FLEX 5000 I/O

Flexible I/O platform enabling integrated control for The Connected Enterprise

FLEX 5000™ I/O is a reliable and flexible distributed I/O solution, allowing you to choose your I/O to meet your operational needs. The platform offers integrated safety with discrete and analog fail-safe I/O for applications requiring speed, frequency measurement, temperature sensors, pressure, and flow sensor monitoring. The modules are TÜV certified up to SIL 3, PLe, Cat. 4 and can be conveniently mounted in the same rack with standard modules, reducing hardware cost. FLEX 5000 I/O enhances communication with 1 Gb EtherNet/IP™ connectivity, offering higher speed and increased bandwidth. Ease of communication is optimized with multiple network architecture and topology options such as Parallel Redundancy Protocol (PRP), Device Level Ring (DLR), Linear, and Star. And, a defense in depth security strategy is achieved with module vendor certificates, firmware encryption and secure boot functionality.

Extreme environment (XT) variant

ControlLogix® 5580 controllers

LAN A

LAN B
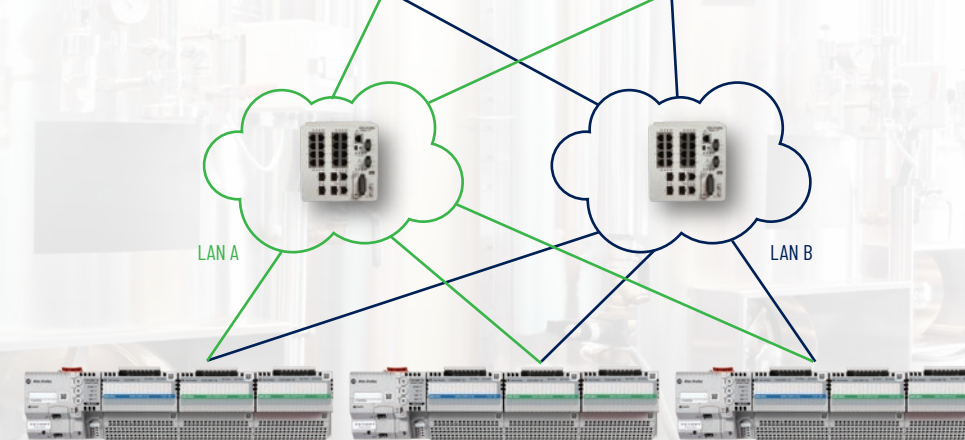
FLEX 5000™ I/O support for controller redundancy

Flexibility in design and maintenance

- Optimize footprint by mounting up to 16 modules on a single node, vertically or horizontally, and in any module sequence
- Operate at -40...70 °C (-40...158 °F) temperatures and in extreme environments with XT version rated up to G3 with conformal coating
- Use in hazardous areas under Class I, Division 2, Zone 2, Groups A, B, C, D
- Reduce downtime with simplified Removal and Insertion Under Power (RIUP) and easy online changes

Ready for Process applications

- Gain support for ControlLogix® 5580 controller redundancy in high availability applications from Studio 5000 Logix Designer® application, version 33 or later and deliver more consistent operations with increased reliability
- Reduce downtime with easy access to additional Process diagnostics via HART Premier Integration in Studio 5000 Logix Designer software
- Save engineering time through tight integration with instruction set in PlantPAx® 5.0 system and above

Discover Logix redundant control solutions

Rockwell Automation

Adapters

Description	Catalog number	
	Non-extreme environment (non-XT)	Extreme environment (XT)
EtherNet/IP adapter with 2 RJ45 ports, Supports up to 8 FLEX 5000 I/O modules	5094-AENTR	5094-AENTRXT
EtherNet/IP adapter with 2 RJ45 ports, Supports up to 16 FLEX 5000 I/O modules	5094-AEN2TR	5094-AEN2TRXT
EtherNet/IP adapter with 2 SFP slots, Supports up to 8 FLEX 5000 I/O modules*	5094-AENSFPR	5094-AENSFPRXT
EtherNet/IP adapter with 2 SFP slots, Supports up to 16 FLEX 5000 I/O modules*	5094-AEN2SFPR	5094-AEN2SFPRXT

Small form factor pluggable (SFP) transceivers sold separately.

Specifications	Adapter	Terminal base assembly Mounting base + removable terminal block
Dimension (HxWxD)	92.7 x 94.0 x 96.5 mm (3.65 x 3.70 x 3.80 in.)	89.3 x 94.0 x 63.0 mm (3.52 x 3.70 x 2.48 in.)
Operating temperature	-40...70 °C (-40...158 °F)	
Storage temperature	-40...85 °C (-40...185 °F)	
Relative humidity	5...95% Non-condensing	
Operating shock	30 g	
Non-operating shock	30 g	
Vibration	5 g @ 10...500 Hz Displacement: 0.030 inch (pp)	
Corrosive resistance classification	ANSI/ISA S71.04 G2 - Non-XT catalogs ANSI/ISA S71.04 G3 with conformal coating - XT catalogs	

Mounting bases and removable terminal blocks

Description	Catalog number	
	Non-extreme environment (non-XT)	Extreme environment (XT)
Mounting base	5094-MB	5094-MBXT
Removable terminal block screw	5094-RTB3	5094-RTB3XT
Removable terminal block spring	5094-RTB3S	5094-RTB3SXT
Removable CJC terminal block screw	5094-RTB3T	5094-RTB3TXT
Removable CJC terminal block spring	5094-RTB3TS	5094-RTB3TSXT
Removable relay terminal block screw	5094-RTB3W	5094-RTB3WXT
Removable relay terminal block spring	5094-RTB3WS	5094-RTB3WSXT
Removable isolated terminal block screw	5094-RTB3I	5094-RTB3IXT
Removable isolated terminal block spring	5094-RTB3IS	5094-RTB3ISXT
Removable terminal block AC screw	5094-RTB3AC	5094-RTB3ACXT
Removable terminal block AC spring	5094-RTB3ACS	5094-RTB3ACSXT
Removable terminal block 32 output screw	5094-RTB32C	5094-RTB32CXT
Removable terminal block 32 output spring	5094-RTB32CS	5094-RTB32CSXT
Removable terminal block 32 input screw	5094-RTB32V	5094-RTB32VXT
Removable terminal block 32 input spring	5094-RTB32VS	5094-RTB32VSXT

Standard I/O modules

Description	Catalog number	
	Non-extreme environment (non-XT)	Extreme environment (XT)
Digital 16 input 24V DC	5094-IB16	5094-IB16XT
Digital 16 output 24V DC	5094-OB16	5094-OB16XT
Relay 8 output isolated	5094-OW8I	5094-OW8IXT
Analog 8 input	5094-IF8	5094-IF8XT
Universal analog 8 input	5094-IY8	5094-IY8XT
Analog 8 output	5094-OF8	5094-OF8XT
High speed counter	5094-HSC	5094-HSCXT
Digital 8 input 240V AC	5094-IM8^	5094-IM8XT^
Digital 16 input 120V AC	5094-IA16^	5094-IA16XT^
Digital 32 input 24V DC	5094-IB32^	5094-IB32XT^
Digital 8 output 24V DC	5094-OB8^	5094-OB8XT^
Digital 16 output 120/240V AC	5094-OA16^	5094-OA16XT^
Digital 32 output 24V DC	5094-OB32^	5094-OB32XT^
Analog 8 input isolated HART	5094-IF8IH	5094-IF8IHXT
Analog 8 output isolated HART	5094-OF8IH	5094-OF8IHXT
Serial interface	5094-SERIAL^	5094-SERIALXT^

^ *With 4 g vibration and 25 g operating shock. Refer to Technical Data (5094-TD001) for more details.*

Safety I/O modules

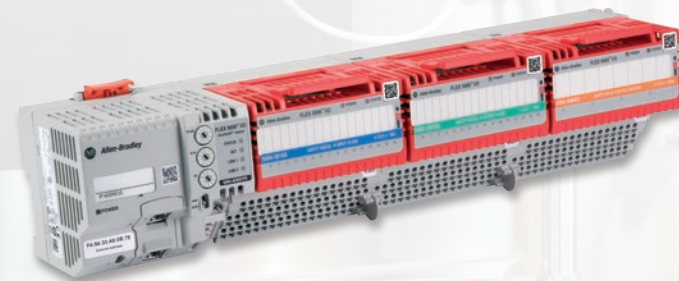| Description	Catalog number	
	Non-extreme environment (non-XT)	Extreme environment (XT)
Safety digital 16 input 24V DC	5094-IB16S	5094-IB16SXT
Safety digital 16 output 24V DC	5094-OB16S	5094-OB16SXT
Safety relay 4 output isolated	5094-OW4IS	5094-OW4ISXT
Safety analog 4 input isolated HART	5094-IF4IHS#	5094-IF4IHSXT#
Safety analog 4 output isolated HART	5094-OF4IHS#	5094-OF4IHSXT#
Safety analog 8 input RTD/TC	5094-IRT8S#	5094-IRT8SXT#
Safety frequency 2 input isolated	5094-IJ2IS#	5094-IJ2ISXT#

Refer to Product Selection for availability.
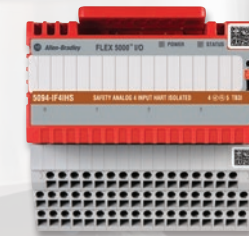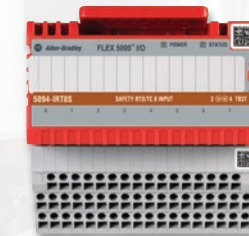
Standard and safety I/O modules

Specifications	
Dimension (HxWxD)	87.0 x 94.0 x 54.0 mm (3.43 x 3.70 x 2.13 in.)
Operating temperature	-40...70 °C (-40...158 °F)
Storage temperature	-40...85 °C (-40...185 °F)
Relative humidity	5...95% Non-condensing
Operating shock	30 g[+]
Non-operating shock	30 g
Vibration	5 g[+] @ 10...500 Hz Displacement: 0.030 inch (pp)
Corrosive resistance classification	ANSI/ISA S71.04 G2 - Non-XT catalogs ANSI/ISA S71.04 G3 with conformal coating - XT catalogs

[+] *Refer to Technical Data (5094-TD001) for more details.*

Visit **rok.auto/flex5000IO**

Accessories

Description	Catalog number
Interconnect cable 0.5 meter	5094-CE05
Interconnect cable 1 meter	5094-CE10
Interconnect cable 3 meter	5094-CE30
SA power jumper screw - pack of 10	5094-SAJMPR-QTY10
Shield RTB screw - pack of 5	5094-STB-QTY5
End cap - pack of 5	5094-ECR-QTY5

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