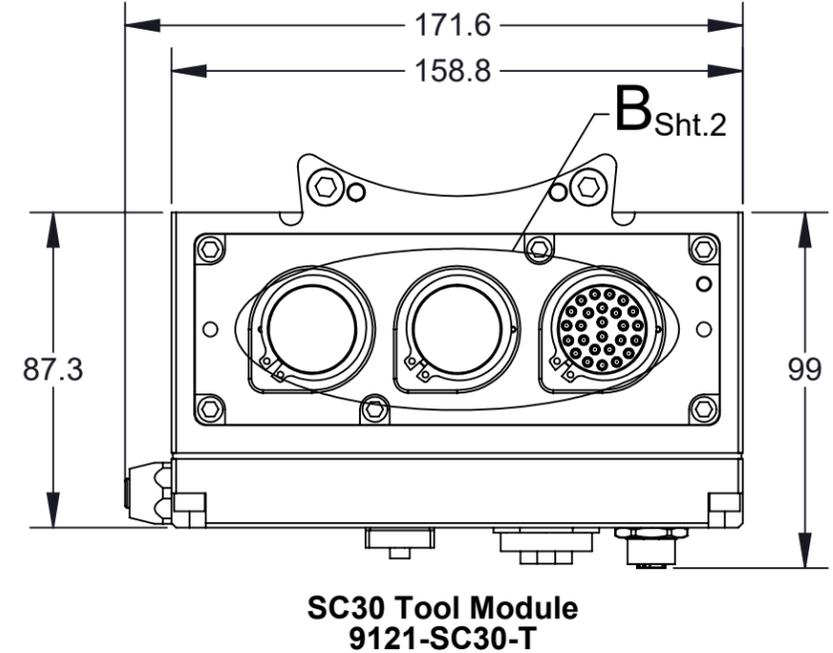
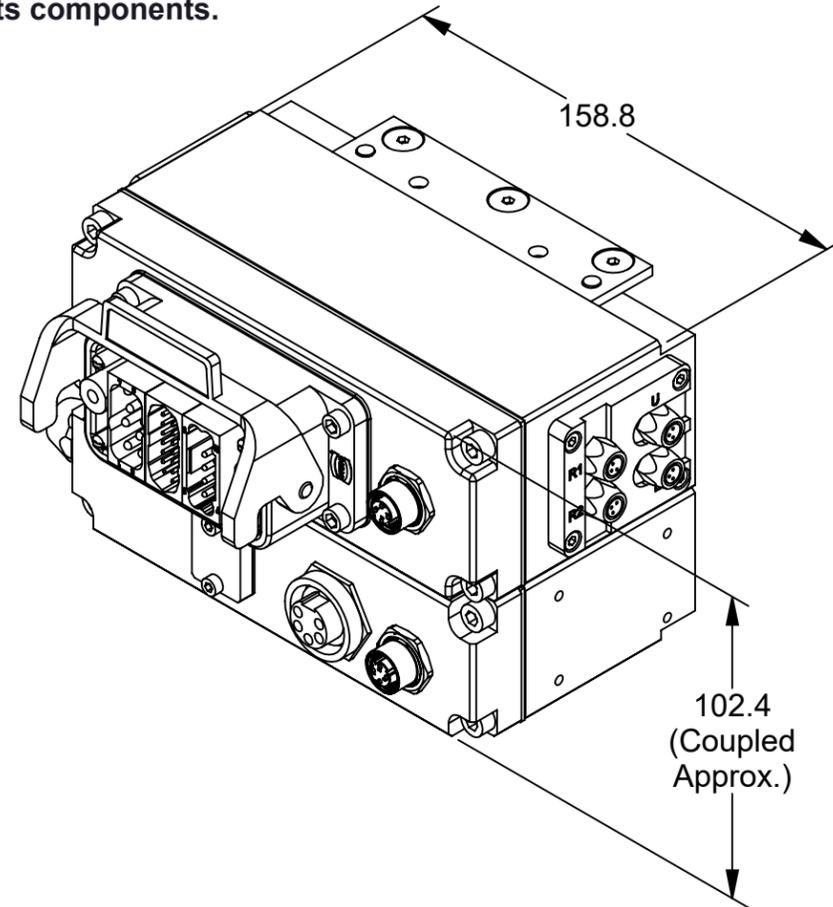
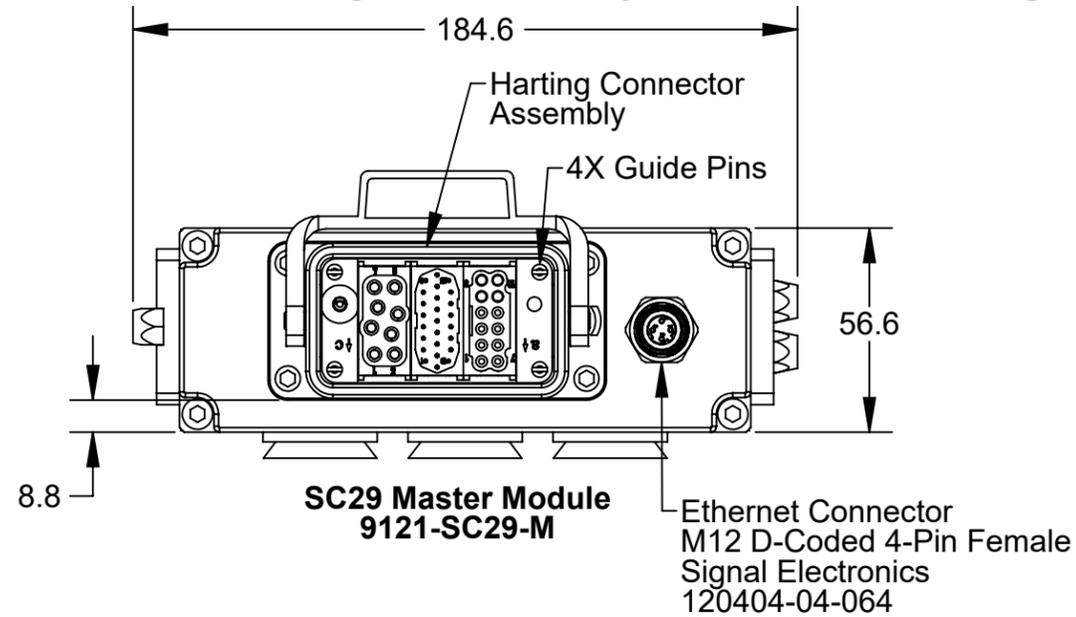
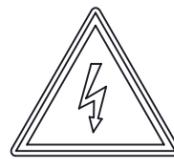


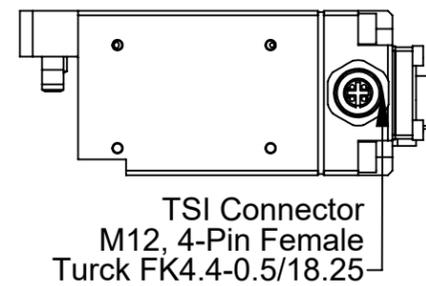
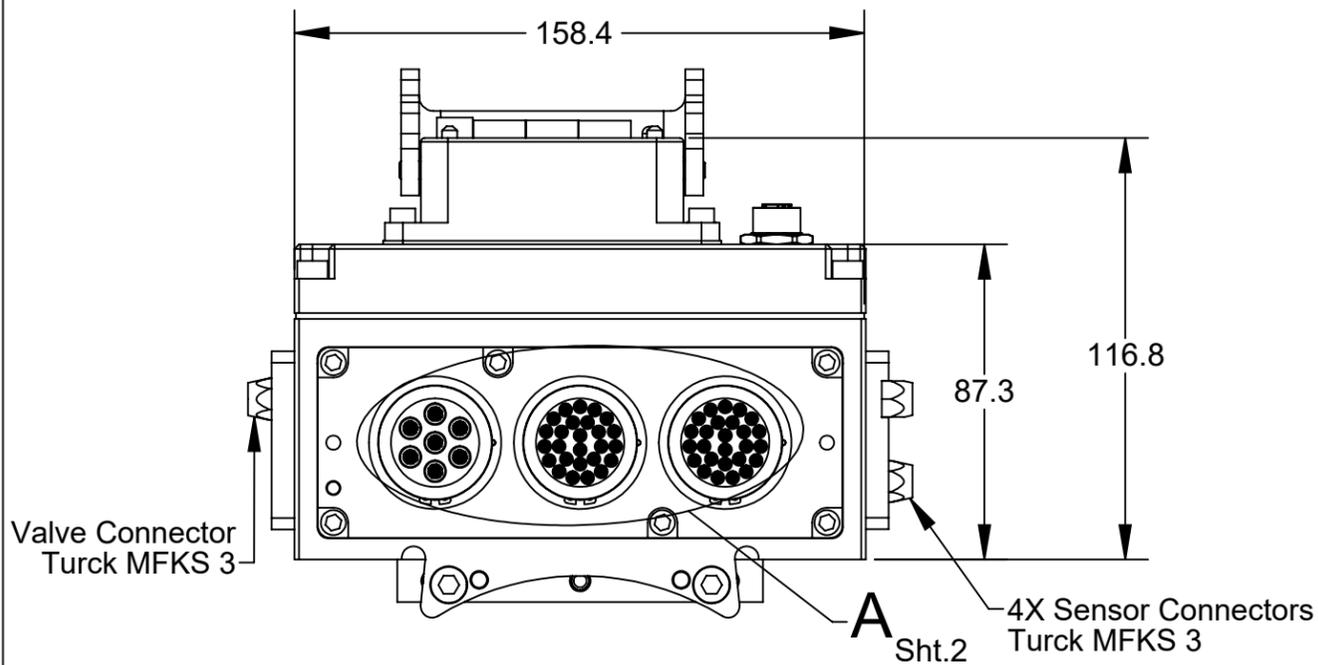
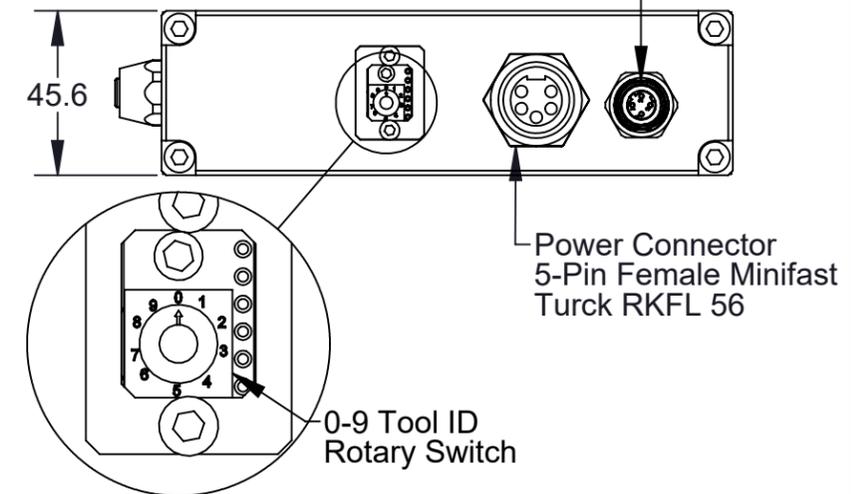
REV.	DESCRIPTION	INITIATOR	DATE
07	Eco 20149; Reconnected dimensions caused by the replacement of 3700-20-8556.SLDPRT with 3700-20-8556.SLDASM for the 9121-SC17-M and 9121-SC29-M	DS	8/17/2021

**"DANGER!" - Electrical Shock Hazard**

This module has a Voltage of 50V or greater, NO contact should be attempted before removing power. This especially includes separation or insertion of the mating connectors or any contact with the tool changer or its components.



Ethernet Connector  
M12 D-Coded 4-Pin Female  
Signal Electronics  
120404-04-064



NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN MILLIMETERS.



3rd ANGLE PROJECTION

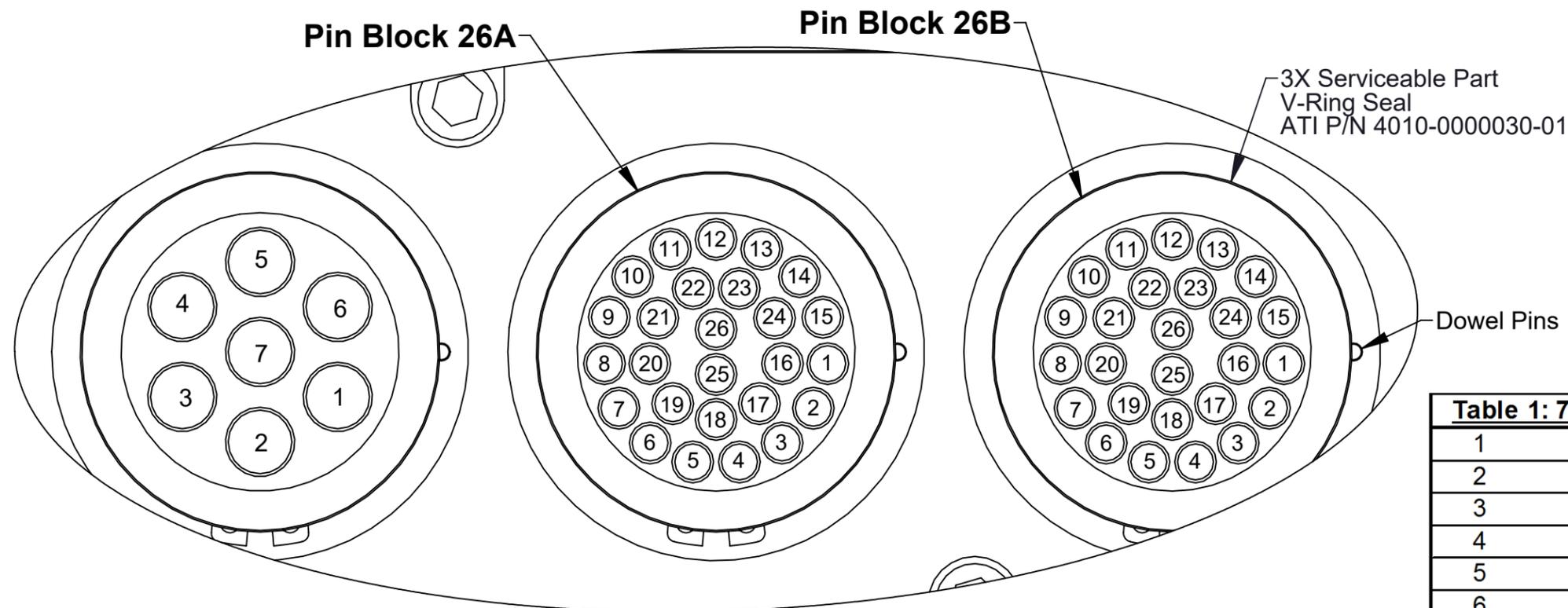


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- Notes:
1. Pin Block pin assignment information on Sheet 2.
  2. Connector details and pin assignment information on Sheet 3.
  3. Electrical schematic and functional notes on Sheet 4.

DRAWN BY: W. Berrocal, 9/21/16		TITLE	
CHECKED BY: A. Takla, 4/24/17 F. Alonso, 4/25/17		SC29 Master, SC30 Tool Customer Drawing	
PROJECT # 160916-1 SHEET 1 OF 4	SCALE 1:2	SIZE B	DRAWING NUMBER 9630-20-SC29M SC30T
			REVISION 07

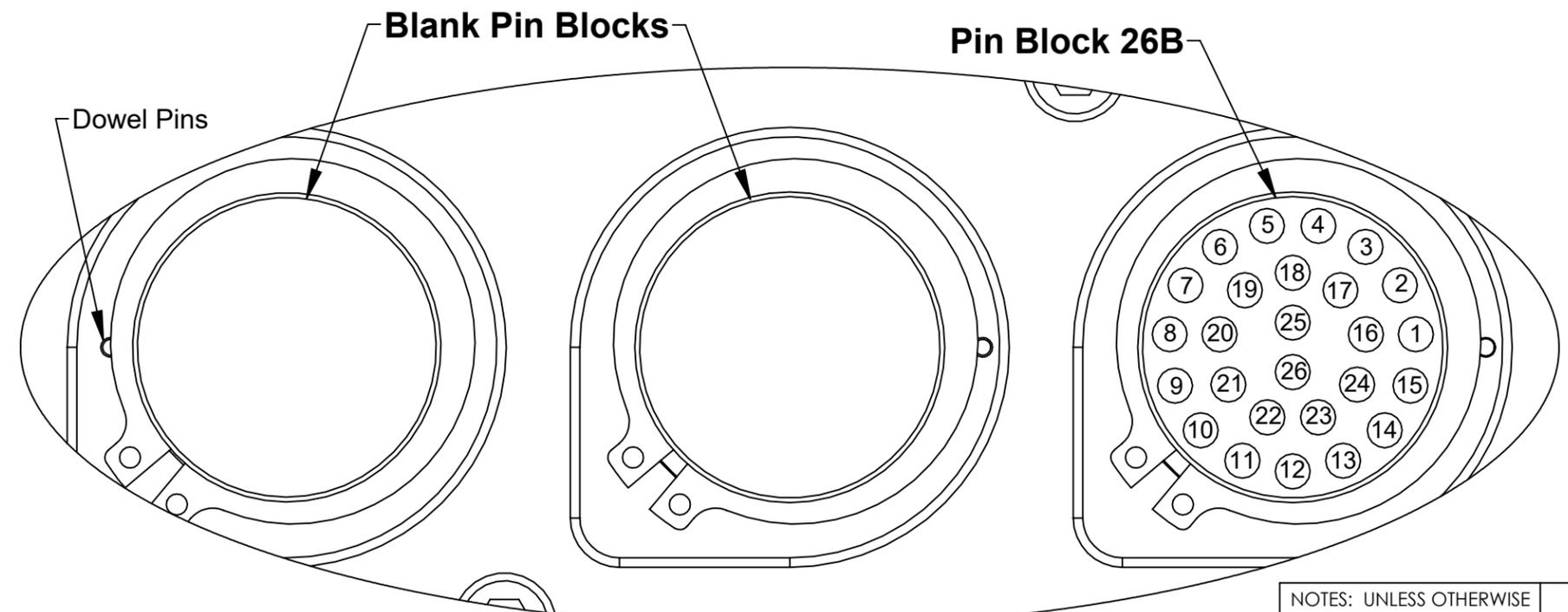


Master Side Pin Blocks  
Scale 2:1

Table 1: 7-Pin Block	
1	N/C
2	N/C
3	N/C
4	N/C
5	N/C
6	N/C
7	N/C

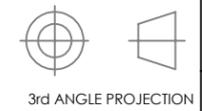
Table 2: Pin Block 26A	
1	N/C
2	N/C
3	N/C
4	N/C
5	N/C
6	N/C
7	N/C
8	N/C
9	N/C
10	N/C
11	N/C
12	N/C
13	N/C
14	N/C
15	N/C
16	N/C
17	N/C
18	N/C
19	N/C
20	N/C
21	N/C
22	N/C
23	N/C
24	N/C
25	N/C
26	N/C

Table 3: Pin Block 26B	
1	N/C
2	24V Unswitched
3	US1 + and US2+ (1)
4	Tool ID1
5	Tool ID2
6	Tool ID4
7	N/C
8	N/C
9	N/C
10	TX+ (1)
11	TX+ (2)
12	TSI In
13	Rx+ (2)
14	Rx+ (1)
15	Rx- (1)
16	N/C
17	US1 + and US2+ (2)
18	Tool ID8
19	US1- and US2- (1)
20	US1- and US2- (2)
21	Tx- (1)
22	Tx- (2)
23	Enet Shield
24	Rx- (2)
25	FE (2)
26	FE (1)



Tool Side Pin Blocks  
Scale 2:1

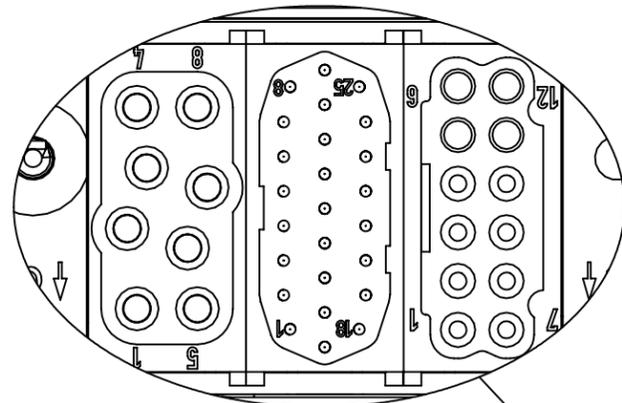
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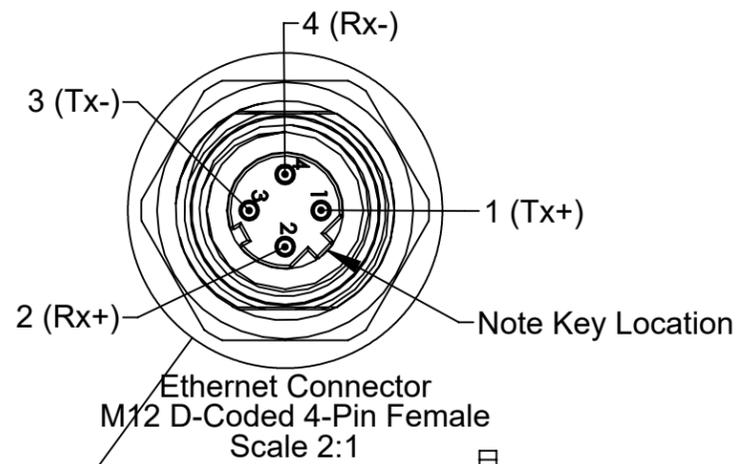
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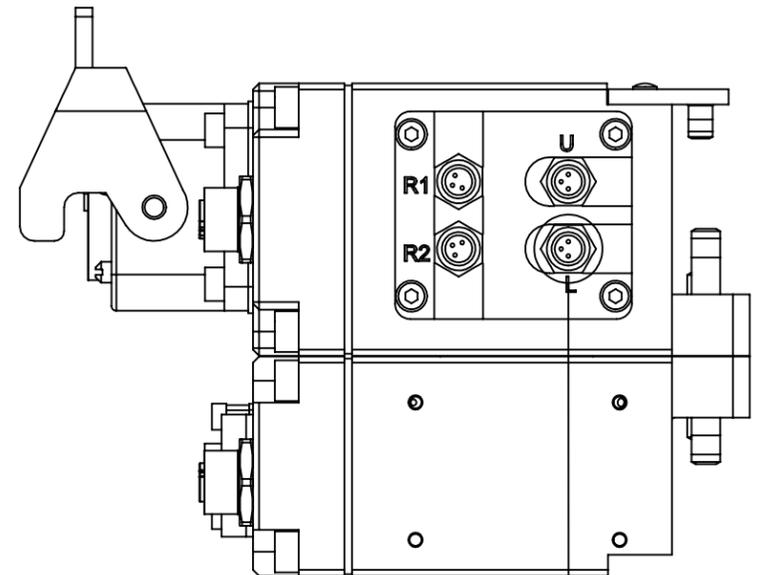
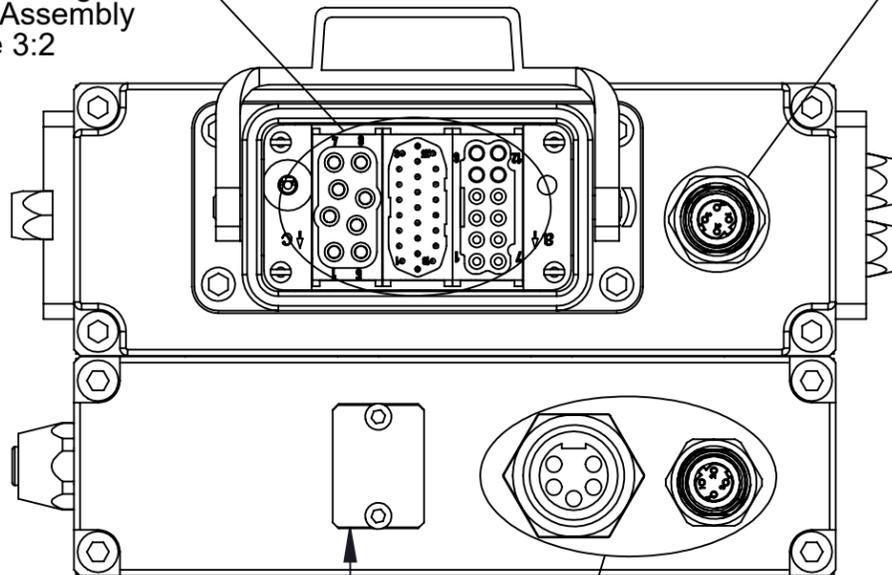
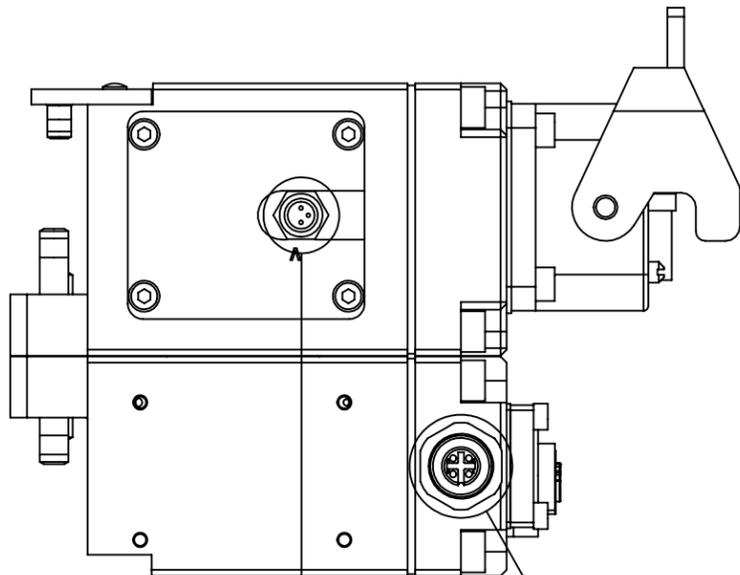
DRAWN BY: W. Berrocal, 9/21/16		TITLE	
CHECKED BY: A. Takla, 4/24/17 F. Alonso, 4/25/17		SC29 Master, SC30 Tool Customer Drawing	
PROJECT # 160916-1	SHEET 2 OF 4	SCALE 1:2	SIZE B
DRAWING NUMBER 9630-20-SC29M SC30T		REVISION 07	



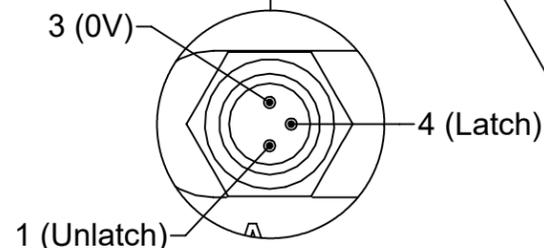
Master Harting  
Connector Assembly  
Scale 3:2



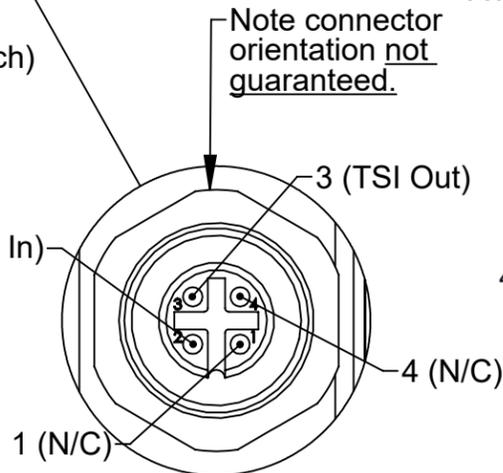
Ethernet Connector  
M12 D-Coded 4-Pin Female  
Scale 2:1



Serviceable Part  
Tool ID Window  
ATI P/N 3700-20-5621

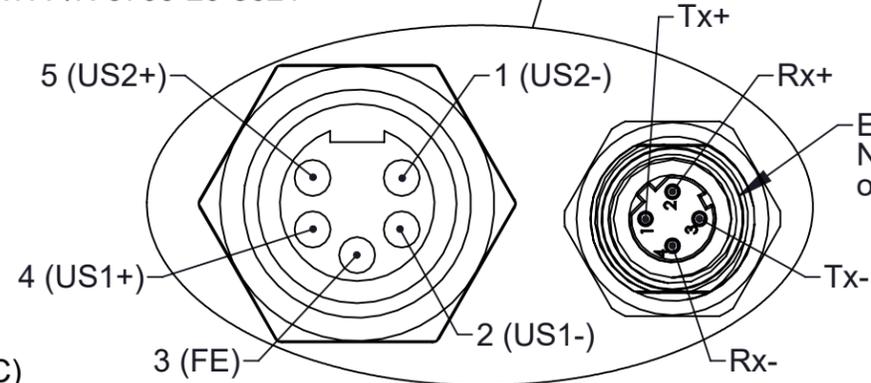


Valve Connector  
M8 3-Pin Female  
Scale 2:1



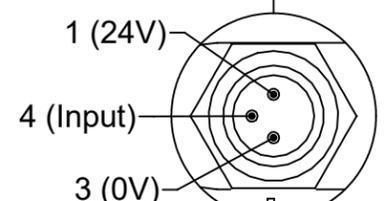
TSI Connector  
M12 4-Pin Female  
Scale 2:1

Note connector  
orientation not  
guaranteed.



Tool Harting Connector Assembly  
Scale 3:2

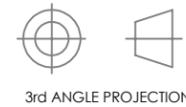
Ethernet Connector  
Note connector  
orientation



Sensor Connectors  
4X M8 3-Pin Female  
Scale 2:1

NOTES: UNLESS OTHERWISE  
SPECIFIED.

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ALL DIMENSIONS ARE IN  
MILLIMETERS.



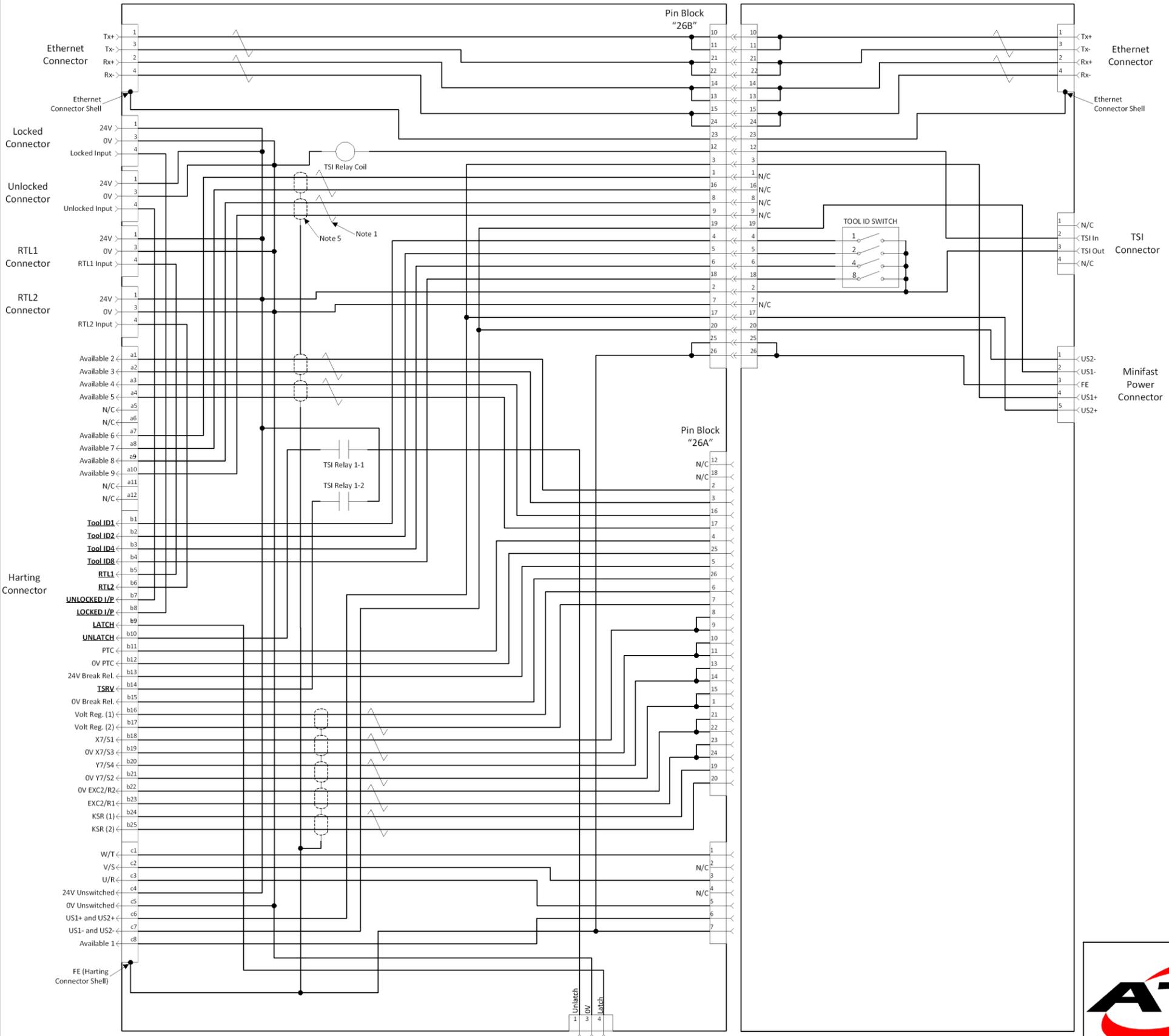
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DRAWN BY: W. Berrocal, 9/21/16		TITLE	
CHECKED BY: A. Takla, 4/24/17 F. Alonso, 4/25/17		SC29 Master, SC30 Tool Customer Drawing	
PROJECT # 160916-1	SHEET 3 OF 4	SCALE 1:5	SIZE B
		DRAWING NUMBER	REVISION
		9630-20-SC29M SC30T	07

9121-SC29-M

9121-SC30-T



**Schematic Notes:**

1. The indicated wire pairs are twisted in the Master and Tool modules.
2. ATI Tool Changer control and sensor signals are identified as bold and underlined.
3. **IMPORTANT: 24V power is required for the Lock, Unlock, Ready-to-Lock sensors, and Tool ID. Therefore it is recommended that the 24V power on pin c4 be unswitched.**
4. Cables for Harting connectors are supplied by the customer.
5. The indicated wire pairs are shielded in the Master and Tool. The shields are connected to FE via the Harting Connector Shell (Cage Pin).
6. The Tool Stand Interlock (TSI) circuit is provided to **ONLY** allow tool release while in the stand or storage location as indicated by actuation of a customer-integrated switch. It is suggested that the customer integrate a single pole, single throw (Normally Open, spring return) limit switch to work with this feature. The limit switch should be mounted to the end effector in such a way that the switch is closed only when the tool is in the stand or storage location.
7. The TSRV input is provided for fault monitoring of the TSI circuit. Please consult the product manual for operation and fault monitoring recommendations.
8. Refer to Table 4 for the Tool ID output (Note: Use pin c4 of the Harting Connector (Master Side) as common). A maximum of 10 unique Tool ID are available.
9. **The SC29 Master is only compatible with double-solenoid valves.**

**Table 4: Tool ID Output**

Switch Position	Harting Connector (Master)			
	b4	b3	b2	b1
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1



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DRAWN BY: W. Berrocal, 9/21/16		TITLE	
CHECKED BY: A. Takla, 4/24/17 F. Alonso, 4/25/17		SC29 Master, SC30 Tool Customer Drawing	
PROJECT # 160916-1	SHEET 4 OF 4	SCALE 1:10	SIZE B
		DRAWING NUMBER 9630-20-SC29M SC30T	REVISION 07