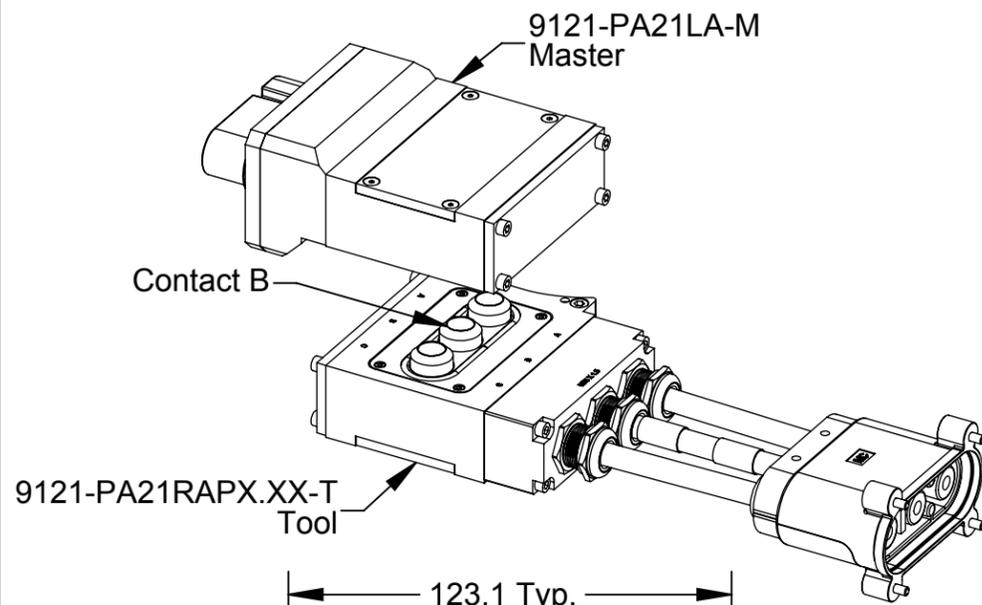


**"DANGER!" - Electrical Shock Hazard**

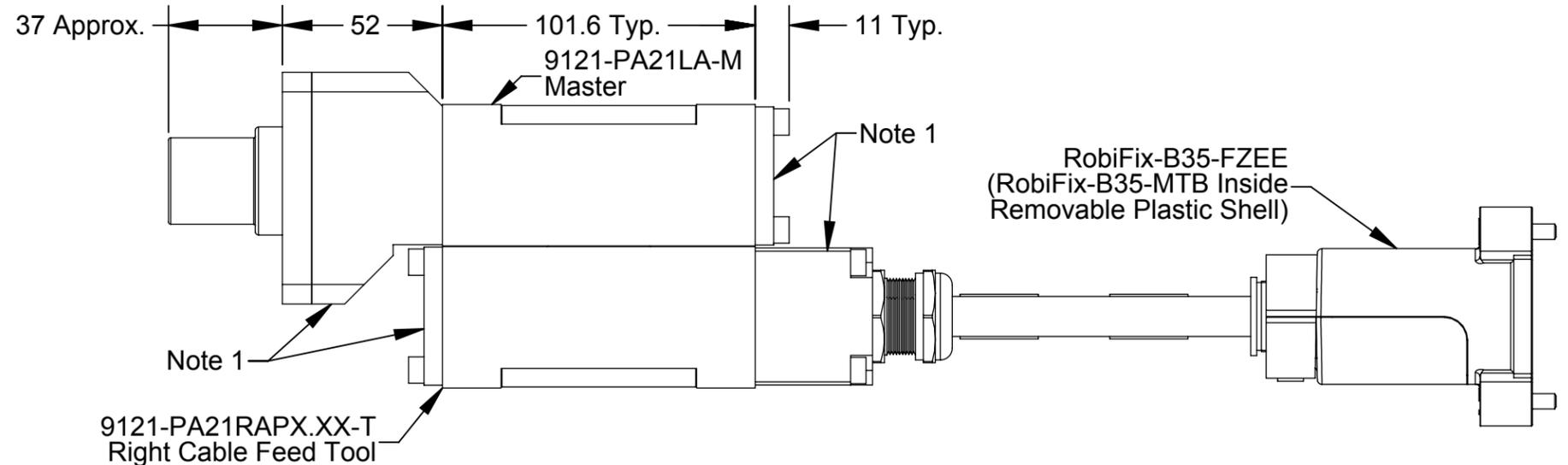
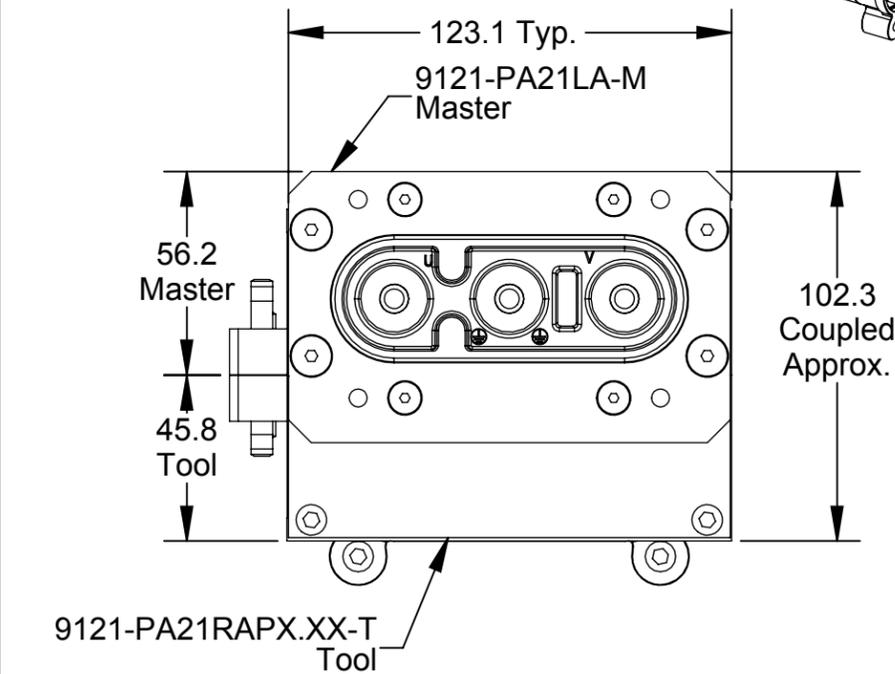
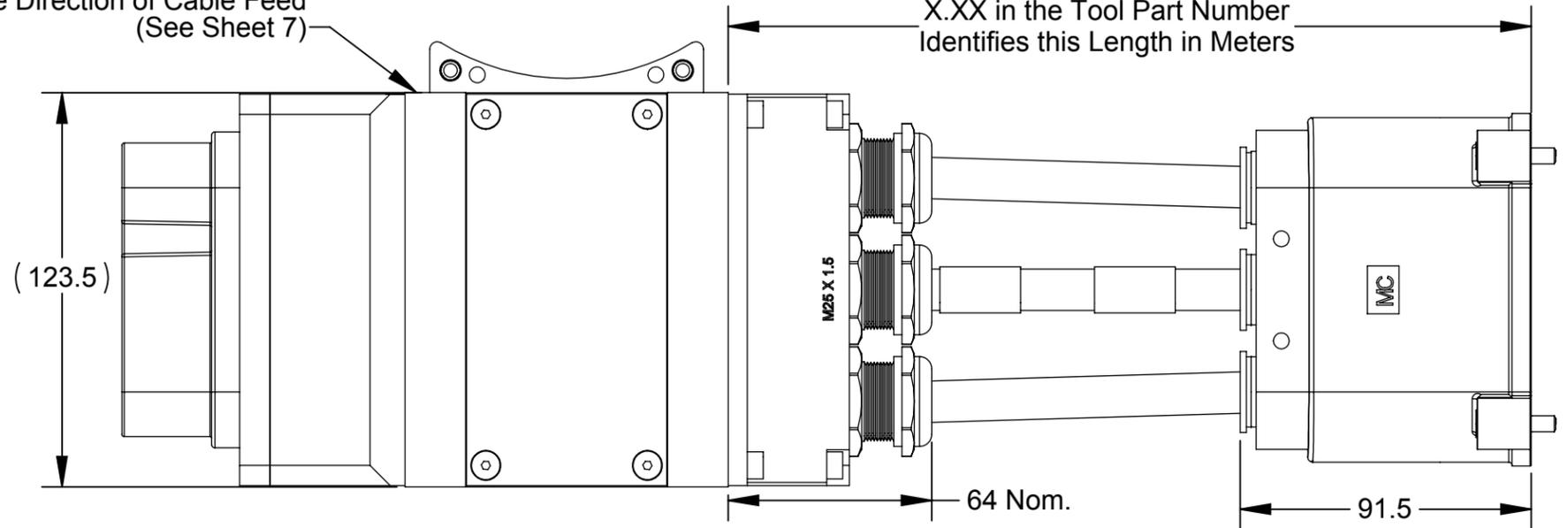
This module has a Voltage of 50V or greater, NO contact should be attempted before removing power. This especially includes separation or insertion of the mating connectors or any contact with the tool changer or its components.

Rev.	Description	Initiator	Date
01	ADDED LEFT AND RIGHT FEED CONFIGURATIONS & SHEET 7	DKL	6/12/2018



"L" and "R" in the part number identifies the Direction of Cable Feed (See Sheet 7)

X.XX in the Tool Part Number identifies this Length in Meters

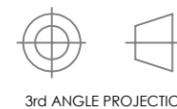


RobiFix Contact	Master ATI Contact		Tool ATI Contact
U**	A	>--->	A
Gnd	B	>--->	B
V**	C	>--->	C
Tool Contact B is Configured for First-Make/Last-Break			
** Contacts U & V may be switched in the field either in the ATI module or in the RobiFix connector.			

Notes:  
1. The RobiFix fitting plate and cord grip assemblies may be installed on either end. (Shown with **LEFT end Master Feed** and **RIGHT end Tool Feed**)

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: D.Lawson-6/5/18		TITLE	
CHECKED BY: K. Zachary-6/7/18		PA21 Power Module Customer Drawing	
PROJECT # 180122-1	SHEET 1 OF 7	SCALE 1:2	SIZE B
DRAWING NUMBER 9630-20-PA21		REVISION 01	

Screws Supplied  
with Cover  
Loctite 222 / 25 in-lb

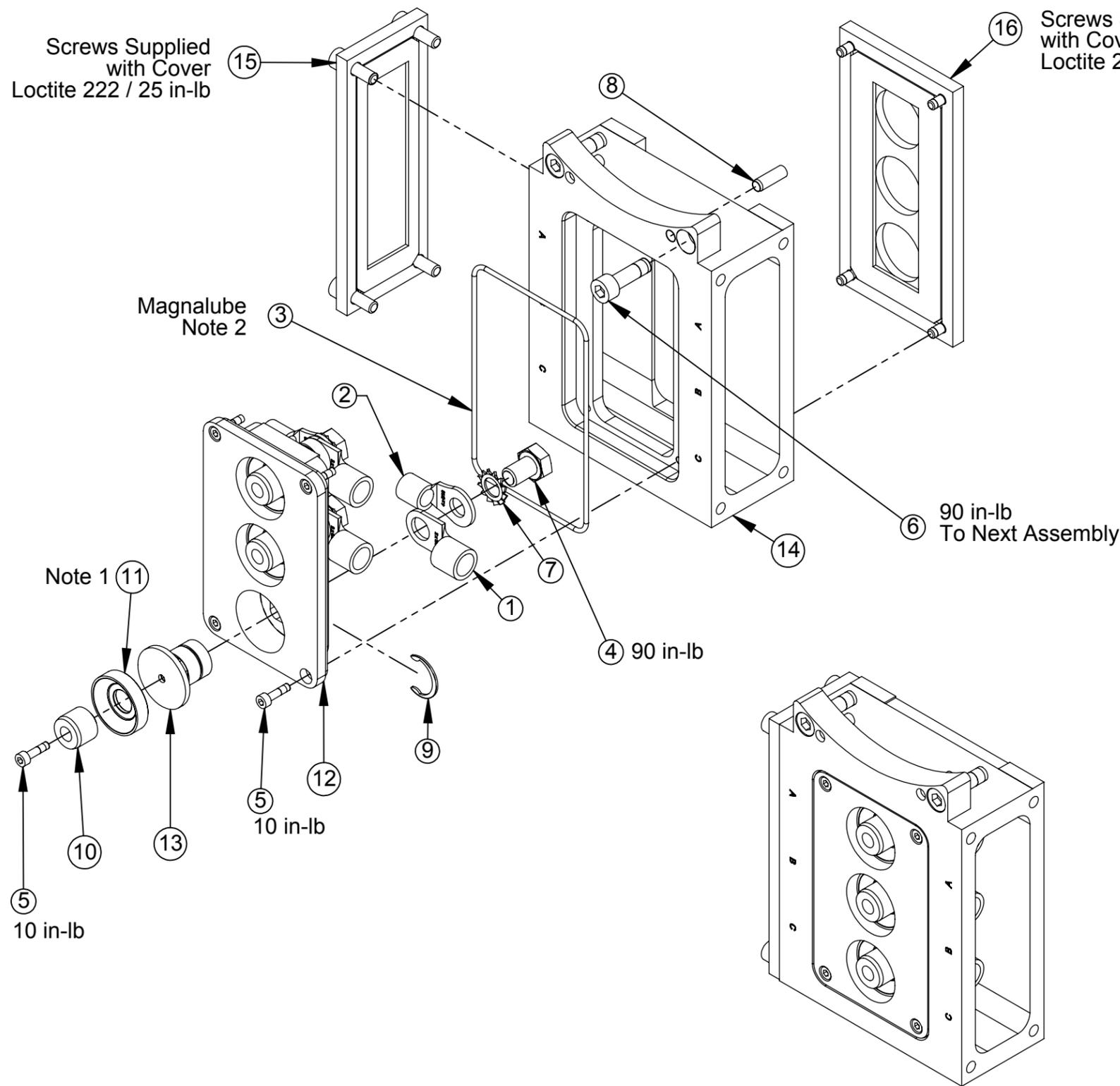
Screws Supplied  
with Cover  
Loctite 222 / 12 in-lb

## Master Side Parts 9121-PA21R-M & 9121-PA21L-M

Left Feed Shown. For Right Feed the End Cover  
Assembly is Located on the Opposite Side

Full Master Rebuild Kit = 9005-20-2580  
Contains 1 each of items: 4, 5, 7, 9, 10, 11 & 13

Tip Master Rebuild Kit = 9005-20-2582  
Contains 1 each of items: 5, 10 & 11



ITEM NO.	QTY	PART NUMBER	DESCRIPTION
1	3	1705-0610219-03	Ring Terminal, Non Insulated, #2 AWG, 3/8" Stud
2	3	1705-0610220-03	Ring Terminal, Non Insulated, #4 AWG, 5/16 Stud
3	1	3410-0001439-01	O-Ring, 85mm x 2mm, Nitrile, 70A
4	3	3500-0868012-12	M8 x 12 HHCS, Zinc, 8.8
5	7	3500-1058012-15A	M3-0.5 x 12mm SHCS, Blue, Pre-Applied
6	2	3500-1066020-15A	M6-1 x 20mm SHCS, Blue, Pre-Applied
7	3	3510-5267001-12	Washer, Lock, Ext. Tooth, M8, Steel, Zn Plt, DIN 6797A
8	2	3540-0105016-11	5mm x 16mm Dowel Alloy Steel
9	3	3690-6500004-11	Low-Clearance C-Style Ring for 5/8" Shaft Dia.
10	3	3700-20-4153	INSULATOR POST, MASTER
11	3	3700-20-8523	Contact Tip, 200A, Master, Silver Plate
12	1	3700-20-9501	Contact Block, PA20, Master
13	3	3700-20-9510	Contact Base, 200A, Bolt Type, PAXX Master
14	1	3700-20-10484	Housing, Box, PA20
15	1	9005-20-2495	End Cover Assembly, PA20, 44.8mm
16	1	9005-20-2603	Cover Plate Assembly, PA21

NOTES: UNLESS OTHERWISE  
SPECIFIED.

DO NOT SCALE DRAWING.  
ALL DIMENSIONS ARE IN  
INCHES.



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

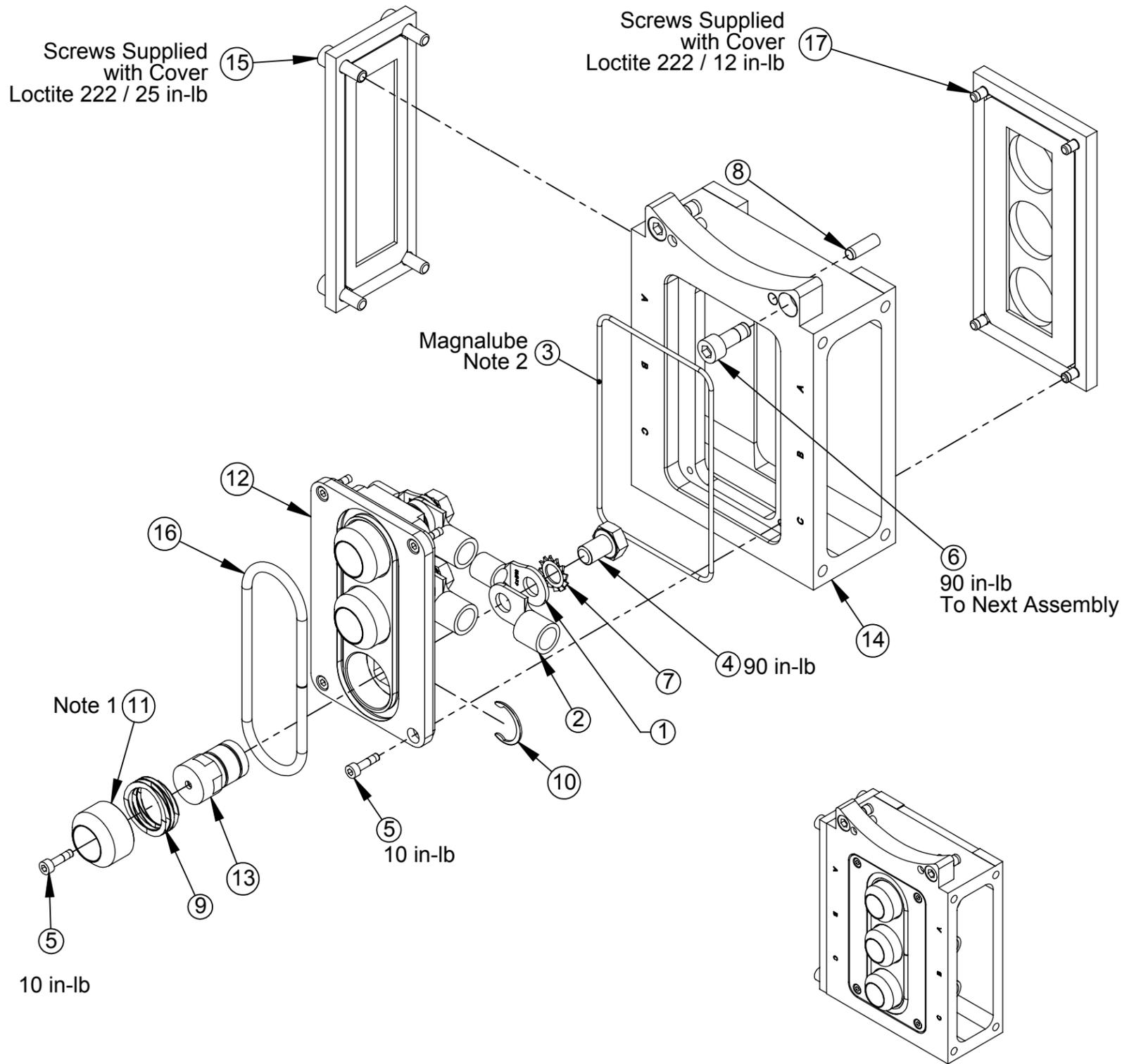
PROPERTY OF ATI INDUSTRIAL AUTOMATION, INC. NOT TO BE REPRODUCED IN ANY  
MANNER EXCEPT ON ORDER OR WITH PRIOR WRITTEN AUTHORIZATION OF ATI.

- Notes:
1. Apply silver grease to the bottom surface per the product manual.
  2. After applying Magnalube to the o-ring, fit to the underside of the contact carrier, then slip the contact carrier and seal into the housing.



3rd ANGLE PROJECTION

DRAWN BY: D.Lawson-6/5/18		TITLE	
CHECKED BY: K. Zachary-6/7/18		PA21 Power Module Customer Drawing	
PROJECT #	180122-1	SHEET	OF 7
SCALE	1:2	SIZE	B
DRAWING NUMBER	9630-20-PA21		REVISION
			01



## Tool Side Parts 9121-PA21R-T & 9121-PA21L-T

Right Feed Shown. For Left Feed the End Cover Assembly is Located on the Opposite Side

Full Tool Rebuild Kit = 9005-20-2581  
Contains 1 each of items: 4, 5, 7, 9, 10, 11 & 13

Tip Tool Rebuild Kit = 9005-20-2583  
Contains 1 each of items: 5, 9 & 11

ITEM NO.	QTY	PART NUMBER	DESCRIPTION
1	3	1705-0610220-03	Ring Terminal, Non Insulated, #4 AWG, 5/16 Stud
2	3	1705-5510202-03	Ring Term.,#2x8mm, AMP 322870
3	1	3410-0001439-01	O-Ring, 85mm x 2mm, Nitrile, 70A
4	3	3500-0868012-12	M8 x 12 HHCS, Zinc, 8.8
5	7	3500-1058012-15A	M3-0.5 x 12mm SHCS, Blue, Pre-Applied
6	2	3500-1066016-15A	M6-1 x 16mm SHCS, Blue, Pre-Applied
7	3	3510-5267001-12	Washer, Lock, Ext. Tooth, M8, Steel, Zn Plt, DIN 6797A
8	2	3540-0105016-11	5mm x 16mm Dowel Alloy Steel
9	3	3610-7301101-21	Wave Spring, .91"OD x .44 Lg-Smalley 14892-08
10	3	3690-6500004-11	Low-Clearance C-Style Ring for 5/8" Shaft Dia.
11	3	3700-20-8524	Contact Tip, 200A, Tool, Silver Plate
12	1	3700-20-9511	Contact Carrier Plate, PA20-T
13	3	3700-20-9512	200A Contact Base, Bolt Type, PAXX Tool
14	1	3700-20-10484	Housing, Box, PA20
15	1	9005-20-2495	End Cover Assembly, PA20, 44.8mm
16	1	9005-20-2498	8.3" x 4mm Dia. Viton Tubular Seal, PA20-T
17	1	9005-20-2603	Cover Plate Assembly, PA21

**Notes:**

1. Apply silver grease to the bottom surface per the product manual.
2. After applying Magnalube to the o-ring, fit to the underside of the contact carrier, then slip the contact carrier and seal into the housing.

NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN INCHES.



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: D.Lawson-6/5/18

CHECKED BY: K. Zachary-6/7/18

PROJECT # 180122-1 SHEET 3 OF 7

TITLE

PA21 Power Module Customer Drawing

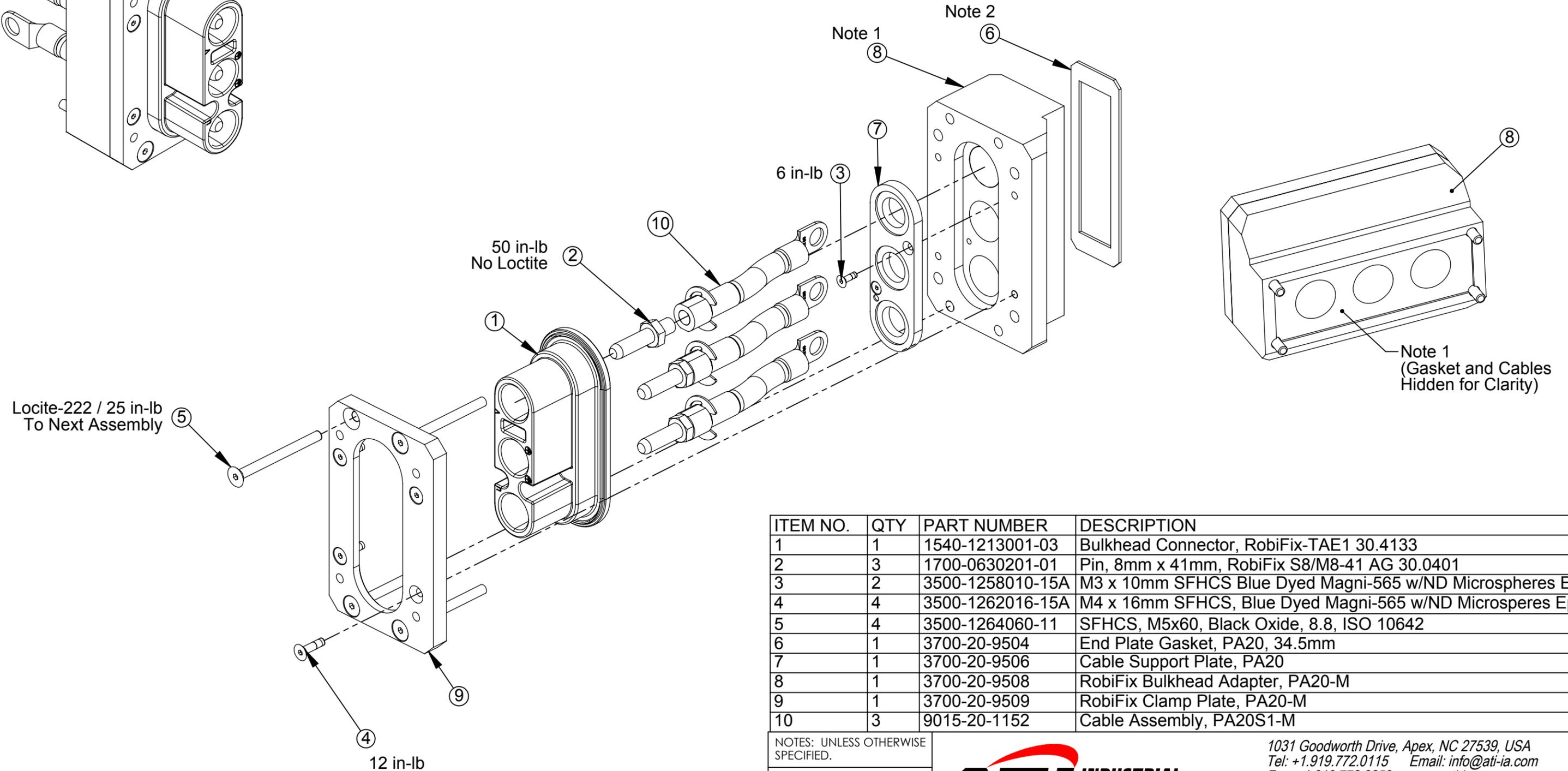
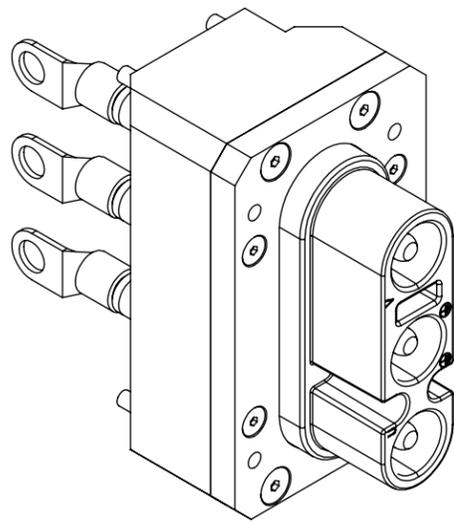
SCALE  
1:2

SIZE  
B

DRAWING NUMBER  
9630-20-PA21

REVISION  
01

# 9005-20-2604 Master Side RobiFix Adapter Parts



ITEM NO.	QTY	PART NUMBER	DESCRIPTION
1	1	1540-1213001-03	Bulkhead Connector, RobiFix-TAE1 30.4133
2	3	1700-0630201-01	Pin, 8mm x 41mm, RobiFix S8/M8-41 AG 30.0401
3	2	3500-1258010-15A	M3 x 10mm SFHCS Blue Dyed Magni-565 w/ND Microspheres Epoxy
4	4	3500-1262016-15A	M4 x 16mm SFHCS, Blue Dyed Magni-565 w/ND Microspheres Epoxy
5	4	3500-1264060-11	SFHCS, M5x60, Black Oxide, 8.8, ISO 10642
6	1	3700-20-9504	End Plate Gasket, PA20, 34.5mm
7	1	3700-20-9506	Cable Support Plate, PA20
8	1	3700-20-9508	RobiFix Bulkhead Adapter, PA20-M
9	1	3700-20-9509	RobiFix Clamp Plate, PA20-M
10	3	9015-20-1152	Cable Assembly, PA20S1-M

NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN INCHES.



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: D.Lawson-6/5/18

CHECKED BY: K. Zachary-6/7/18

TITLE

PA21 Power Module Customer Drawing

PROJECT # 180122-1 SHEET 4 OF 7

SCALE  
1:2

SIZE  
B

DRAWING NUMBER  
9630-20-PA21

REVISION  
01

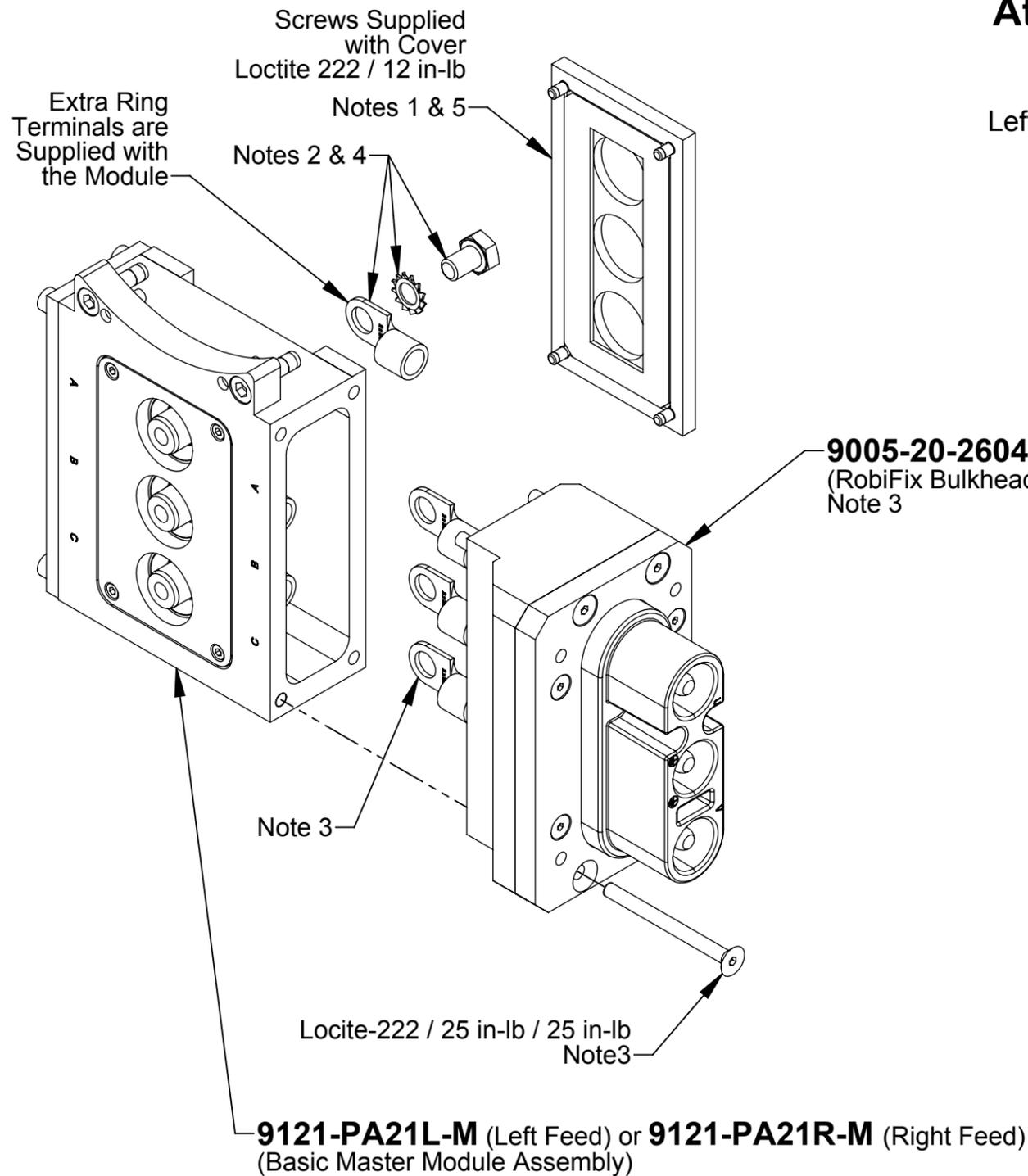
**Notes:**

1. Degrease pocket on rear of the bulkhead adapter with alcohol.
2. Remove release paper from gasket and apply to bulkhead adapter.

# Attachment of Master Side RobiFix Adapter 9121-PA21RA-M & 9121-PA21LA-M

Left Feed Shown. For Right Feed the RobiFix Adapter Assembly is Located on the Opposite Side

**All fasteners shown are supplied with their respective subassemblies.**



**9121-PA21LA-M**  
(PA21-M WITH ROBIFIX ADAPTER)

**Notes (listed in the order to be carried out):**

1. Remove the cover from the PA21 master module.
2. Remove the M8 hex head bolts and lock washers from the PA21 contact bases.
3. Fit the RobiFix adapter assembly to the PA21 module and tighten its screws. Note ring terminal orientation.
4. Position the cable ring terminals over the contact bases and refit the lock washers and M8 bolts. Tighten the bolts, No Loctite / 90 in-lb
5. Refit the PA21 cover and tighten its screws.

NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN INCHES.



3rd ANGLE PROJECTION



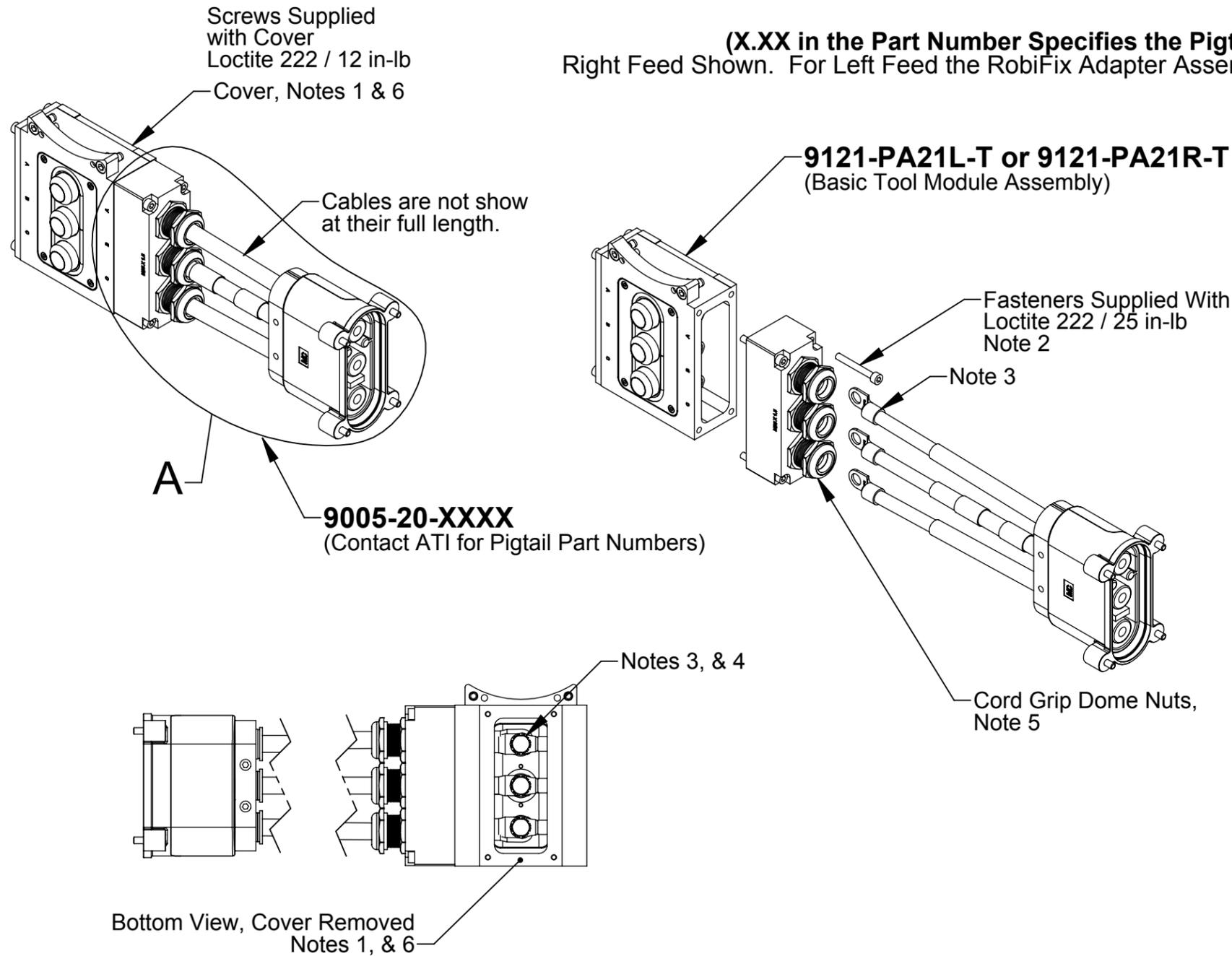
1031 Goodworth Drive, Apex, NC 27539, USA  
Tel: +1.919.772.0115 Email: info@ati-ia.com  
Fax: +1.919.772.8259 www.ati-ia.com  
ISO 9001 Registered Company

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

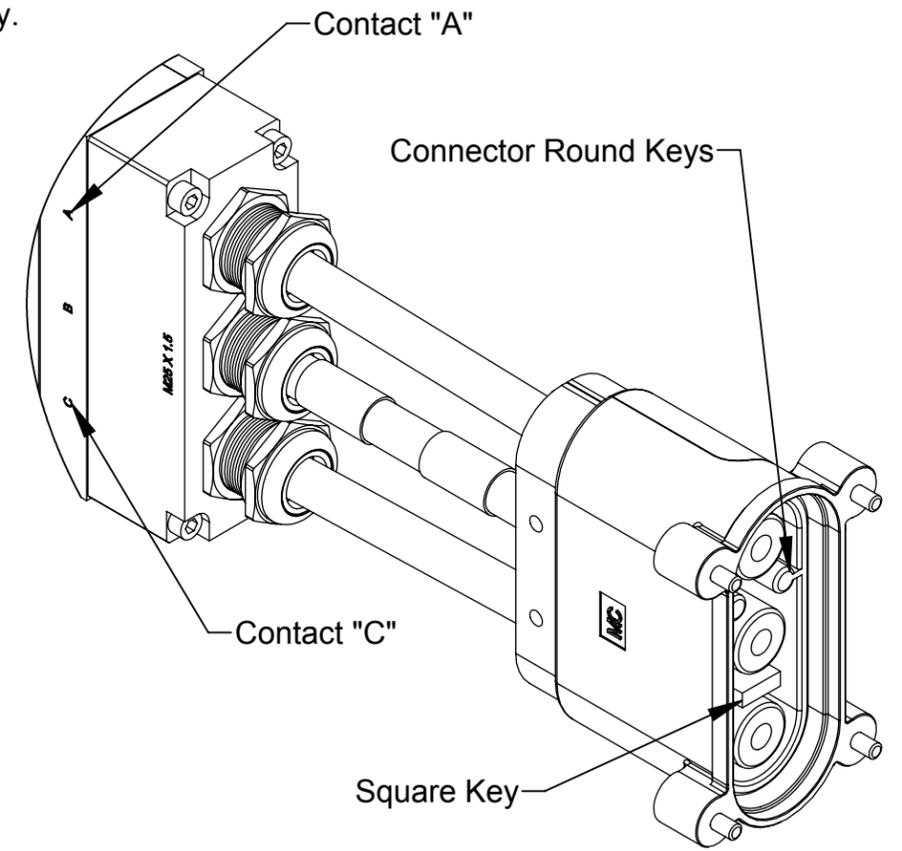
DRAWN BY: D.Lawson-6/5/18		TITLE		
CHECKED BY: K. Zachary-6/7/18		PA21 Power Module Customer Drawing		
PROJECT #	180122-1	SHEET	5	OF 7
SCALE	1:2	SIZE	B	DRAWING NUMBER
				9630-20-PA21
				REVISION
				01

# Attachment of the Tool Side RobiFix Pigtail Adapter 9121-PA21LAPX.XX-T & 9121-PA21RAPX.XX-T

(X.XX in the Part Number Specifies the Pigtail Length in Meters)  
Right Feed Shown. For Left Feed the RobiFix Adapter Assembly is Located on the Opposite Side



## KEYWAY ORIENTATION



VIEW A  
SCALE 1 : 2

**Perform the assembly steps in the order listed below.**

**Notes:**

1. Remove the cover from the PA21-T module.
2. Attach the fitting plate assembly to the PA21 housing and tighten its mounting screws.
3. Route the cables from the pigtail through the cord grips (observe the cable routing in View A).
4. Insert the hex head bolts through the lock washers and ring terminals and tighten the bolts.
5. Tighten the cord grip dome nuts one at a time starting with the middle fitting.
6. Fit the cover and tighten its mounting screws.

NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN MILLIMETERS.



3rd ANGLE PROJECTION

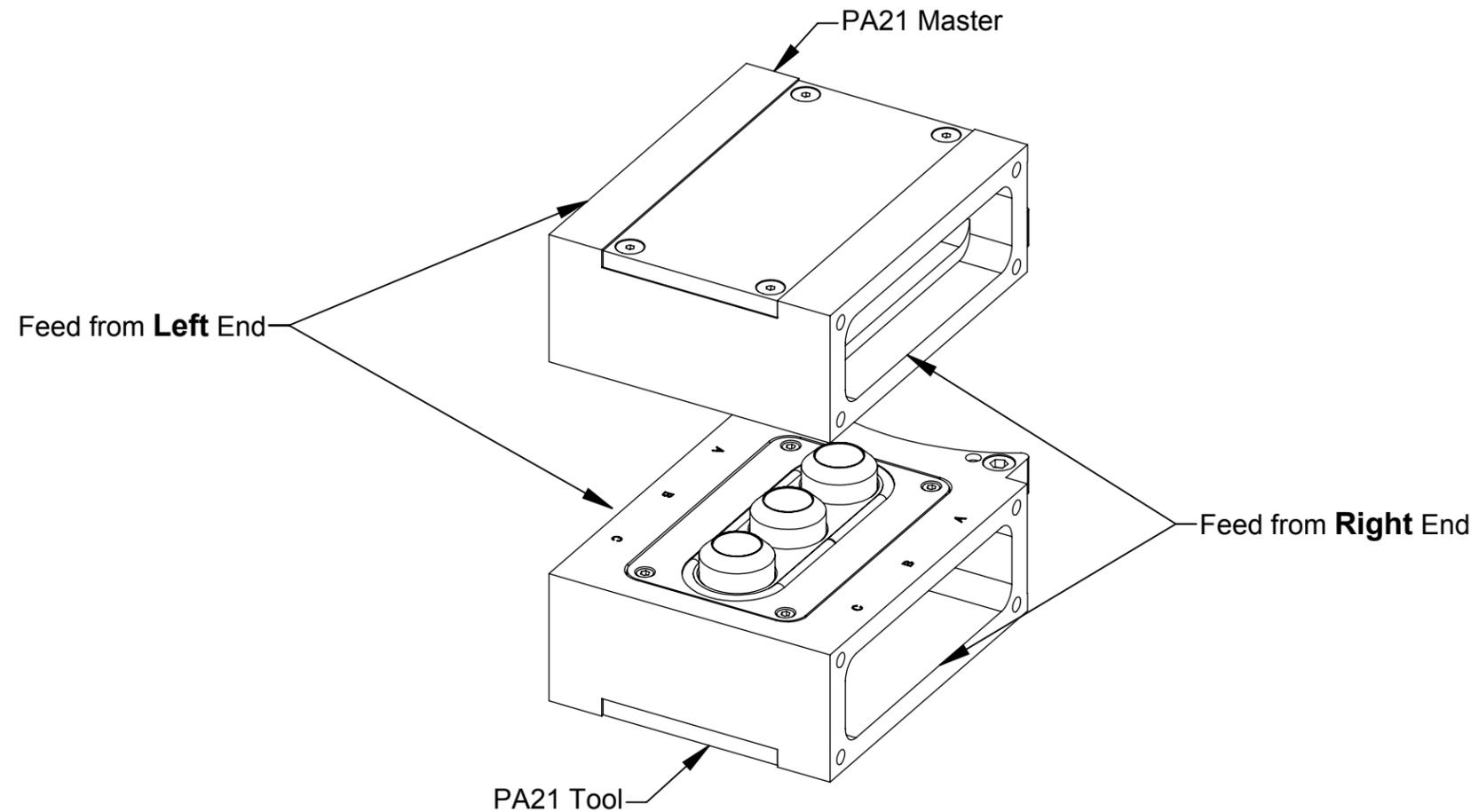


1031 Goodworth Drive, Apex, NC 27539, USA  
Tel: +1.919.772.0115 Email: info@ati-ia.com  
Fax: +1.919.772.8259 www.ati-ia.com  
ISO 9001 Registered Company

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: D.Lawson-6/5/18		TITLE		
CHECKED BY: K. Zachary-6/7/18		PA21 Power Module Customer Drawing		
PROJECT #	180122-1	SHEET	6 OF 7	REVISION
SCALE	1:4	SIZE	B	DRAWING NUMBER
		9630-20-PA21		01

## Determining the Direction of Cable Feed (Left or Right Feed, See Notes)



Left and Right are Defined by the Orientation Shown Above  
with the Master Module on Top and the Tool Module Below.

**Notes:**

1. The PA21 can be configured for cable connections on either the left or right end of the module.
2. "L" or "R" in the part number designates the direction of cable feed as defined in the image above.
3. If the incorrect feed direction is purchased, the modules can be quickly and easily converted in the field by switching the end cover and cord grip plates.
4. When the RobiFix adapter is attached to the PA21 Master module, the tool side adapter **MUST** be on the opposite end of the tool module (i.e. for Master assembly 9121-PA21**L**A-M (left feed), configure the Tool as 9121-PA21**R**AX.XX-T (right feed)).

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: D.Lawson-6/5/18		TITLE	
CHECKED BY: K. Zachary-6/7/18		PA21 Power Module Customer Drawing	
PROJECT # 180122-1	SHEET 7 OF 7	SCALE 1:2	SIZE B
		DRAWING NUMBER	REVISION
		9630-20-PA21	01