

Available 1756 I/O Modules

You can select these types of digital I/O modules.

| Digital I/O Type | Description |
|-----------------------|---|
| Diagnostic | These modules provide diagnostic features to the point level. These modules have a D at the end of the catalog number. |
| Electronic fusing | These modules have internal electronic fusing to prevent too much current from flowing through the module. These modules have an E at the end of the catalog number. |
| Individually isolated | These modules have individually isolated inputs or outputs. These modules have an I at the end of the catalog number. |

| I/O Type | Cat. No. | Page | Cat. No. | Page | |
|---------------|----------------|-----------|----------------|------------|-----|
| AC digital | 1756-IA8D | 3 | 1756-LSC8XIB8I | 234 | |
| | 1756-IA16 | 6 | 1756-OA8D | 120 | |
| | 1756-IA16I | 9 | 1756-OA8E | 123 | |
| | 1756-IA32 | 12 | 1756-OA16 | 126 | |
| | 1756-IM16I | 85 | 1756-OA16I | 130 | |
| | 1756-IN16 | 88 | 1756-ON8 | 207 | |
| | DC digital | 1756-IB16 | 15 | 1756-OB8I | 142 |
| 1756-IB16D | | 18 | 1756-OB16D | 145 | |
| 1756-IB16I | | 21 | 1756-OB16E | 149 | |
| 1756-IB16IF | | 25 | 1756-OB16I | 152 | |
| 1756-IB16IOSE | | 28 | 1756-OB16IEF | 155 | |
| 1756-IB32 | | 31 | 1756-OB16IEFS | 159 | |
| 1756-IC16 | | 34 | 1756-OB16IS | 163 | |
| 1756-IG16 | | 76 | 1756-OB32 | 167 | |
| 1756-IH16I | | 79 | 1756-OC8 | 171 | |
| 1756-IH16ISOE | | 82 | 1756-OG16 | 201 | |
| 1756-IV16 | | 111 | 1756-OH8I | 204 | |
| 1756-IV32 | | 114 | 1756-OV16E | 211 | |
| 1756-OB8 | | 134 | 1756-OV32E | 215 | |
| 1756-OB8EI | | 138 | | | |
| Contact | | | | 1756-OW16I | 219 |
| | | | | 1756-OX8I | 222 |
| Analog | 1756-IF6CIS | 42 | 1756-OF4 | 175 | |
| | 1756-IF6I | 46 | 1756-OF6CI | 179 | |
| | 1756-IF8 | 51 | 1756-OF6VI | 182 | |
| | 1756-IF8I | 59 | 1756-OF8 | 186 | |
| | 1756-IF16 | 68 | 1756-OF8I | 193 | |
| | 1756-IF4FXOF2F | 38 | | | |
| | 1756-IR6I | 91 | | | |
| | 1756-IRT8I | 96 | | | |
| | 1756-IT6I | 103 | | | |
| | 1756-IT6I2 | 107 | | | |
| | HART interface | 1756-IF8H | 56 | 1756-OF8H | 189 |
| 1756-IF8IH | | 64 | 1756-OF8IH | 197 | |
| 1756-IF16H | | 72 | | | |
| Specialty | 1756-CFM | 225 | 1756-LSC8XIB8I | 234 | |
| | 1756-HSC | 230 | 1756-PLS | 238 | |

1756-IA32

ControlLogix AC (74...132V) input module

Simplified Schematic

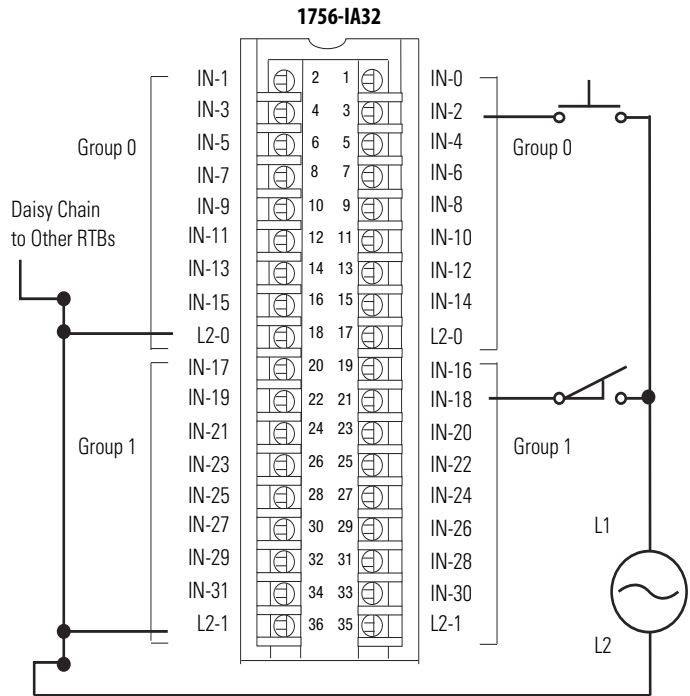
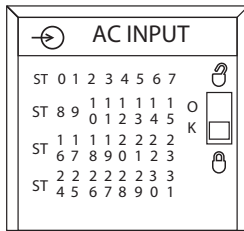
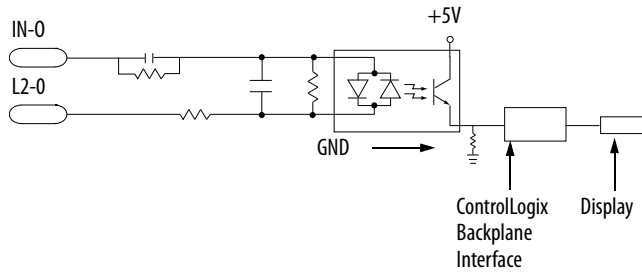


Table 11 - Technical Specifications - 1756-IA32

| Attribute | 1756-IA32 |
|---------------------------------------|--|
| Inputs | 32 (16 points/group) |
| Voltage category | 120V AC 50/60 Hz |
| Operating voltage range | 74...132V AC, 47...63 Hz |
| Input voltage, nom | 120V AC 50/60 Hz |
| Input delay time (screw to backplane) | |
| Off to On | Hardware delay: 1.5 ms nom/10 ms max + filter time User-selectable filter time: 1 or 2 ms |
| On to Off | Hardware delay: 1 ms nom/8 ms max + filter time User-selectable filter time: 9 or 18 ms |
| Current draw @ 5.1V | 165 mA |
| Current draw @ 24V | 2 mA |
| Total backplane power | 0.9 W |
| Power dissipation, max | 6.1 W @ 60 °C (140 °F) |
| Thermal dissipation | 20.8 BTU/hr |
| Off-state voltage, max | 20V |
| Off-state current, max | 2.5 mA |
| On-state current, min | 5 mA @ 74V AC |
| On-state current, max | 15 mA @ 132V AC |

Table 11 - Technical Specifications - 1756-IA32 (Continued)

| Attribute | 1756-IA32 |
|----------------------------------|--|
| Inrush current, max | 390 mA |
| Input impedance, max | 14.0 k Ω @ 132V AC, 60 Hz |
| Cyclic update time | 200 μ s . . . 750 ms |
| Change of state | Software configurable |
| Timestamp of inputs | \pm 200 μ s |
| Isolation voltage | 250V (continuous), basic insulation type, inputs-to-backplane 125V (continuous), basic insulation type, input group-to-group No isolation between individual group inputs Routine tested @ 1350V AC for 2 s |
| Module keying | Electronic, software configurable |
| Removable terminal block housing | 1756-TBCH 1756-TBS6H |
| RTB keying | User-defined mechanical |
| Slot width | 1 |
| Wire category | 1 ⁽¹⁾ |
| North American 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](#).

Table 12 - Environmental Specifications - 1756-IA32

| Attribute | 1756-IA32 |
|--|--|
| 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) |
| Temperature, surrounding air, max | 60 °C (140 °F) |
| Temperature, nonoperating 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) |
| Relative humidity IEC 60068-2-30 (Test Db, Unpackaged Damp Heat) | 5 . . . 95% noncondensing |
| Vibration IEC 60068-2-6 (Test Fc, Operating) | 2 g @ 10 . . . 500 Hz |
| Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g |
| Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 50 g |
| Emissions | CISPR 11 (IEC 61000-6-4): Class A |
| ESD immunity IEC 61000-4-2 | 6 kV contact discharges 8 kV air discharges |
| Radiated RF immunity IEC 61000-4-3 | 10V/m with 1 kHz sine-wave 80% AM from 80 . . . 2000 MHz 10V/m with 200 Hz 50% Pulse 100% AM @ 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM @ 1890 MHz 3V/m with 1 kHz sine-wave 80% AM from 2000 . . . 2700 MHz |

Table 12 - Environmental Specifications - 1756-IA32 (Continued)

| Attribute | 1756-IA32 |
|---|--|
| EFT/B immunity IEC 61000-4-4 | ±4 kV at 5 kHz on signal ports |
| Surge transient immunity IEC 61000-4-5 | ±1 kV line-line (DM) and ±2 kV line-earth (CM) on signal ports |
| Conducted RF immunity IEC 61000-4-6 | 10V rms with 1 kHz sine-wave 80% AM from 150 kHz. . . 80 MHz |

Table 13 - Certifications - 1756-IA32

| Certification ⁽¹⁾ | 1756-IA32 |
|------------------------------|---|
| UL | UL Listed Industrial Control Equipment. See UL File E65584. |
| CSA | CSA Certified Process Control Equipment. See CSA File LR54689C. 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"> • EN 61326-1; Meas./Control/Lab., Industrial Requirements • EN 61000-6-2; Industrial Immunity • EN 61000-6-4; Industrial Emissions • EN 61131-2; Programmable Controllers (Clause 8, Zone A & B) European Union 2006/95/EC LVD, compliant with: EN 61131-2; Programmable Controllers (Clause 11) |
| C-Tick | Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; Industrial Emissions |
| KC | Korean Registration of Broadcasting and Communications Equipment, compliant with: 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.