



FLEX I/O Digital DC Output Modules

Catalog Numbers 1794-OB8, 1794-OB8EP, 1794-OB16, 1794-OB16P, 1794-OB32P

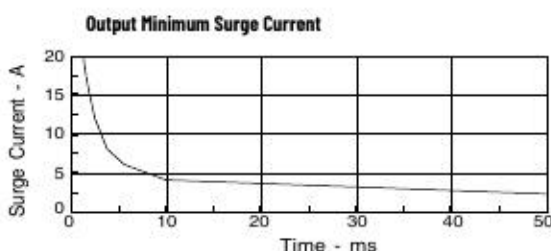
Topic	Page
Summary of Changes	1
Overview	5
Install Your Module	5
Configure Your 1794-OB8EP Output Module	8
Configure Your 1794-OB8, 1794-OB16, 1794-OB16P, and 1794-OB32P Output Modules	8
Specifications	9
Additional Resources	13

Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes.

Topic	Page
Updated Certifications	12
Added Additional Resources	13

Figure 4 - Surge Current for 1794-0B8EP

**Specifications - 1794-0B16 and 1794-0B16P**

Attribute	1794-0B16	1794-0B16P
Number of outputs	16, current, sourcing	
Recommended terminal base unit	1794-TB2, 1794-TB3, 1794-TB3S, 1794-TB3K, 1794-TB3SK	
On-state voltage, min	10V DC	
On-state voltage, nom	24V DC	
On-state voltage, max	31.2V DC (see Figure 5)	
Output current rating	8.0 A (16 outputs @ 0.5 A)	
On-state current, min per channel	1.0 mA	
On-state current, max per channel	500 mA	
On-state voltage drop, max	0.5V DC	
Surge current, repeatable every 2 seconds	2 A for 50 ms	1.5 A for 50 ms
Off-state leakage current, max	0.5 mA	
Isolation voltage	50V (continuous), Basic Insulation Type Tested at 850V DC for 1 s between user and system No isolation between individual channels	50V (continuous), Basic Insulation Type Type tested at 2121V DC for 60 s, between field side and system No isolation between individual channels
Output signal delay Off to On On to Off	0.5 ms 1.0 ms	
Flexbus current	80 mA @ 5V DC	60 mA @ 5V DC
Power dissipation, max	5.3 W @ 31.2V DC	5.0 W @ 31.2V DC
Thermal dissipation, max	18.1 BTU/hr @ 31.2V DC	17.0 BTU/hr @ 31.2V DC
Fusing	Module outputs are not fused. Fusing is recommended. If fusing is desired, you must provide external fusing. Use SAN-O MQ4-800mA fuses.	Outputs are electronically protected

Specifications - 1794-0B32P

Attribute	Value
Number of outputs	32, current, sourcing
Recommended terminal base unit	1794-TB32, 1794-TB32S
On-state voltage, min	10V DC
On-state voltage, nom	24V DC
On-state voltage, max	31.2V DC
Output current rating	14.0 A max per module (6 A total for channels 0...15; 8 A total for channels 16...31)
On-state current, min per channel	1.0 mA
On-state current, max per channel	500 mA
On-state voltage drop, max	0.5V DC
Surge current	2 A for 50 ms, repeatable every 2 seconds
Off-state leakage current, max	0.5 mA
Isolation voltage	50V (continuous), Basic Insulation Type Type tested at 850V DC for 60 s, between field side and system No isolation between individual channels
Output signal delay Off to On On to Off	0.5 ms 1.0 ms
Flexbus current	80 mA @ 5V DC
Power dissipation, max	5.3 W @ 32.1V DC
Thermal dissipation, max	18.1 BTU/hr @ 31.2V DC
Fusing	Outputs are electronically protected.

General Specifications

Attribute	1794-0B8	1794-0B8EP	1794-0B16	1794-0B16P	1794-0B32P
Off-state voltage, max	31.2V DC				
Terminal base screw torque	Determined by the installed terminal base				
Keyswitch position	2				
Indicators (field side indication)	8 yellow status indicators	8 yellow status indicators 8 red fault indicators	16 yellow status indicators	16 yellow status indicators	32 yellow status indicators
External DC power supply voltage, nom	24V DC				
External DC power voltage range	19.2...31.2V DC (includes 5% AC ripple)	19.2...31.2V DC (includes 5% AC ripple)	19.2...31.2V DC (includes 5% AC ripple)	10...31.2V DC (includes 5% AC ripple)	10...31.2V DC (includes 5% AC ripple)
External DC power supply current	25 mA @ 24V DC (10...35 mA)	80 mA @ 24V DC	48 mA @ 24V DC (20...65 mA)	60 mA @ 24V DC (25...75 mA)	219 mA @ 24V DC (104 mA @ 10V DC; 278 mA @ 31.2V DC)
Wiring category ⁽¹⁾	2 - on signal ports				
Wire size	Determined by installed terminal base				
Dimensions, approx. (H x W x D) (with module installed)	94 x 94 x 69 mm (3.7 x 3.7 x 2.7 in.)				
Weight, approx.	73 g (2.57 oz.)	104 g (3.66 oz.)	78 g (2.75 oz.)	74 g (2.61 oz.)	85 g (2.99 oz.)
Enclosure type rating	None (open-style)				
North American temp code	T4A	T4A	T4A	T3C	T3C
UKEX/ATEX temp code	T4	T4	T4	T3	-
IECEx temp code	T4	T4	T4	T3	-

(1) Use this Conductor Category information for planning conductor routing. See the Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.

Environmental Specifications

Attribute	Value
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): -20...+55 °C (-4...+131 °F) - 1794-0B8, 1794-0B8EP, 1794-0B16, 1794-0B16P 0...55 °C (32...131 °F) - 1794-0B32P
Temperature, surrounding air, max.	55 °C (131 °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% non-condensing
Vibration	IEC 60068-2-6 (Test Fc, Operating): 5 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: Group 1, Class A (with appropriate enclosure)
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...6000 MHz
EFT/B immunity	IEC 61000-4-4: ±2 kV @ 5 kHz on power ports - 1794-0B8, 1794-0B16, 1794-0B32P ±3 kV @ 5 kHz on power ports - 1794-0B8EP, 1794-0B16P ±2 kV @ 5 kHz on signal ports - 1794-0B8, 1794-0B16, 1794-0B32P ±3 kV @ 5 kHz on signal ports - 1794-0B8EP, 1794-0B16P
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