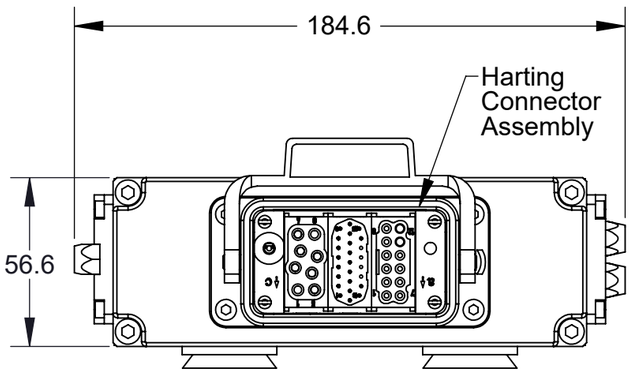
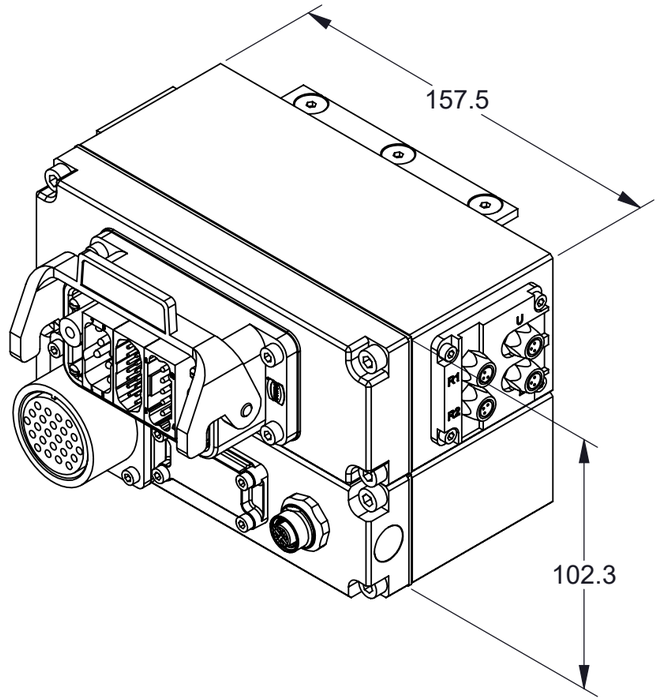
Rev.	Description	Initiator	Date
10	ECO 21823; Updated Tool ID Window and hardware.	LJH	4/29/2026

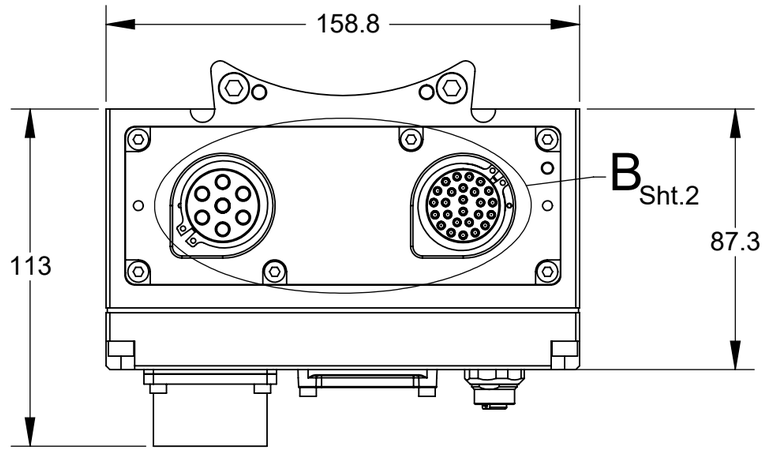
" DANGER!" - Electrical Shock Hazard

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."

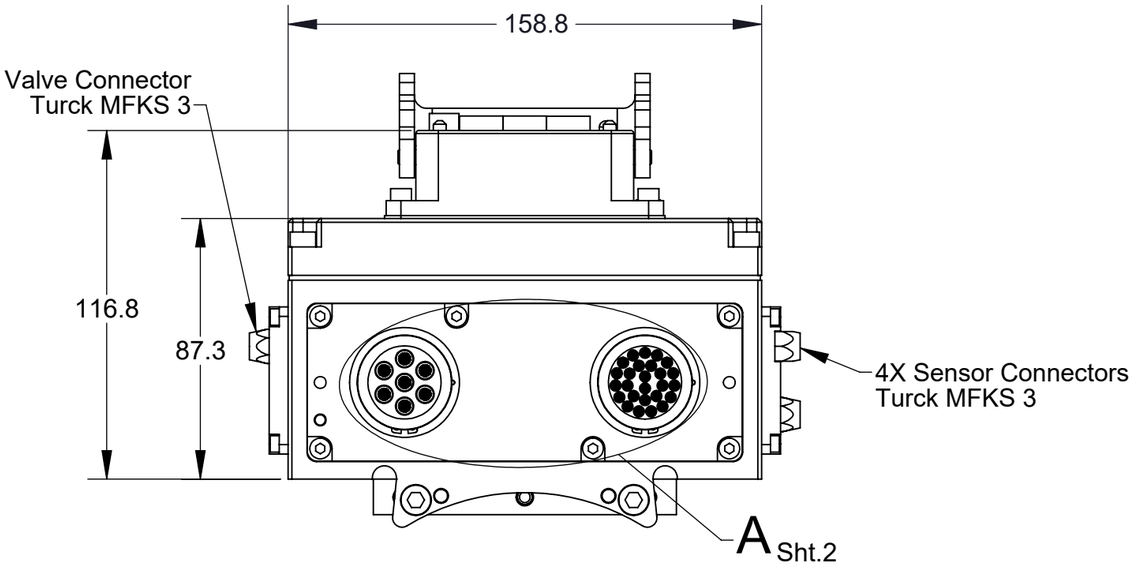


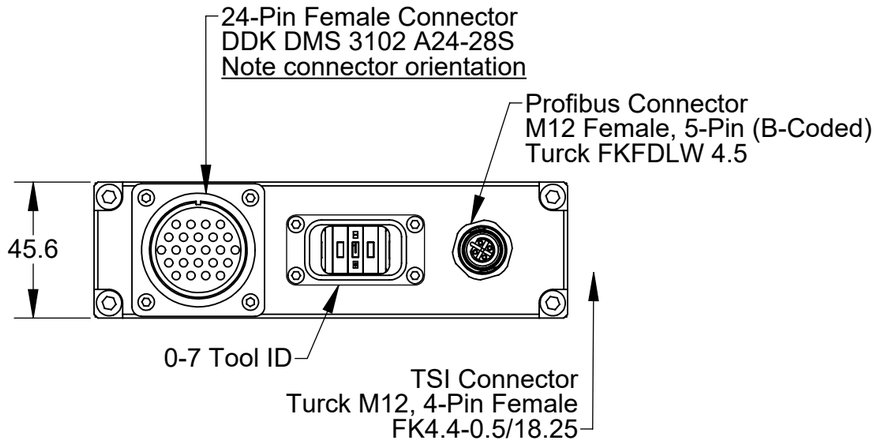
SC8 Master Module
9121-SC8-M





SC8 Tool Module
9121-SC8-T





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.

DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN MILLIMETERS.

3rd ANGLE PROJECTION

ATI INDUSTRIAL AUTOMATION

1031 Goodworth Drive, Apex, NC 27539, USA
Tel: +1.919.772.0115 www.ati-ia.com
Fax: +1.919.772.8259 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.

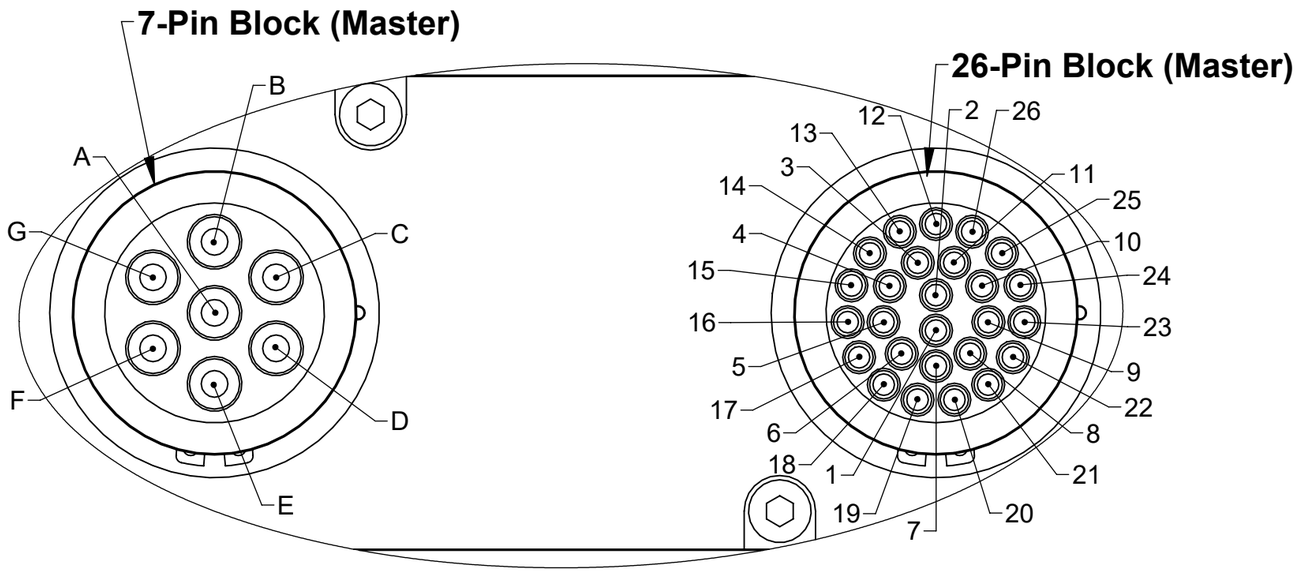
DRAWN BY: W. Berrocal, 4/27/10

CHECKED BY: D. Mushow, 5/6/10

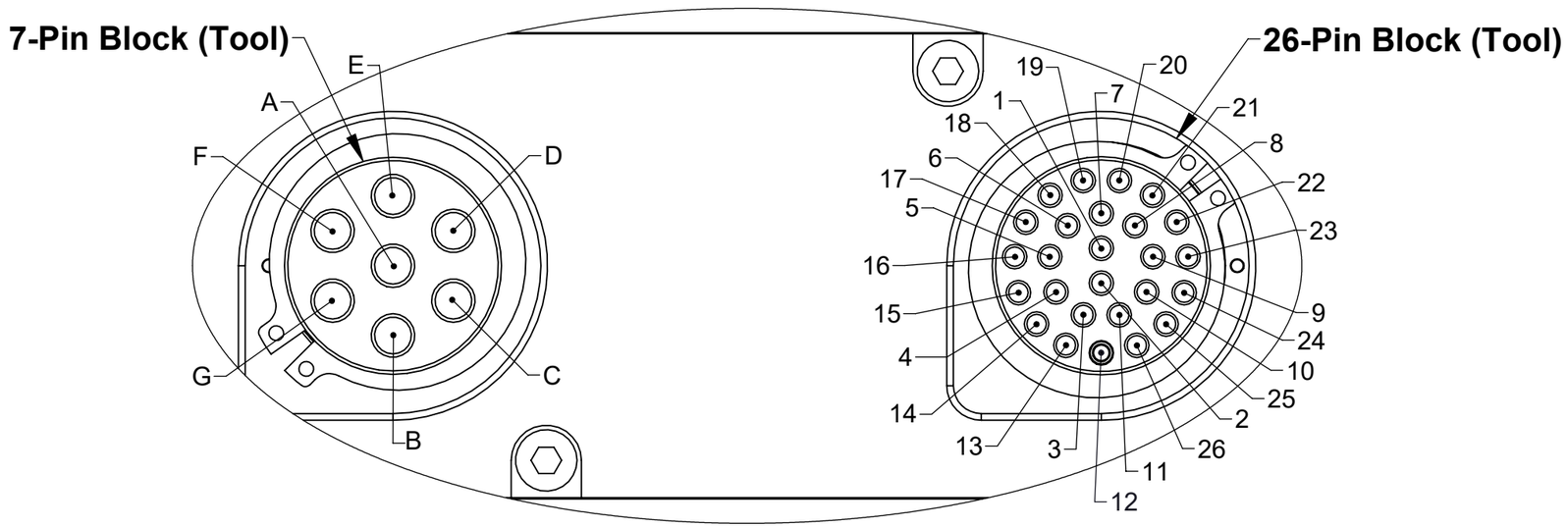
PROJECT # 100430-3 SHEET 1 OF 4

TITLE: SC8 Module Drawing

SCALE	SIZE	DRAWING NUMBER	REVISION
1:2	B	9630-20-SC8	10



Master Side Pin Blocks
Scale 3:2



Tool Side Pin Blocks
Scale 3:2

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 www.ati-ia.com
Fax: +1.919.772.8259 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.

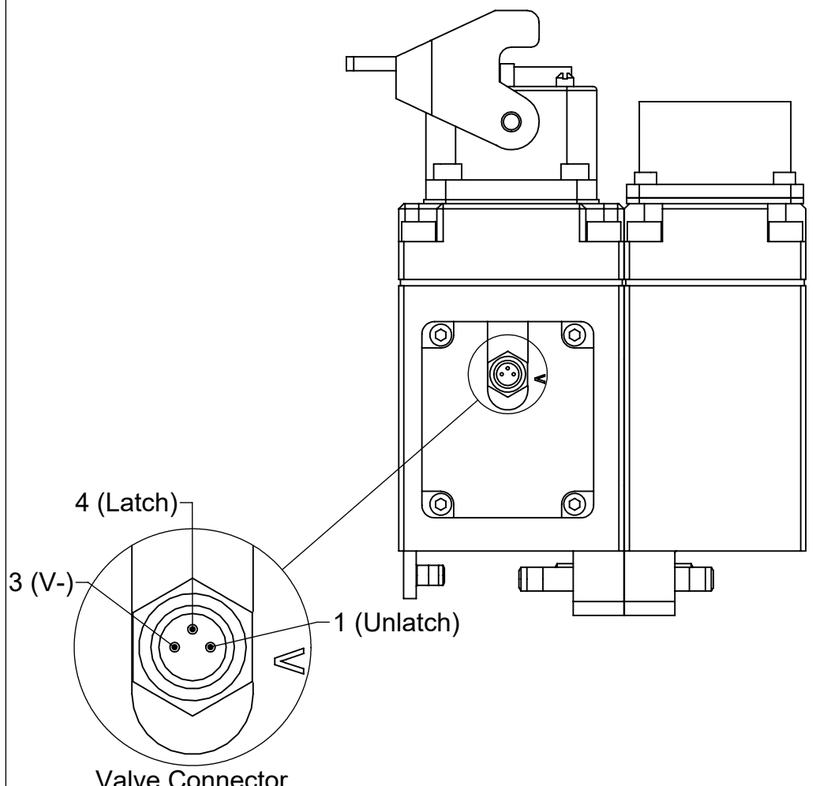
DRAWN BY: W. Berrocal, 4/27/10

CHECKED BY: D. Mushow, 5/6/10

PROJECT # 100430-3 SHEET 2 OF 4

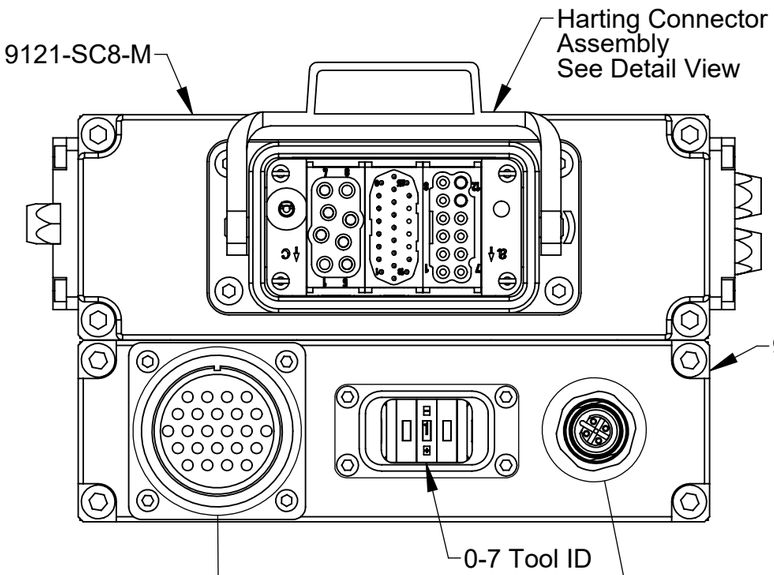
TITLE: SC8 Module Drawing

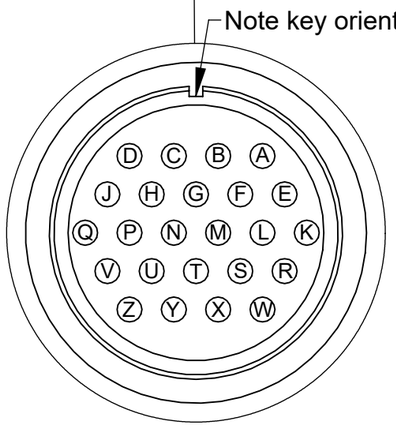
SCALE	SIZE	DRAWING NUMBER	REVISION
1:2	B	9630-20-SC8	10



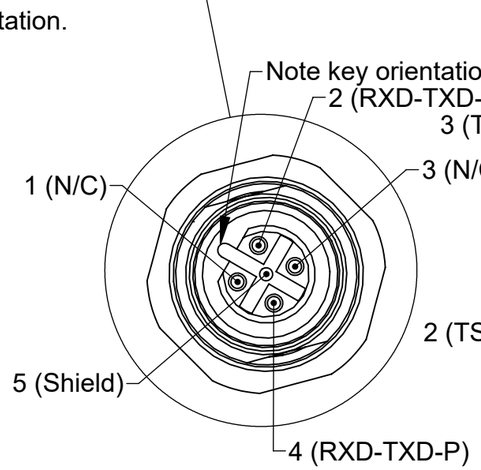
Valve Connector
Turck MFKS 3
Face View
Scale 2:1

Harting Connector Assembly
Scale 3:2

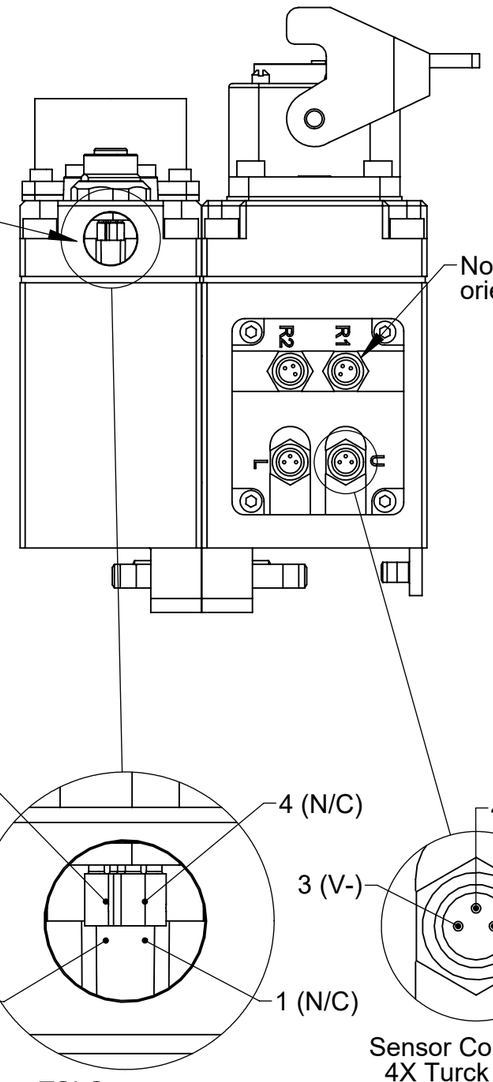




24-Pin Female Connector
DDK DMS 3102 A24-28S
Face View
Scale 3:2



Profibus Connector
M12 Female, 5-Pin (B-coded)
Turck FKFDLW 4.5
Scale 2:1



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

Sensor Connectors
4X Turck MFKS
Face View
Scale 2:1

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 *www.ati-ia.com*
Fax: +1.919.772.8259 *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.

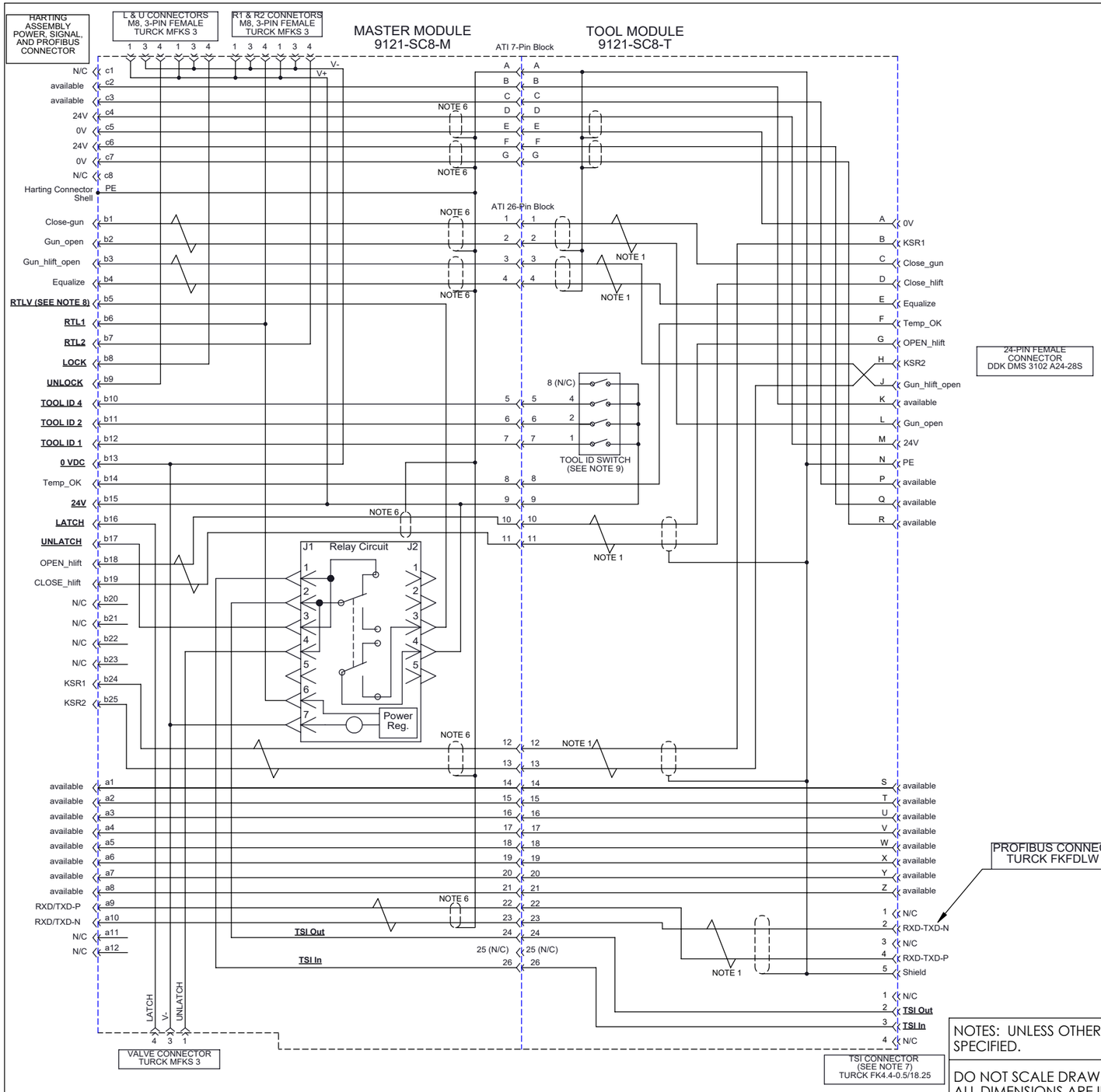
DRAWN BY: W. Berrocal, 4/27/10

CHECKED BY: D. Mushow, 5/6/10

PROJECT # 100430-3 SHEET 3 OF 4

TITLE: SC8 Module Drawing

SCALE	SIZE	DRAWING NUMBER	REVISION
1:5	B	9630-20-SC8	10



Schematic Notes:

1. The indicated wire pairs are twisted in the Master and Tool.
2. ATI Tool Changer control and sensor signals are identified as bold and underlined.
3. IMPORTANT: Power for the L, U, RTL1, and RTL2 sensors and for the Lock/Unlock solenoid in the Valve Adapter are provided by 24V from the SC8 Master Module. It is recommended that sensor power and ground be unswitched.
4. Cables for Harting and DDK connectors are supplied by the customer.
5. The Profibus Shield is connected to PE via the Harting Connector Shell.
6. The indicated wire pairs are shielded in the Master and Tool. The shields are connected to PE via the Harting Connector Shell.
7. 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.
8. The RTL1 sensor is very important to the operation of the TSI feature and should be monitored for failure. The RTLV input is provided for fault monitoring of this circuit. Please consult the product manual for operation and fault monitoring recommendations.
9. Positions 8 and 9 on the Tool ID switch are NOT unique Tool ID's. Refer to Table 3 for the Tool ID output (Note: Use b15 of the Harting Connector (Master Side) as common).

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 www.ati-ia.com
Fax: +1.919.772.8259 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, 4/27/10

CHECKED BY: D. Mushow, 5/6/10

PROJECT # 100430-3 SHEET 4 OF 4

TITLE: SC8 Module Drawing

SCALE	SIZE	DRAWING NUMBER	REVISION
1:10	B	9630-20-SC8	10