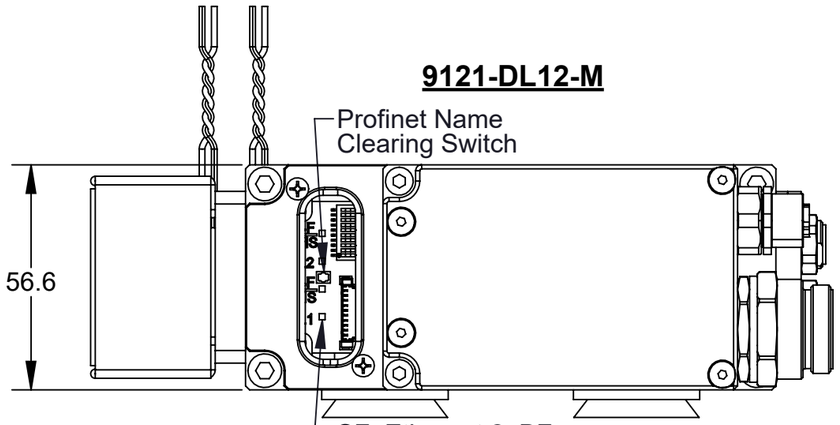
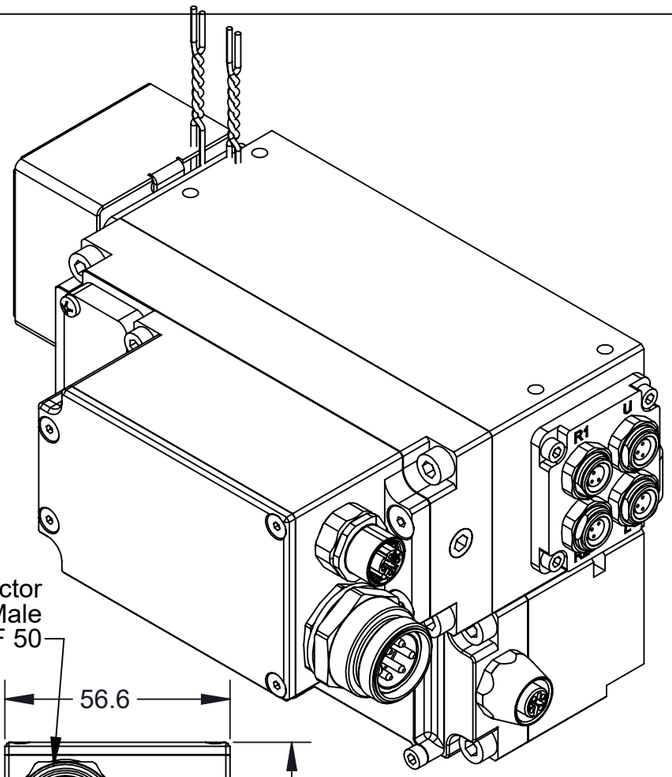
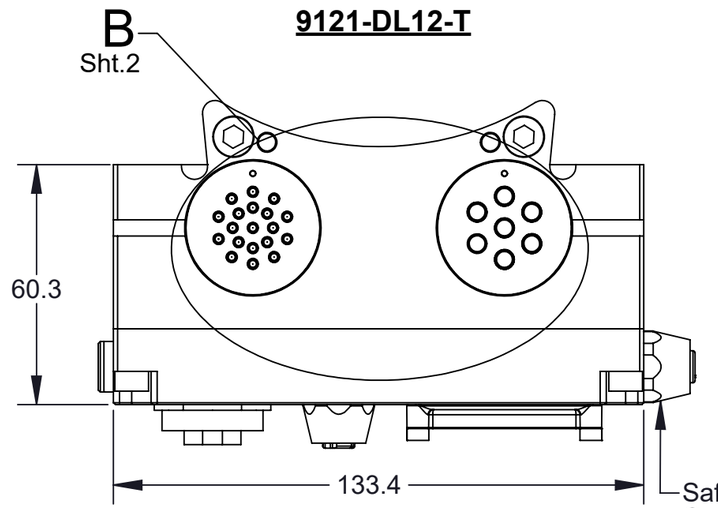
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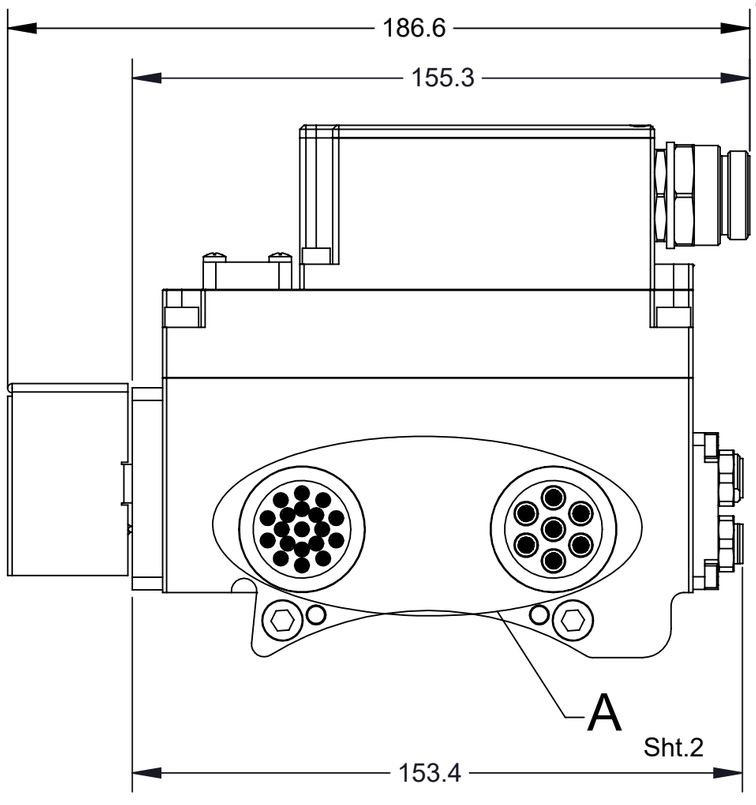
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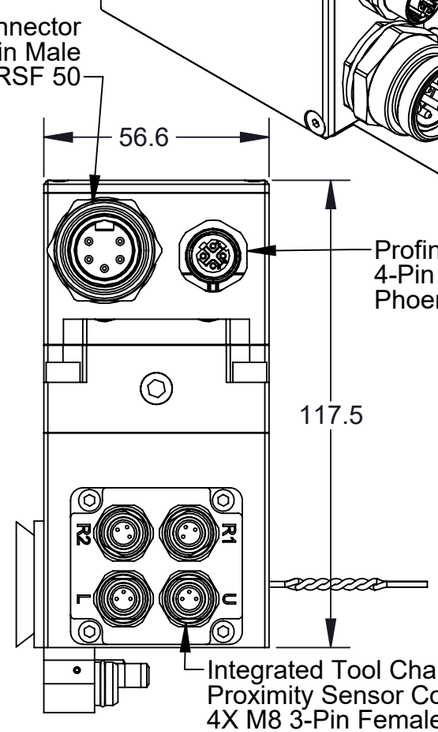


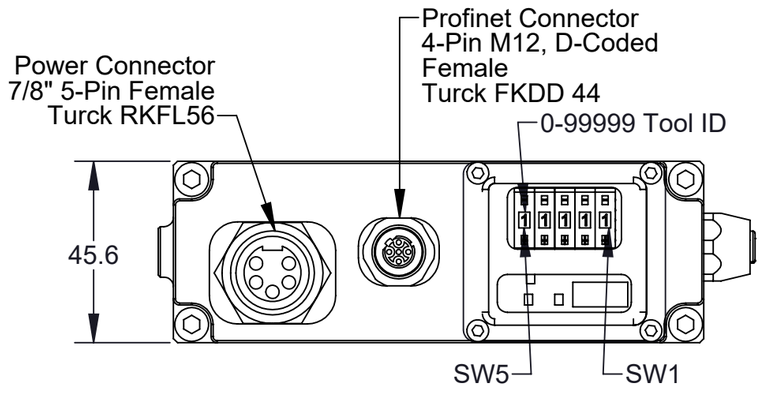


9121-DL12-T









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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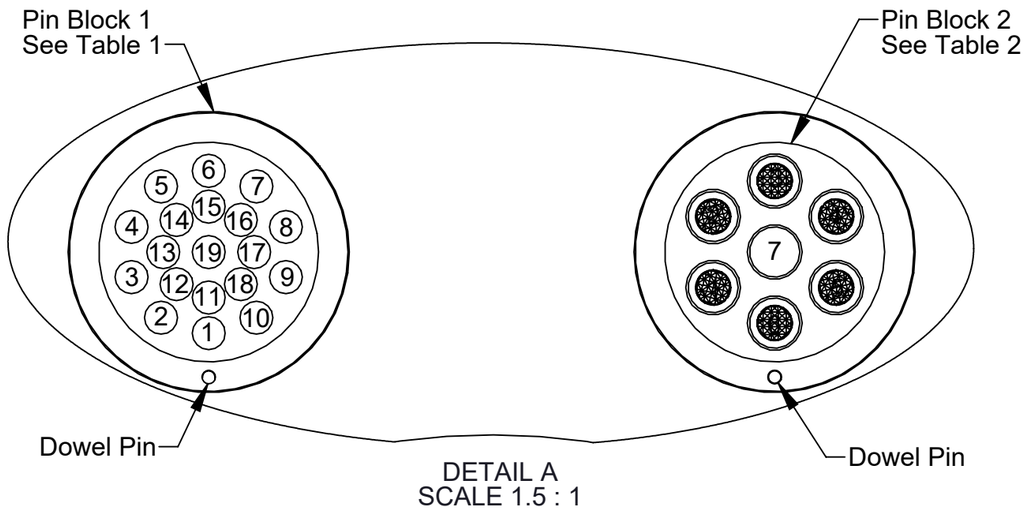
DRAWN BY: W. Berrocal, 8/4/16

CHECKED BY: A. Takla, 8/5/16

PROJECT # 160426-1 SHEET 1 OF 6

TITLE: DL12 Profinet Module Customer Drawing

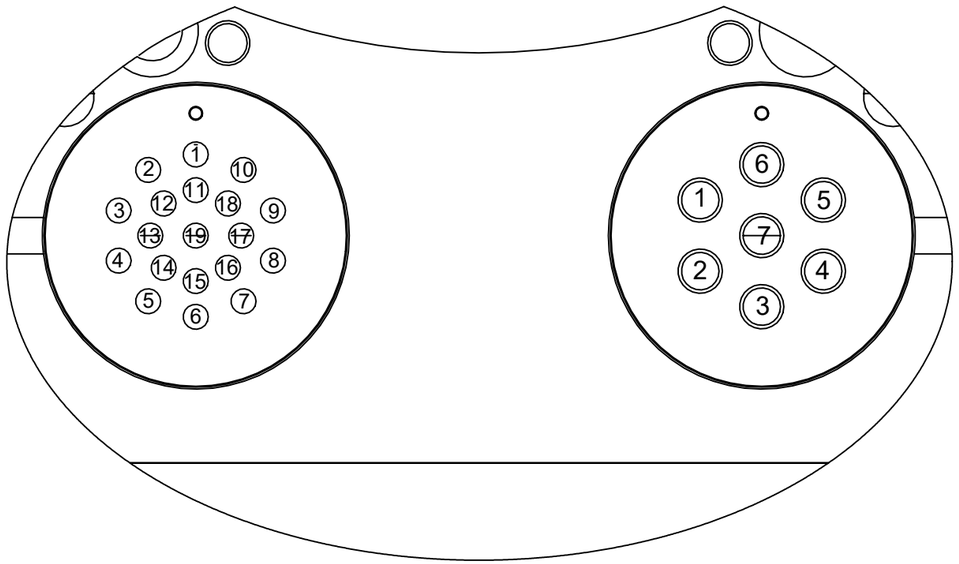
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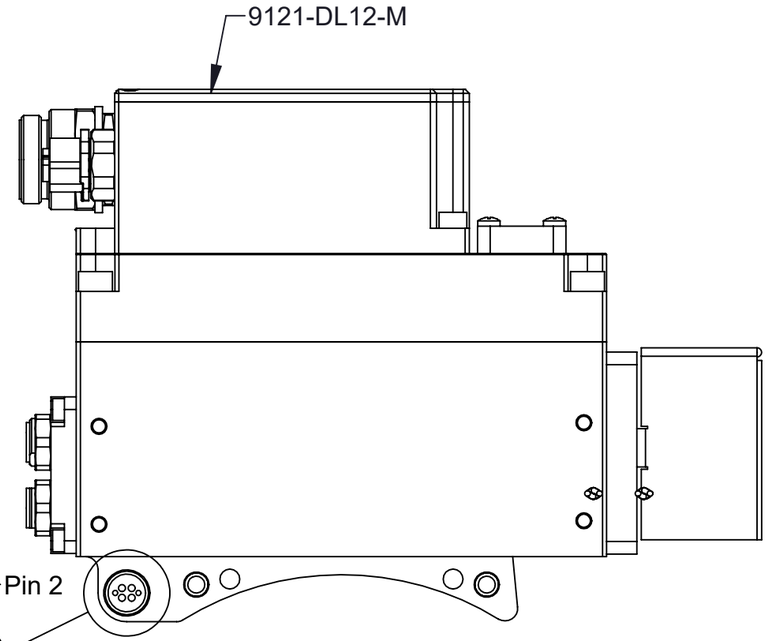
DETAIL A
SCALE 1.5 : 1

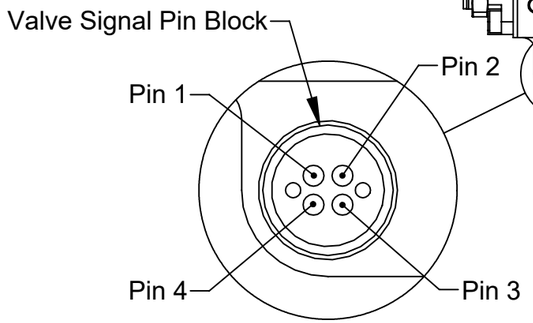
Table 1	
Pin Block 1	
1	N/C
2	N/C
3	SSO_1
4	N/C
5	N/C
6	24V_TH
7	N/C
8	N/C
9	SSO_2
10	N/C
11	N/C
12	RS485+
13	TX1-
14	TX1+
15	N/C
16	RX1+
17	RX1-
18	RS485-
19	24V_GND

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



DETAIL B
SCALE 1.5 : 1





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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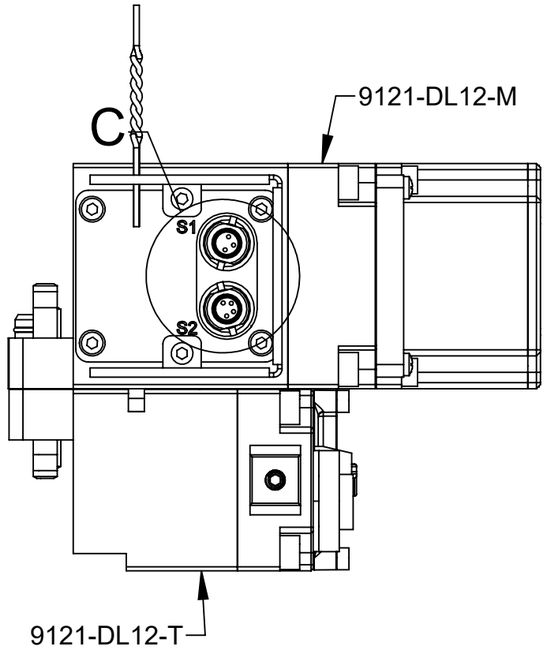
DRAWN BY: W. Berrocal, 8/4/16

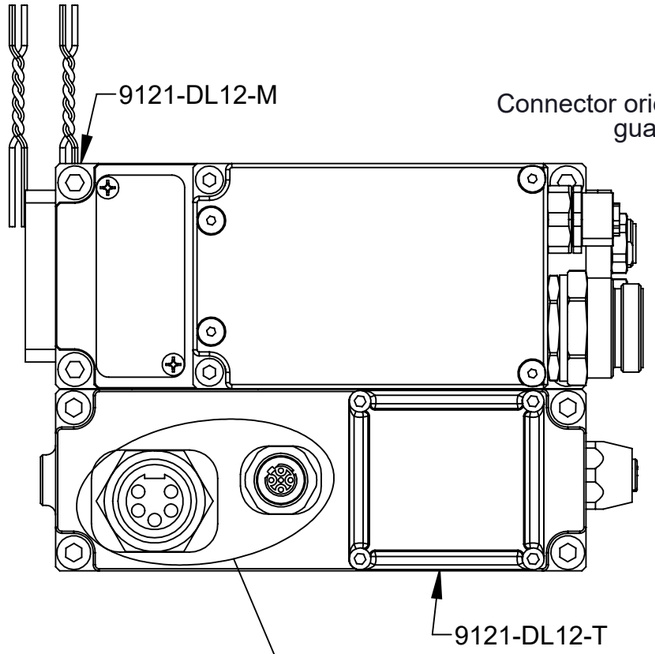
CHECKED BY: A. Takla, 8/5/16

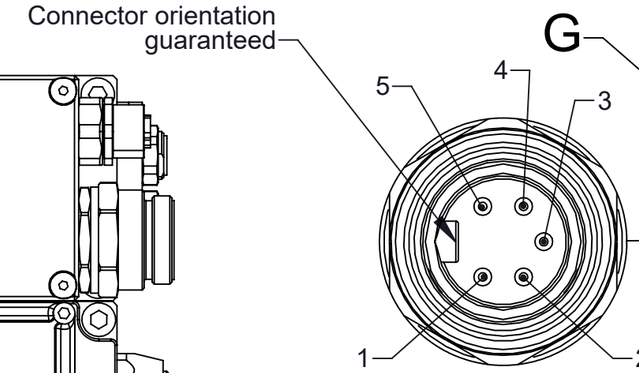
PROJECT # 160426-1 SHEET 2 OF 6

TITLE: DL12 Profinet Module Customer Drawing

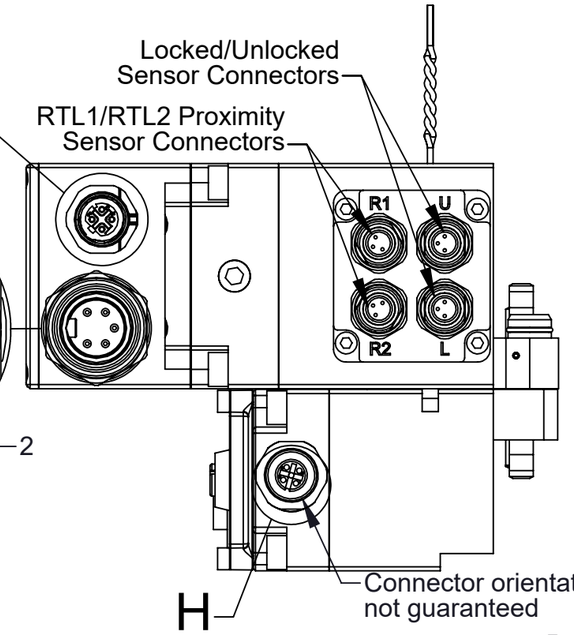
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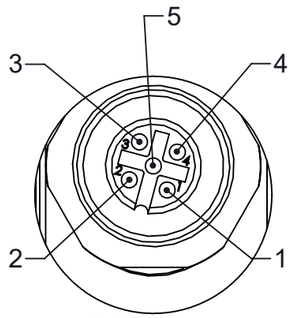






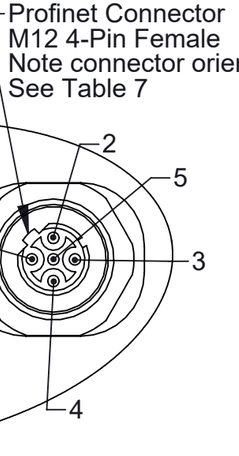
DETAIL F
SCALE 1.5 : 1
Power Connector
7/8" 5-Pin Male
See Table 6





DETAIL H
SCALE 2 : 1
Safety Sensor Connector
M12 5-Pin Female
Scale 2:1

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

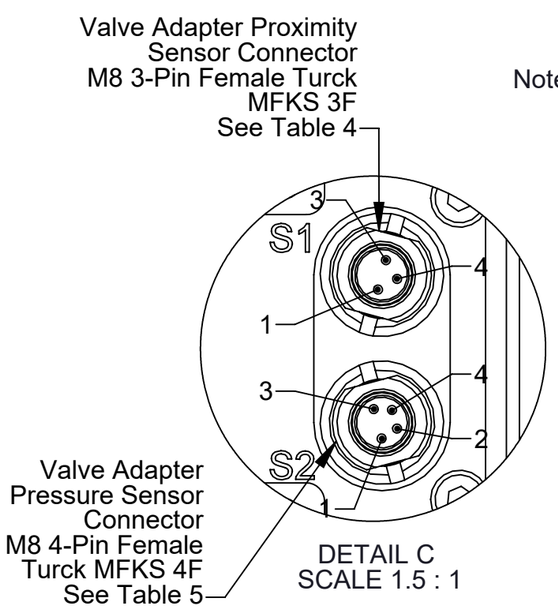


DETAIL G
SCALE 2 : 1
Profinet Connector

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

DETAIL D
SCALE 1.5 : 1

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



DETAIL C
SCALE 1.5 : 1

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

Table 5	
Valve Adapter Pressure Sensor Connector	
1	+5V
2	Pressure Output+
3	Pressure Output-
4	GND_5V

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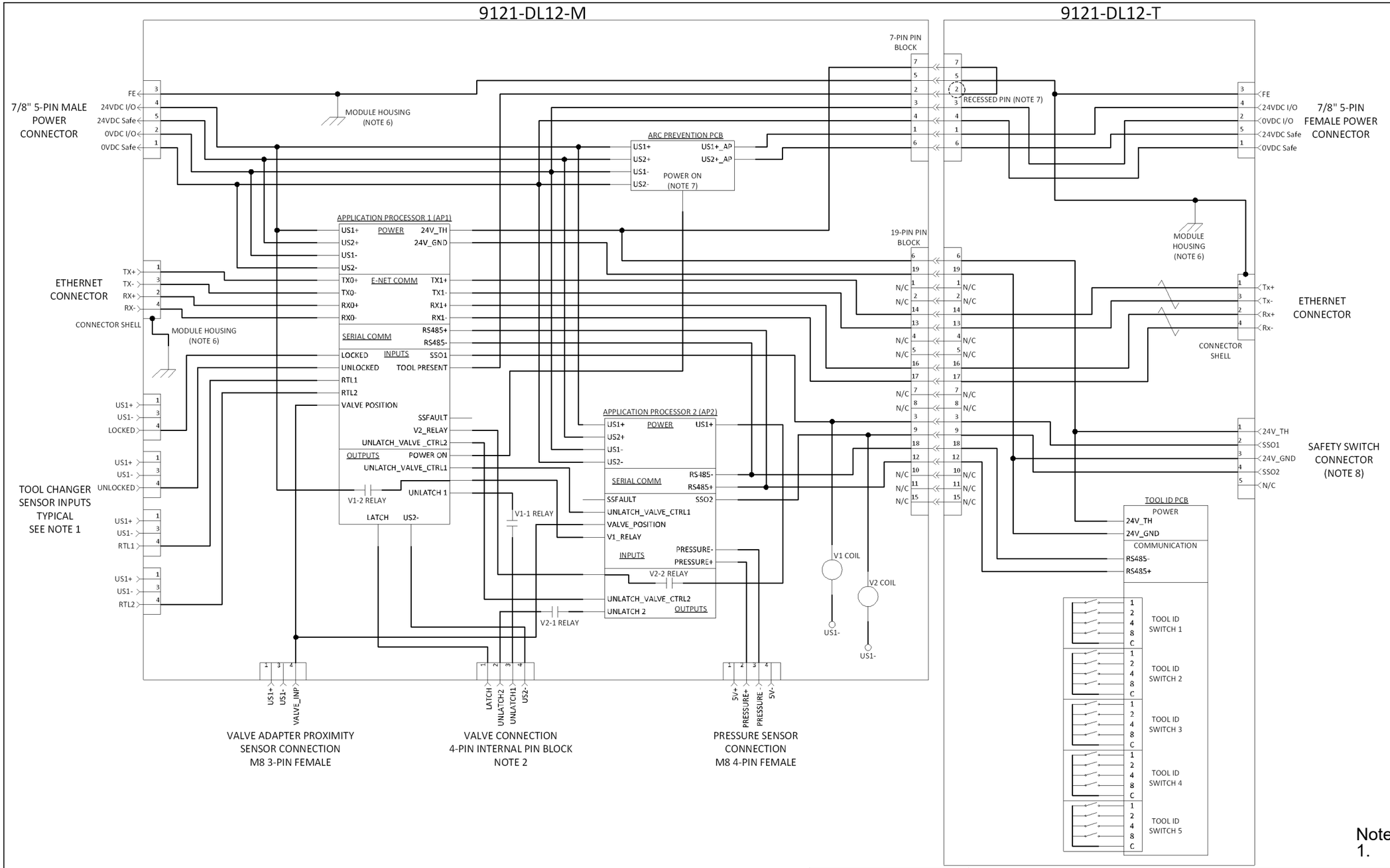
DRAWN BY: W. Berrocal, 8/4/16

CHECKED BY: A. Takla, 8/5/16

PROJECT # 160426-1 SHEET 3 OF 6

TITLE: DL12 Profinet Module Customer Drawing

SCALE	SIZE	DRAWING NUMBER	REVISION
1:2	B	9630-20-DL12	07



Notes:
1. Schematic notes are on Sheet 5.

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PROJECT # 160426-1 SHEET 4 OF 6

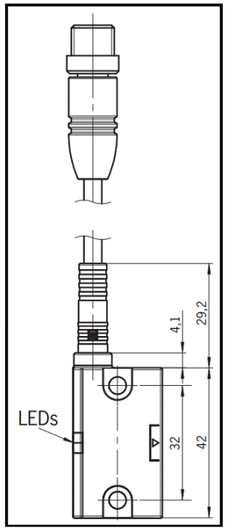
TITLE: DL12 Profinet Module Customer Drawing

SCALE	SIZE	DRAWING NUMBER	REVISION
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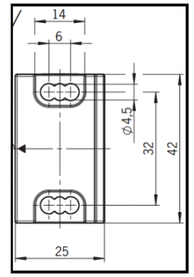
Schematic Notes:

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.





Sensor



Actuator

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

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PROJECT # 160426-1 SHEET 5 OF 6

TITLE: DL12 Profinet Module Customer Drawing

SCALE	SIZE	DRAWING NUMBER	REVISION
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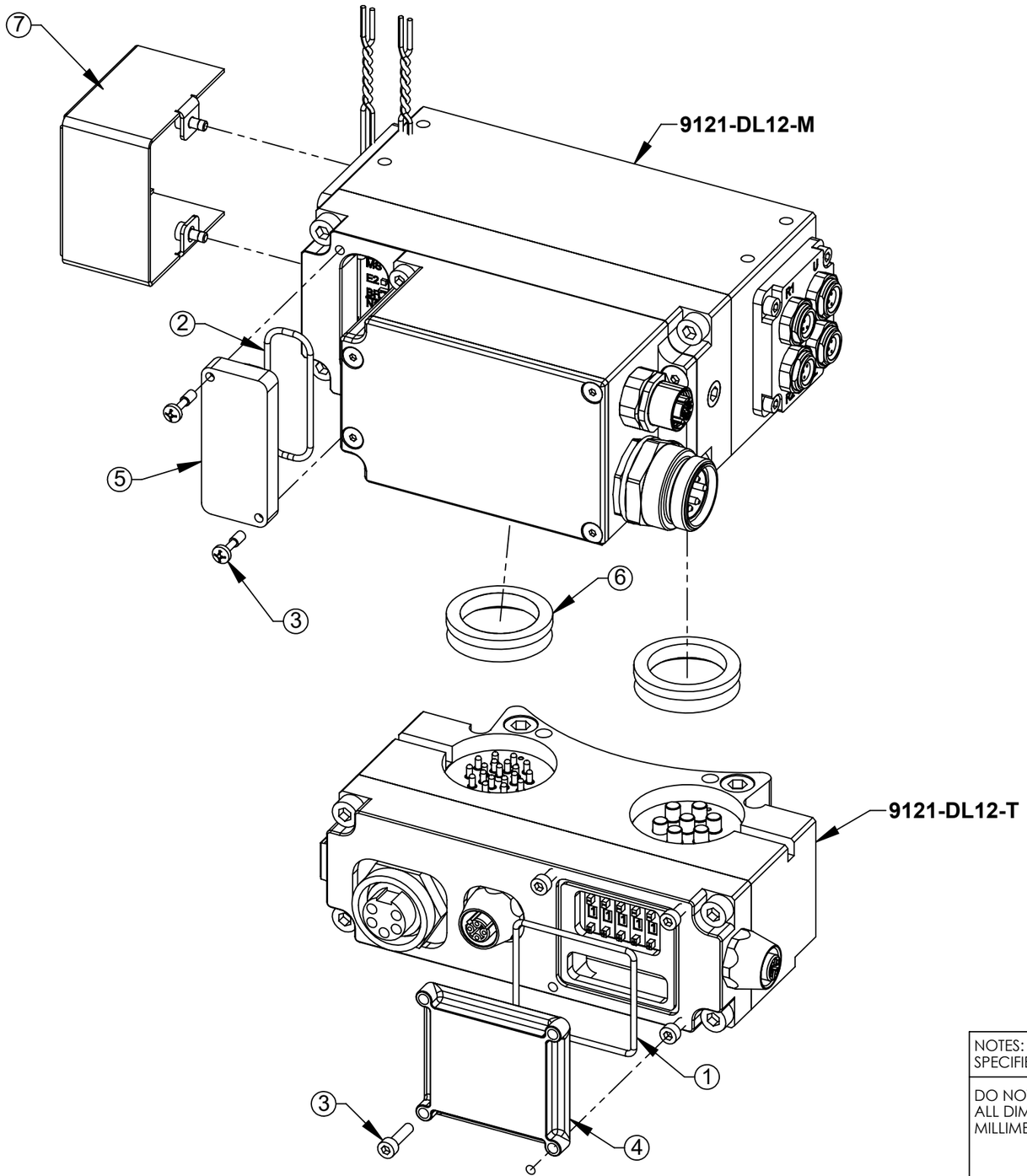


TABLE 9: 9121-DL12-M/T SERVICEABLE PARTS			
ITEM	**QTY**	**PART NUMBER**	**DESCRIPTION**
1	1	3410-0001021-01	O-RING AS568-031
2	1	3410-0001201-01	O-Ring AS568-024
3	6	3500-9957012-21	Pan Head M3 Captive Screw M3 X 12
4	1	3700-20-3058	Tool ID Window
5	1	3700-20-4820	Window, DJ Master, Annular Seal
6	1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

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TITLE: DL12 Profinet Module Customer Drawing

SCALE	SIZE	DRAWING NUMBER	REVISION
1:2	B	9630-20-DL12	07