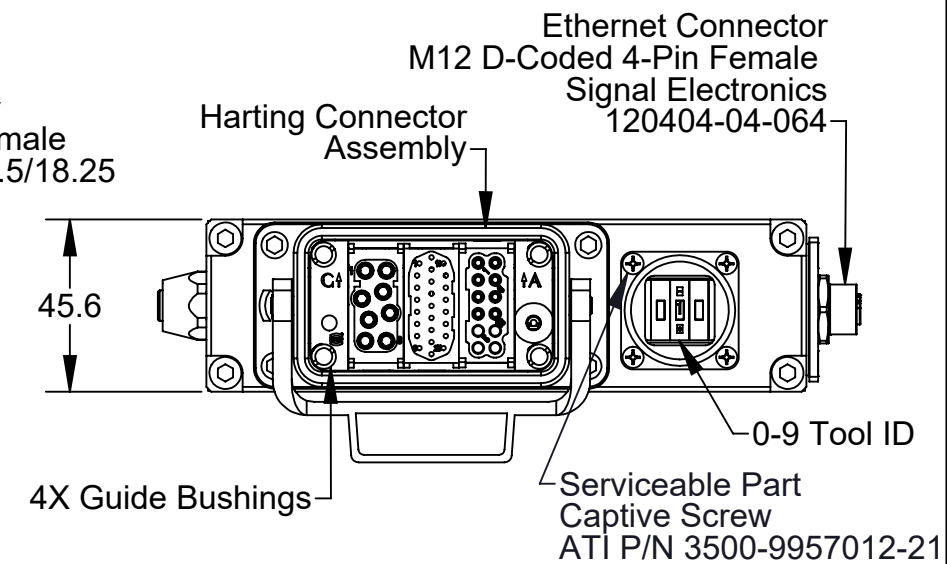
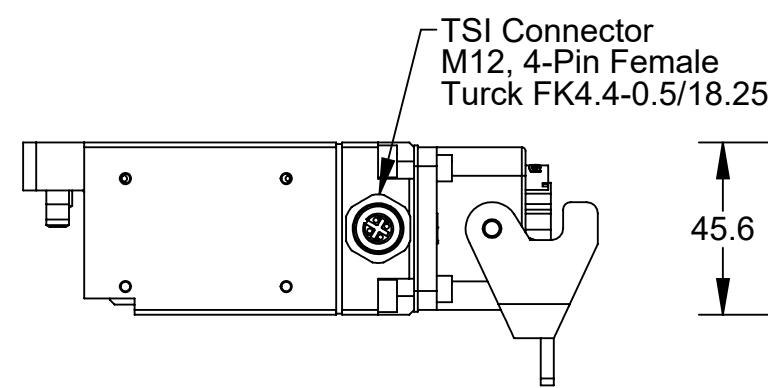
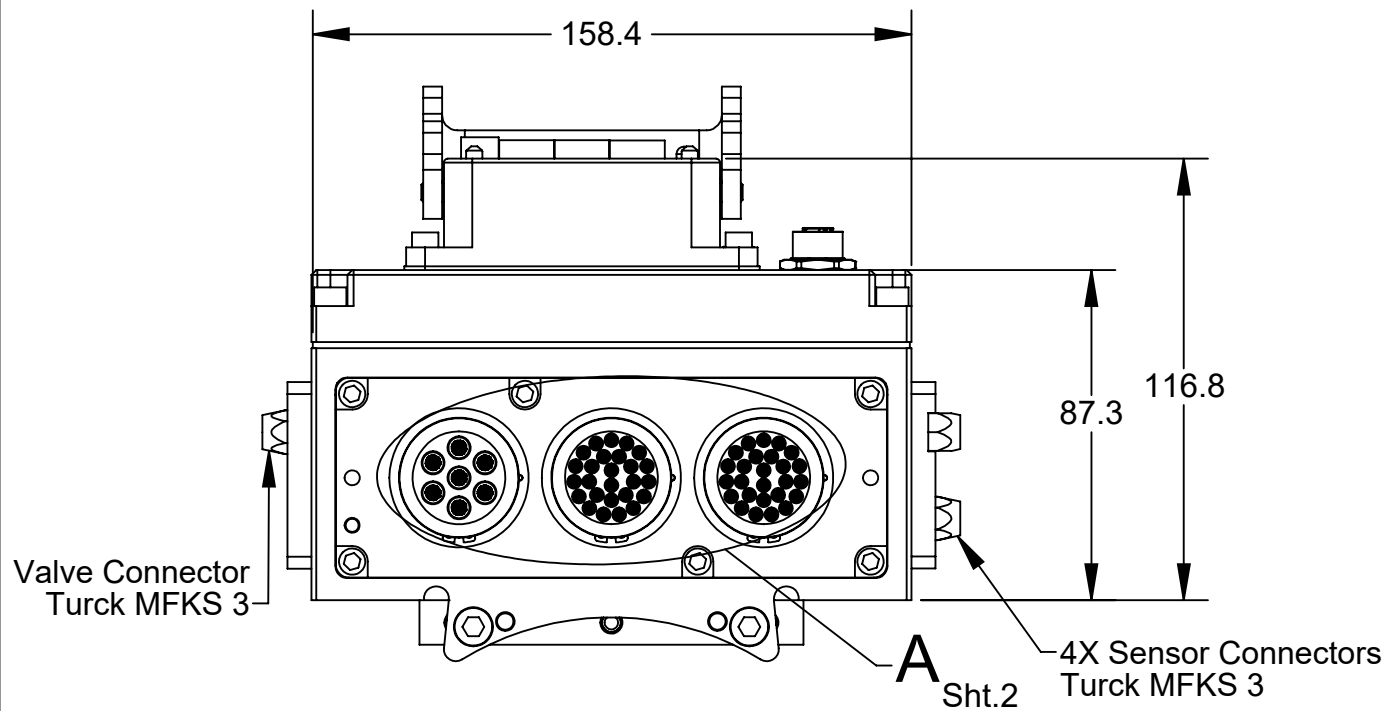
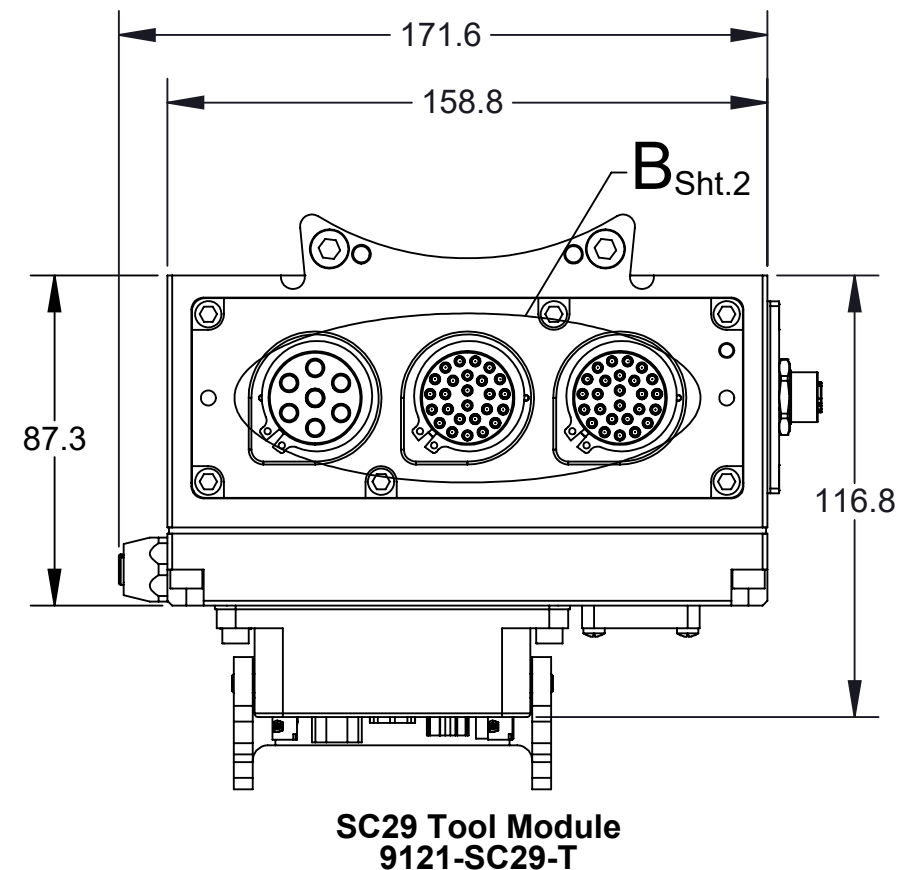
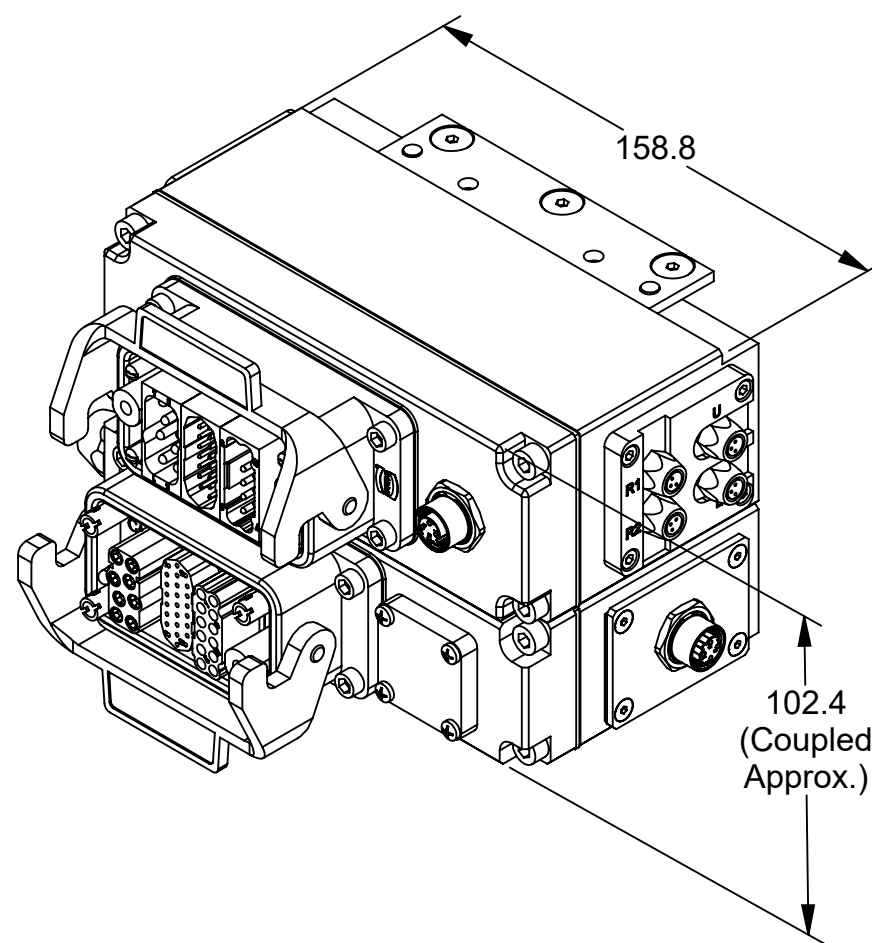
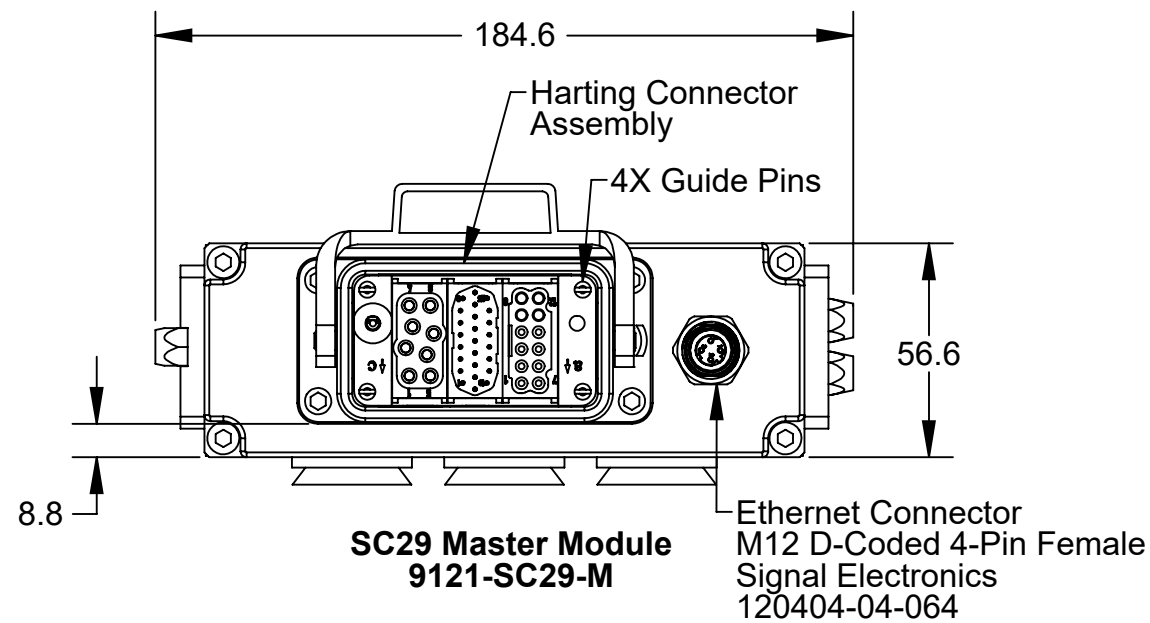


**"DANGER!" - Electrical Shock Hazard**

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.

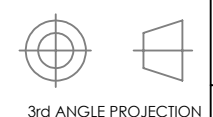
Rev.	Description	Initiator	Date
10	Eco 20149; Reconnected dimensions caused by the replacement of 3700-20-8556.SLDPRT with 3700-20-8556.SLDASM for the 9121-SC29-M	DS	8/16/2021



- 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.

NOTES: UNLESS OTHERWISE SPECIFIED.

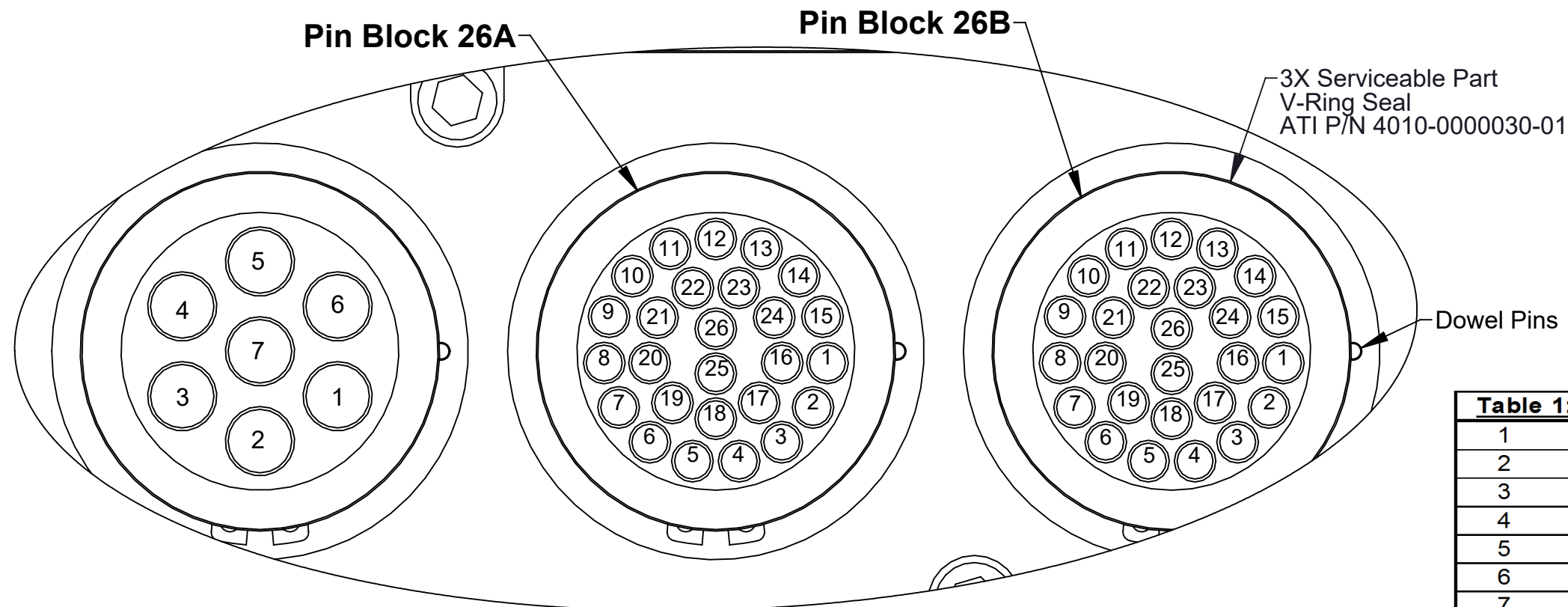
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CHECKED BY: A. Takla, 4/24/17		SC29 Customer Drawing	
F. Alonso, 4/25/17		SCALE	REVISION
PROJECT # 160916-1	SHEET 1 OF 4	1:2	10
		SIZE	DRAWING NUMBER
		B	9630-20-SC29

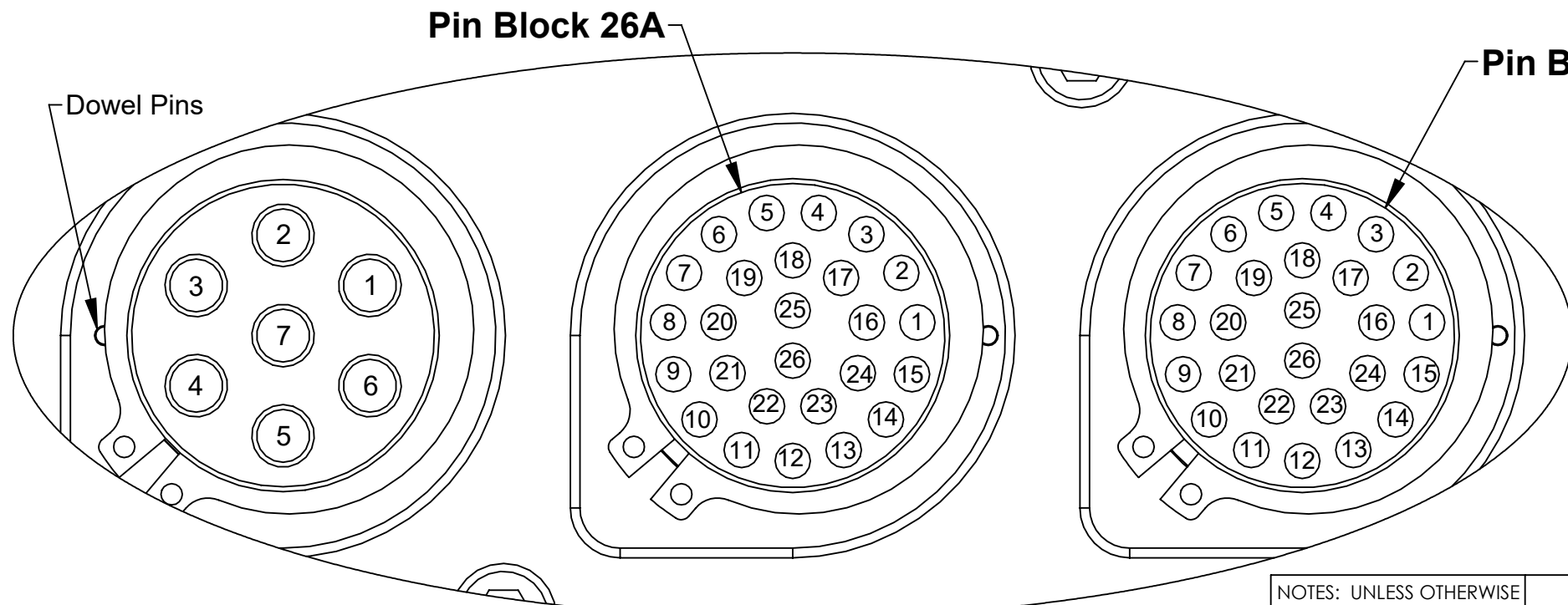


Master Side Pin Blocks  
Scale 2:1

Table 1: 7-Pin Block	
1	W/T
2	N/C
3	V/S
4	N/C
5	U/R
6	Available 1
7	FE

Table 2: Pin Block 26A	
1	0V Y7/S2 (1)
2	Available 2
3	Available 3
4	PTC
5	24V Break Rel.
6	Volt Reg. (1)
7	Volt Reg. (2)
8	X7/S1 (2)
9	X7/S1 (1)
10	0V X7/S3 (2)
11	0V X7/S3 (1)
12	N/C
13	Y7/S4 (2)
14	Y7/S4 (1)
15	0V Y7/S2 (2)
16	Available 4
17	Available 5
18	N/C
19	KSR (1)
20	KSR (2)
21	0V ECX2/R2 (2)
22	0V ECX2/R2 (1)
23	EXC2/R1 (2)
24	EXC2/R1 (1)
25	0V PTC
26	0V Break Rel.

Table 3: Pin Block 26B	
1	Available 6
2	24V Unswitched
3	US1 + and US2+ (1)
4	Tool ID1
5	Tool ID2
6	Tool ID4
7	0V Unswitched
8	Available 8
9	Available 9
10	TX+ (1)
11	TX+ (2)
12	TSI In
13	Rx+ (2)
14	Rx+ (1)
15	Rx- (1)
16	Available 7
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

NOTES: UNLESS OTHERWISE SPECIFIED.

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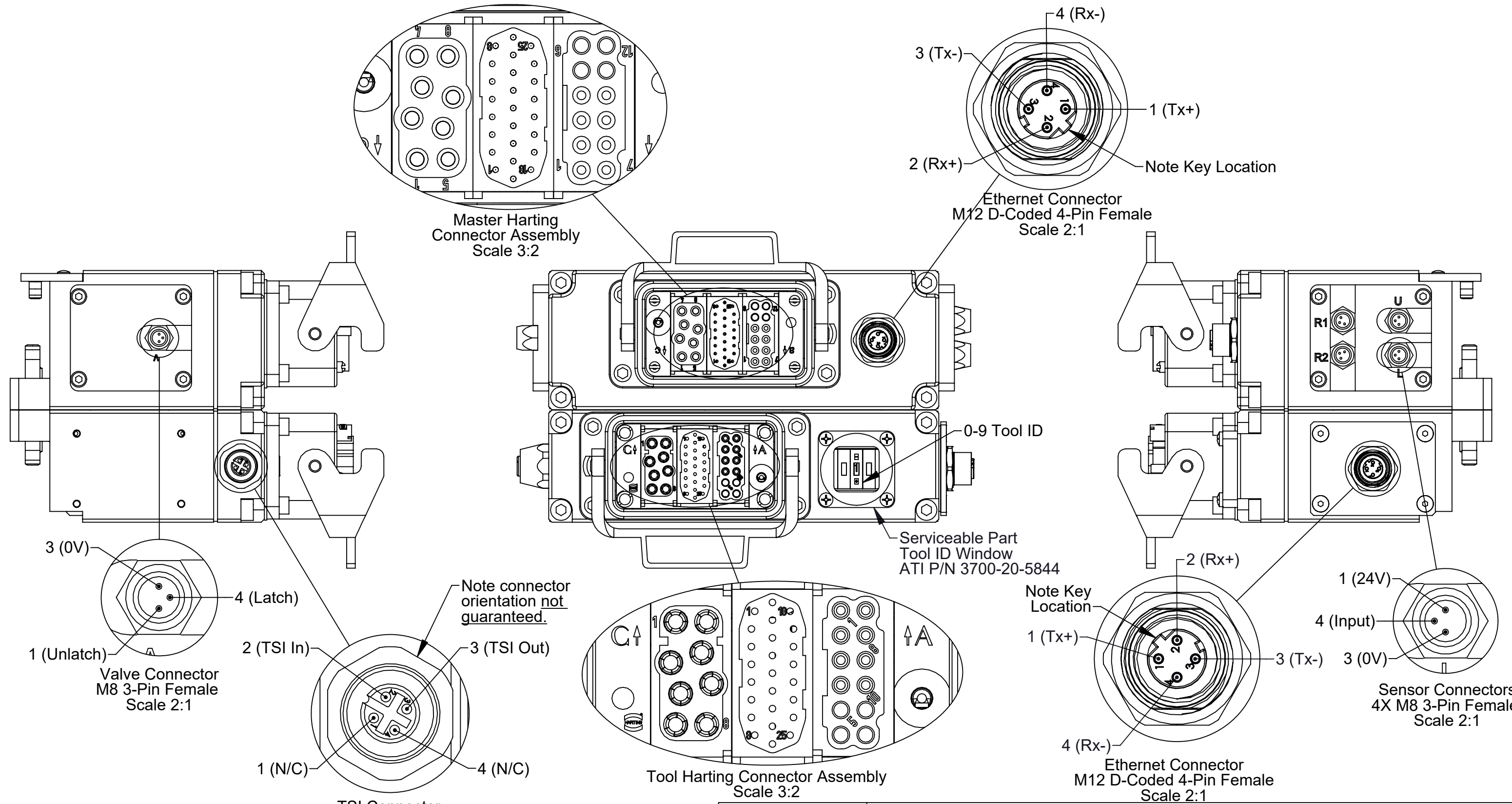
3rd ANGLE PROJECTION



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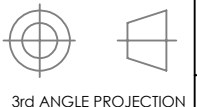
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PROJECT # 160916-1	SHEET 2 OF 4	1:2	B
		DRAWING NUMBER	REVISION
		9630-20-SC29	10



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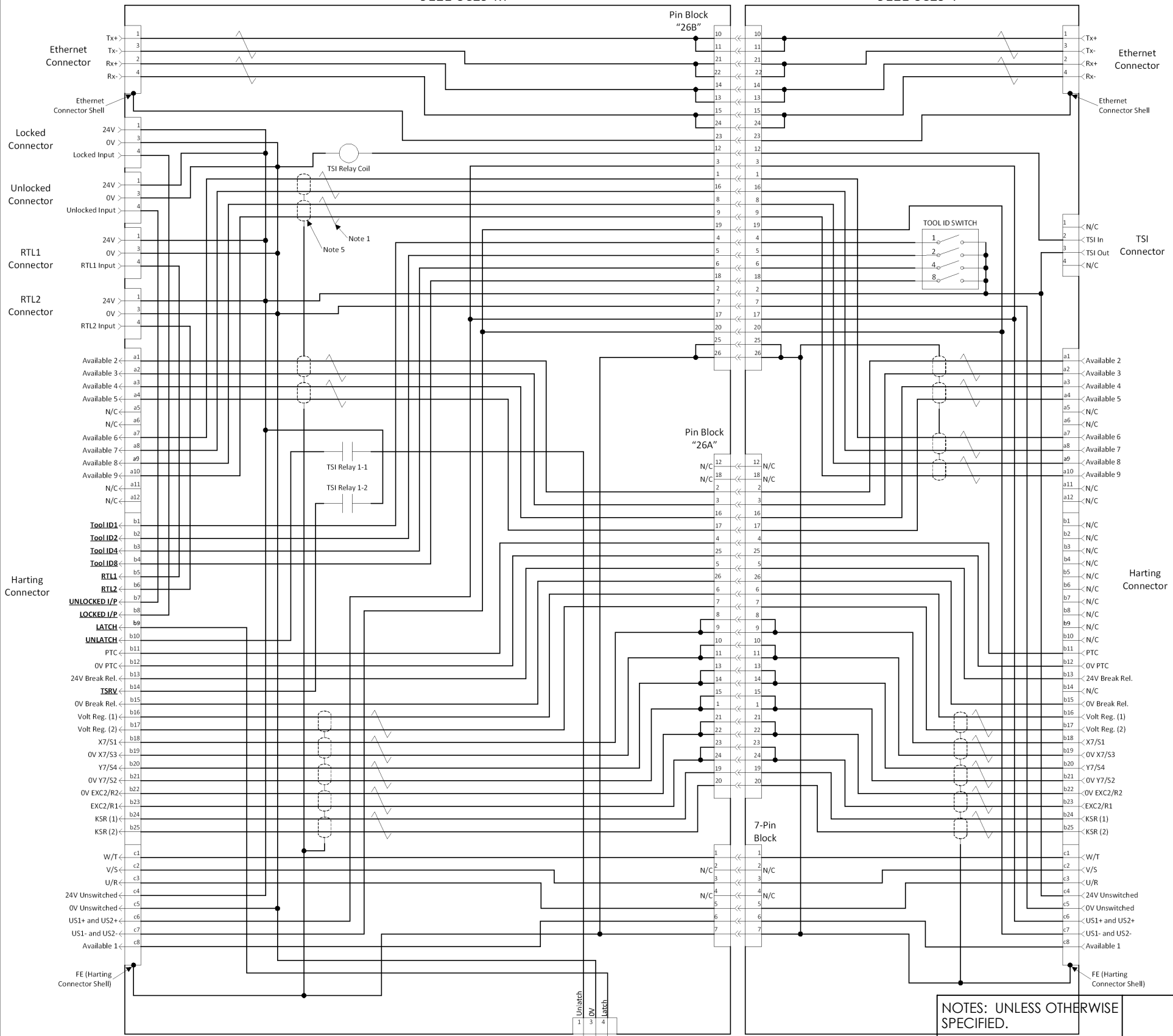
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		DRAWING NUMBER	REVISION
		9630-20-SC29	10



**Schematic Notes:**

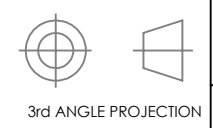
1. The indicated wire pairs are twisted in the Master and Tool modules.
2. ATI Tool Changer control and sensor signals are identified as bold and underlined.
3. **IMPORTANT:** 24V power is required for the Lock, Unlock, Ready-to-Lock sensors, and Tool ID. Therefore it is recommended that the 24V power 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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		DRAWING NUMBER	REVISION
		9630-20-SC29	10