

Monitor Acquisition Devices Connections

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1 Introduction

Monitor 4 and Monitor 8 acquisition devices are available with miscellaneous connections in order to accommodate different sensors signals. Here is a summary of those connections.

2 Sensors Connections

2.1 Current Loops

M12 connectors 5-contacts A-coded female socket on devices.

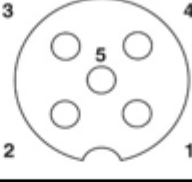
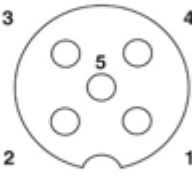
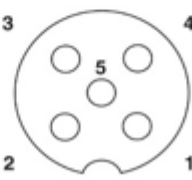
I1		1	IN1	4-20mA current input
		2	NC	/
		3	NC	/
		4	+20VDC	Sensor supply + output
		5	0VDC	Sensor supply - output
I2		1	IN1	4-20mA current input
		2	IN2	4-20mA current input
		3	NC	/
		4	+20VDC	Sensor supply + output
		5	0VDC	Sensor supply - output
I3		1	IN1	4-20mA current input
		2	IN2	4-20mA current input
		3	IN3	4-20mA current input
		4	+20VDC	Sensor supply + output
		5	0VDC	Sensor supply - output

Figure 1: I1, I2, and I3 types of connections

2.2 IEPE Inputs

BNC female socket on devices

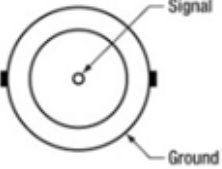
IB		1	Signal	Sensor input
		2	GND	Ground

Figure 2: IB Type of connections

2.3 Unipolar Voltage Inputs

M12 connectors 5-contact A-coded female socket on devices.

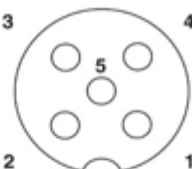
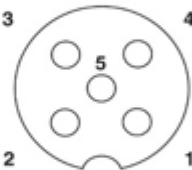
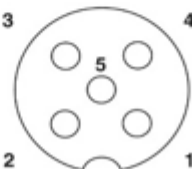
U1		1	IN1	Voltage unipolar input
		2	NC	/
		3	NC	/
		4	+20VDC	Sensor supply + output
		5	0VDC	Sensor supply - output
U2		1	IN1	Voltage unipolar input
		2	IN2	Voltage unipolar input
		3	NC	/
		4	+20VDC	Sensor supply + output
		5	0VDC	Sensor supply - output
U3		1	IN1	Voltage unipolar input
		2	IN2	Voltage unipolar input
		3	IN3	Voltage unipolar input
		4	+20VDC	Sensor supply + output
		5	0VDC	Sensor supply - output

Figure 3: U1, U2, and U3 types of connections

2.4 Differential Voltage Inputs

M12 connectors 8-contact A-coded female socket on devices.

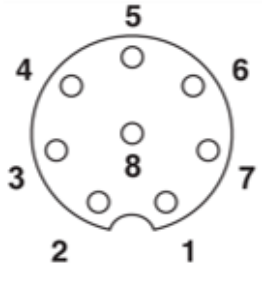
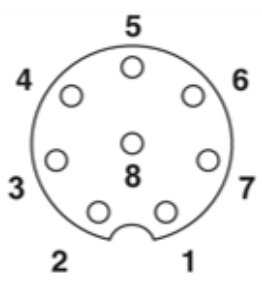
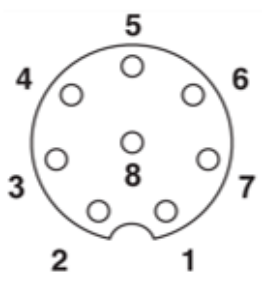
UD1		1	+20VDC	Sensor supply + output
		2	NC	/
		3	NC	/
		4	NC	/
		5	NC	/
		6	IN1-	- Voltage differential input
		7	IN1+	+ Voltage differential input
		8	0VDC	Sensor supply - output
		UD2		1
2	NC			/
3	NC			/
4	IN2-			- Voltage differential input
5	IN2+			+ Voltage differential input
6	IN1-			- Voltage differential input
7	IN1+			+ Voltage differential input
8	0VDC			Sensor supply - output
UD3				1
		2	IN3-	- Voltage differential input
		3	IN3+	+ Voltage differential input
		4	IN2-	- Voltage differential input
		5	IN2+	+ Voltage differential input
		6	IN1-	- Voltage differential input
		7	IN1+	+ Voltage differential input
		8	0VDC	Sensor supply - output

Figure 4: UD1, UD2, and UD3 types of connections

3 DC Power

M12 connector 4-contact T-Power male socket on devices


PSU		1	Earth	Earth
		2	+24VDC	Power Supply +
		3	NC	/
		4	GND	Power Supply -

Figure 5:DC Power Port

4 AC Power

M12 connector 3-contact S-Power male socket on devices


PSU MAINS		1	L	Line
		2	N	Neutral
		⊕	PE	Protective Earth

Figure 6: AC Power Port

5 Digital I/O

M12 connectors 8-contact A-coded female socket on devices.

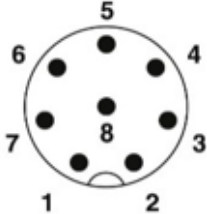
DI1/DO2		1	DI1+	Digital input +
		2	DI1-	Digital input -
		3	NC	/
		4	NC	/
		5	DO1+	Digital output +
		6	DO1-	Digital output -
		7	DO2+	Digital output +
		8	DO2-	Digital output -

Figure 7: DI1/DO2 Type of Connections

6 Local Area Network (LAN)

M12 connector 4-contact D-coded female socket on devices


LAN		1	TD+	Transmit+
		2	RD+	Receive+
		3	TD-	Transmit-
		4	RD-	Receive-

Figure 8: Ethernet LAN

6.1 Power Over Ethernet (MONITOR-4 only)

The MONITOR-4 is compliant with the *IEEE802.3af* standard. It is compatible with Power Sourcing Equipment (PSE) that use PoE Alternative A, power on data pair (Refer to IEEE802.3af for more information).

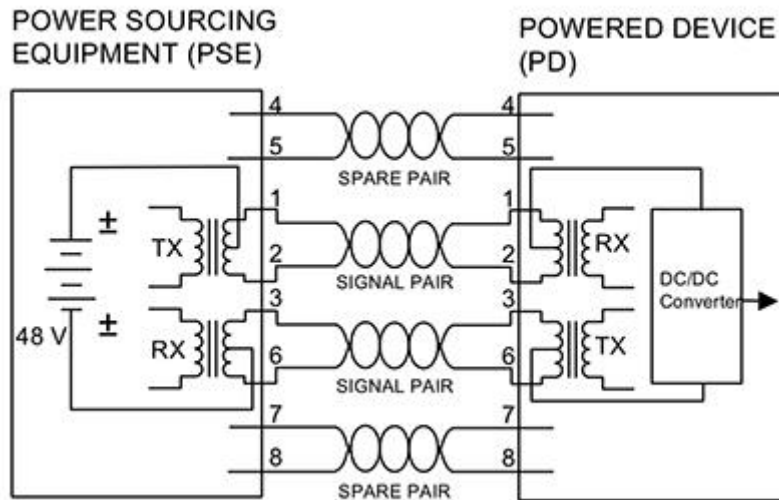



Figure 9: PoE - Alternative A

When the MONITOR-4 is connected to the Cat5e cable, it will automatically present a Powered Device (PD) signature to the PSE or Midspan Equipment, when requested. The equipment will then recognize that a powered device is connected to that line and supply power. The MONITOR-4 (i.e. Powered Device) is set to Class 0 (0.44 Watts to 12.95 Watts) operation.

	<p>Connecting both PoE and PSU supplies at the same time may create electromagnetic disturbances. Please connect one power source at a time.</p>
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