

Technical Note

RFP™ Mating Connectors for RFPC



PURPOSE

Provide mating connector information for the RFP™ Controller module.



MATING CONNECTOR KIT

Elgar Part Number 5380269-01

CONTROL CONNECTOR

Provides user access to programmable digital I/O and RFP monitoring signals.

Connector: 15-pin D-SUB

Positronic Connector P/N SD15M1000Z, crimp male, Elgar P/N 856-918-15

Backshell: Positronic P/N D15000Z00, Elgar P/N 856-975-16

Wire size: Recommended 22 AWG (max 20 AWG);

length: maximum 10 meters (can be extended subject to the environment, cable type, and interface circuits).

Recommend twisted shielded cables used.

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CONTROL CONNECTOR PINOUT

Pin	Type	Signal	Function	Signal Level
1	A	RI (Remote Inhibit)	Active-High input signal that is utilized to shut down power module outputs (Pulled High internally). Active Low input (or connection between Pins 1 & 9) enables outputs.	TTL
2	A	DFI	(Discrete Fault Indicator) Active-Low output signal that indicates events/faults within system modules; derived from collector of opto-isolator.	TTL
3	B	PWR ON	Normally-open relay contacts that close when the RFP Controller power is on	Relay Closure
4	A	DIG0-I/O	Input/Output: programmable digital I/O	TTL
5	A	DIG2-I/O	Input/Output: programmable digital I/O	TTL
6	C	DIGI/O RTN	Signal returns for Programmable Digital Input/Outputs	TTL
7	D	RS 485-H	Input/Output: External data communications bus	RS 485-H
8	E	CHAS GND	Chassis ground	CHAS GND
9	C	RI RTN	Signal return for RI	TTL_RTN
10	C	DFI RTN	Signal return for DFI	TTL_RTN
11	B	PWR ON RTN	Return line for PWR ON	Relay Return
12	A	DIG1-I/O	Input/Output: programmable digital I/O	TTL
13	A	DIG3-I/O	Input/Output: programmable digital I/O	TTL
14	NA	Reserved		Reserved
15	D	RS 485-L	Input/Output: External data communications bus	RS 485-L

Signal Types:

- Signals internally pulled up to +5V DC. Externally to be pulled low, (≤ 0.5 VDC) relative to the designated signal return, (signal type C). DIG0-3 I/O reserved for future feature implementation.
- Internal relay contact that is connected to the return when asserted. Absolute maximum rating 2A @ 30 VDC, 0.5A @ 125 VAC. Minimum 10 mA DC or 10 uA AC current required.
- Return for type A see above.
- Bi-directional differential signal pair conforming to RS485. Internally terminated with 100 ohms between H and L. Provides external control communication to other Elgar power systems.
- Connected to the metal enclosure of the module. The enclosure of the module is connected to the earth ground connection of the RFP power input.

RECOMMENDED TOOLS

Hand crimp Positronic P/N 9507-0-0-0

Pneumatic crimp Positronic P/N 9550-1-0

Insertion extraction Positronic P/N M81969/1-02

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LAN CONNECTOR

Primary user interface to the RFP via Ethernet connection

Type: RJ45, CAT 5 compatible

Protocol conforms to IEEE 802.3 Ethernet-based LANs

Mating connector: Amphenol Bendix P/N RJF6MN, Elgar P/N 856-993-07

Wire size: Standard CAT 5e 10/100-Base-T

length: max 10 meters (can be extended subject to the environment and cable type).

LAN CONNECTOR PINOUT

Pin	Name	Function	Signal Level
1	TX+	Transmit data positive, twisted differential pair with TX-	IEEE 802.3
2	TX-	Transmit data negative, twisted differential pair with TX+	IEEE 802.3
3	RX+	Receive data positive, twisted differential pair with RX-	IEEE 802.3
4	NA		N/A
5	NA		N/A
6	RX-	Receive data negative, twisted differential pair with RX+	IEEE 802.3
7	NA		N/A
8	NA		N/A