

Specifications

General Specifications

Description	1766-L32AWA 1766-L32AWAA	1766-L32BWA 1766-L32BWAA	1766-L32BXB 1766-L32BXBA
Dimensions HxWxD	90 x 180 x 87 mm 3.5 x 7.087 x 3.43 in.		
Shipping weight	0.9 kg (2.0 lbs)		
Number of I/O	24 inputs (20 digital and 4 analog) and 14 outputs (12 digital and 2 analog)		
Power supply voltage	100...240V AC @ 47...63 Hz		24V DC Class 2 SELV
Heat dissipation	Refer to the MicroLogix 1400 Programmable Controllers User Manual, Publication 1766-UM001 .		
Power supply inrush current	120V AC: 25 A for 8 ms 240V AC: 40A for 4 ms		24V DC: 15 A for 20 ms
Power consumption	100 VA	120 VA	50W 7.5W (with no 1762 expansion I/O)
24V DC sensor power	none	24V DC @ 250 mA 400 µF max.	none
Input circuit type	Digital: 120V AC Analog: 0...10V DC	Digital: 24V DC sink/source (standard and high-speed) Analog: 0...10V DC	Digital: 24V DC sink/source (standard and high-speed) Analog: 0...10V DC
Output circuit type	Relay		Relay/FET
Relay life - Electrical	2 x 10 ⁵ operations min (2.5 A, 250V AC / 30V DC)		
Enclosure type rating	None (open-style)		
Wire size	0.25... 2.5 mm ² (22...14 AWG) solid or stranded copper wire rated @ 90 °C (194 °F) or greater.		
Wiring category ⁽¹⁾	2 - on signal ports 2 - on power ports 3 - on communications ports		
Terminal screw torque	0.79 Nm (7.0 in-lb) rated		

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Pilot duty rating	R300, C300		
Expansion bus	Supports up to seven 1762 modules, up to a maximum of 5V, 1500 mA (1300 mA for Series C only) and 24 V, 1500 mA (1300 mA for Series C only).		
North American temp code	T3C		

⁽¹⁾ Use this Conductor Category information for planning conductor routing. Refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).

Specifications for Inputs

Digital Inputs

Description	1766-L32AWA 1766-L32AWAA	1766-L32BWA, 1766-L32BWAA, 1766-L32BXB, 1766-L32BXBA	
		Inputs 0 through 11 (12 high-speed DC inputs)	Inputs 12 and higher (8 standard DC inputs)
On-state voltage range	79...132 V AC	4.5...24V DC, Class 2 (4.5...26.4V DC @ 60°C/140°F) (4.5...30V DC @ 30°C/86°F)	10...24V DC, Class 2 (10...26.4V DC @ 60°C/140°F) (10...30V DC @ 30°C/86°F)
Off-state voltage range	0...20 V AC	0...1.5V DC	0...5V DC
Operating frequency	47...63 Hz	0 Hz...100 kHz	0 Hz...1 kHz (scan time dependent)
On-state current min nom max	5.0 mA @ 79 V AC 12 mA @ 120 V AC 16.0 mA @ 132 V AC	7.1 mA @ 4.5V DC 9.9 mA @ 24V DC 10.5 mA @ 30V DC	3.2 mA @ 10V DC 5.3 mA @ 24V DC 5.5 mA @ 30V DC
Off-state leakage current	2.5 mA max.	0.2 mA max.	1.5 mA max.
Nominal impedance	12 kΩ @ 50 Hz 10 kΩ @ 60 Hz	2.4 kΩ	4.5 kΩ
Inrush current (max.) @ 120V AC	250 mA		

Analog Inputs

Description	1766-L32AWAA, -L32BWAA, -L32BXBA
Voltage input range	0...10.0V DC - 1 LSB
Type of data	12-bit unsigned integer
Input coding (0...10.0V DC - 1 LSB)	0...4,095
Voltage input impedance	>199 kΩ
Input resolution	12 bit
Non-linearity	±1.0% of full scale
Overall accuracy -20...60 °C (-4...140 °F)	±1.0% of full scale
Voltage input overvoltage protection	10.5 V DC
Field wiring to logic isolation	Non-isolated with internal logic

Analog Outputs

Description	1766-L32AWAA, -L32BWAA, -L32BXBA
Number of inputs	2 single-ended
Voltage output range	0...10 V DC - 1 LSB
Type of data	12 bit unsigned integer
Step response	2.5 ms @ 95%
Load range Voltage output	1 K Ω
Output resolution	12 bit
Analog output setting time	3 ms (max.)
Overall Accuracy -20...60 °C (-4...140 °F)	$\pm 1.0\%$ of full scale
Electrical isolation	Non-isolated with internal logic
Cable length	30 m (98 ft) shielded cable

Relay and FET Outputs

Description		1766-L32AWA, 1766-L32AWAA, 1766-L32BWA, 1766-L32BWAA	1766-L32BXB, 1766-L32XBBA
Maximum controlled load		1440 VA	1080 VA
Maximum Continuous Current:			
Current per channel and group common		2.5 A per channel 8A max channel 8...11 common	2.5 A per channel
Current per controller	at 150V max	28 A or total of per-point loads, whichever is less	
	at 240V max	20 A or total of per-point loads, whichever is less	

Relay Outputs

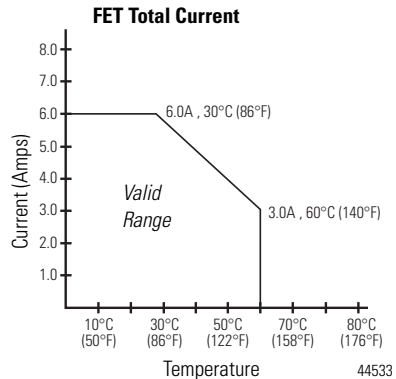
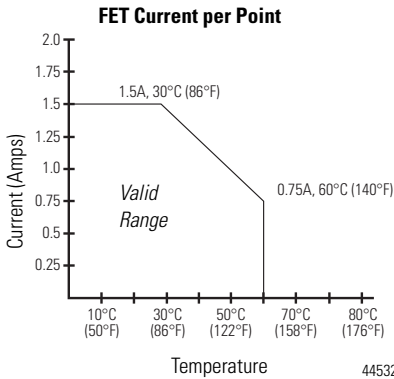
Description	1766-L32AWA, 1766-L32AWAA, 1766-L32BWA, 1766-L32BWAA, 1766-L32BXB, 1766-L32XBBA
Turn On Time/Turn Off Time	10 ms (maximum) ⁽¹⁾
Load current	10 mA (minimum)

⁽¹⁾ Scan time dependent

Maximum Volts	Amperes		Amperes Continuous	Volt-Amperes	
	Make	Break		Make	Break
240V AC	7.5 A	0.75 A	2.5 A	1800 VA	180 VA
120V AC	15.0 A	1.5 A	2.5 A	1800 VA	180 VA
250V DC	0.11 A		1.0 A	28 VA	
125V DC	0.22 A		1.0 A	28 VA	

1766-L32BXB, 1766-L32BXBA FET Output

Maximum output current (temperature dependent):



Description	General Operation	High Speed Operation ⁽¹⁾ (Output 2, 3 and 4 Only)
Power supply voltage	24V DC (-15%, 10%) Class 2	
On-state voltage drop: at max load current at max surge current	1V DC 2.5V DC	Not Applicable Not Applicable
Current rating per point max load min load max leakage	See graphic above 1.0 mA 1.0 mA	100 mA 20 mA 1.0 mA
Surge current per point: peak current max surge duration max rate of repetition @ 30 °C (86 °F) max rate of repetition @ 60 °C (140 °F)	4.0 A 10 ms once every second once every 2 seconds	Not Applicable Not Applicable Not Applicable Not Applicable