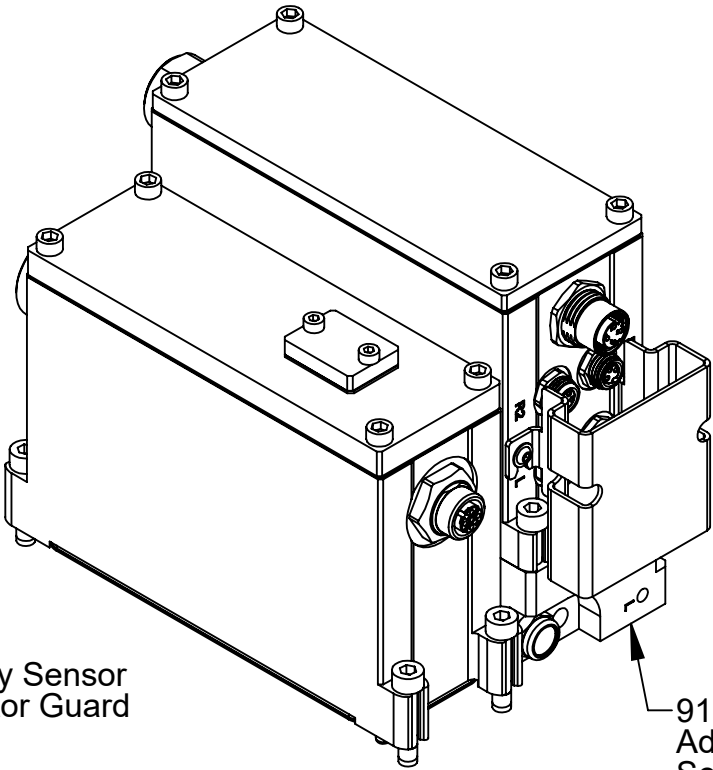
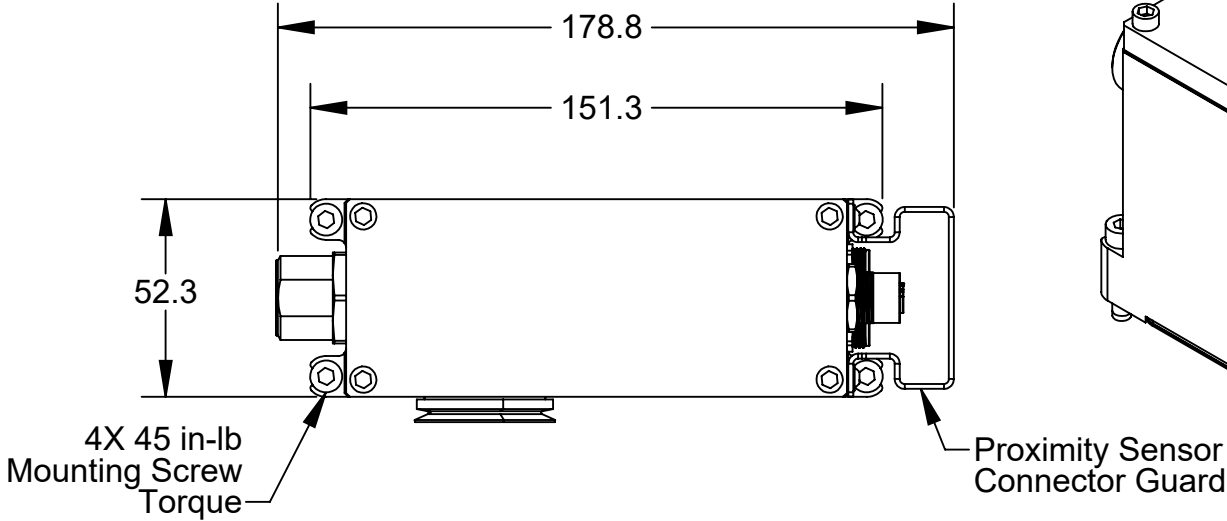
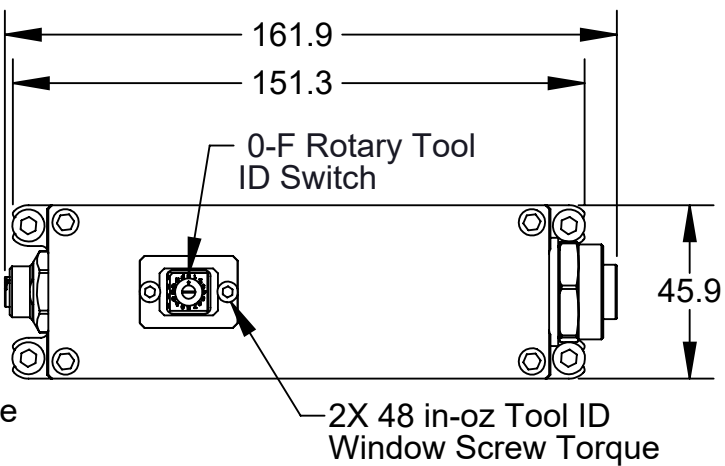


REV.	DESCRIPTION	INITIATOR	DATE
03	Release.	WB	1/13/2022

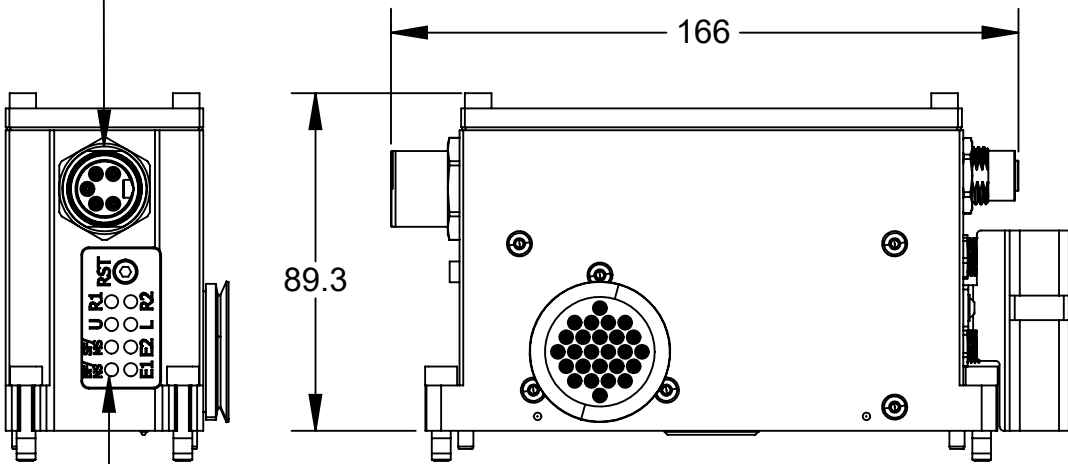
9128-CYP1-M



9128-CYP1-T

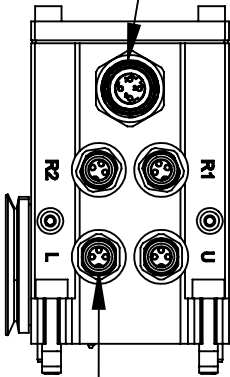


Input/Output Power Connector  
5-Pin Male MiniFast  
Binder 09-2451-100-05  
Connector orientation as shown



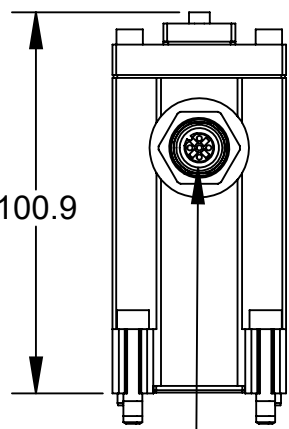
Diagnostic LED's.  
Refer to manual for details

Ethernet Connector  
4-Pin M12, D-Coded Female  
Signal Electronics 120404-04-064  
Connector orientation as shown



Connector Guard  
hidden in this view

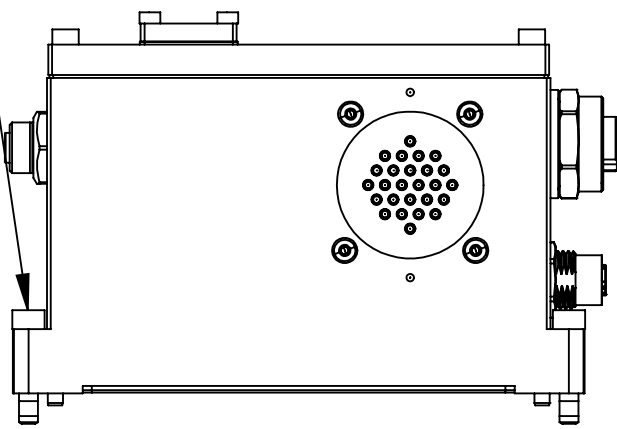
Integrated Tool Changer  
Proximity Sensor Connections  
4X M8 3-Pin Female  
TE T4041017031-000  
Connector orientations as shown



4X 45 in-lb  
Mounting Screw  
Torque

Safety Switch Connector  
M12 5-Pin Female  
Turck FKFDL 4.5  
Connector orientation as shown

Input/Output Power Connector  
5-Pin Female MiniFast  
Turck RKF 50-0.3M/M20  
Connector orientation not  
guaranteed

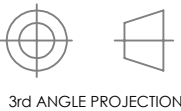


Ethernet Connector  
4-Pin M12, D-Coded Female  
Signal Electronics 120404-04-064  
Connector orientation as shown

- Notes:
1. Pin block signal assignments are shown on Sheet 2.
  2. Connector pin designations are shown on Sheet 3.
  3. Electrical schematic of Master and Tool is shown on Sheet 4. Schematic notes are on Sheet 5.
  4. Connection to Safety Switches is outlined on Sheet 6.
  5. Serviceable parts are shown on Sheet 7.

NOTES: UNLESS OTHERWISE  
SPECIFIED.

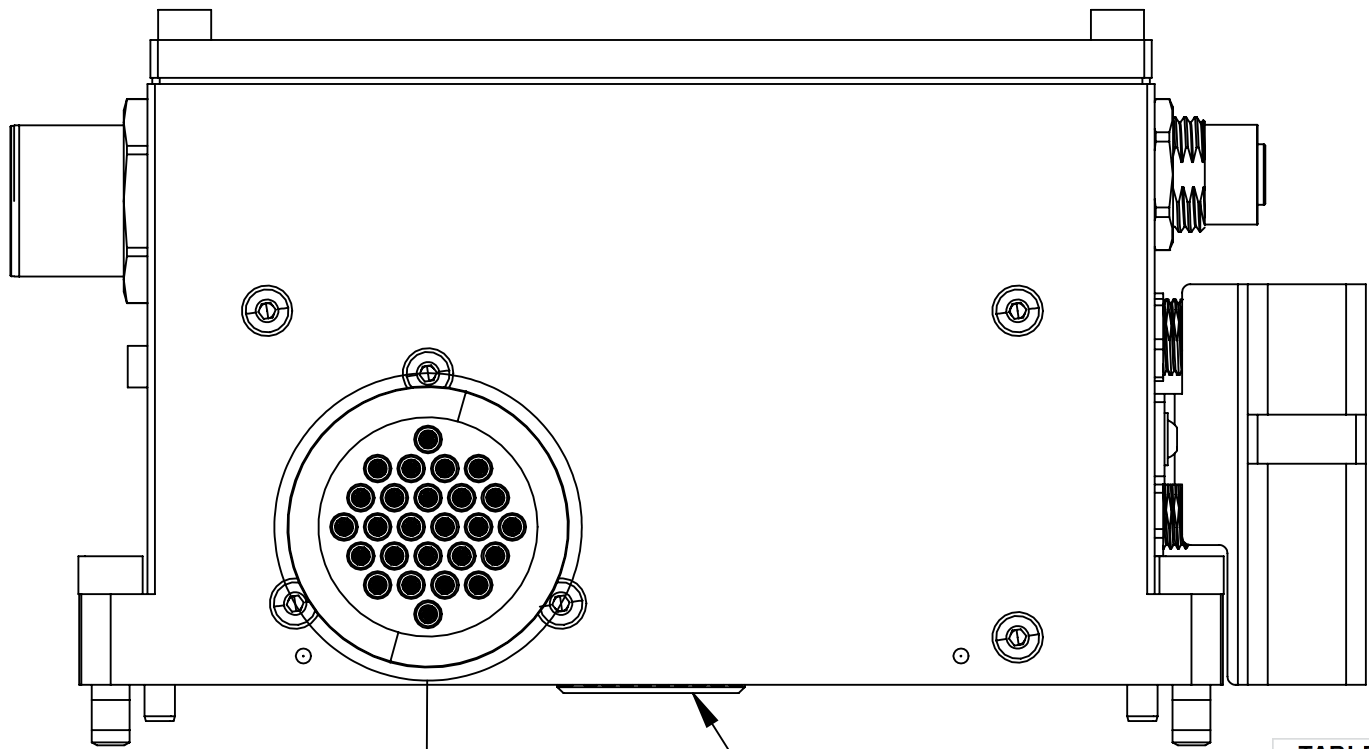
DO NOT SCALE DRAWING.  
ALL DIMENSIONS ARE IN  
MILLIMETERS.



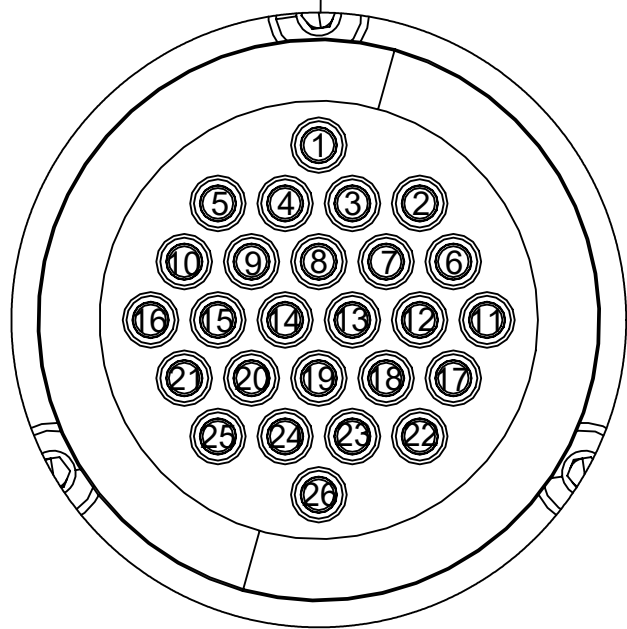
1031 Goodworth Drive, Apex, NC 27539, USA  
Tel: +1.919.772.0115 www.ati-ia.com  
Fax: +1.919.772.8259 ISO 9001 Registered Company

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, 4/2/20		TITLE	
CHECKED BY: F. Alonso, 4/2/20		CYP1 Series 8 Profinet Control Module	
PROJECT # 180905-2	SHEET 1 OF 7	SCALE 1:2	SIZE B
DRAWING NUMBER 9630-20-CYP1		REVISION 03	



Card Edge Connection

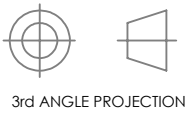


DETAIL A  
SCALE 2 : 1

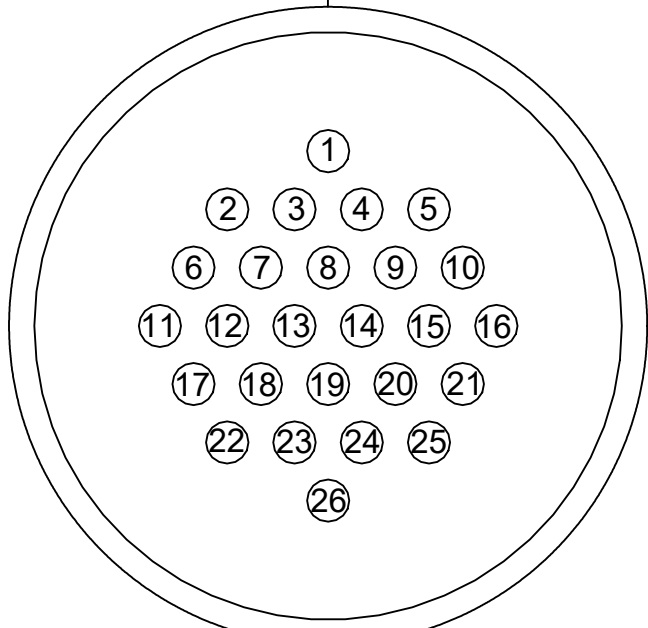
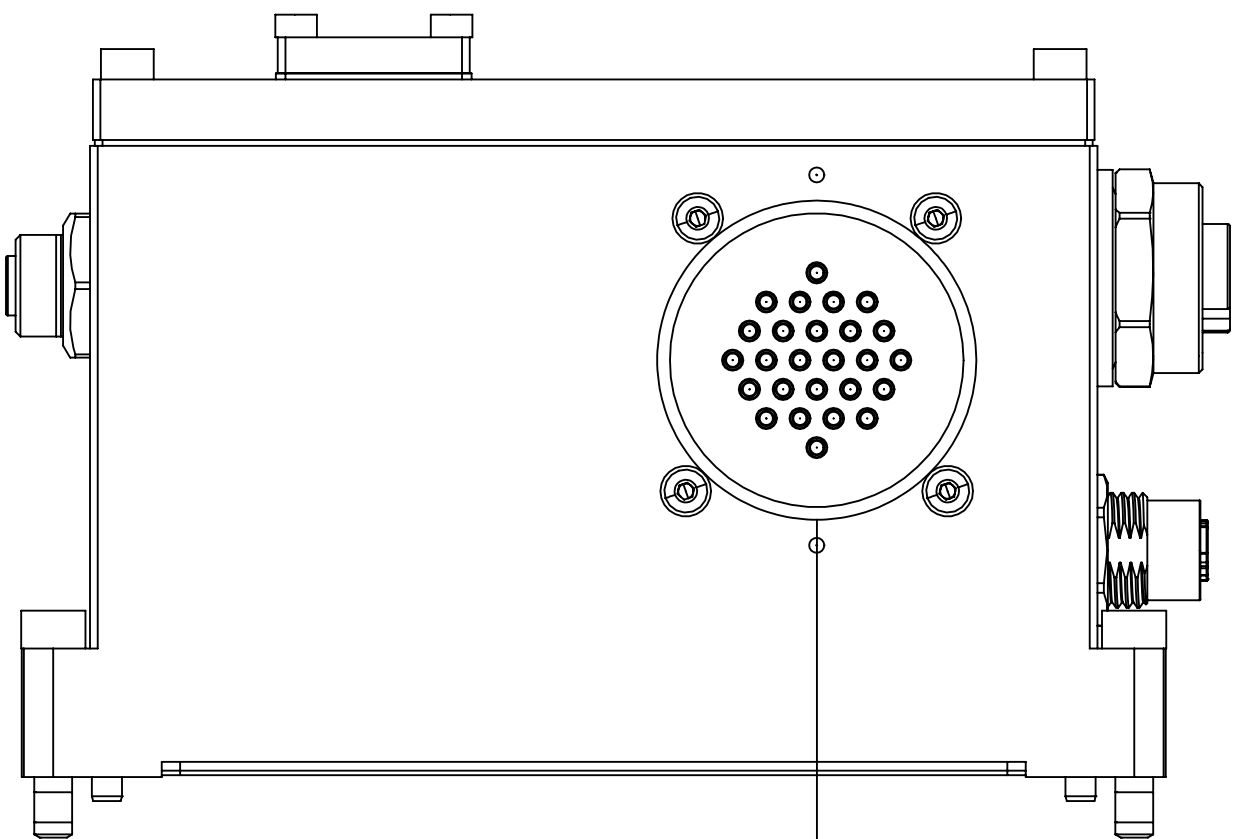
TABLE 1: PIN BLOCK PIN DESIGNATIONS	
Pin	Signal
1	SSO2
2	1RX+
3	1RX-
4	TOOL ID1
5	AP_US1_24V
6	1TX-
7	1RX+
8	1RX-
9	TOOL ID2
10	US1_GND
11	1TX+
12	1TX-
13	TOOL PRESENT
14	24V TOOL (UNSWITCHED 24V)
15	TOOL ID4
16	FE
17	1TX+
18	N/C
19	24V_SAFETY_SWITCH
20	TOOL ID8
21	US2_GND
22	24V_GND
23	N/C
24	N/C
25	AP_US2_24V
26	SSO1

NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING.  
ALL DIMENSIONS ARE IN MILLIMETERS.



3rd ANGLE PROJECTION



DETAIL B  
SCALE 2 : 1



1031 Goodworth Drive, Apex, NC 27539, USA  
Tel: +1.919.772.0115 [www.ati-ia.com](http://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, 4/2/20

CHECKED BY: F. Alonso, 4/2/20

PROJECT # 180905-2

SHEET 2 OF 7

TITLE

CYP1 Series 8 Profinet Control Module

SCALE

1:2

SIZE

B

DRAWING NUMBER

9630-20-CYP1

REVISION

03

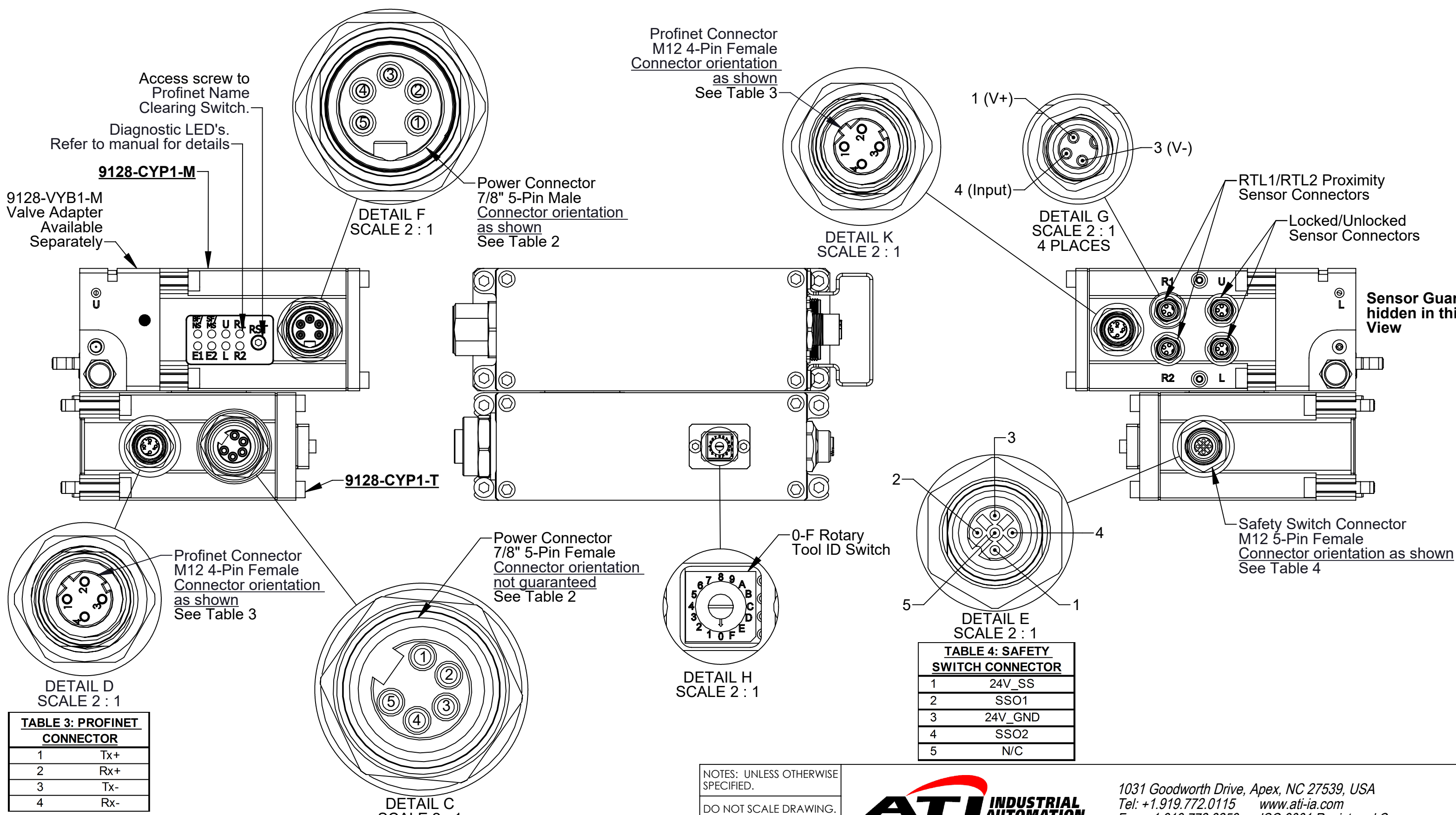


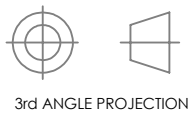
TABLE 3: PROFINET CONNECTOR	
1	Tx+
2	Rx+
3	Tx-
4	Rx-

TABLE 2: POWER CONNECTOR	
1	US2_GND
2	US1_GND
3	FE
4	US1_24V
5	US2_24V

TABLE 4: SAFETY SWITCH CONNECTOR	
1	24V_SS
2	SSO1
3	24V_GND
4	SSO2
5	N/C

NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN MILLIMETERS.

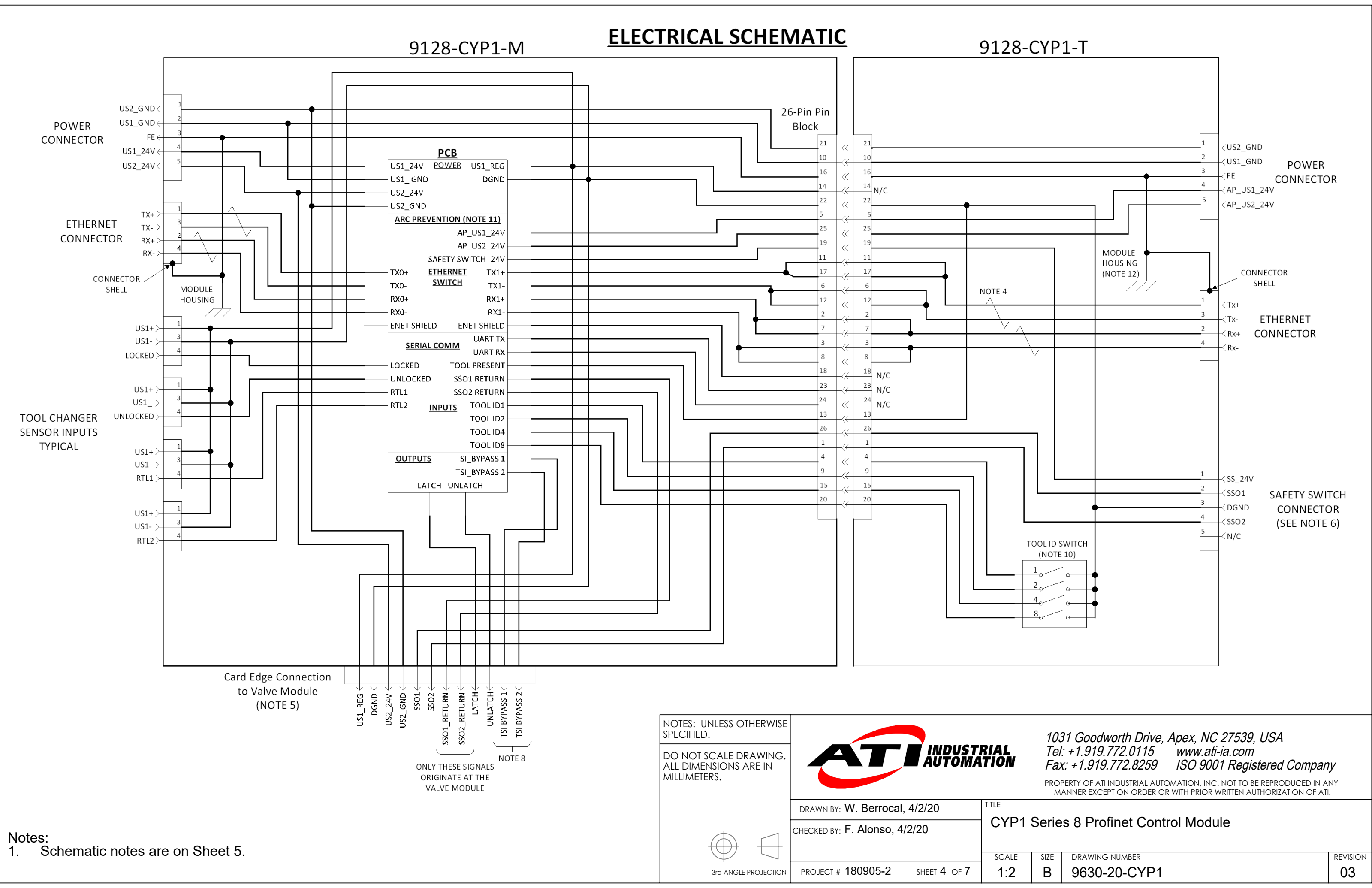


1031 Goodworth Drive, Apex, NC 27539, USA  
Tel: +1.919.772.0115 www.ati-ia.com  
Fax: +1.919.772.8259 ISO 9001 Registered Company

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, 4/2/20		TITLE CYP1 Series 8 Profinet Control Module			
CHECKED BY: F. Alonso, 4/2/20					
PROJECT # 180905-2	SHEET 3 OF 7	SCALE 1:2	SIZE B	DRAWING NUMBER 9630-20-CYP1	REVISION 03

ELECTRICAL SCHEMATIC



Notes:  
1. Schematic notes are on Sheet 5.

NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN MILLIMETERS.

3rd ANGLE PROJECTION

ATII

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, 4/2/20

CHECKED BY: F. Alonso, 4/2/20

PROJECT # 180905-2    SHEET 4 OF 7

TITLE

CYP1 Series 8 Profinet Control Module

SCALE  
1:2

SIZE  
B



DRAWING NUMBER  
9630-20-CYP1

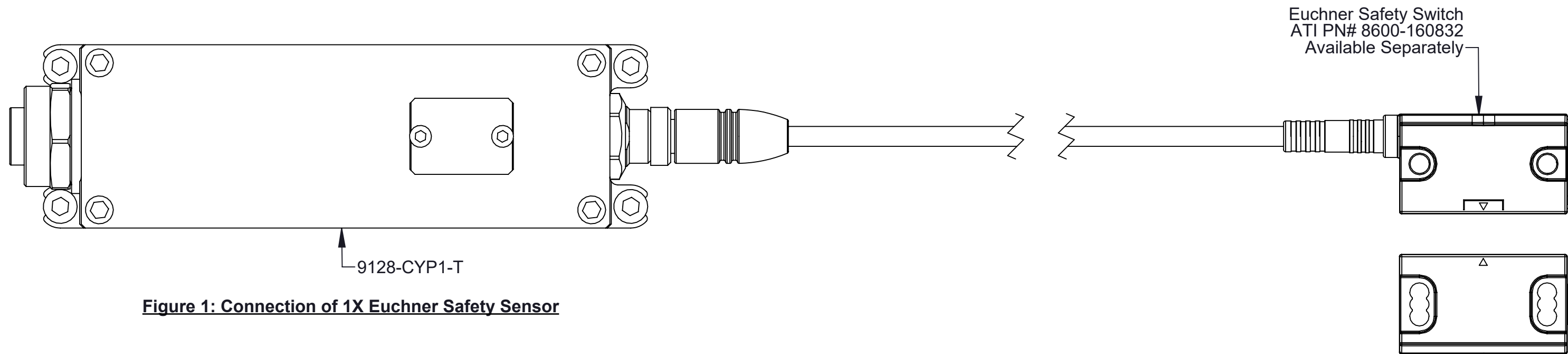
REVISION  
03



Notes:

1. The status of the Locked, Unlocked, and RTL1/RTL2 sensors are communicated in the bitmap and via the LED indicators on the side of the module. The CYP1 Master module is compatible ONLY with PNP sensor.
2. The complete tool changer package comes equipped with external cables that are connected to the sensors.
3. Cables for Profinet and Power are supplied by the customer.
4. The Ethernet (Tx and Rx) signals are transmitted over twisted pairs. The Tx and Rx pairs are passed redundantly over the 26-pin Pin Block.
5. The Card Edge connector is used to transmit the Latch and Unlatch command to a 9128-VY series Valve Module. The Valve Module contains a double solenoid pneumatic valve(s) that locks and unlocks the Tool Changer. The Valve is driven by US2 Power. NOTE: The CYP1 is not compatible with single solenoid valve modules.
6. The Valve Module will only unlatch the Tool Changer if the Tool is nested in the Tool Stand as indicated by the two Safety Switch inputs, SSO1 and SSO2. The SSO1 and SSO2 Safety Switch inputs are transmitted from the Master Control Module to the Valve Module via the Card Edge connector.
7. Error and diagnostic bits are not shown on this schematic but are reported in the Master Bitmap. Refer to the product manual for details.
8. When the TSI\_BYPASS 1 and TSI\_BYPASS 2 are both true, the Valve Module will allow the Tool Changer to unlatch even when the Tool is NOT nested in the Tool Stand. The TSI\_BYPASS 1 and TSI\_BYPASS 2 can only be true when the RTL1, RTL2, and TOOL\_PRESENT signals are false, indicating that a Tool is not attached to the Master. Refer to the product manual for details.
9. See the notes on Sheet 6 for details regarding compatible Safety Sensors and single and series connection of the Safety Sensors. Note: The Safety Sensor(s) is powered by US1 power.
10. The Tool ID I/O is reported in the Master Bitmap. Refer to the Product Manual for more information.
11. The Arc Prevention Circuit turns off US1 and US2 Power during coupling and uncoupling of the Tool Changer. The switching function is controlled by the Profinet Master PCB. The TOOL\_PRESENT input is used to ensure that the spring/contact pins are touching when power is turned on. Refer to the manual for additional information.
12. FE is connected directly to the Master and Tool Module housings. The shells of the Profinet connectors on the Master and Tool modules are also tied to FE.
13. Electrical Rating:
  - US1: 4A, 21V to 30V
  - US2: 6A, 20V to 30V

<div>NOTES: UNLESS OTHERWISE SPECIFIED.</div> <div>DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN INCHES.</div> <div><div>3rd ANGLE PROJECTION</div></div>	<div></div>		<div>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</div>			
			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, 4/2/20		TITLE			
	CHECKED BY: F. Alonso, 4/2/20		CYP1 Series 8 Profinet Control Module			
PROJECT # 180905-2    SHEET 5 OF 7		SCALE	SIZE	DRAWING NUMBER		REVISION
		2:3	B	9630-20-CYP1		03



**Figure 1: Connection of 1X Euchner Safety Sensor**

Safety Switch Compatability

1. The CYP1 Module is compatible with the following types of Safety Switches:
  - Any safety rated mechanical limit switch that has two NO contacts.
  - Magnetically Coded Non-contact Interlock Switches such as the Allen-Bradley Ferroguard or Sipha switches (must have two NO contacts).
  - PLe Rated RFID Based Safety Switches with two safety outputs. RFID based Safety Switches with both single and series connection are supported - refer to manual for specific models and connection instructions.

**IMPORTANT: To achieve a PLd safety rating, the CYP1 module must be used with a VY Series PLd certified Valve Module and a PLe Rated Safety Switch. See the manual for details.**

Connection of Single Safety Switch

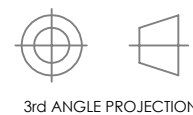
2. If only a single Safety Switch is required, ATI recommends the use of an Euchner Safety Switch (ATI P/N 8600-160832). Reference Figure 1 for connection details and component part numbers.

Series Connection of 2 to 4 Safety Switches:

3. If two to four Safety Switches are required to be connected in series then ONLY series connected Safety Switches can be used (see the manual for details).  
**IMPORTANT: THE CYP1 TOOL CANNOT SUPPORT MORE THAN FOUR (4) SAFETY SWITCHES CONNECTED IN SERIES.**
4. Check with ATI before selecting a switch that is not suggested in the manual.

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](mailto:info@ati-ia.com)  
Fax: +1.919.772.8259 [www.ati-ia.com](http://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, 4/2/20

CHECKED BY: F. Alonso, 4/2/20

PROJECT # 180905-2 SHEET 6 OF 7

TITLE

CYP1 Series 8 Profinet Control Module

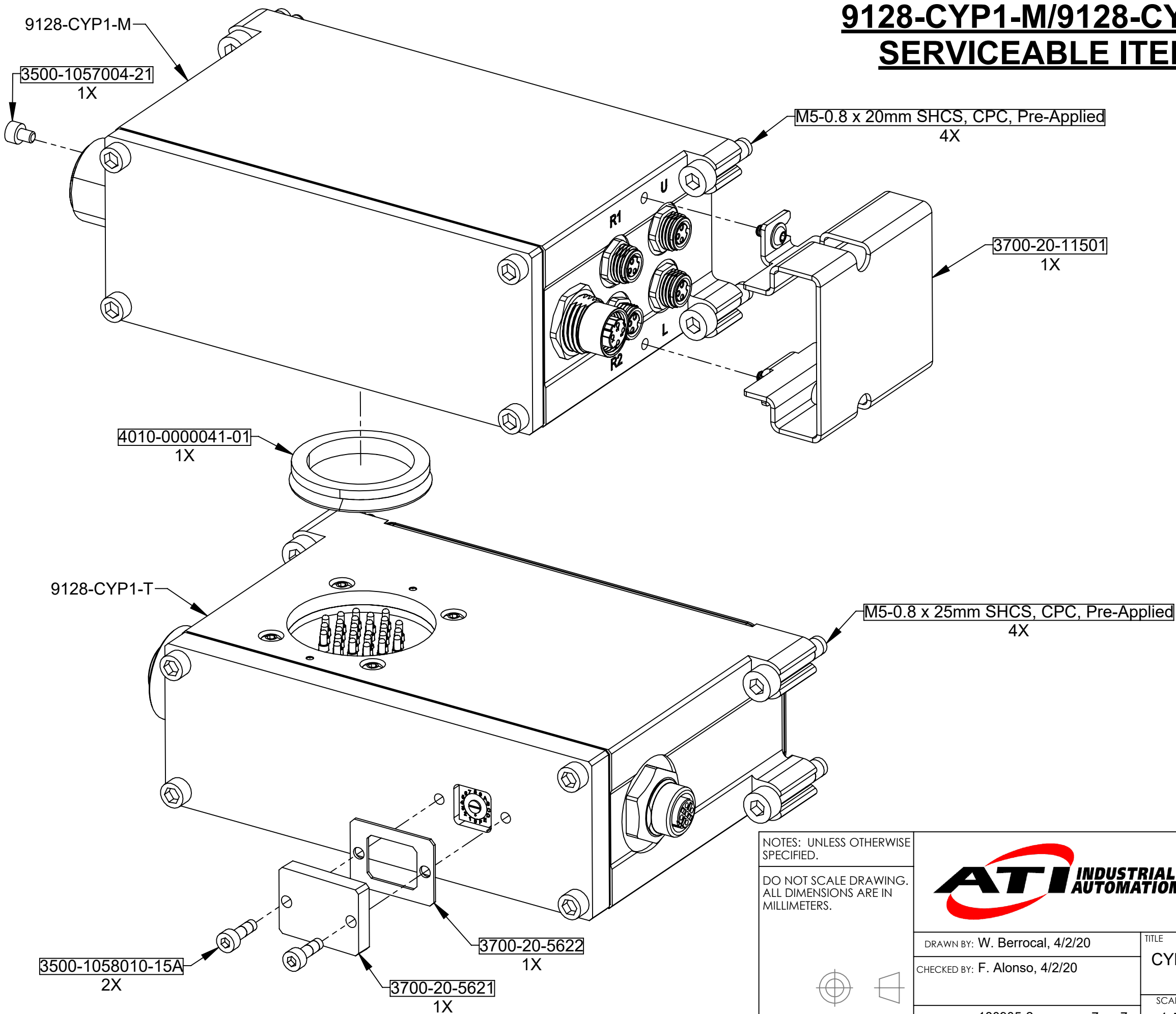
SCALE  
1:5

SIZE  
B

DRAWING NUMBER  
9630-20-CYP1

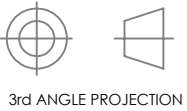
REVISION  
03

9128-CYP1-M/9128-CYP1-T  
SERVICEABLE ITEMS



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 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, 4/2/20		TITLE		
CHECKED BY: F. Alonso, 4/2/20		CYP1 Series 8 Profinet Control Module		
PROJECT # 180905-2	SHEET 7 OF 7	SCALE 1:5	SIZE B	DRAWING NUMBER 9630-20-CYP1
				REVISION 03