

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Selected official Rockwell Automation product data

ALLEN-BRADLEY CONTROLLOGIX

1756-OV32E

32-POINT SINKING DC OUTPUT MODULE

This package includes the official manufacturer selection and specification pages for the exact catalog number.

REFERENCE PACKAGE

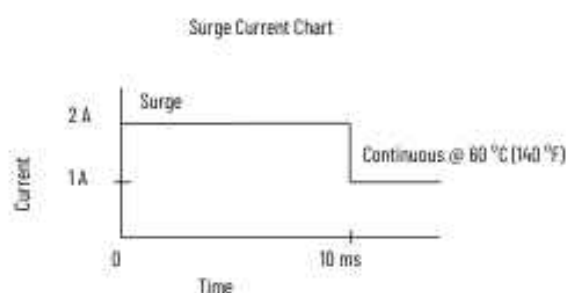
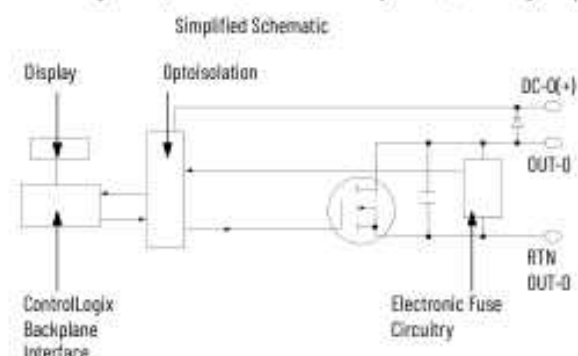
ControlLogix I/O Technical Data

OFFICIAL DOCUMENT

1756-OV32E

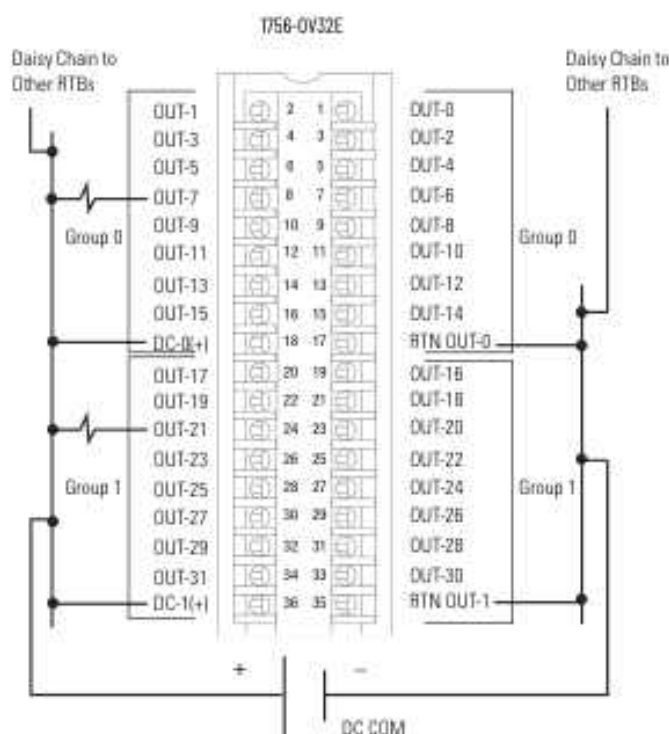
1756-0V32E, 1756-0V32EK

ControlLogix DC (10...30V) electronically fused, sinking output module



DC OUTPUT												
ST	0	1	2	3	4	5	6	7	F	O	K	T
ST	8	9	0	1	2	3	4	5	F	O	K	T
ST	6	7	8	9	0	1	2	3	F	O	K	T
ST	2	2	2	2	2	2	2	3	F	O	K	T
ST	4	5	6	7	8	9	0	1	F	O	K	T

ELECTRONIC FUSING



Diagnostic Specifications

Attribute	1756-0V32E, 1756-0V32EK
Short trip	5 A for 20 ms @ 24V DC (output on then short) 5 A for 20 ms @ 24V DC (output info short)
Time stamp of diagnostics	±1 ms

Technical Specifications

Attribute	1756-0V32E, 1756-0V32EK
Outputs	32 electronically fused (16 points/group)
Voltage category	12/24V DC sink
Operating voltage range	10...30V DC
Output delay time (24V to 0V DC transition) Off to On On to Off	75 μ s nom/300 μ s max 230 μ s nom/1 ms max
Current draw @ 5.1V	390 mA
Current draw @ 24V	2 mA
Total backplane power	2.04 W
Power dissipation, max	5.88 W @ 60 °C (140 °F)
Thermal dissipation	20.1 BTU/hr
Off-state leakage current per point, max	1 mA per point
On-state voltage drop, max	350 mV DC @ 0.5 A
Current per point, max	0.5 A @ 50 °C (122 °F) linear derating 0.35 A @ 60 °C (140 °F)
Current per group, max	8 A @ 50 °C (122 °F) linear derating 5 A @ 60 °C (140 °F)
Current per module, max	16 A @ 50 °C (122 °F) linear derating 10 A @ 60 °C (140 °F)
Surge current per point	2 A for 10 ms per point, repeatable every 2 s @ 60 °C (140 °F)
Load current, min	2 mA per output
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 No isolation between individual group outputs
Module keying	Electronic, software configurable
Fusing	Electronically fused per group
Removable terminal block	1756-TBCH 1756-TBS6H
RTB keying	User-defined mechanical
Slot width	1
Wire category	1 ⁽¹⁾
Enclosure type	None (open-style)
Temperature code	T4

(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 1770-4.3.

Environmental Specifications

Attribute	1756-0V32E, 1756-0V32EK
Temperature, operating IEC 60068-2-1 (Test Ae, Operating Cold), IEC 60068-2-2 (Test Be, Operating Dry Heat), IEC 60068-2-14 (Test Nb, Operating Thermal Shock)	0...60 °C (32...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	IEC 61000-6-4
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
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

Certifications

Certification ⁽¹⁾	1756-0V32E, 1756-0V32EX
cULus	UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
CE	European Union 2014/30/EU EMC Directive, compliant with: - 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 2014/35/EU LVD, compliant with EN 61131-2; Programmable Controllers (Clause 11)
RCM	Australian Radiocommunications Act, compliant with EN 61000-6-4; Industrial Emissions
Ex	European Union 2014/34/EU ATEX Directive, compliant with: - EN IEC 60079-0; Explosive atmospheres - Part 0: Equipment - General requirements - EN IEC 60079-7; Explosive atmospheres - Part 7: Equipment protection by increased safety "e" - II 3 G Ex ec IIC T4 Gc - UL22ATEX2820X
IECEX	IECEX System, compliant with: - IEC 60079-0; Explosive atmospheres - Part 0: Equipment - General requirements - IEC 60079-7; Explosive atmospheres - Part 7: Equipment protection by increased safety "e" - II 3 G Ex ec IIC T4 Gc - IECEX UL 22.0065X
UKex	In conformity with the following UKex Statutory Instruments and their amendments: - Schedule 1 of the UKEX Regulation 2016 No. 1107 - Equipment protection by increased safety "e", reference certificate number UL22UKEX2602X - Zone 2 classification according to UKEX Regulation 2016 No. 1107
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with Article 58-2 of Radio Waves Act, Clause 3
UKCA	In conformity with the following UK Statutory Instruments and their amendments: 2016 No. 1091, Electromagnetic Compatibility Regulations 2016 No. 1101, Electrical Equipment (Safety) Regulations 2016 No. 1107, Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032, Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment
Morocco	In conformity with the following regulations: - Arrêté ministériel n° 6404-15 du 1^{er} muharram 1437 (15 octobre 2015) Équipements électriques destinés à être utilisés sous certaines limites de tension - Arrêté ministériel n° 6404-15 du 29 ramadan 1436 (16 juillet 2015) Compatibilité électromagnétique des équipements
CCC	CCC 202012230911998 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products

(1) When product is marked. See the Product Certification link at mk.automation.com/certifications for Declarations of Conformity, Certificates, and other certification details.