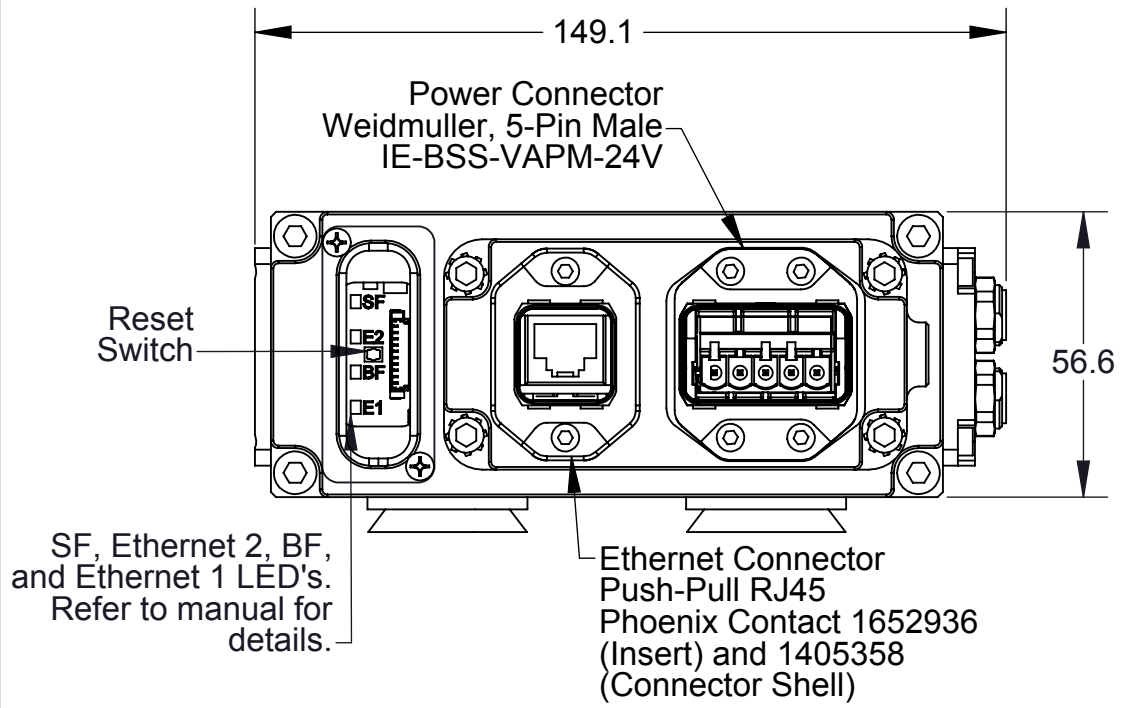
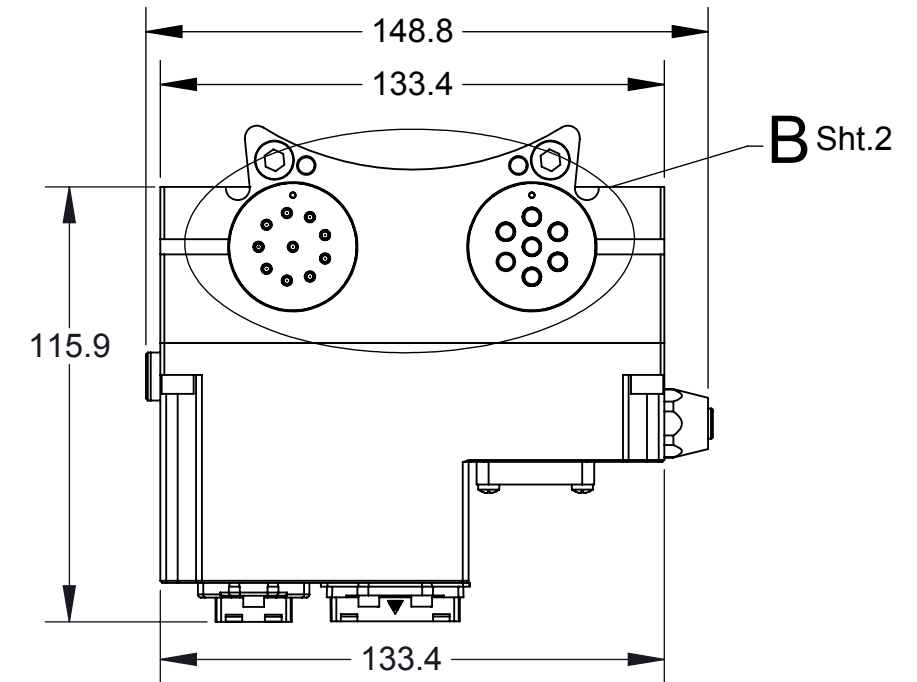
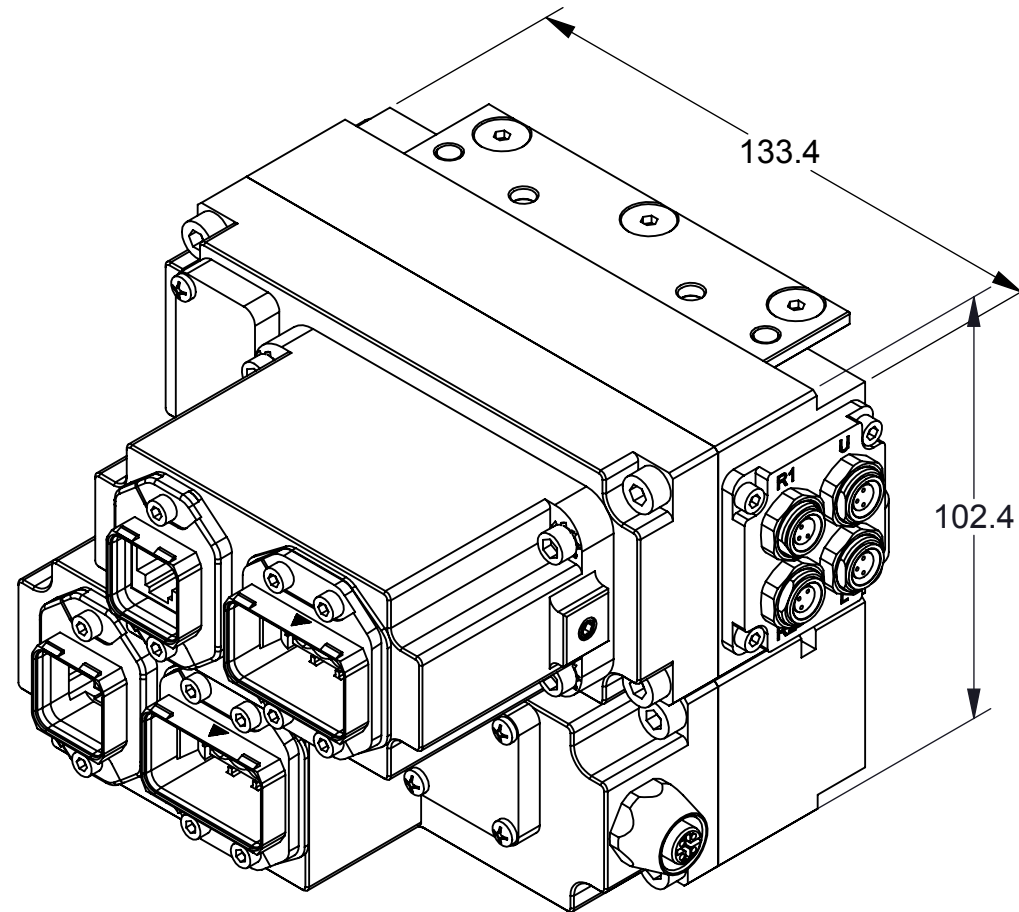
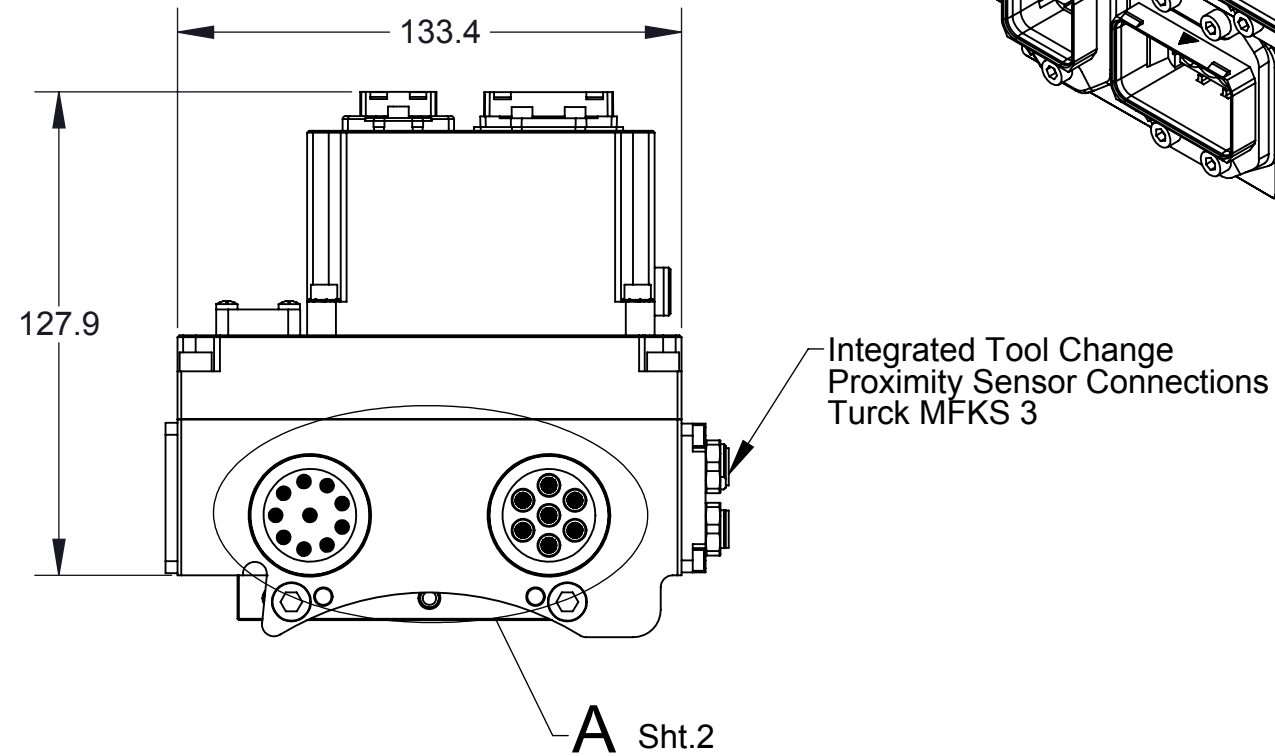


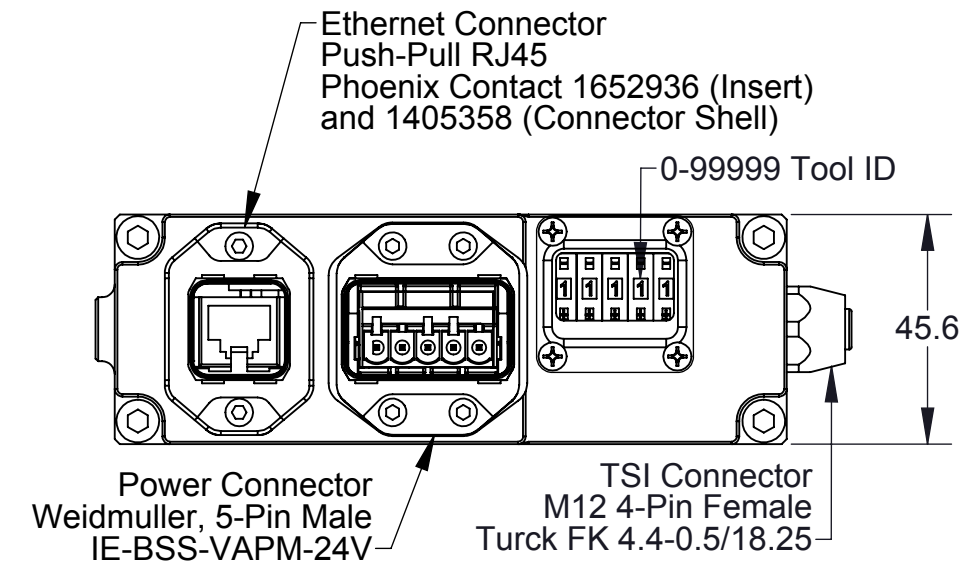
Rev.	Description	Initiator	Date
08	ECO 17475: 9121-DL4-M & 9121-DL4-T: Weidmuller 5-Pin Male Power Connector changed to IE-BSS-VAPM-24V was IE-BSS-VAPM-24.	TBC	2/20/2019



9121-DL4-M



9121-DL4-T



- Notes:
1. Pin block signal assignments shown on Sheet 2.
 2. Connector pin designations shown on Sheet 3.
 3. Electrical schematic of DL4 Master and Tool shown on Sheet 4.

NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN MILLIMETERS.



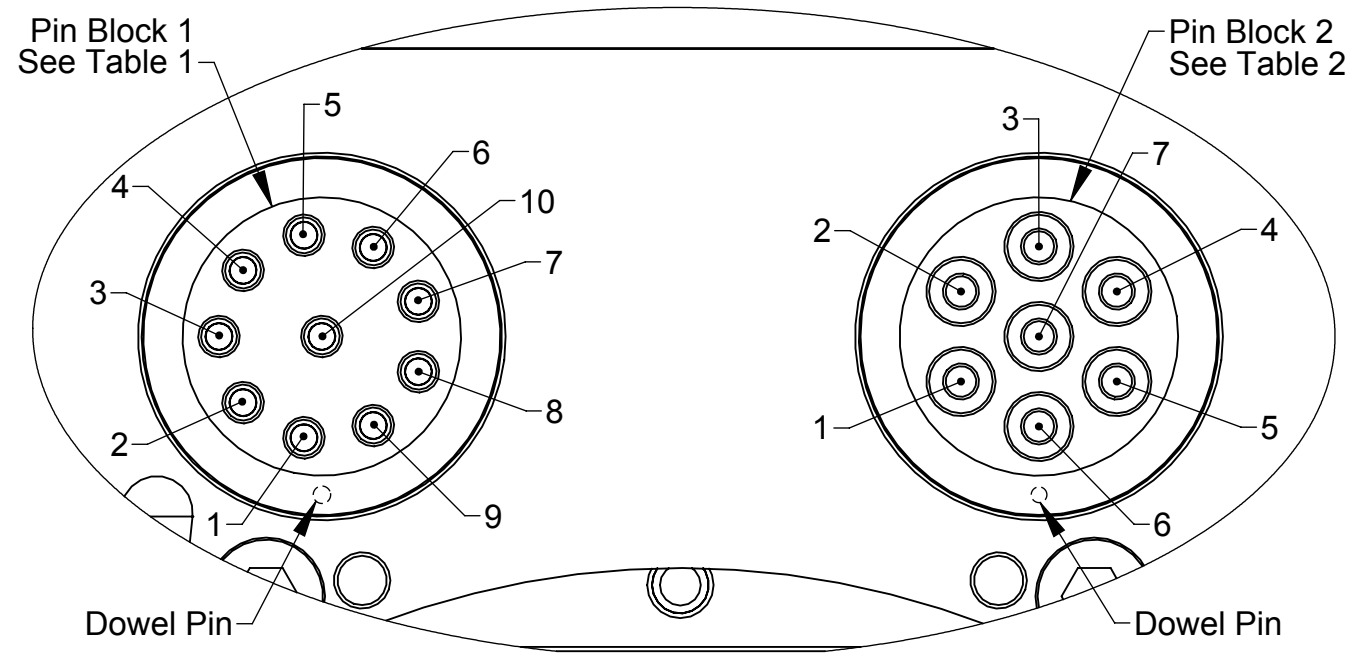
3rd ANGLE PROJECTION



1031 Goodworth Drive, Apex, NC 27539, USA
 Tel: +1.919.772.0115 Email: info@ati-ia.com
 Fax: +1.919.772.8259 www.ati-ia.com
 ISO 9001 Registered Company

PROPERTY OF ATI INDUSTRIAL AUTOMATION, INC. NOT TO BE REPRODUCED IN ANY MANNER EXCEPT ON ORDER OR WITH PRIOR WRITTEN AUTHORIZATION OF ATI.

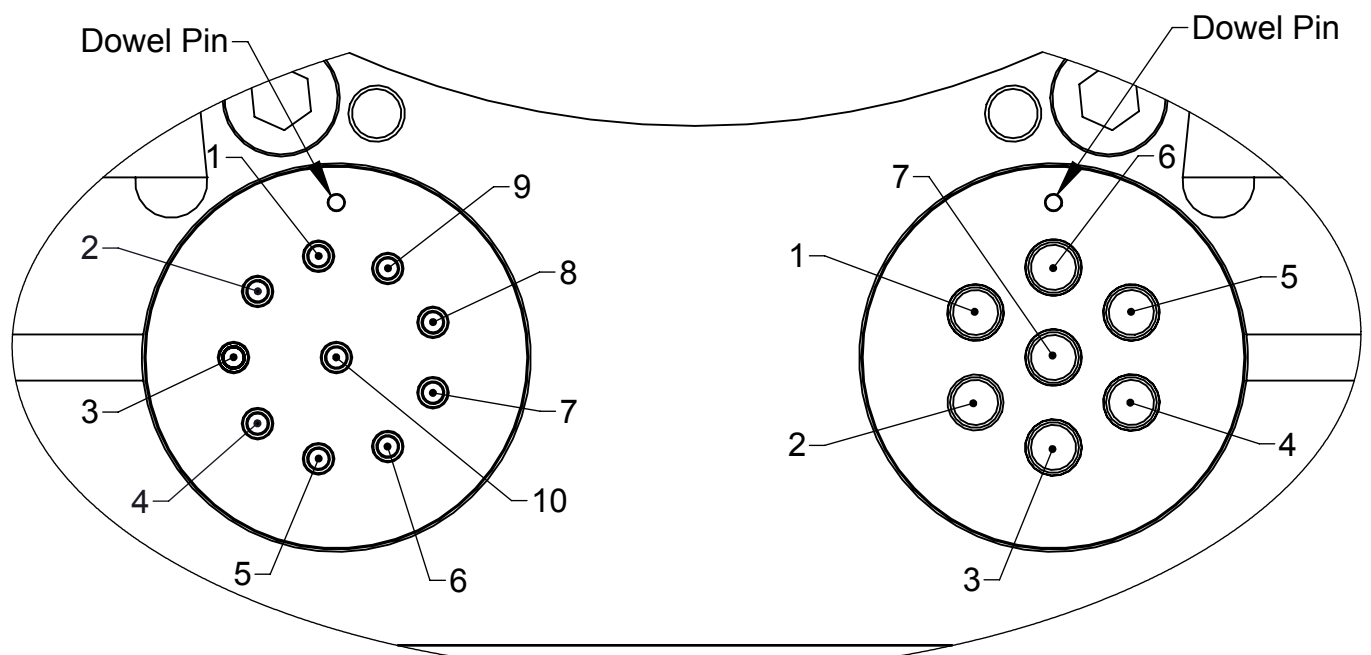
DRAWN BY: W. Berrocal, 7/13/11		TITLE	
CHECKED BY: A. Strotzer, 7/13/11		DL4 Profinet Module Customer Drawing	
PROJECT # 110629-4 SHEET 1 OF 4	SCALE 1:2	SIZE B	DRAWING NUMBER 9630-20-DL4
			REVISION 08



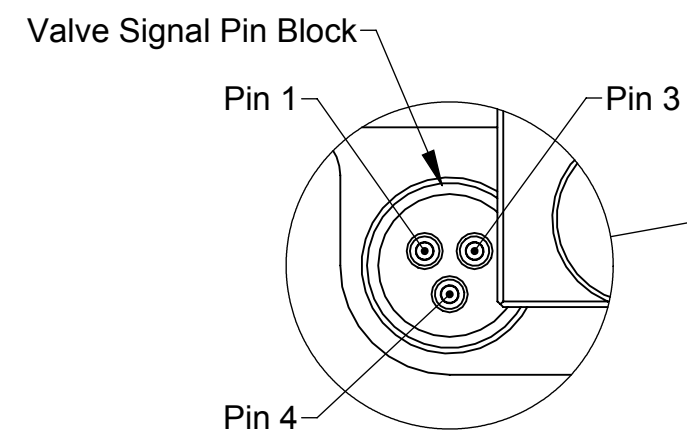
DETAIL A
SCALE 1.5 : 1

Table 1	
Pin Block 1	
1	RX1+
2	RX1-
3	RS485+
4	RS485-
5	TSI IN
6	TSRV
7	TX1+
8	TX1-
9	TSI OUT
10	TSIV

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



DETAIL B
SCALE 1.5 : 1



DETAIL C
SCALE 2 : 1

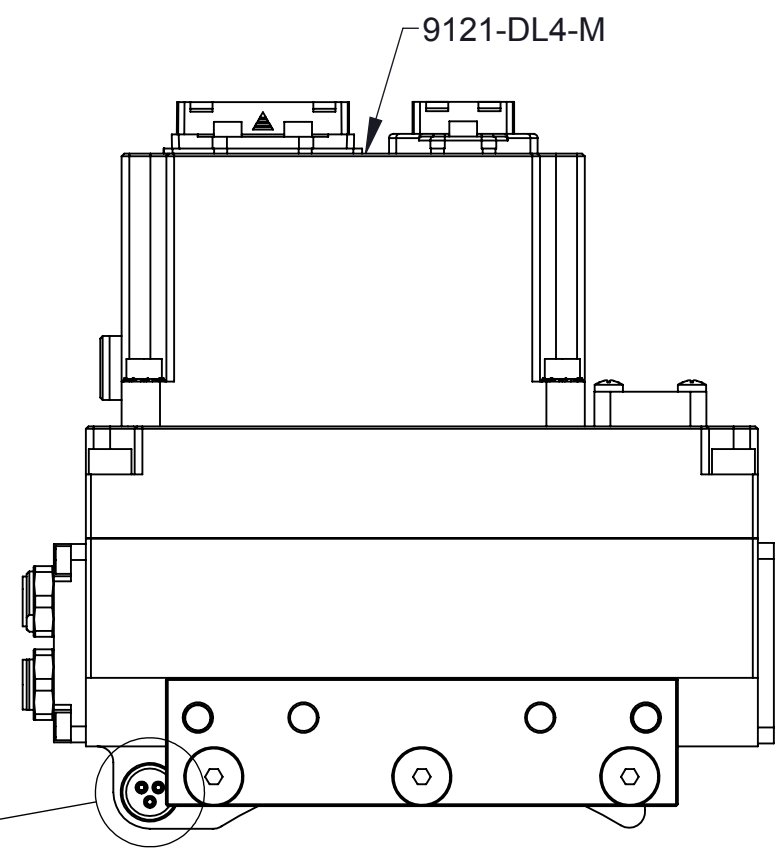


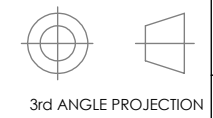
Table 3		
Internal Valve Connection		
Pin 1	V+	Unlatch Output
Pin 3	V-	Common
Pin 4	V+	Latch Output

NOTES: UNLESS OTHERWISE SPECIFIED.
DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN MILLIMETERS.



1031 Goodworth Drive, Apex, NC 27539, USA
Tel: +1.919.772.0115 Email: info@ati-ia.com
Fax: +1.919.772.8259 www.ati-ia.com
ISO 9001 Registered Company

PROPERTY OF ATI INDUSTRIAL AUTOMATION, INC. NOT TO BE REPRODUCED IN ANY MANNER EXCEPT ON ORDER OR WITH PRIOR WRITTEN AUTHORIZATION OF ATI.



DRAWN BY: W. Berrocal, 7/13/11

CHECKED BY: A. Strotzer, 7/13/11

PROJECT # 110629-4 SHEET 2 OF 4

TITLE
DL4 Profinet Module Customer Drawing

SCALE	SIZE	DRAWING NUMBER	REVISION
1:2	B	9630-20-DL4	08

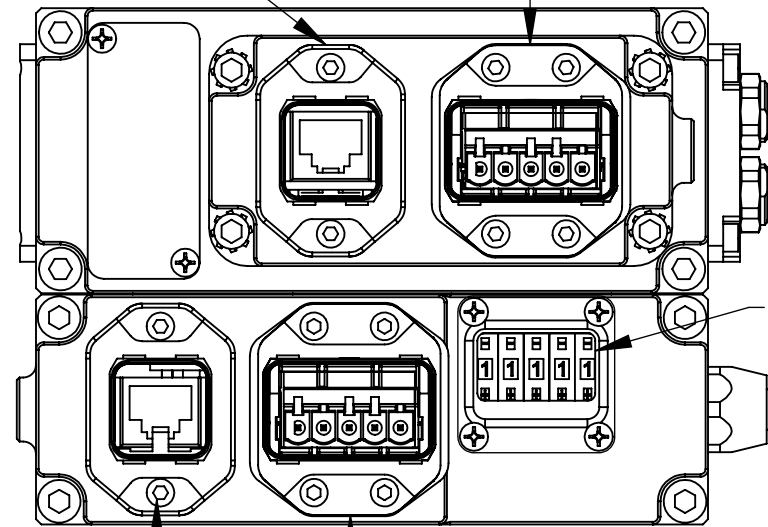
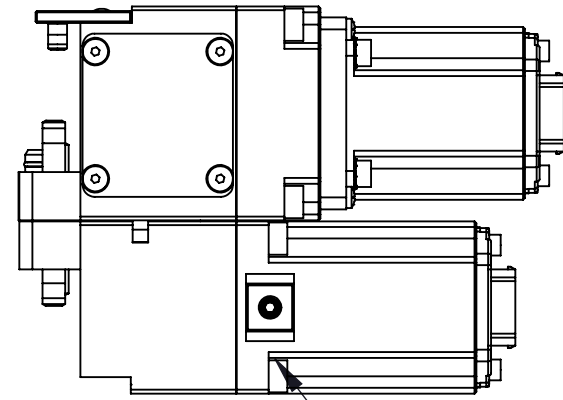
Ethernet Connector
Push-Pull RJ45
Phoenix Contact 1652936 (Insert)
and 1405358 (Connector Shell)
See Table 5

Power Connector
Weidmuller, 5-Pin Male
IE-BSS-VAPM-24V
See Table 4

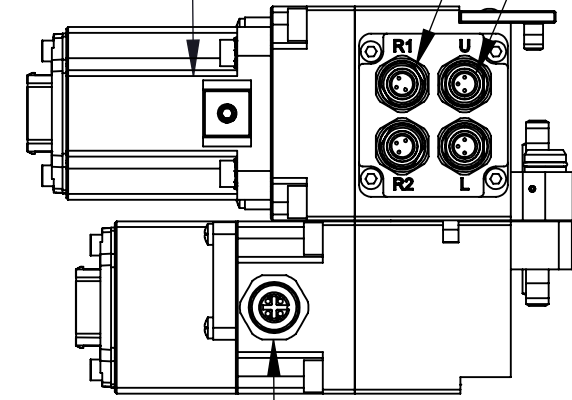
FE Ground Terminal Connection
M5 x 0.8 threaded hole, 9mm deep
Hole is accessed by removing M5
stainless steel set screw plug.

RTL1/RTL2 Proximity
Sensor Connectors

Locked/Unlocked
Sensor Connectors



0-99999
Tool ID's

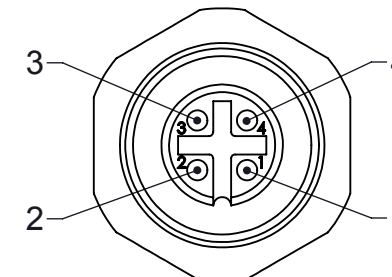


TSI Connector
Turck FK4.4-0.5/18.25
Orientation Not Guaranteed
(See Table 6)

FE Ground Terminal Connection
M5 x 0.8 threaded hole, 9mm deep
Hole is accessed by removing M5
stainless steel set screw plug.

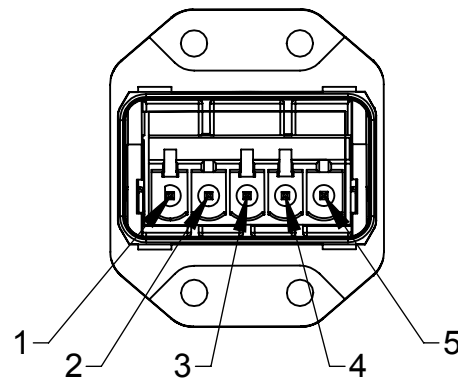
Ethernet Connector
Push-Pull RJ45
Phoenix Contact 1652936 (Insert)
and 1405358 (Connector Shell)
See Table 6

Power Connector
Weidmuller, 5-Pin Male
IE-BSS-VAPM-24V
See Table 4

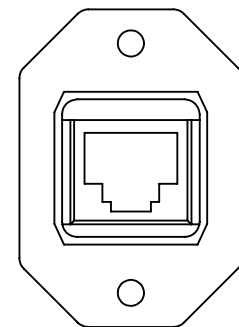


TSI Connector
M12 4-Pin Female
Turck FK4.4-0.5/18.25
Scale 2:1

1	24V_TH
2	24V_TH
3	TSI Relay Control
4	TSIV Input



Power Connector, Master and Tool Sides
Weidmuller, 5-Pin Male
IE-BSS-VAPM-24V
Scale 3:2



Ethernet Connector
Push-Pull RJ45
Phoenix Contact 1652936 (Insert)
and 1405358 (Connector Shell)
Scale 1:1

Power Connector	
1	US1+ (L1)
2	US1- (N1)
3	US2+ (L2)
4	US2- (N2)
5	FE

Profinet Connector Master	
1	TX0+
2	TX0-
3	RX0+
4	RJ45_4
5	RJ45_5
6	RX0-
7	RJ45_7
8	RJ45_8

Profinet Connector Tool	
1	RX1+
2	RX1-
3	TX1+
4	RJ45_4
5	RJ45_5
6	TX1-
7	RJ45_7
8	RJ45_8

NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING.
ALL DIMENSIONS ARE IN
MILLIMETERS.



3rd ANGLE PROJECTION



1031 Goodworth Drive, Apex, NC 27539, USA
Tel: +1.919.772.0115 Email: info@ati-ia.com
Fax: +1.919.772.8259 www.ati-ia.com
ISO 9001 Registered Company

PROPERTY OF ATI INDUSTRIAL AUTOMATION, INC. NOT TO BE REPRODUCED IN ANY MANNER EXCEPT ON ORDER OR WITH PRIOR WRITTEN AUTHORIZATION OF ATI.

DRAWN BY: W. Berrocal, 7/13/11

CHECKED BY: A. Strotzer, 7/13/11

PROJECT # 110629-4 SHEET 3 OF 4

TITLE

DL4 Profinet Module Customer Drawing

SCALE
1:2

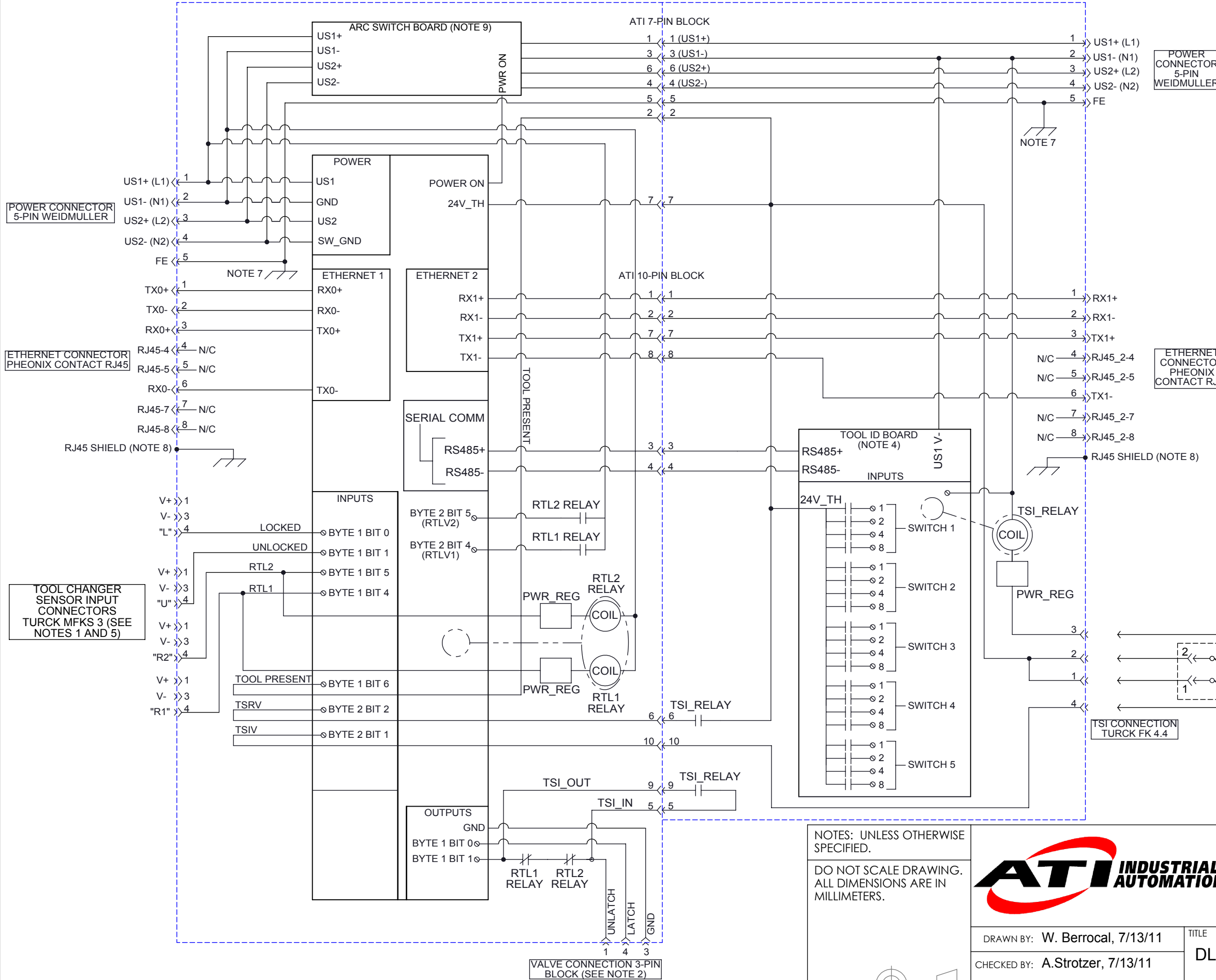
SIZE
B

DRAWING NUMBER
9630-20-DL4

REVISION
08

**MASTER MODULE
9121-DL4-M**

**TOOL MODULE
9121-DL4-T**



Schematic Notes:

- The complete tool changer package comes equipped with external cables that are connected to the sensors. An internal pin block is used to connect the Latch/Unlatch signal to the Valve Adapter.
- Power, Ethernet, and Safety Switch cables for the DL4 Modules are supplied by the customer.
- The Tool ID I/O is reported in the DL4 Master Bitmap. Refer to the product manual for more information.
- Note that the sensors are powered by unswitched Profinet Power. The common, V+, and V- connections are not shown here.
- The following twisted pairs are maintained:
 - RX1+ and RX1-
 - TX1+ and TX1-
 - RX0+ and RX0-
 - TX0+ and TX0-
- FE is connected directly to the Module housings.
- The RJ45 Shield is connected directly to the Module housings.
- The Arc Prevention Board 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 the main PC Board. 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.
- The 9121-DL4-T module supports the use of a mechanical limit switch for integration with TSI. The limit switch connected to the TSI connector must have two sets of N.O. contacts (double-pole, single-throw). A limit switch is available from ATI (p/n 9005-20-1165) but is not included with the DL4 modules. Contact ATI for specific switch requirements.
- For applications requiring Profinet running in Fast Startup Mode, a cross-over cable to the DL4 Tool Module will be required.

NOTE:
TSI SWITCH MUST USE 2 NORMALLY OPEN CONTACTS. THE SWITCH IS MOUNTED TO THE END EFFECTOR (SEE NOTE 10)

NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN MILLIMETERS.



1031 Goodworth Drive, Apex, NC 27539, USA
 Tel: +1.919.772.0115 Email: info@ati-ia.com
 Fax: +1.919.772.8259 www.ati-ia.com
 ISO 9001 Registered Company

PROPERTY OF ATI INDUSTRIAL AUTOMATION, INC. NOT TO BE REPRODUCED IN ANY MANNER EXCEPT ON ORDER OR WITH PRIOR WRITTEN AUTHORIZATION OF ATI.

DRAWN BY: W. Berrocal, 7/13/11		TITLE	
CHECKED BY: A. Strotzer, 7/13/11		DL4 Profinet Module Customer Drawing	
PROJECT # 110629-4	SHEET 4 OF 4	SCALE 1:10	SIZE B
		DRAWING NUMBER 9630-20-DL4	REVISION 08

