Technical Specifications - 5094-IB16S, 5094-IB16SXT

Attribute	5094-IB16S, 5094-IB16SXT
On-state voltage range	10...32V DC
On-state current, @ on-state min voltage	2.4 mA @ 10V
On-state current, @ on-state nom voltage	2.5 mA @ 24V
On-state current, @ on-state max voltage	2.8 mA @ 32V
Off-state voltage, max	5V DC
Off-state current, max	1.5 mA
Input delay time (screw to backplane), max Off to On On to Off	6 ms @ RPI of 2 ms
Safety Integrity Level	Up to and including Cat. 4 / PL e acc. to EN ISO 13849-1, SIL CL 3 acc. to IEC 62061, SIL 3 acc. to IEC 61508. (1)
Safety Reaction Time (SRT)	6 ms @ RPI of 2ms
Test output current per point	0.2 A
Number of test output	8
Test output pulse width, max	600 µs
Test output pulse period, typical	100 ms
Test output max field capacitance	100 nF
Test output short circuit protection	Yes
Test output leakage current, max	0.5 mA
Module over-temperature detection	Yes
Input delay time Off to On, user-selectable filter time On to Off, user-selectable filter time	 0…50 ms 0…50 ms
SA supply reverse voltage protection	Yes
SA supply overvoltage protection, max	60V
Timestamp of inputs	No
CIP Sync	Yes

(1) See the FLEX 5000 Digital I/O User Manual, publication 5094-UM001, for Safety Application Suitability Levels and Safety Data for Safety I/O Modules.

General Specifications - 5094-IB16S, 5094-IB16SXT

Attribute	5094-IB16S, 5094-IB16SXT
Inputs	16 channels (1 group of 16), sinking
Backplane Power (BP) voltage	15V DC
Backplane Power (BP) current, max	100 mA
Sensor Actuator Power (SA) voltage range	18…32V DC
Sensor Actuator Power (SA) current, max	1.8 A
Power dissipation, max	3.5 W
Thermal dissipation, max	11.94 BTU/hr
Isolation voltage	250V (continuous), Basic Insulation Type, System to Field No isolation between SA Power and input ports No isolation between individual input ports
Module keying	Mechanical keying or electronic keying via programming software
Indicators	1 green/red module status indicator 1 green/red SA power status indicator 16 yellow/red I/O status indicators
Terminal base (TB) assembly	5094-TB3I (consists of a 5094-MB and 5094-RTB3I) 5094-TB3IS (consists of a 5094-MB and 5094-RTB3IS) 5094-TB3IXT (consists of a 5094-MBXT and 5094-RTB3IXT) 5094-TB3ISXT (consists of a 5094-MBXT and 5094-RTB3ISXT) **IMPORTANT:** You must order mounting bases (MBs) and removable terminal blocks (RTBs) separately. MBs and RTBs do not ship with FLEX 5000 I/O modules.
TB keying	5 5
Wire category(1)	2 - signal ports 2 - power ports
Wire size - signal	0.34…2.5 mm^2 (22…14 AWG) solid or stranded copper wire rated at 105°C (221 °F), or greater, 1.2 mm (3/64 in.) insulation, max Ferrule according to DIN 46 228/1
Wire size - power	2.5 mm^2 (14 AWG) Cu multi-strand
Dimensions (HxWxD), approx	87.0 x 94.0 x 54.0 mm (3.43 x 3.70 x 2.13 in.)
Weight, approx	136 g (0.30 lb)
Enclosure type	None (open-style)
North American temp code	T4
ATEX/IECEx temp code	T4
IECEx temp code	T4

(1) Use this Conductor Category information for planning conductor routing. See the Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.
Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual.

Environmental Specifications - 5094-IB16S, 5094-IB16SXT

Attribute	5094-IB16S, 5094-IB16SXT
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)	-40 °C <Ta < +70 °C (-40 °F < Ta < +158 °F)
Temperature, surrounding air, max	70 °C (158 °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)	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)	30 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 10V/m with 1 kHz sine-wave 80% AM from 2000…2700 MHz 3V/m with 1 kHz sine-wave 80% AM from 2000…6000 MHz
EFT/B immunity IEC 61000-4-4	±4 kV @ 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
Corrosion resistance classification	**5094-IB16S** – ISA S71.04 G2 **5094-IB16SXT** – ISA S71.04 G3