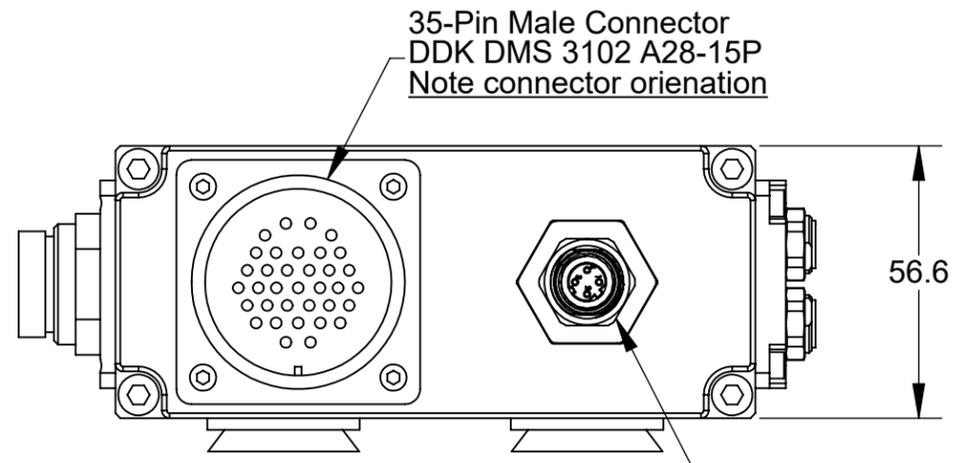


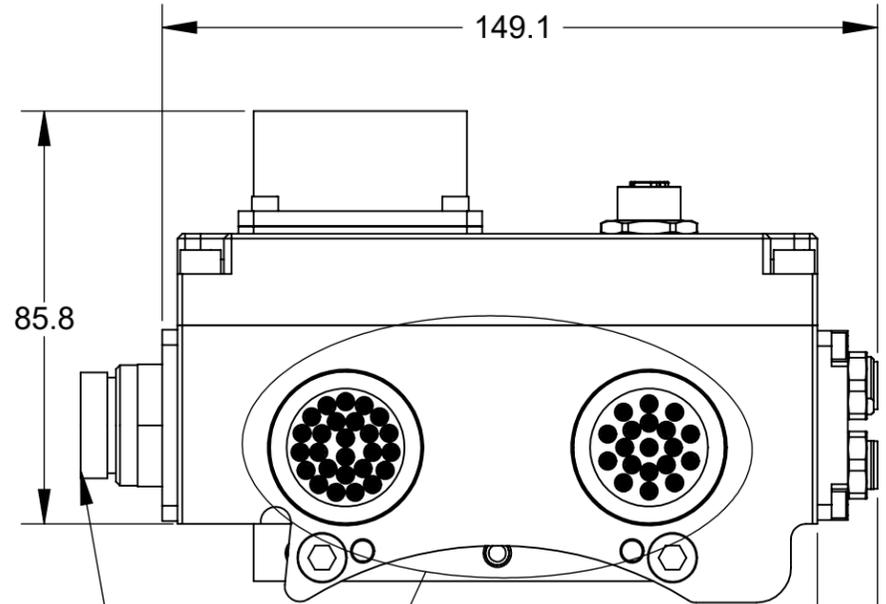
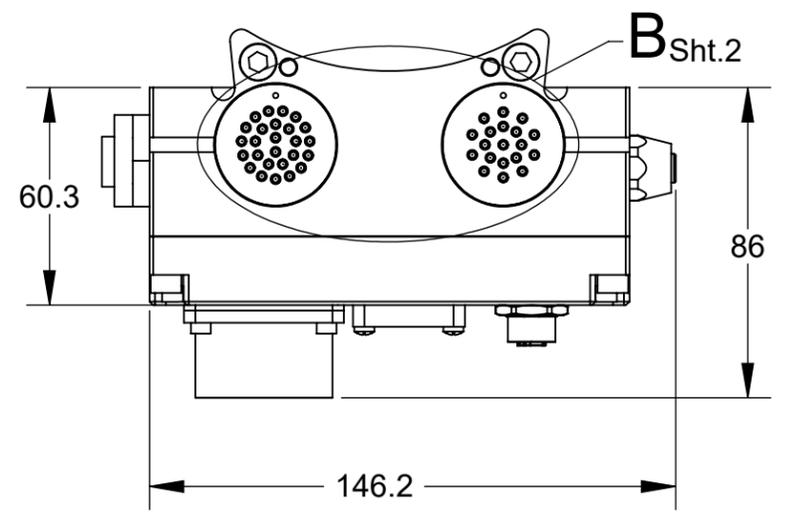
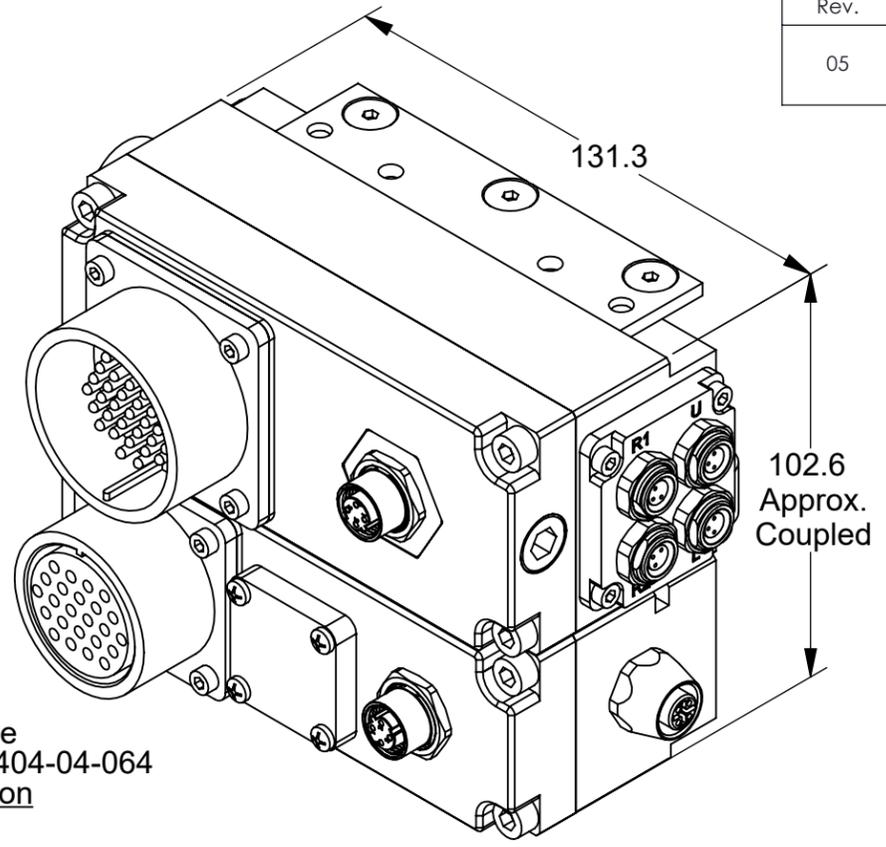
Rev.	Description	Initiator	Date
05	Eco 20570; Changed Turck FKSD 44130-0 to Signal Electronics / 120404-04-064. Updated Connector Detail View. Changed Part Number in Schematic.	CF	3/1/2022



**9121-VB18-M**

35-Pin Male Connector  
DDK DMS 3102 A28-15P  
Note connector orientation

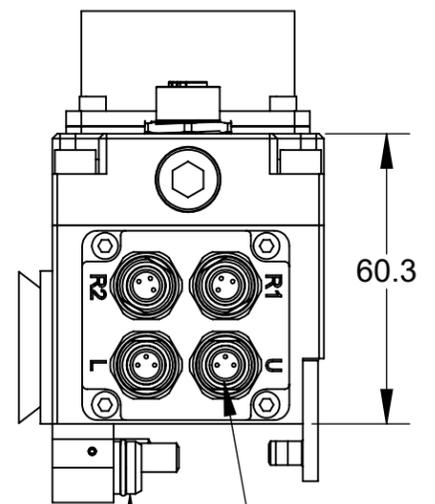
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Turck M12, 4-Pin Female  
Signal Electronics / 120404-04-064  
Note connector orientation



A Sht.2

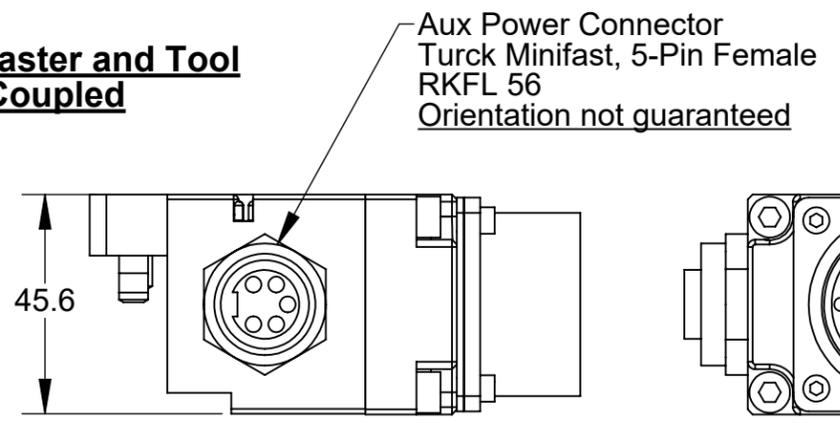
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Turck Minifast, 5-Pin Male  
RSFL 56  
Orientation not guaranteed

Valve Signal Pin Block  
See Sheet 2 (Table 3)  
for Details

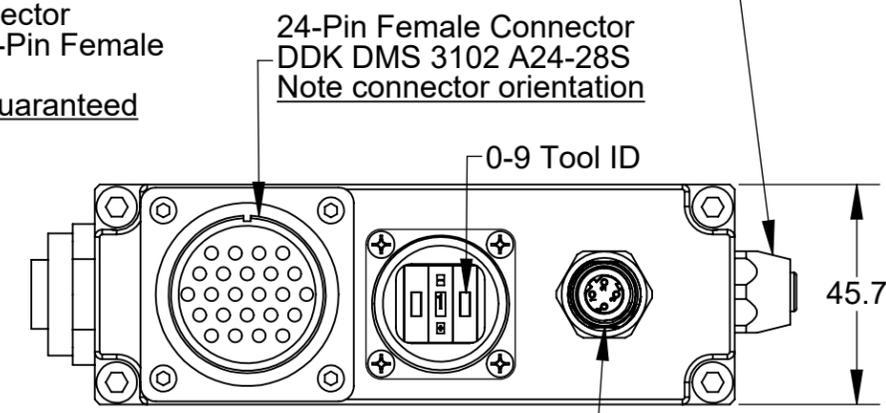


RTL, Lock, and Unlock  
Sensor Connectors  
4X Turck MFKS 3

**VB18 Master and Tool  
Coupled**



Aux Power Connector  
Turck Minifast, 5-Pin Female  
RKFL 56  
Orientation not guaranteed



**9121-VB18-T**

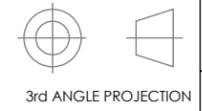
Profinet Connector  
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Signal Electronics /  
120404-04-064  
Note connector orientation

TSI Connector  
Turck M12, 4-Pin Female  
FK4.4-0.5/18.25  
Orientation not guaranteed

- 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.

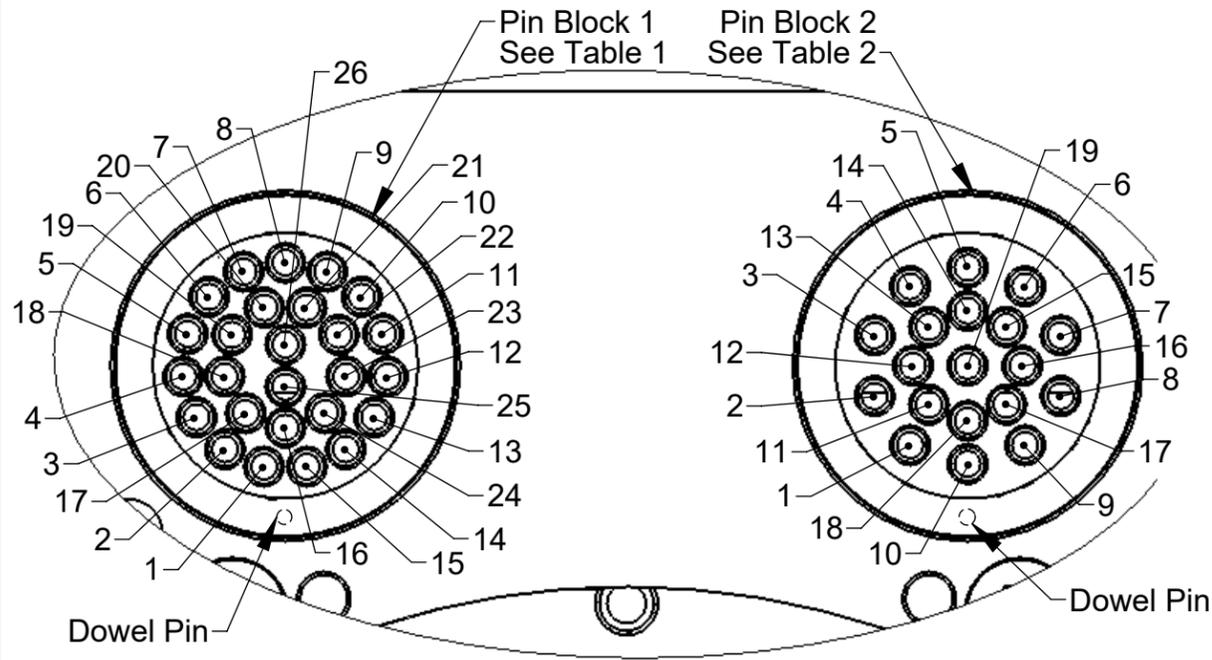
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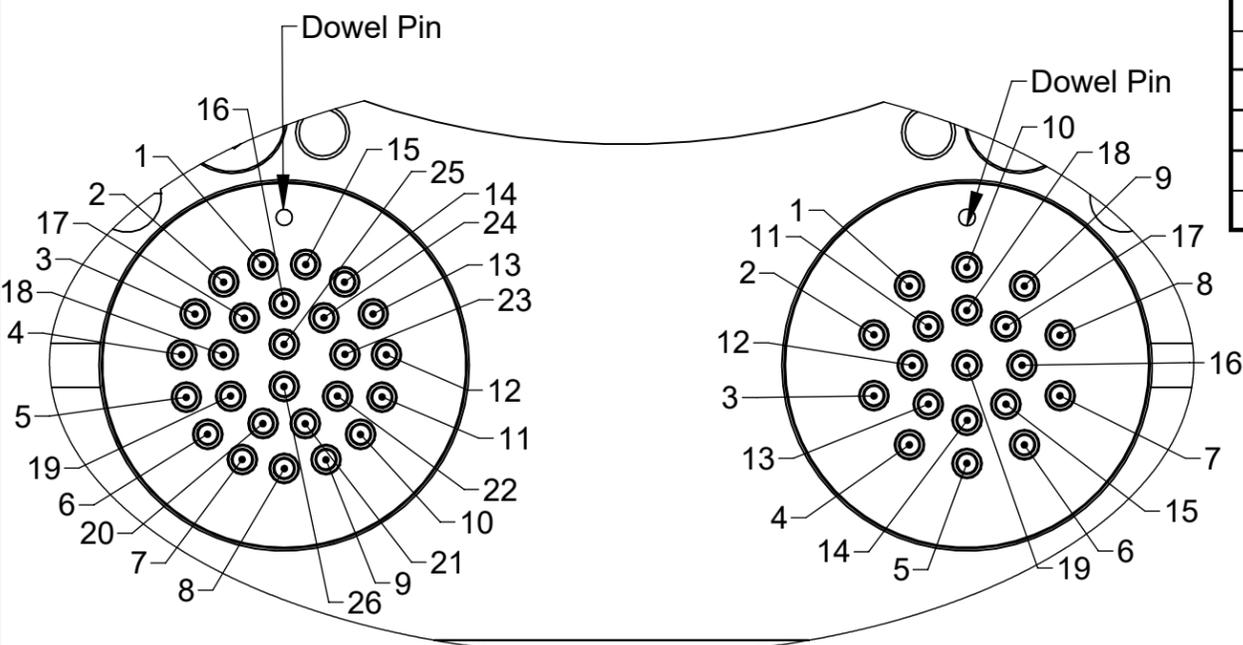
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D. Fleissner, 1/5/15		SCALE	SIZE
PROJECT # 141030-4	SHEET 1 OF 5	1:2	B
		DRAWING NUMBER	REVISION
		9630-20-VB18	05



**Master Side Pin Blocks**  
SCALE 1.5 : 1



**Tool Side Pin Blocks**  
DETAIL B  
SCALE 1.5 : 1

Table 1: 26-Pin Pin Block	
1	Spare 1
2	Spare 2
3	Spare 3
4	Spare 4
5	Spare 5
6	Spare 6
7	Spare 7
8	Spare 8
9	Spare 9
10	Spare 10
11	Spare 11
12	Spare 12
13	Spare 13
14	Spare 14
15	Spare 15
16	Spare 16
17	Spare 17
18	Spare 18
19	Spare 19
20	Spare 20
21	Spare 21
22	Spare 22
23	Tool ID1
24	Tool ID2
25	Tool ID4
26	Tool ID8

Table 2: 19-Pin Pin Block	
1	Tx+
2	Tx-
3	Rx+
4	Rx-
5	N/C
6	UB
7	UL
8	24V
9	TSI Out
10	N/C
11	N/C
12	0V
13	N/C
14	TSI In
15	ProfI Shld
16	N/C
17	GND
18	GND
19	FE

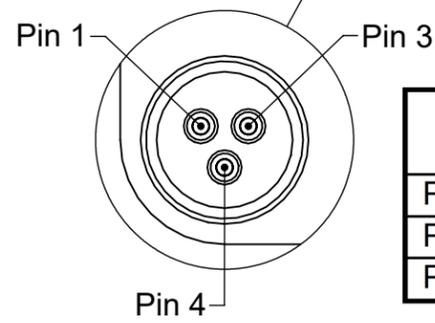
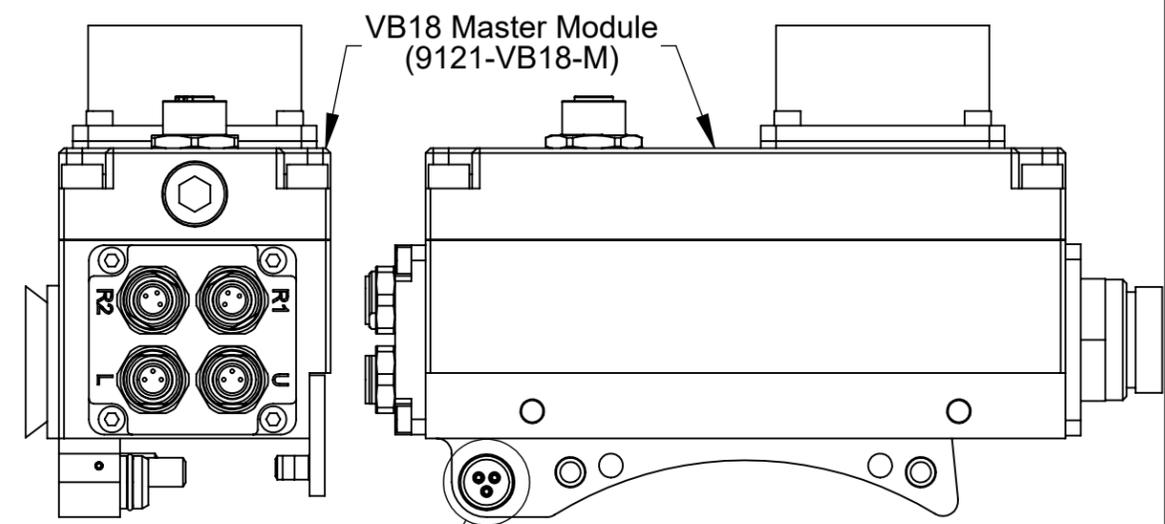


Table 3: Valve Signal Pin Block		
Pin 1	V+	Unlock Output
Pin 3	V-	Common
Pin 4	V+	Lock Output

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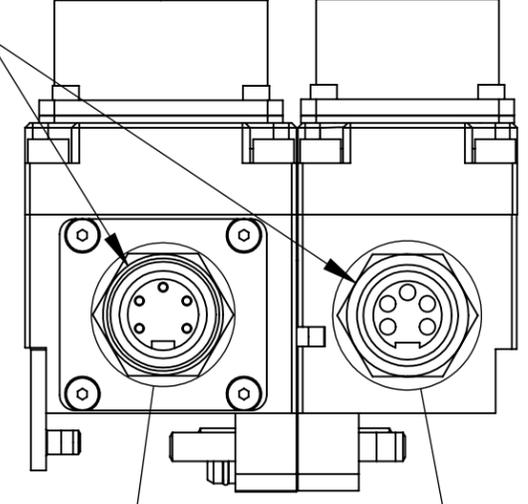
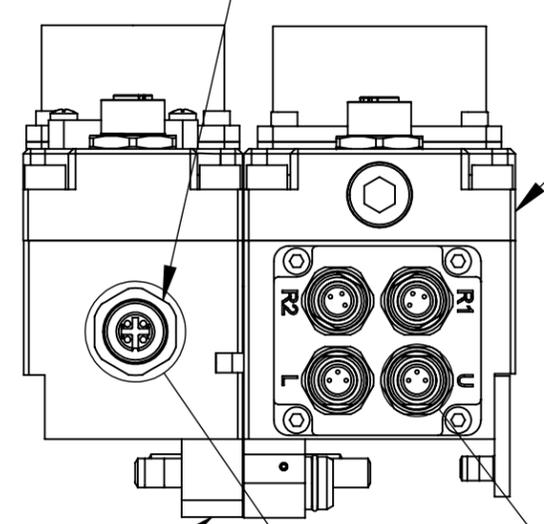
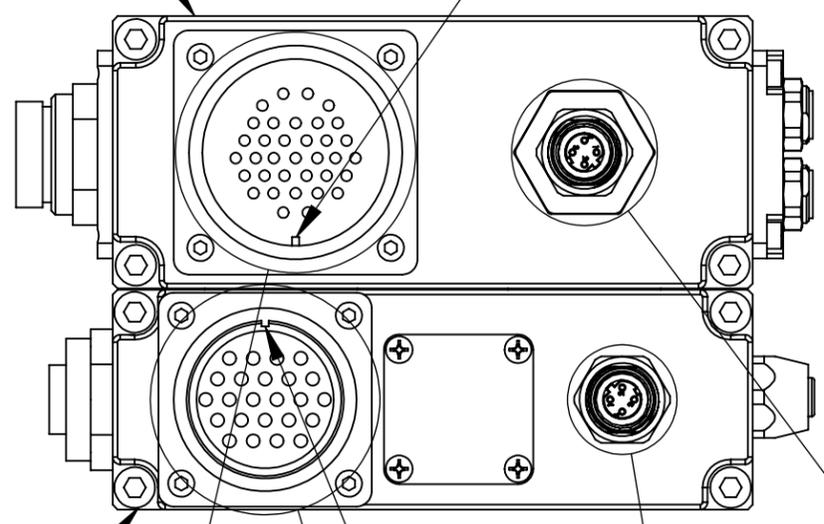
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D. Fleissner, 1/5/15		SCALE	SIZE
PROJECT # 141030-4	SHEET 2 OF 5	2:3	B
		DRAWING NUMBER	REVISION
		9630-20-VB18	05

9121-VB18-M

Note connector orientation

TSI connector orientation not guaranteed

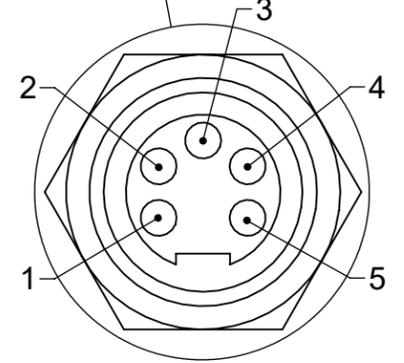
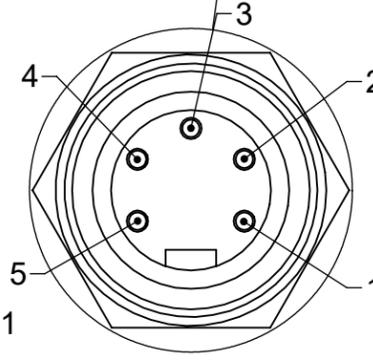
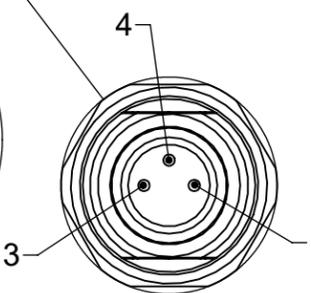
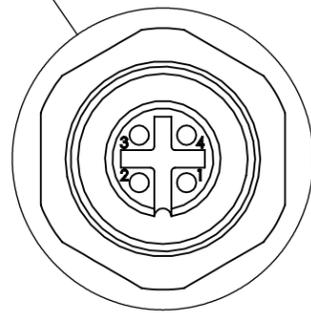
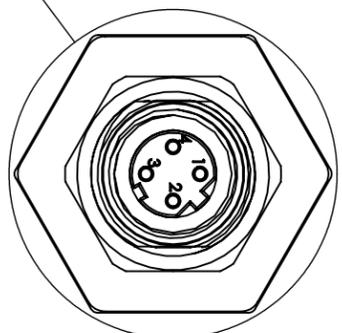
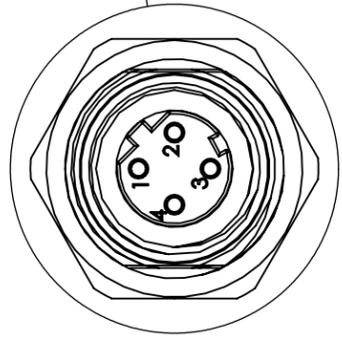
Aux Power Connector Orientation not guaranteed



9121-VB18-T

Note connector orientation

9121-VB18-T



Profinet Connector M12, 4-Pin Female  
Signal Electronics / 120404-04-064  
Scale 2:1

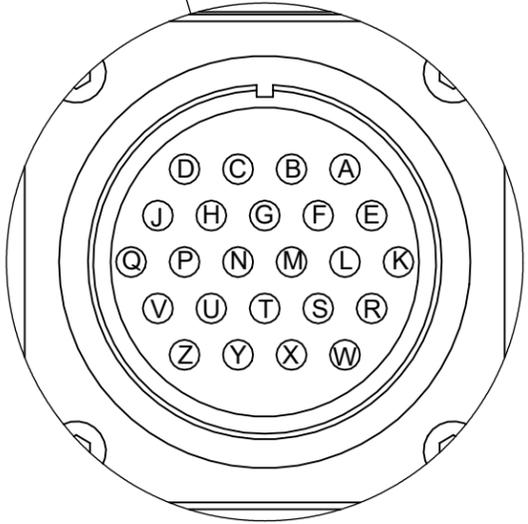
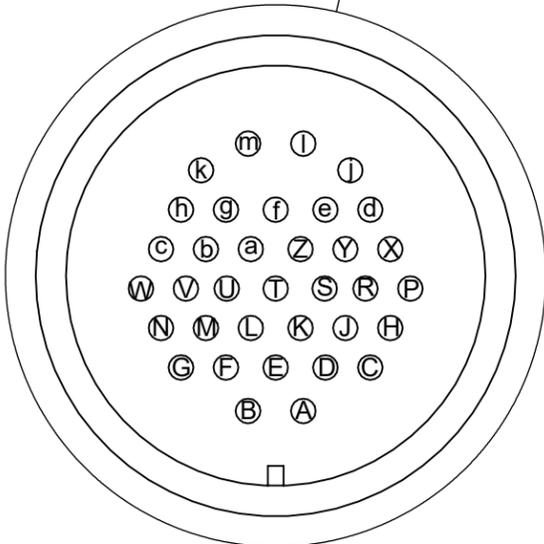
Profinet Connector Turck M12, 4-Pin Female  
Signal Electronics / 120404-04-064  
Scale 3:2

TSI Connector Turck M12, 4-Pin Female  
FK4.4-0.5/18.25  
Scale 2:1

Sensor Connectors 4X Turck MFKS 3  
Scale 2:1

Aux Power Connector Turck Minifast, 5-Pin Male  
RSFL 56  
Scale 3:2

Aux Power Connector Turck Minifast, 5-Pin Female  
RKFL 56  
Scale 3:2



35-Pin Male Connector (Master)  
DDK DMS 3102 A28-15P  
Scale 3:2

24-Pin Female Connector (Tool)  
DDK DMS 3102 A24-28S  
Scale 3:2

Table 4: Profinet Connector

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

Table 5: TSI Connector

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

Table 6: Sensor Connectors

1	V+
3	V-
4	Input

Table 7: Aux Power Connector

1	GND
2	GND
3	PE
4	UB
5	UL

NOTES: UNLESS OTHERWISE SPECIFIED.

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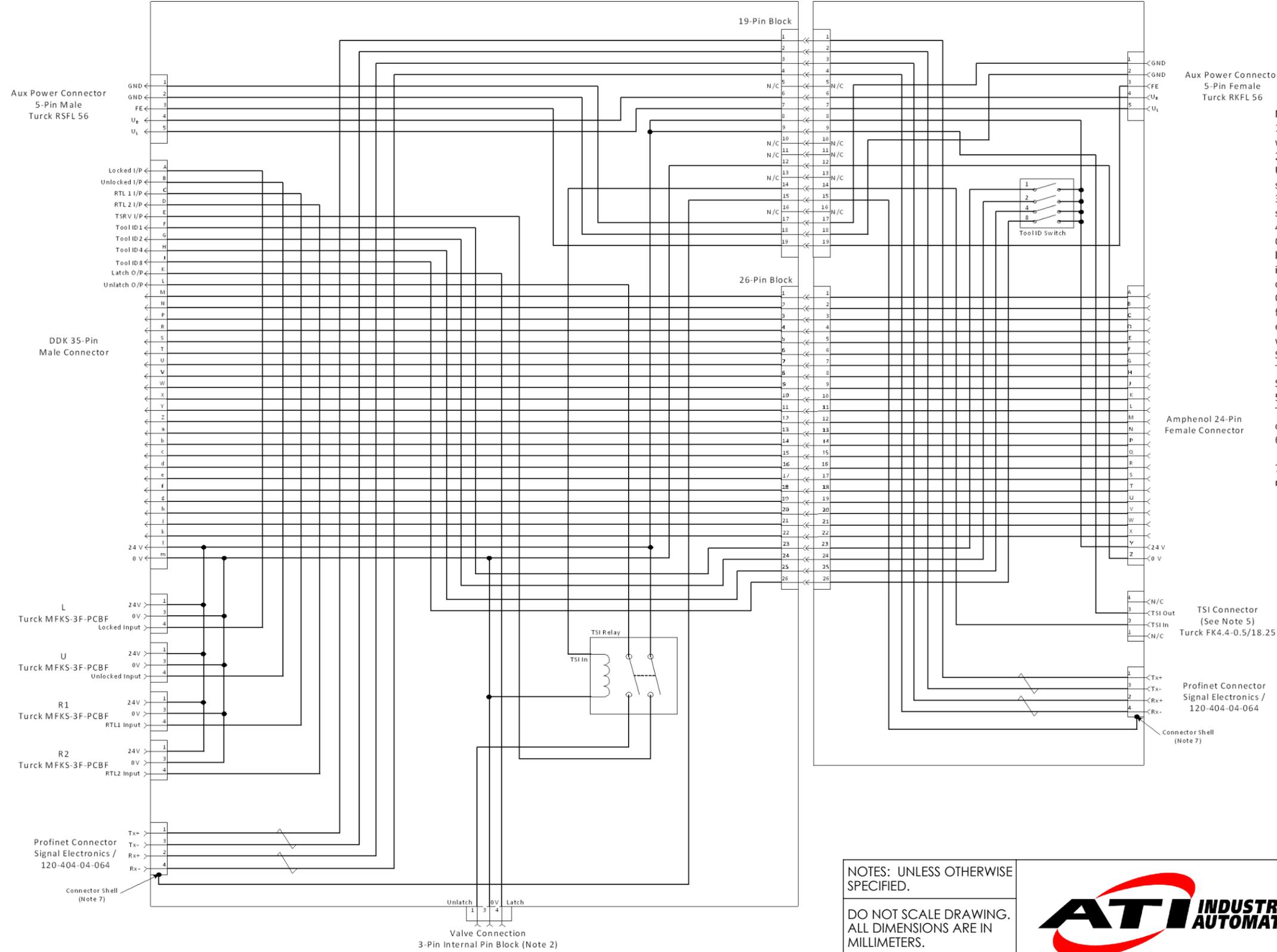
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PROJECT # 141030-4	SHEET 3 OF 5	DRAWING NUMBER 9630-20-VB18	REVISION 05

9121-VB18-M

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Aux Power Connector  
5-Pin Female  
Turck RKFL 56

Amphenol 24-Pin  
Female Connector

TSI Connector  
(See Note 5)  
Turck FK4.4-0.5/18.25

Profinet Connector  
Signal Electronics /  
120-404-04-064

Connector Shell  
(Note 7)

Notes:

1. The complete tool changer package comes equipped with external cables that are connected to the sensors.
2. An internal pin block is used to transmit the Latch/Unlatch signal to the valve adapter, as shown in the schematic.
3. The Latch and Unlatch command signals must be sourcing, NOT sinking.
4. 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 mechanical 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. A Siemens Magnetic Safety Switch can be used with the TSI circuit. See Sheet 5 for wiring of the Magnetic Safety Switch.
5. The TSRV input is provided for fault monitoring of the TSI Circuit. Please consult the product manual for operation and fault monitoring recommendations.
6. Refer to Table 8 for the Tool ID output (Note: Use Pin I of the 37-Pin Connector (Master Side) as common).
7. The Profinet connector shell is isolated from the module housing and passed from Master to Tool.

**Table 8: Tool ID Binary Output**

Switch Position	35-Pin Connector (Master)			
	Pin J	Pin H	Pin G	Pin F
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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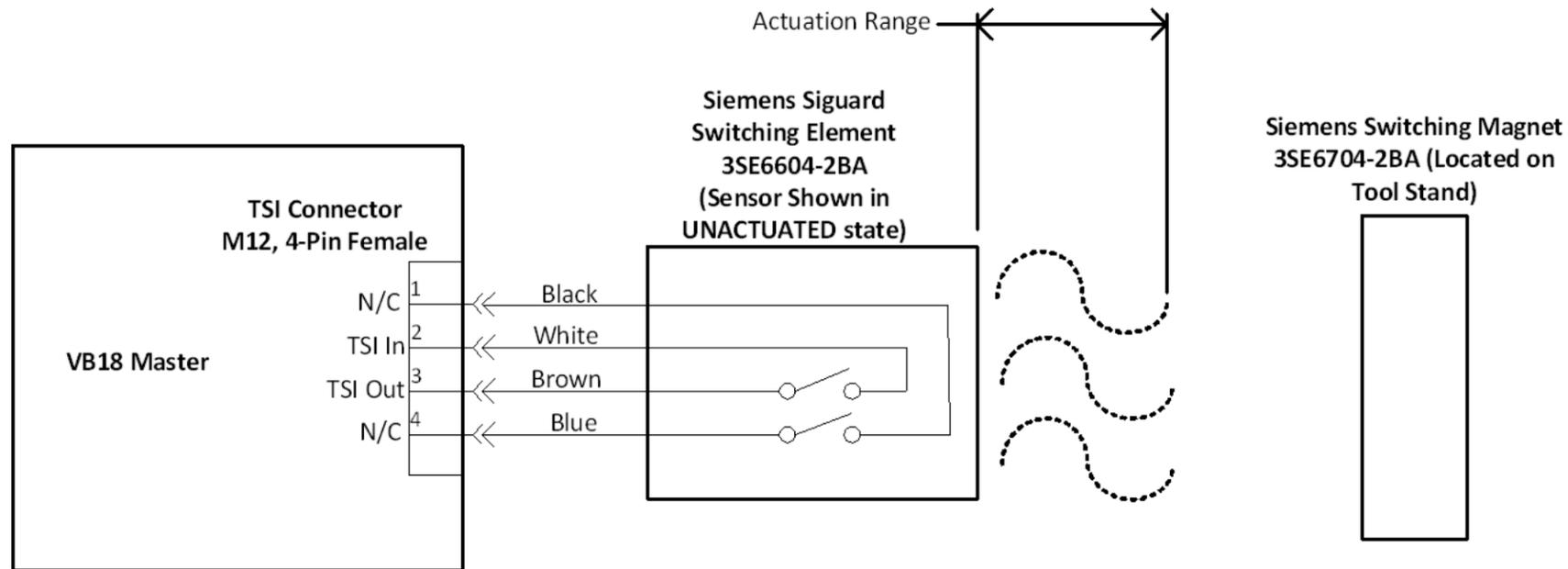
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PROJECT # 141030-4	SHEET 4 OF 5	1:1	05
		SIZE	DRAWING NUMBER
		B	9630-20-VB18



Magnetic Sensor Notes:

1. Siemens Switching Element PN# 3SE6604-2BA
2. Siemens Switching Magnet PN# 3SE6704-2BA
3. With magnetically based safety sensors, the unlock circuit will be completed when the Siemens Siguard Switching Element is in close proximity to the Siemens Switching Magnet.
4. With the Switching Magnet on the tool stand, the sensor will insure that a Tool can only be released at the tool stand.
5. The Siemens Siguard Switching Element is normally closed when in the actuation range of the Siemens Switching Magnet.
6. The Siemens Siguard Switching Element comes with a 4 conductor 3m long unterminated cable.

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SCALE	1:2	SIZE	B	DRAWING NUMBER
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