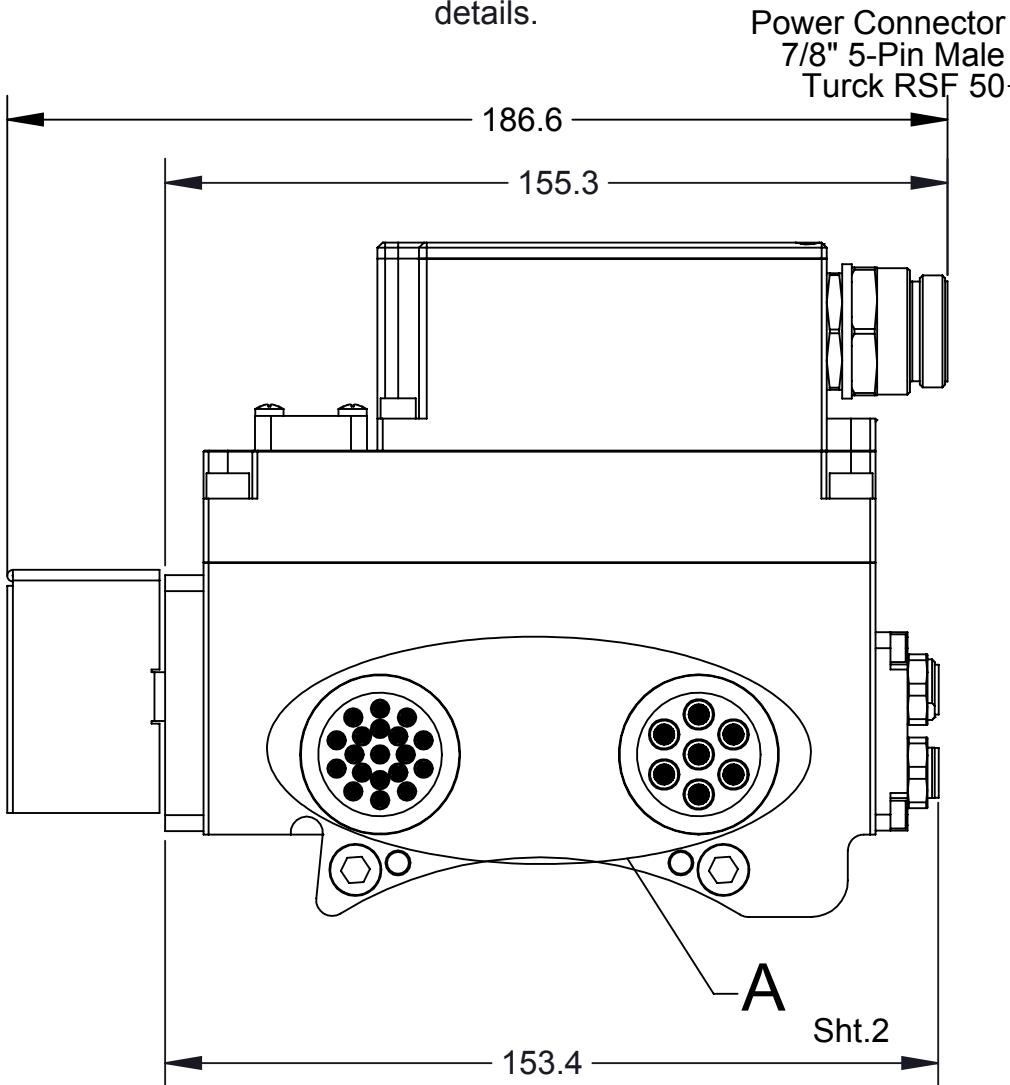
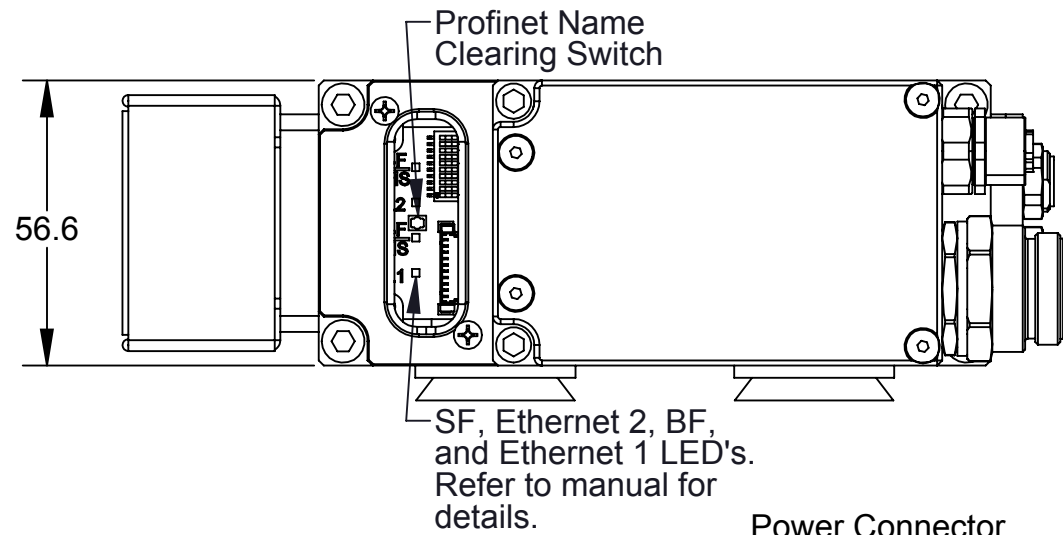
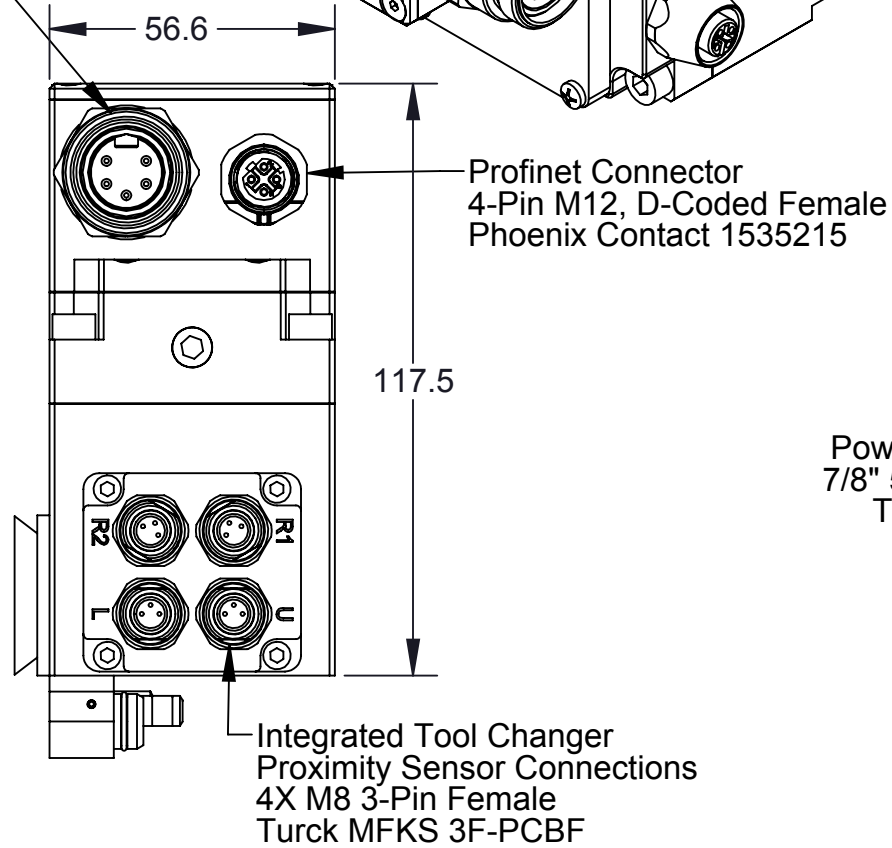
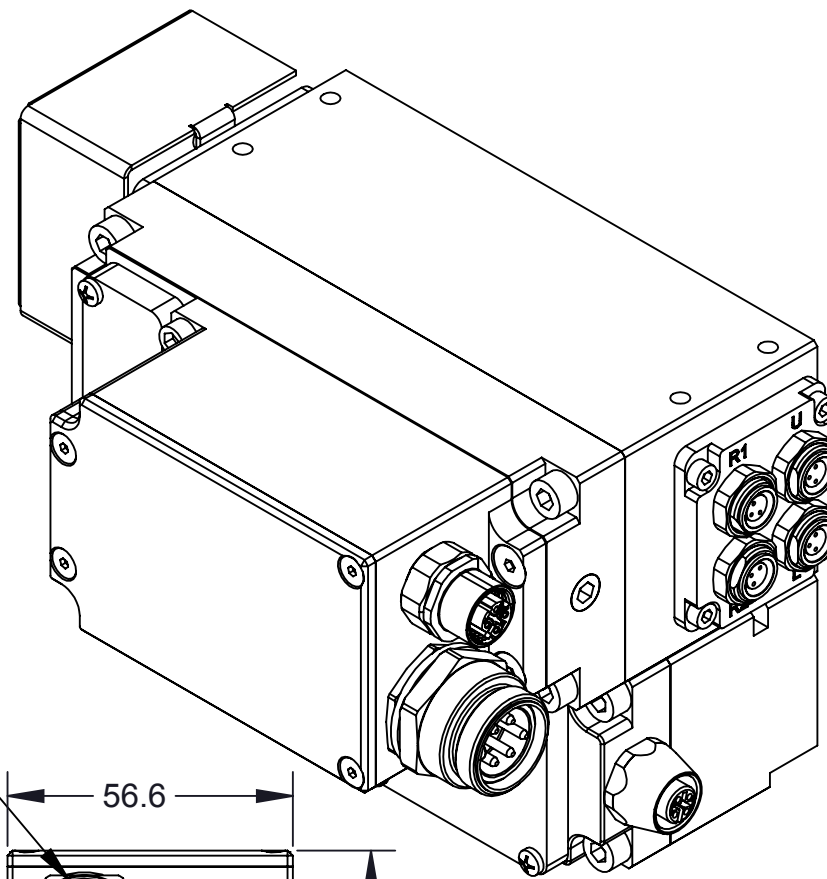


REV.	DESCRIPTION	INITIATOR	DATE
06	Changed do to ECO 16730. Added a lock nut and washer to guarantee connector orientation.	SEZ	4/3/2018

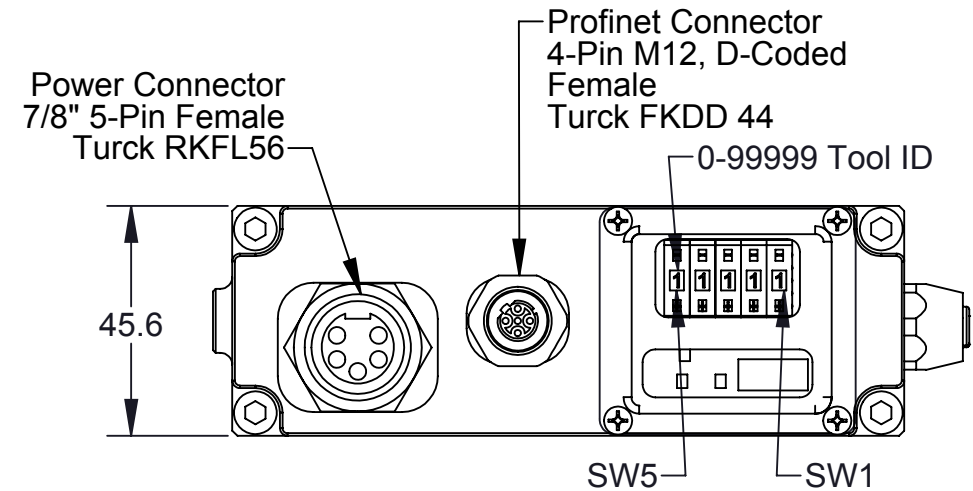
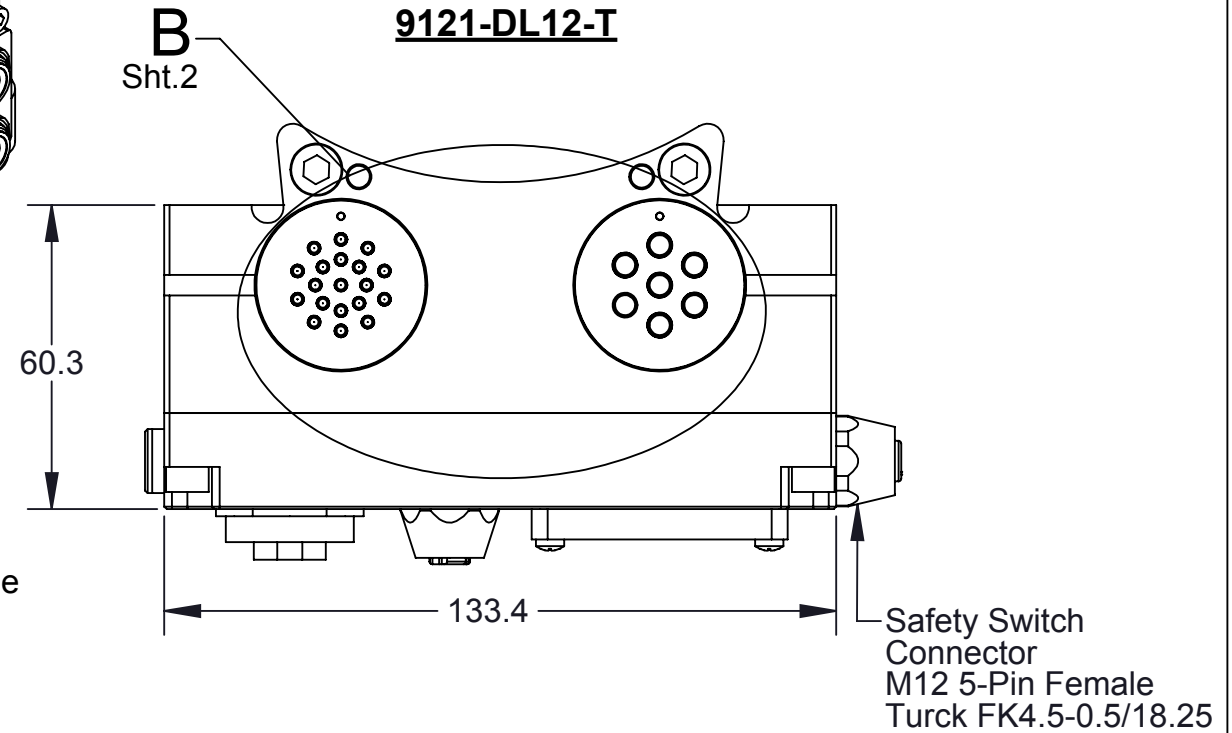
9121-DL12-M



Power Connector
7/8" 5-Pin Male
Turck RSF 50



9121-DL12-T



- Notes:
1. Pin block signal assignments are shown on Sheet 2.
 2. Connector pin designations are shown on Sheet 3.
 3. Electrical schematic of DL12 Master and Tool is shown on Sheet 4. Schematic notes are on Sheet 5.
 4. Serviceable parts are shown on Sheet 6.

NOTES: UNLESS OTHERWISE SPECIFIED.

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3rd ANGLE PROJECTION



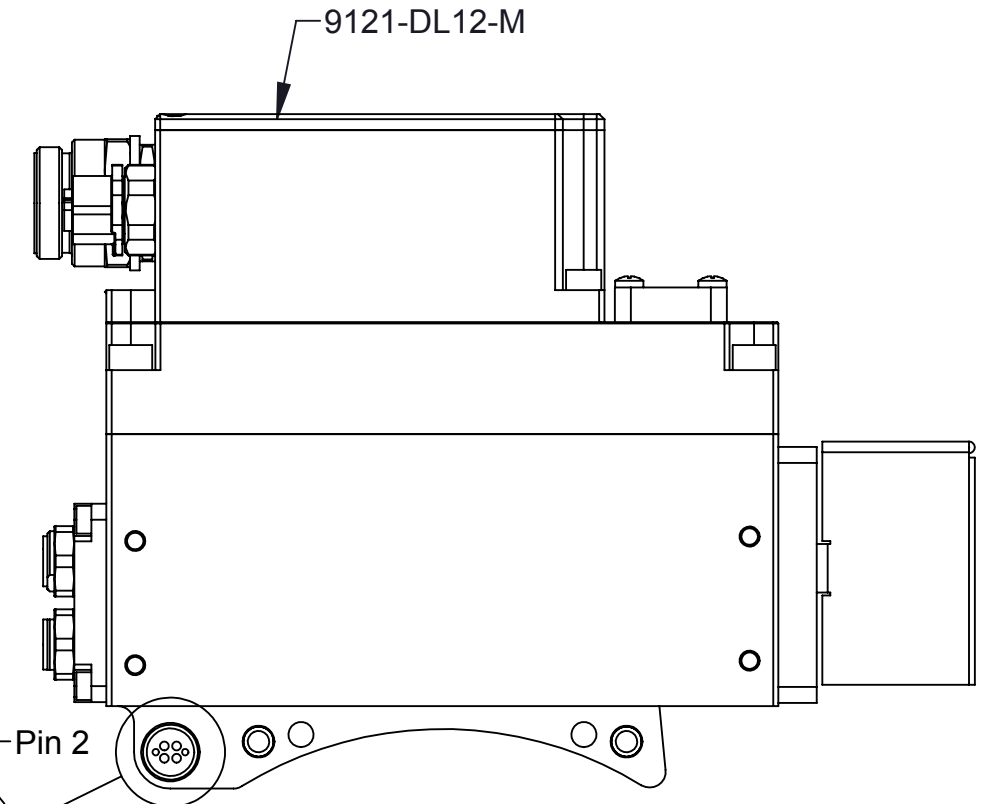
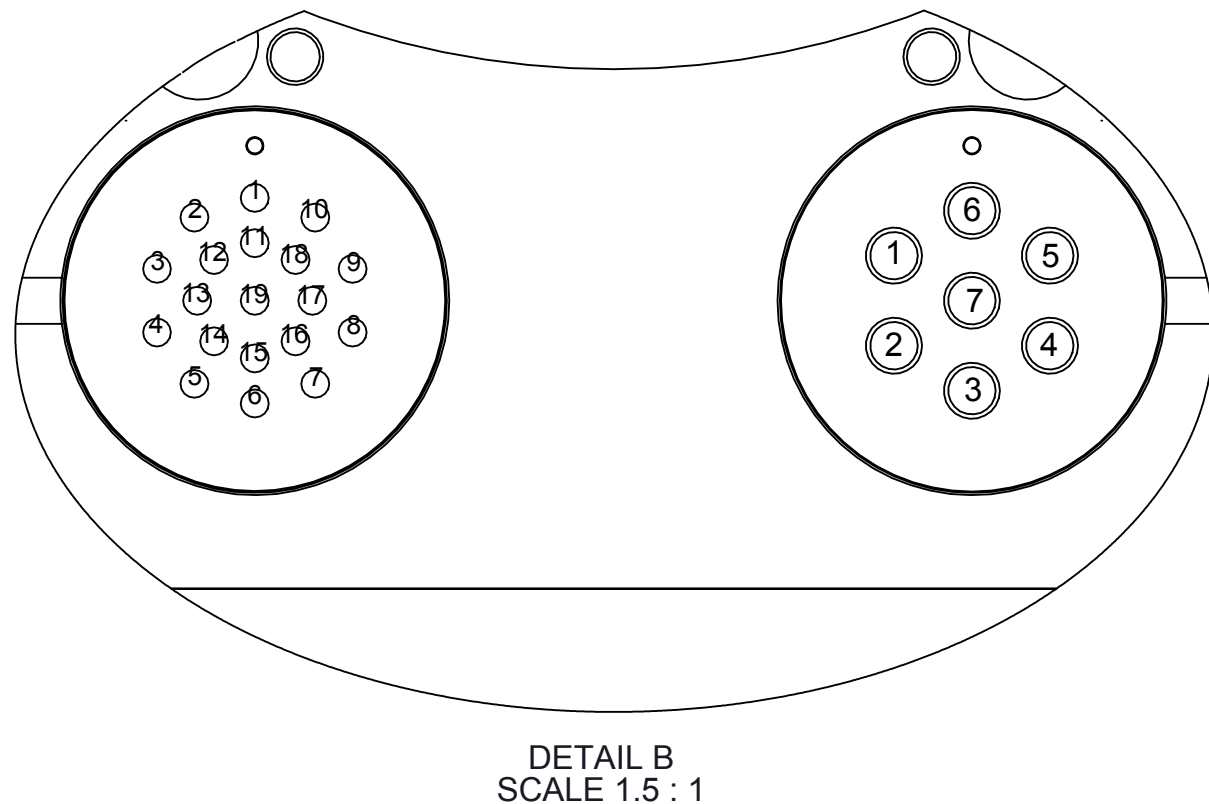
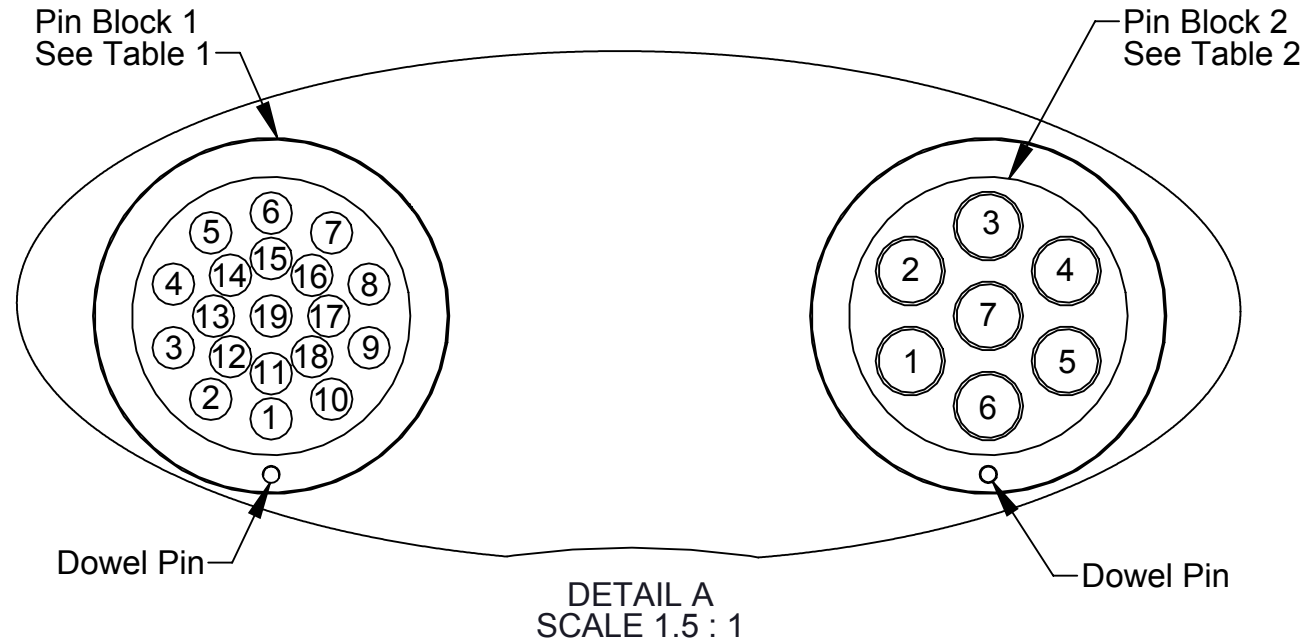
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PROJECT # 160426-1	SHEET 1 OF 6	SCALE 1:2	SIZE B
DRAWING NUMBER 9630-20-DL12		REVISION 06	

Table 1	
Pin Block 1	
1	N/C
2	N/C
3	SSO_1
4	N/C
5	N/C
6	24V_TH
7	N/C
8	N/C
9	SSO_2
10	N/C
11	N/C
12	RS485+
13	TX1-
14	TX1+
15	N/C
16	RX1+
17	RX1-
18	RS485-
19	24V_GND

Table 2	
Pin Block 2	
1	AP_US1+
2	TOOL_PRESENT
3	US1-
4	US2-
5	FE
6	AP_US2+
7	24V_TH



DETAIL C
SCALE 2 : 1

Table 3	
Internal Valve Connection	
Pin 1	Latch
Pin 2	Unlatch 2
Pin 3	Unlatch 1
Pin 4	US2 -

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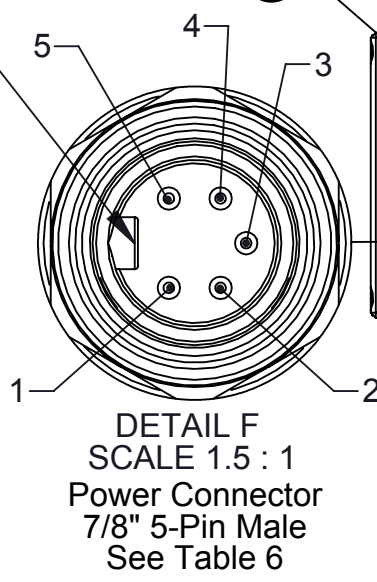
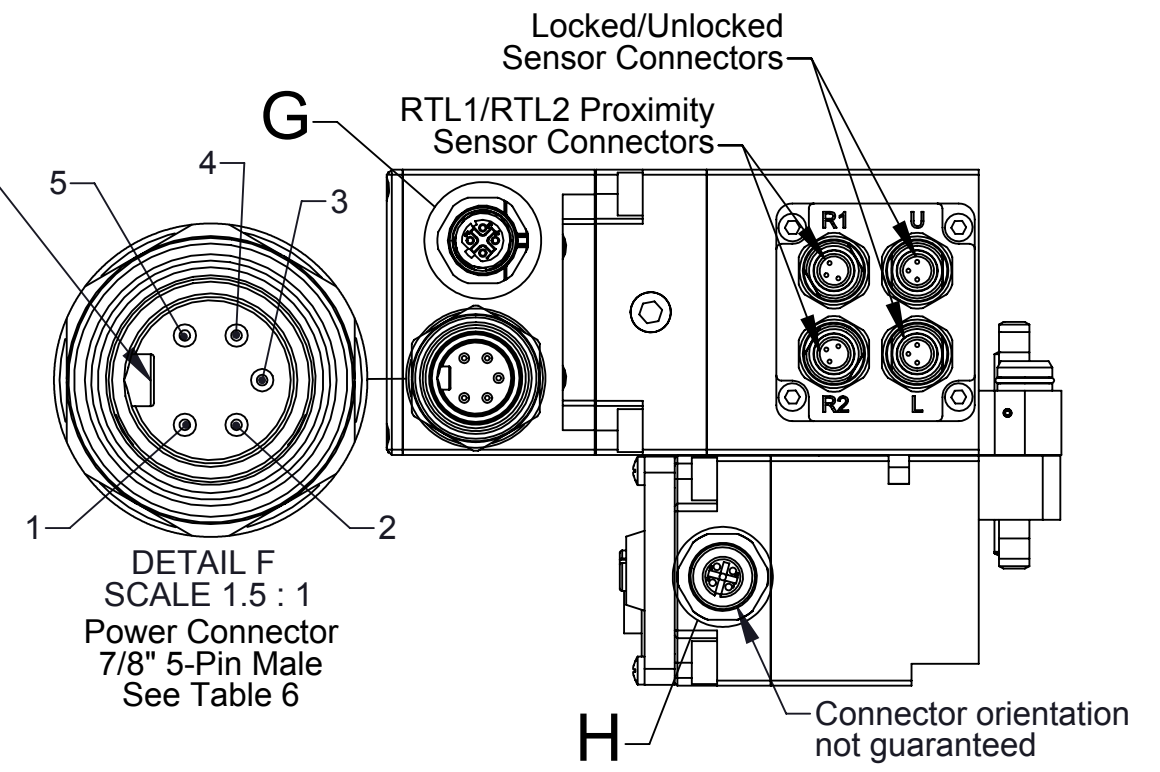
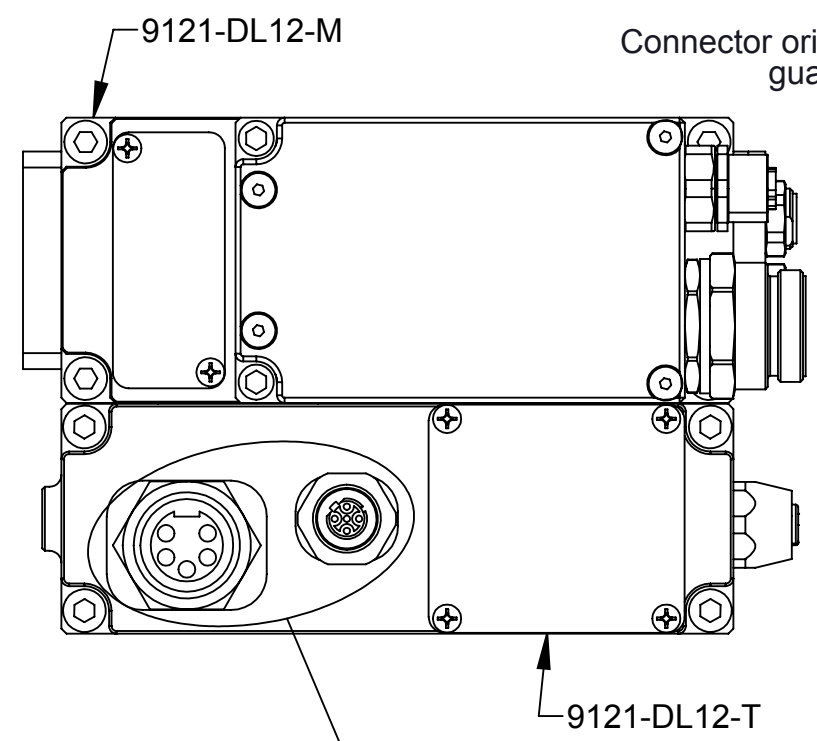
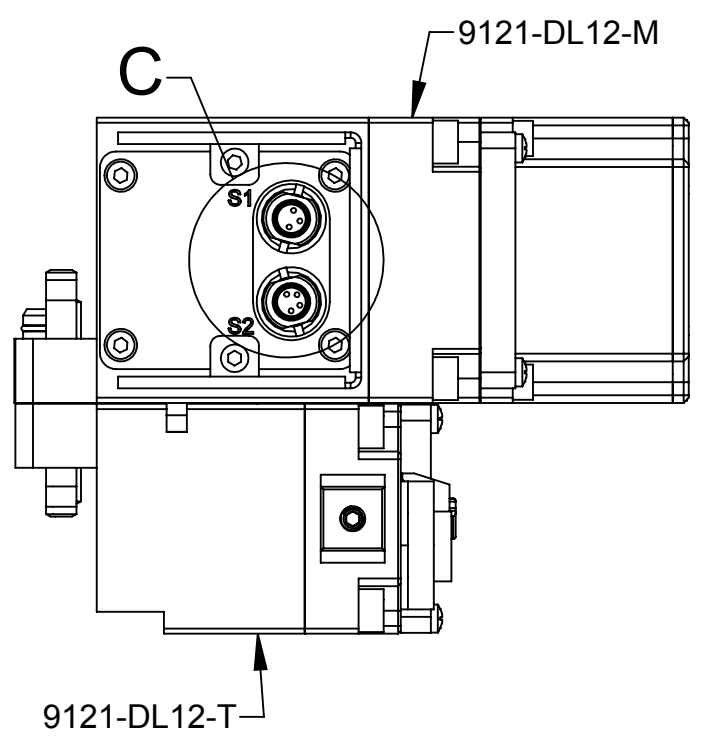
3rd ANGLE PROJECTION



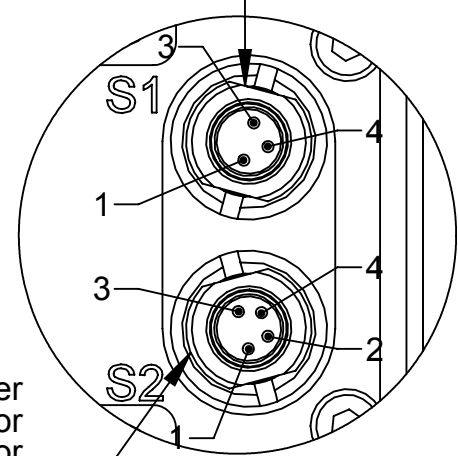
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PROJECT #	160426-1	SHEET	OF 6
SCALE	1:2	SIZE	B
DRAWING NUMBER	9630-20-DL12		REVISION
			06



Valve Adapter Proximity
Sensor Connector
M8 3-Pin Female Turck
MFKS 3F
See Table 4



Valve Adapter
Pressure Sensor
Connector
M8 4-Pin Female
Turck MFKS 4F
See Table 5

Table 4 Valve Adapter Proximity Sensor	
1	US1+
3	US1-
4	Input

Power Connector
7/8" 5-Pin Female
Note connector orientation
See Table 6

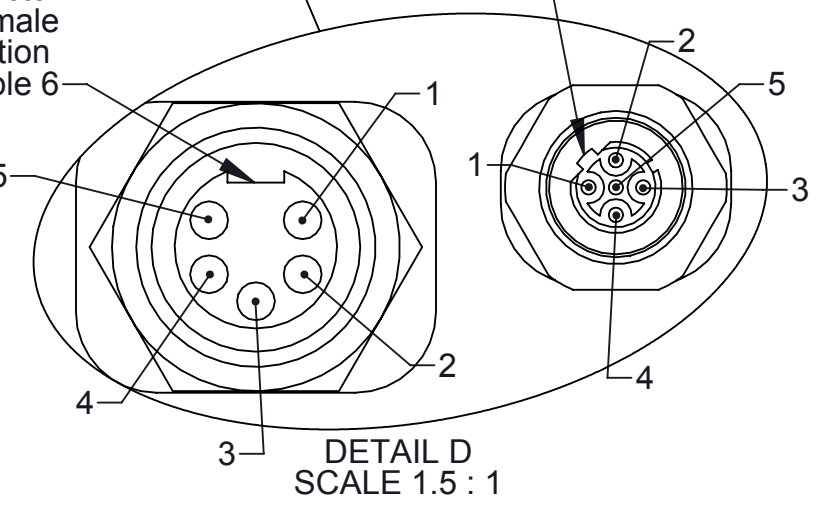


Table 6 Power Connector	
1	0VDC Safe
2	0VDC I/O
3	FE
4	24VDC I/O
5	24VDC Safe

Profinet Connector
M12 4-Pin Female
Note connector orientation
See Table 7

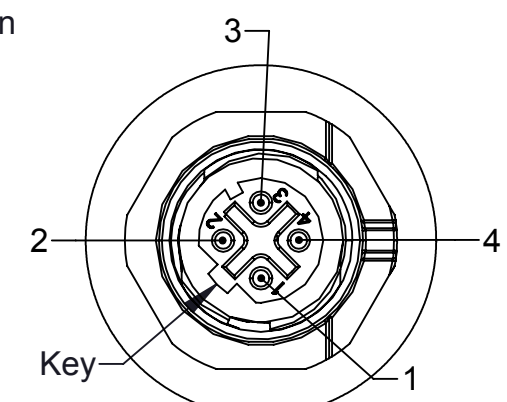


Table 7 Profinet Connector	
1	Tx+
2	Rx+
3	Tx-
4	Rx-

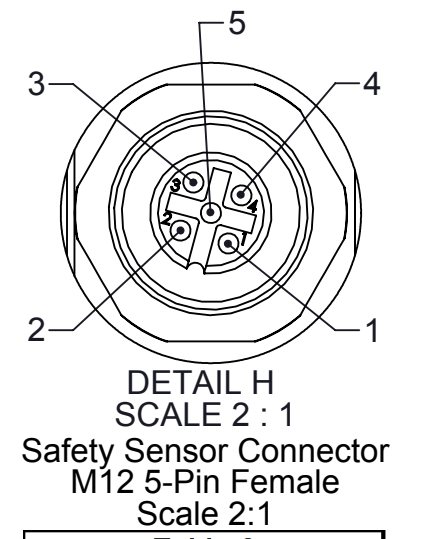
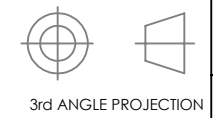


Table 8 Safety Switch Connector	
1	24V_TH
2	SSO1
3	24V_GND
4	SSO2
5	N/C

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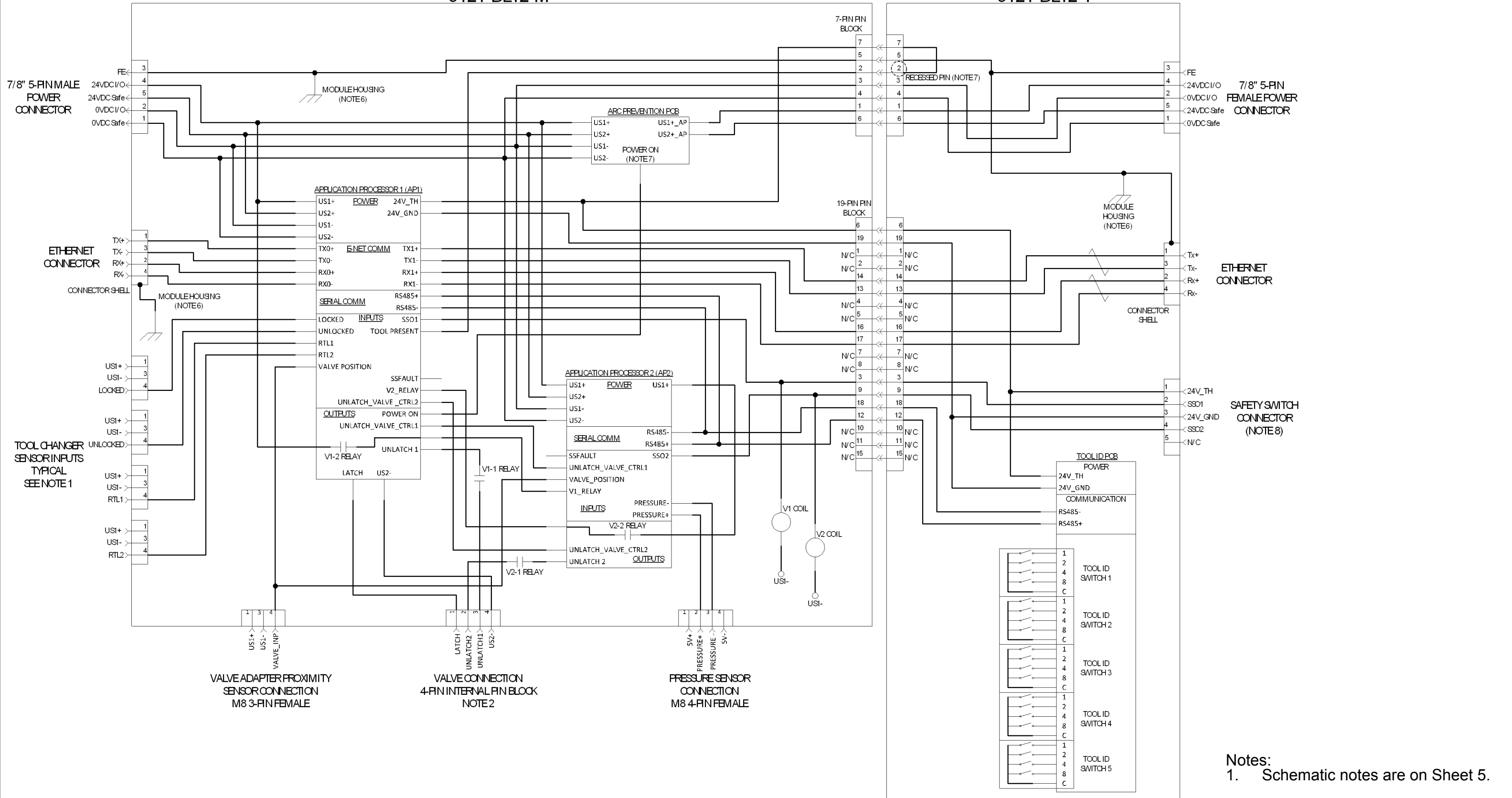
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PROJECT # 160426-1	SHEET 3 OF 6	SIZE B	DRAWING NUMBER 9630-20-DL12

9121-DL12-M

9121-DL12-T



Notes:
1. Schematic notes are on Sheet 5.

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PROJECT # 160426-1 SHEET 4 OF 6		SCALE 1:2	SIZE B	DRAWING NUMBER 9630-20-DL12	REVISION 06

Schematic Notes:

1. The complete tool changer package comes equipped with external cables that are connected to the sensors. The DL12 modules must be used with Valve Adapters employing two valves and diagnostic monitoring via pressure and proximity sensors (ex. 9121-JR4-M, 9121-JU4-M).
2. An internal pin block is used to connect the Latch/Unlatch signal to the Valve Adapter.
3. Power, Profinet, and Safety Switch cables for the DL12 Modules are supplied by the customer.
4. Note that the R1, R2, L, and U sensors are powered by unswitched (US1) Profinet Power. The common US1+ and US1- connections are not shown here.
5. The Profinet (TX and RX) signals are transmitted over twisted pairs.
6. GND is connected directly to the Master and Tool Module housings. The shells of the Profinet connectors on the Master and Tool modules are tied to ground.
7. The Arc Prevention PCB turns off US1+ and US2+ during coupling and uncoupling of the Master and Tool. The switching function is controlled by the "Power ON" signal from Application Processor 1 (AP1). The "Tool Present" circuit is used to ensure that the spring/contact pins are touching when power is turned on. Refer to the product manual for additional information.
8. The 9121-DL12-M module requires the use of a two channel, PL e rated contactless Safety Sensor, specifically, CES-I-AP-M-C04-USB-117324 (reference Figure 1). The Safety Sensor is not included with the DL12 but is available from ATI. The Safety Sensor is powered by 24V US1 current limited (24V_TH) Profinet power.
9. The Valve Adapter pressure sensor is supplied with 5V (unswitched) from AP2. The pressure sensor provides an analog input to the DL12.
10. The Valve Adapter proximity sensor is powered from unswitched (US1) Profinet power.
11. The DL12 module employs a dual channel safety circuit to prevent an unsafe tool unlatch. An extensive description of the safety system is provided in the DL12 Operation Manual: 9620-20-C-DL12.

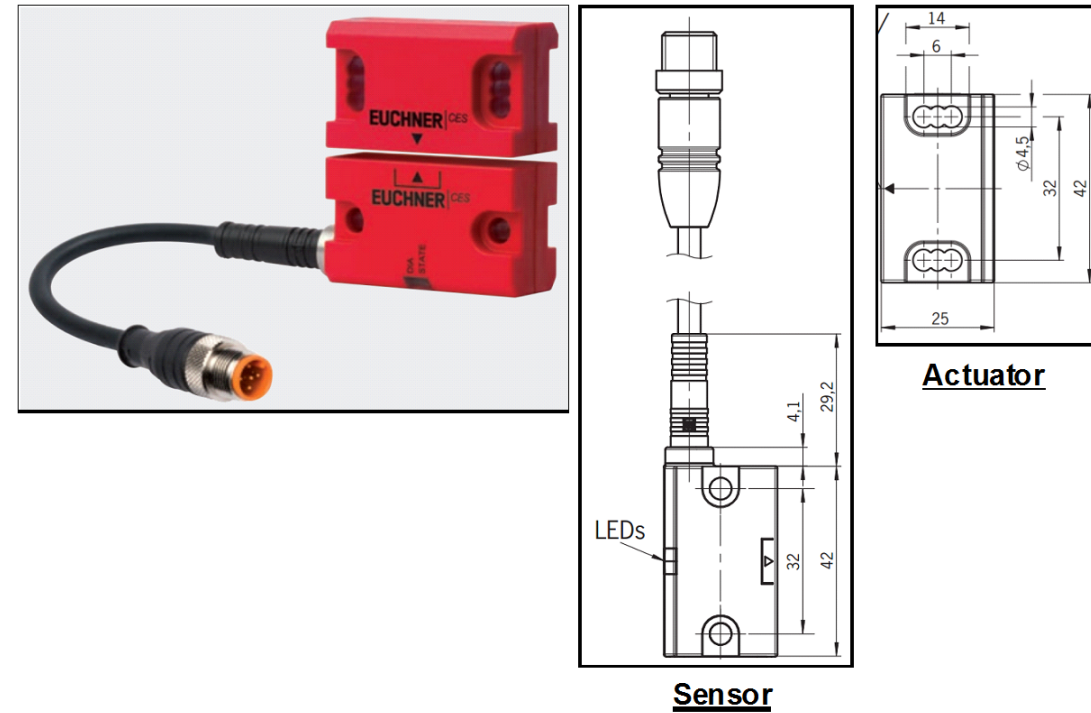




Figure 1: Euchner CES-AP-C04 Series Safety Sensor

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 3rd ANGLE PROJECTION	PROJECT # 160426-1 SHEET 5 OF 6	SCALE 1:10	SIZE B	DRAWING NUMBER 9630-20-DL12	REVISION 06

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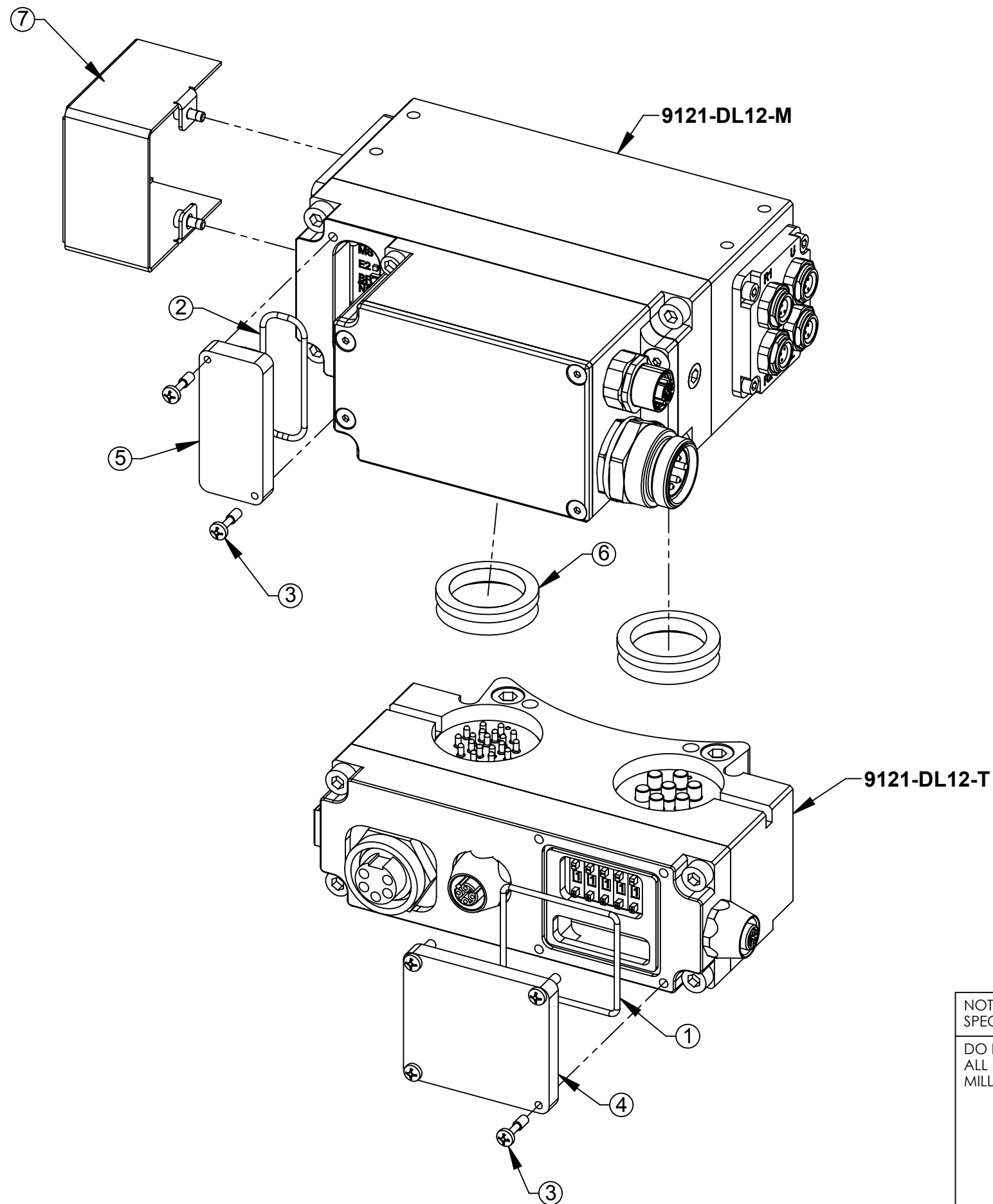
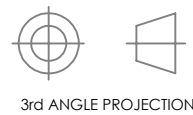


TABLE 9: 9121-DL12-M/T SERVICEABLE PARTS			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	3410-0001021-01	O-RING AS568-031
2	1	3410-0001201-01	O-Ring AS568-024
3	6	3500-9957012-21	Pan Head M3 Captive Screw M3 X 12
4	1	3700-20-3058	Tool ID Window
5	1	3700-20-4820	Window, DJ Master, Annular Seal
6	1	4010-0000030-01	V-Ring Seal V-22A Nitrile
7	1	9005-20-2517	Diagnostic Sensor Guard

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		DRAWING NUMBER 9630-20-DL12	REVISION 06