-level installation manual. See the Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).

**Environmental Specifications - 1756-OB16E**

| Attribute                                                                                                                                                                                                            | 1756-OB16E                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Temperature, operating<br>IEC 60068-2-1 (Test Ad, Operating Cold),<br>IEC 60068-2-2 (Test Bd, Operating Dry Heat),<br>IEC 60068-2-14 (Test Nb, Operating Thermal Shock)                                              | 0...60 °C (32...140 °F)      |
| Temperature, surrounding air, max                                                                                                                                                                                    | 60 °C (140 °F)               |
| Temperature, nonoperating<br>IEC 60068-2-1 (Test Ab, Unpackaged Nonoperating Cold),<br>IEC 60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat),<br>IEC 60068-2-14 (Test Na, Unpackaged Nonoperating Thermal Shock) | -40...+85 °C (-40...+185 °F) |
| Relative humidity<br>IEC 60068-2-30 (Test Db, Unpackaged Damp Heat)                                                                                                                                                  | 5...95% noncondensing        |
| Vibration<br>IEC 60068-2-6 (Test Fc, Operating)                                                                                                                                                                      | 2 g @ 10...500 Hz            |
| Shock, operating<br>IEC 60068-2-27 (Test Ea, Unpackaged Shock)                                                                                                                                                       | 30 g                         |
| Shock, nonoperating<br>IEC 60068-2-27 (Test Ea, Unpackaged Shock)                                                                                                                                                    | 50 g                         |
| Emissions                                                                                                                                                                                                            | CISPR 11, Class A            |

**Environmental Specifications - 1756-0B16E (continued)**

| Attribute                                    | 1756-0B16E                                                                                                                                                                                                       |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ESD immunity<br>IEC 61000-4-2                | 6 kV contact discharges<br>8 kV air discharges                                                                                                                                                                   |
| Radiated RF immunity<br>IEC 61000-4-3        | 10V/m with 1 kHz sine-wave 80% AM from 80...2000 MHz<br>10V/m with 200 Hz 50% Pulse 100% AM @ 900 MHz<br>10V/m with 200 Hz 50% Pulse 100% AM @ 1890 MHz<br>3V/m with 1 kHz sine-wave 80% AM from 2000...2700 MHz |
| EFT/B immunity<br>IEC 61000-4-4              | ±4 kV at 5 kHz on signal ports                                                                                                                                                                                   |
| Surge transient immunity<br>IEC 61000-4-5    | ±1 kV line-line (DM) and ±2 kV line-earth (CM) on signal ports                                                                                                                                                   |
| Conducted RF immunity<br>IEC 61000-4-6       | 10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz                                                                                                                                                        |
| Oscillatory surge withstand<br>IEEE C37.90.1 | 3 kV                                                                                                                                                                                                             |

**Certifications - 1756-0B16E**

| Certification <sup>(1)</sup> | 1756-0B16E                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UL                           | UL Listed Industrial Control Equipment. See UL File E65584.                                                                                                                                                                                                                                                                                                                                                                                     |
| CSA                          | CSA Certified Process Control Equipment. See CSA File LR54689C.<br>CSA Certified Process Control Equipment for Class I, Division 2 Group A,B,C,D Hazardous Locations. See CSA File LR69960C.                                                                                                                                                                                                                                                    |
| CE                           | European Union 2004/108/IEC EMC Directive, compliant with: <ul style="list-style-type: none"> <li>• EN 61326-1; Meas./Control/Lab., Industrial Requirements</li> <li>• EN 61000-6-2; Industrial Immunity</li> <li>• EN 61000-6-4; Industrial Emissions</li> <li>• EN 61131-2; Programmable Controllers (Clause 8, Zone A &amp; B)</li> </ul> European Union 2006/95/EC LVD, compliant with:<br>EN 61131-2; Programmable Controllers (Clause 11) |
| C-Tick                       | Australian Radiocommunications Act, compliant with:<br>AS/NZS CISPR 11; Industrial Emissions                                                                                                                                                                                                                                                                                                                                                    |
| Ex                           | European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> <li>• EN 60079-15; Potentially Explosive Atmospheres, Protection "n"</li> <li>• EN 60079-0; General Requirements II 3 G Ex nA IIC T4 X Gc</li> </ul>                                                                                                                                                                                                  |
| FM                           | FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations                                                                                                                                                                                                                                                                                                                                                           |
| KC                           | Korean Registration of Broadcasting and Communications Equipment, compliant with:<br>Article 58-2 of Radio Waves Act, Clause 3                                                                                                                                                                                                                                                                                                                  |

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