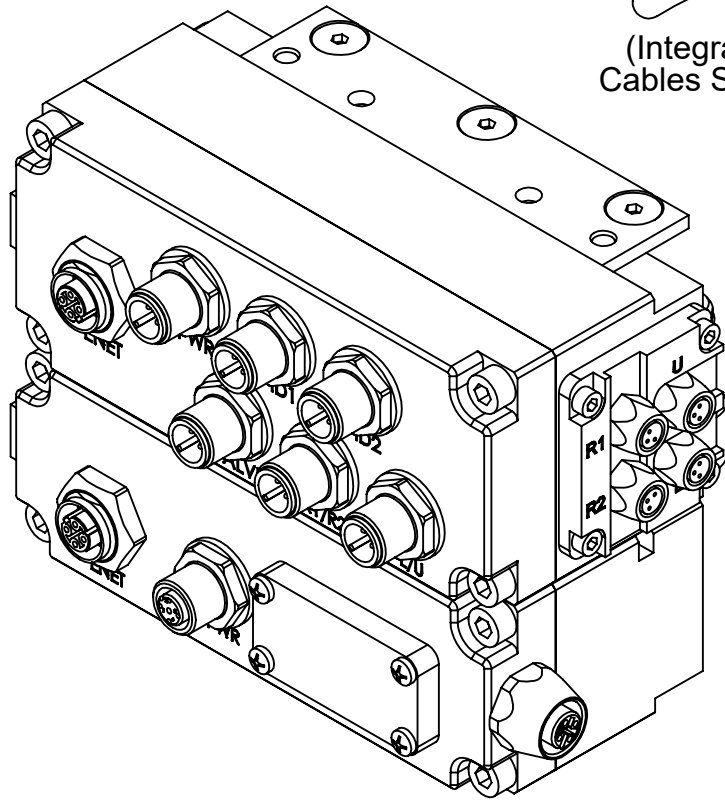
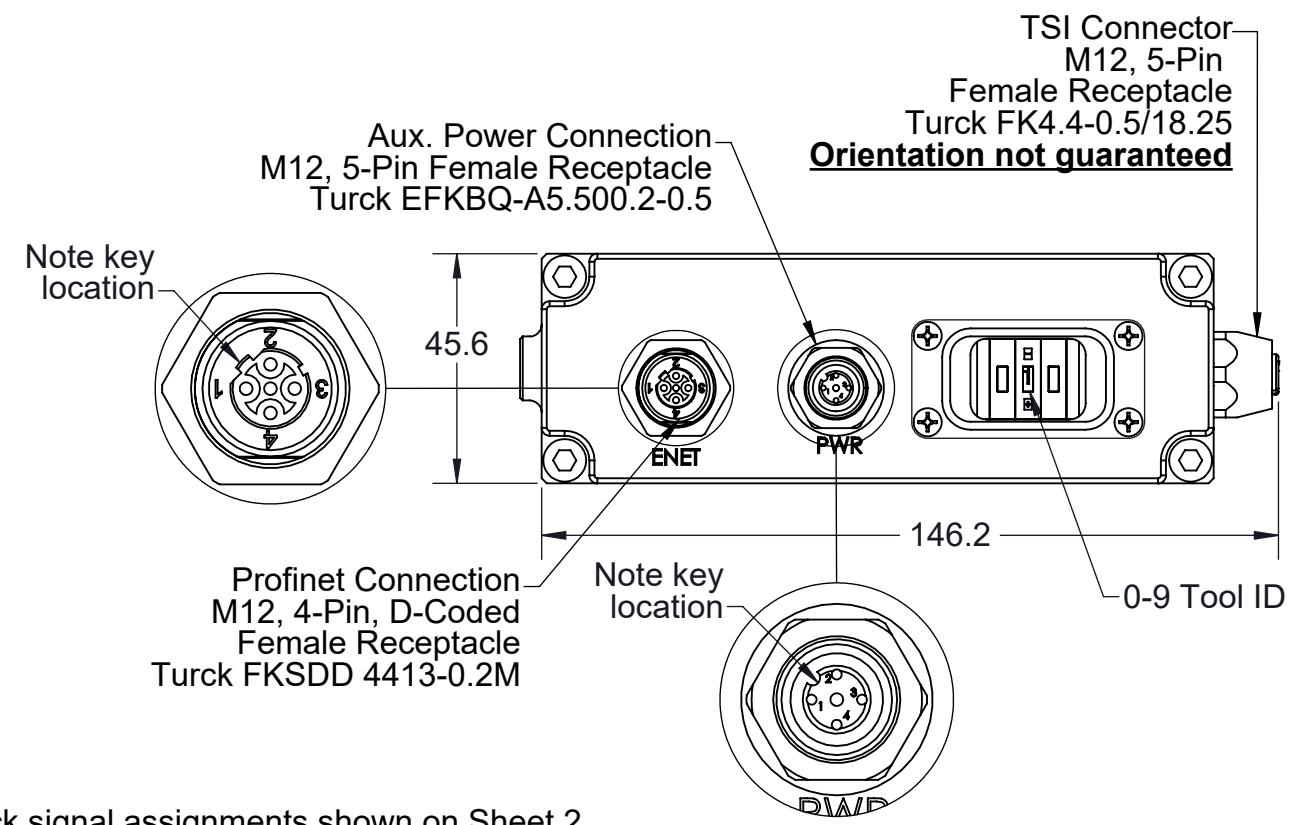
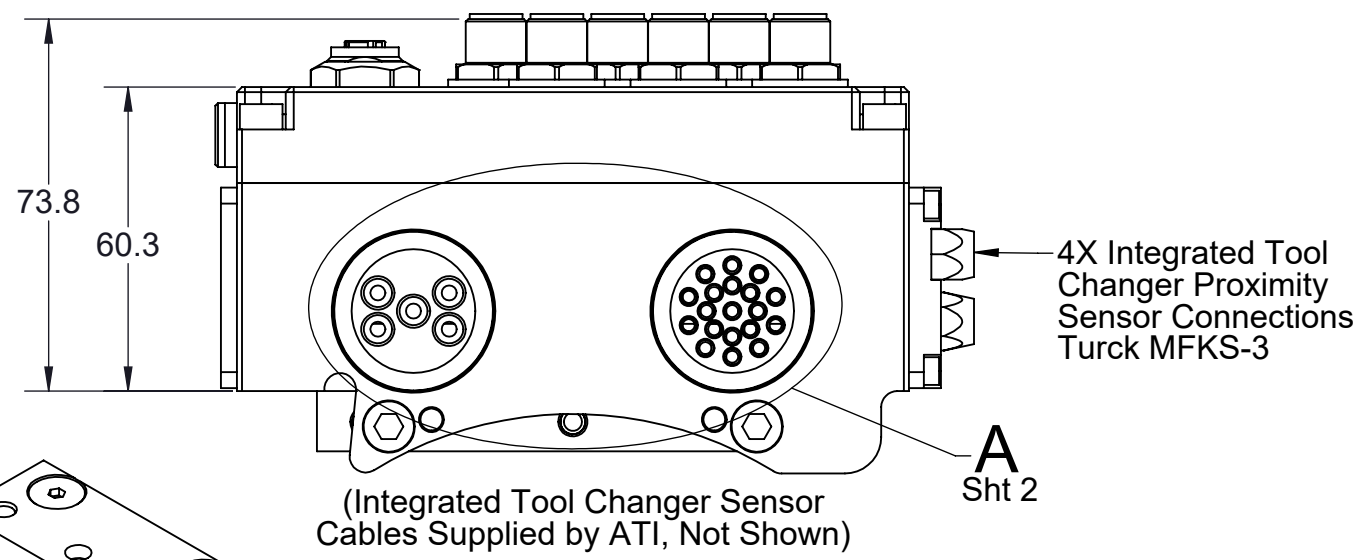
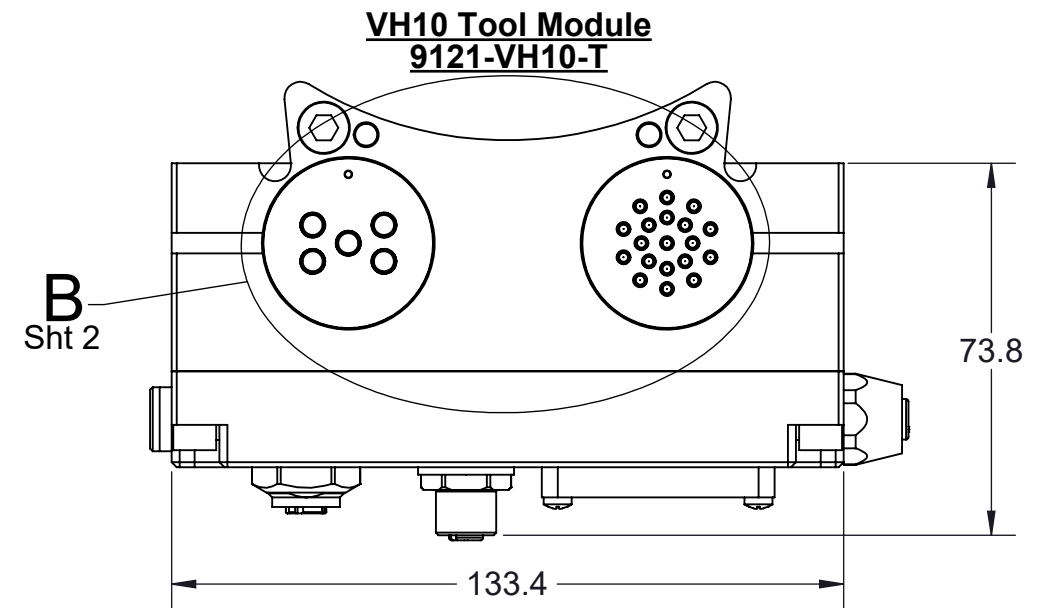
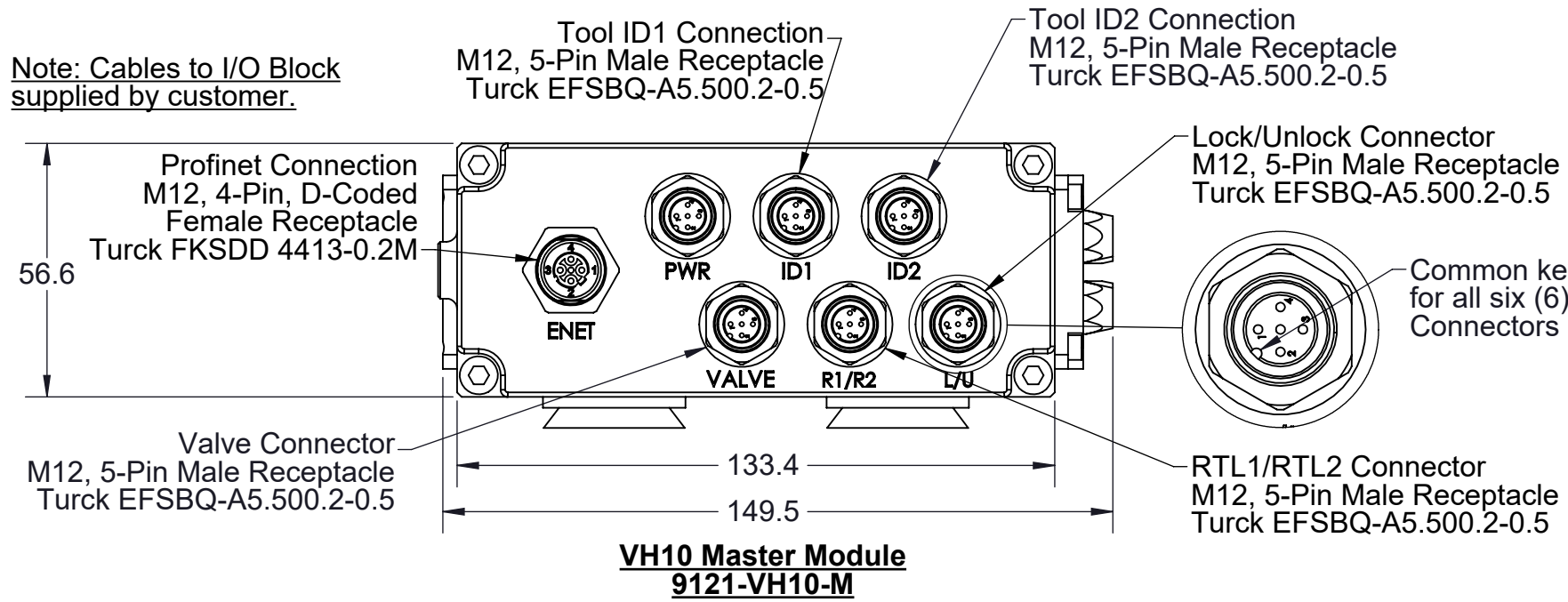


Rev.	Description	Initiator	Date
04	Eco 18995; Replaced 1510-2313008-05 with 1510-2313036-05. Fixed dangling dimensions. Updated title block.	MAL	6/18/2020

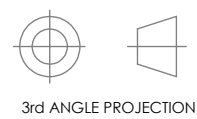
Note: Cables to I/O Block supplied by customer.



- Notes:
1. Pin block signal assignments shown on Sheet 2.
  2. Connector pin designations shown on Sheet 3.
  3. Electrical schematic of VH10 Master and Tool shown on Sheet 4.

NOTES: UNLESS OTHERWISE SPECIFIED.

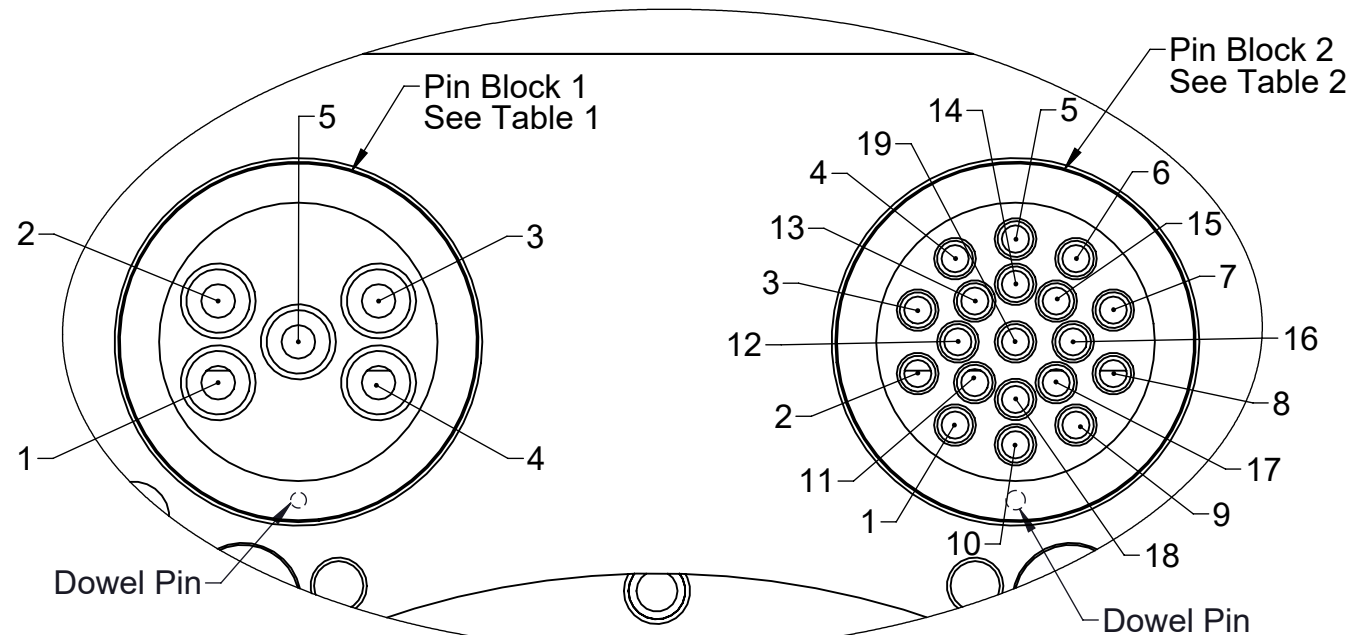
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DRAWN BY: W. Berrocal, 8/20/08		TITLE	
CHECKED BY: L. Jamshidi, 7/21/11		VH10 Module Customer Drawing	
PROJECT # 110719-1	SHEET 1 OF 4	SCALE 1:2	SIZE B
DRAWING NUMBER 9630-20-VH10		REVISION 04	



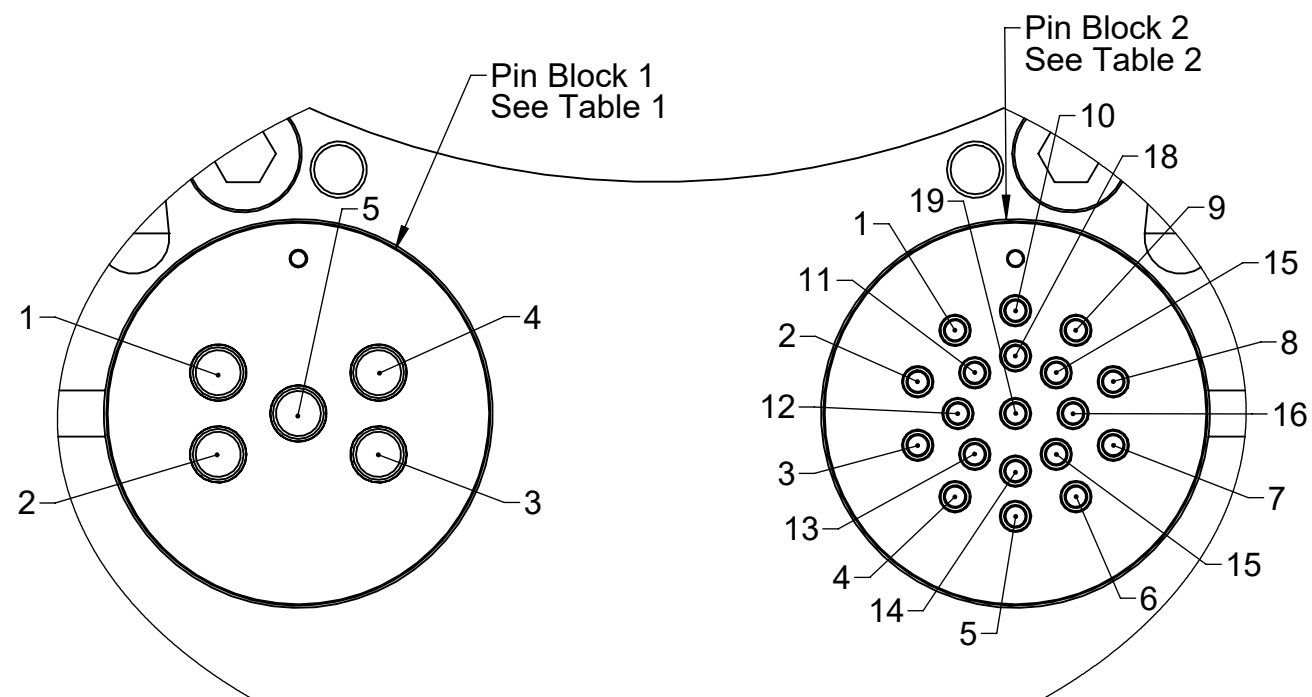
DETAIL A  
SCALE 1.5 : 1

**Table 1: VH10 Pin Block 1**

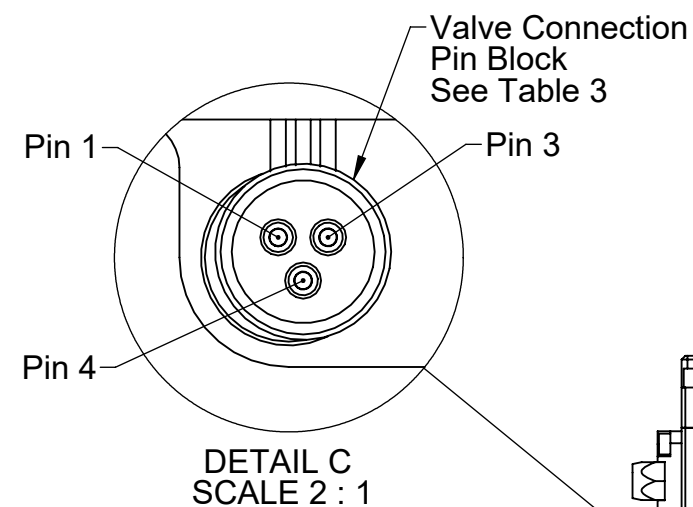
Pin	Description
1	Tx+
2	Rx+
3	Tx-
4	Rx-
5	FE

**Table 2: VH10 Pin Block 2**

Pin	Description
1	Tool ID1
2	24V, Unswitched
3	24V, Switched
4	24V (Tool ID)
5	N/C
6	TSI Out
7	N/C
8	N/C
9	TSI In
10	N/C
11	Tool ID2
12	Tool ID4
13	Tool ID8
14	N/C
15	N/C
16	Ground, Switched
17	N/C
18	Reserved
19	Ground, Unswitched



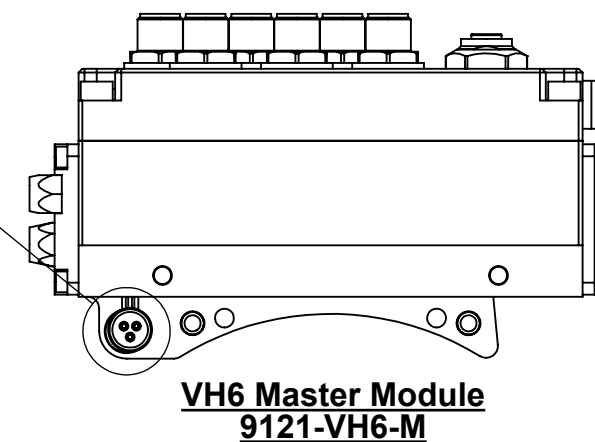
DETAIL B  
SCALE 1.5 : 1



**Table 3**

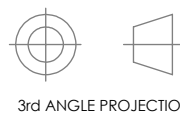
**Internal Valve Connection**

Pin 1	V+	Unlock Output
Pin 3	V-	Common
Pin 4	V+	Lock Output



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CHECKED BY: L. Jamshidi, 7/21/11

TITLE

VH10 Module Customer Drawing

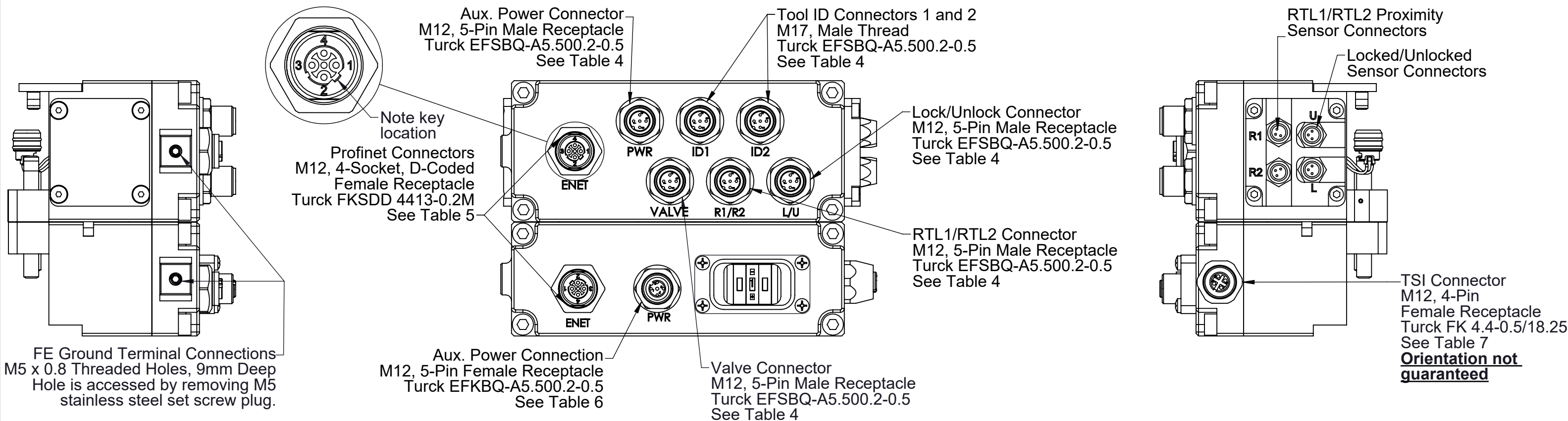
PROJECT # 110719-1 SHEET 2 OF 4

SCALE  
1:2

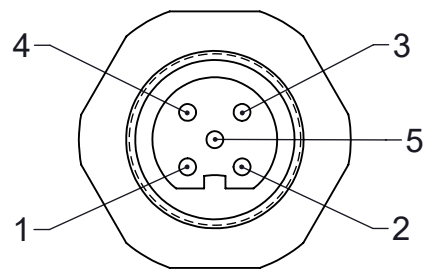
SIZE  
B

DRAWING NUMBER  
9630-20-VH10

REVISION  
04

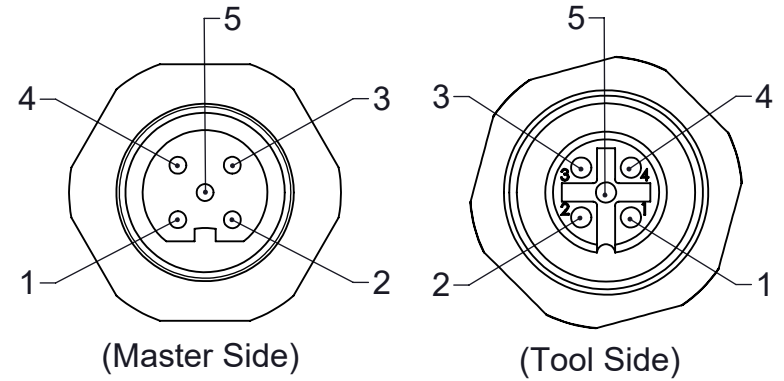


FE Ground Terminal Connections  
M5 x 0.8 Threaded Holes, 9mm Deep  
Hole is accessed by removing M5  
stainless steel set screw plug.



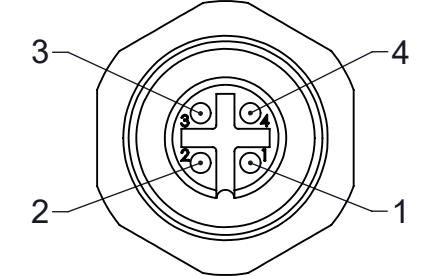
**Table 4: Pin Assignment, M12 5-Pin Receptacles**

VALVE Connector		R1/R2 Connector		L/U Connector		ID1 Connector		ID2 Connector	
1	N/C	1	24V	1	24V	1	24V	1	24V
2	Unlatch (24V, Switched)	2	RTL1	2	Locked	2	Tool ID1	2	Tool ID4
3	Ground	3	Ground	3	Ground	3	Ground	3	Ground
4	Latch (24V, Switched)	4	RTL2	4	Unlocked	4	Tool ID2	4	Tool ID8
5	FE	5	FE	5	FE	5	FE	5	FE



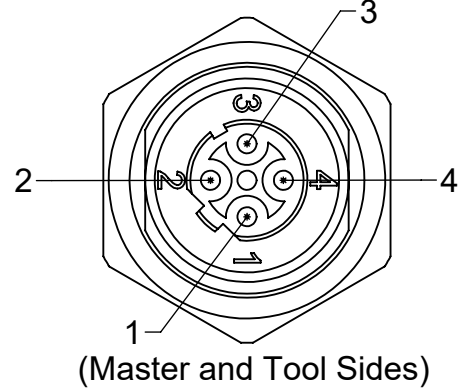
**Table 6: Pin Assignment  
Aux. Power Connectors**

1	24V, Unswitched
2	Ground, Switched
3	Ground, Unswitched
4	24V, Switched
5	Reserved



**Table 7: Pin Assignment,  
TSI Connector**

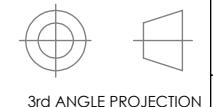
1	N/C
2	TSI In
3	TSI Out
4	N/C



**Table 5: Pin Assignment,  
M12 D-Coded Profinet  
Connector**

1	Tx+
2	Rx+
3	Tx-
4	Rx-

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CHECKED BY: L. Jamshidi, 7/21/11  
PROJECT # 110719-1 SHEET 3 OF 4

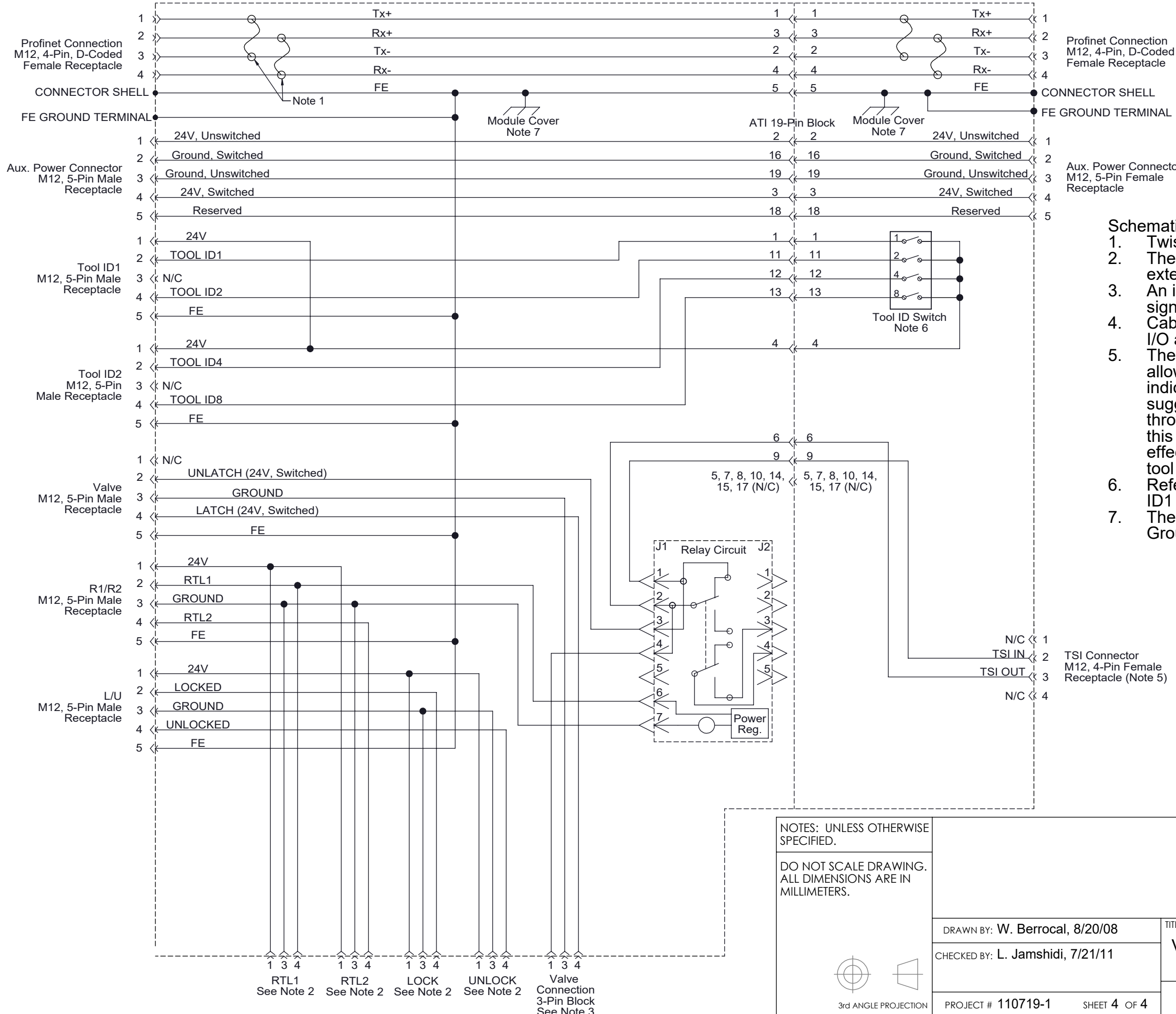
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TITLE VH10 Module Customer Drawing		REVISION 04	
SCALE 1:2	SIZE B	DRAWING NUMBER 9630-20-VH10	

Control/Signal Module, Master  
9121-VH10-M

Control/Signal Module, Tool  
9121-VH10-T



Schematic Notes:

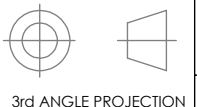
1. Twisted wire pairs are maintained on the indicated pins.
2. The complete tool changer package comes equipped with external cables that are connected to the sensors.
3. An internal pin block is used to transmit the Latch/Unlatch signal to the valve adapter.
4. Cables for Profinet, Aux. Power, Tool ID, and Tool Changer I/O are supplied by the customer.
5. 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 "made" only when the tool is in the stand or storage location.
6. Refer to Table 8 for the Tool ID output (Note: Use Pin 1 of the ID1 or ID2 connector as common).
7. The Profinet connector shell and FE are connected to the FE Ground Terminal located on the Module Cover.

Table 8: Tool ID Binary Output

Switch Position	Tool ID2 Connector		Tool ID1 Connector	
	Pin 4	Pin 2	Pin 4	Pin 2
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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PROJECT # 110719-1	SHEET 4 OF 4	SCALE 1:1	SIZE B
DRAWING NUMBER 9630-20-VH10		REVISION 04	