

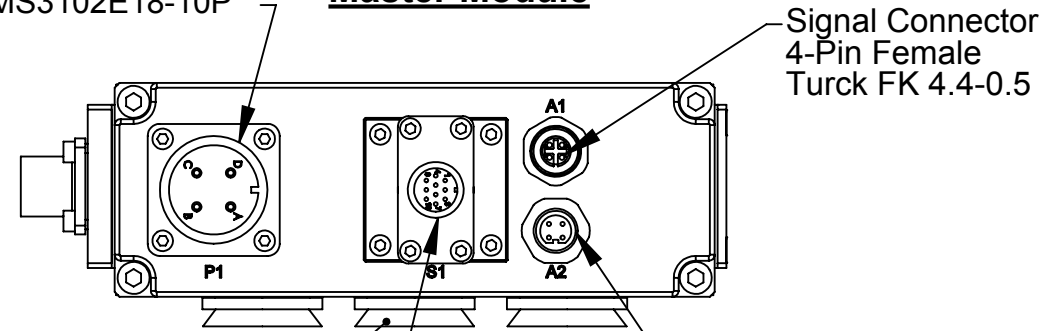
**"DANGER!" - Electrical Shock Hazard**

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
04	Eco 18058; (2) Cleat dowels 3450-0105010-11 removed from the 9121-EF61-M	DS	7/30/2019

Power Connector  
4-Pin Male  
Amphenol MS3102E18-10P

**9121-EF61-M  
Master Module**



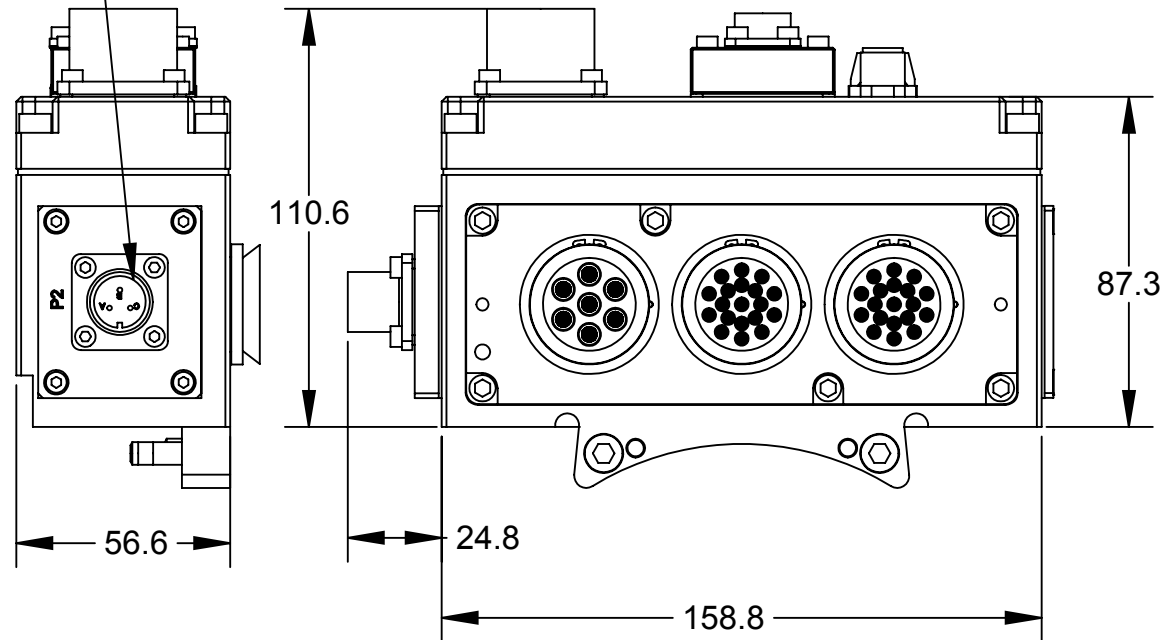
Signal Connector  
4-Pin Female  
Turck FK 4.4-0.5

(3) 4010-0000030-01  
Replaceable  
V-Ring Seals

Signal Connector  
4-Pin Male  
Turck FS 4.4-0.5

Signal Connector  
10-Pin Male  
JAE JN2AS10UL1-R

Brake Connector  
3-Pin Male  
Amphenol MS3102E10SL-3P

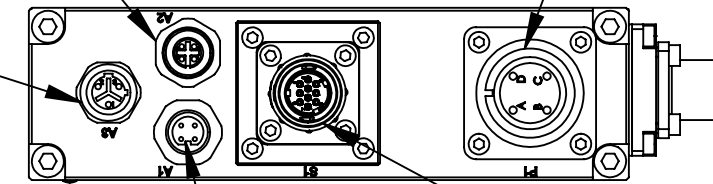


Signal Connector  
4-Pin Female  
Turck FK 4.4-0.5

**9121-EF61-T  
Tool Module**

Power Connector  
4-Pin Female  
Amphenol MS3102E18-10S

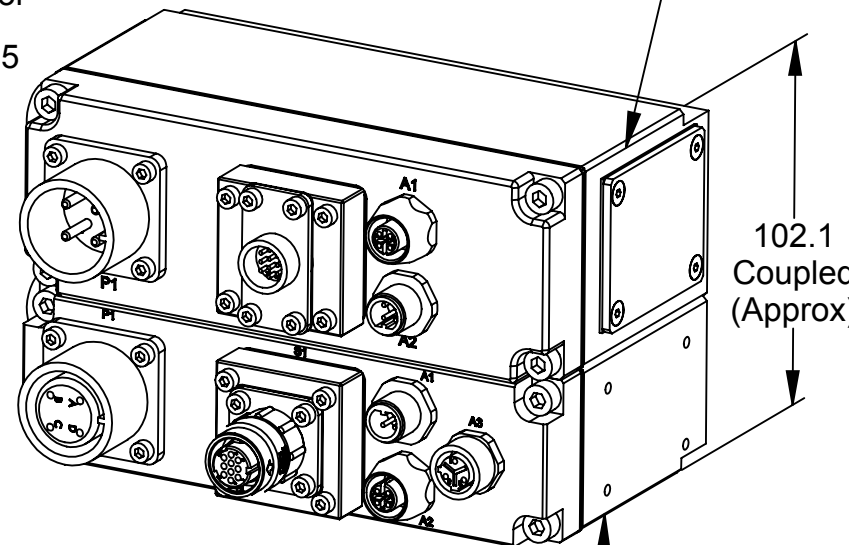
Battery Connector  
3-Pin Female  
Turck FKB3-0.5



Signal Connector  
4-Pin Male  
Turck FS 4.4-0.5

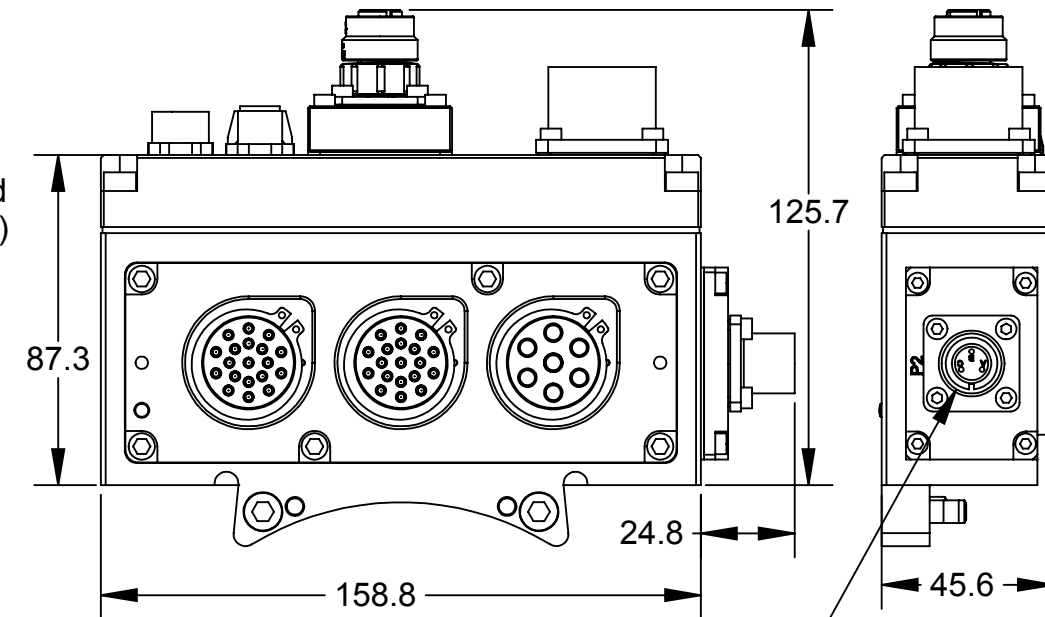
Signal Connector  
10-Pin Female  
JAE JN2MS10SL1-R

**9121-EF61-M**



102.1  
Coupled  
(Approx)

**9121-EF61-T**



Brake Connector  
3-Pin Female  
Amphenol MS3102E10SL-3S

**Operation:**

- Do not couple or uncouple the servo modules unless electrical power has been disconnected and discharged both upstream and downstream from the modules.
- Warning: The battery voltage is connected to the exposed contacts 2 and 3 on the pin-block of the 9121-EF61-T module. A short circuit on these pins can cause permanent damage to the module. Avoid touching the pin-block with metal objects.**

**Notes:**

- See Sheet 2&3 for detailed information regarding the EF61 Master and Tool Module Connectors and Pin Block.
- See Sheet 4 for detailed EF61 Module Electrical Schematic and Electrical Rating.

NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN MILLIMETERS.



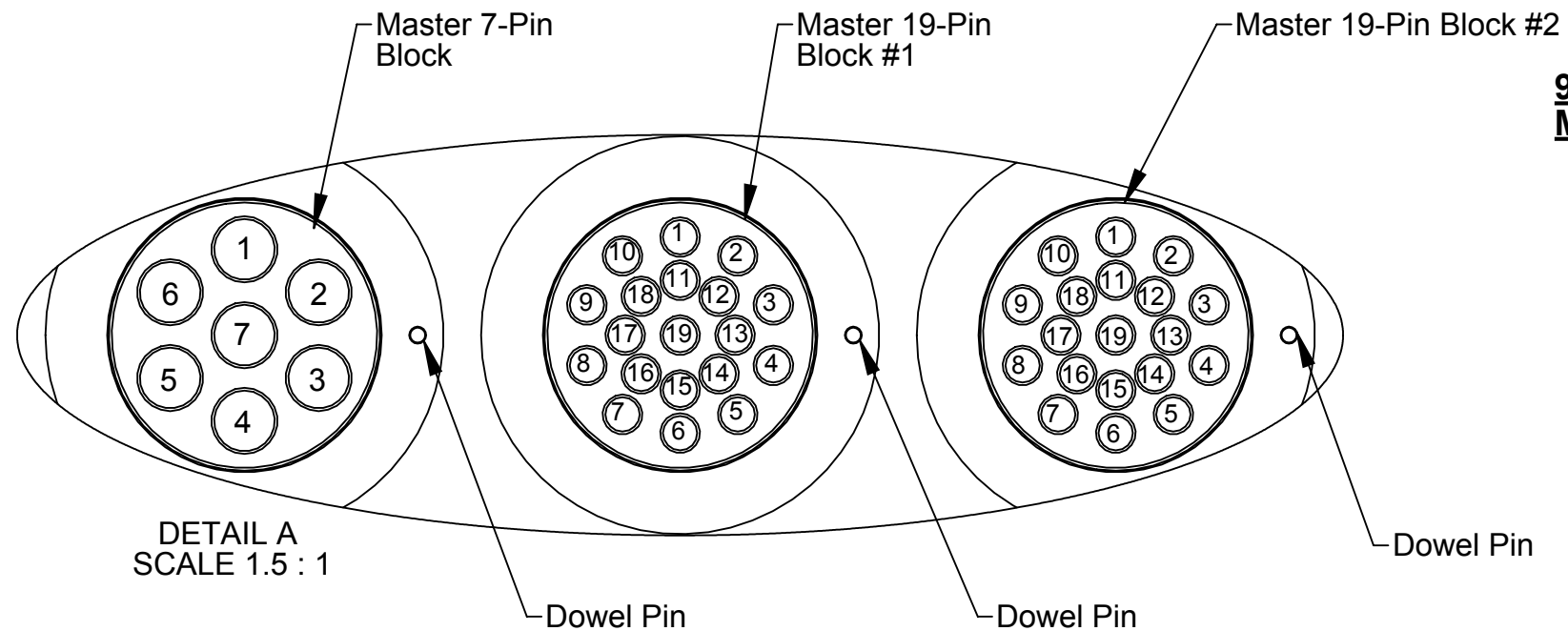
3rd ANGLE PROJECTION



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

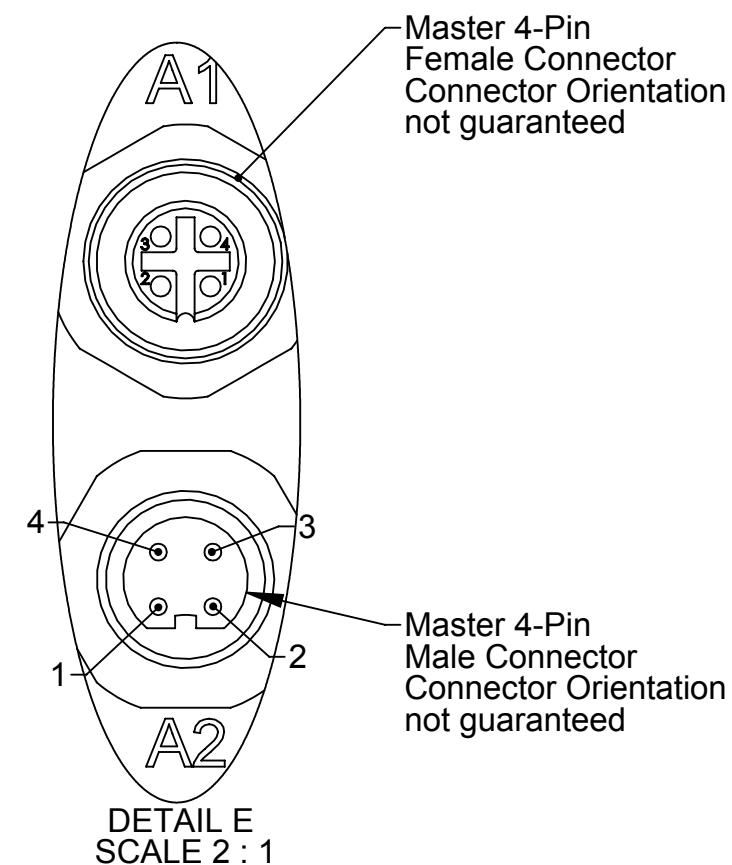
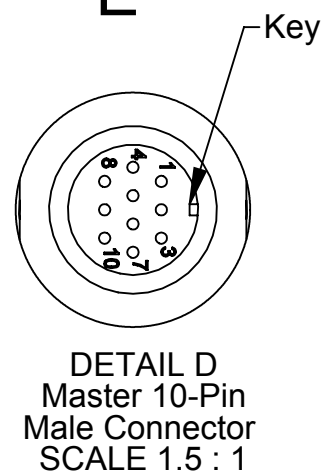
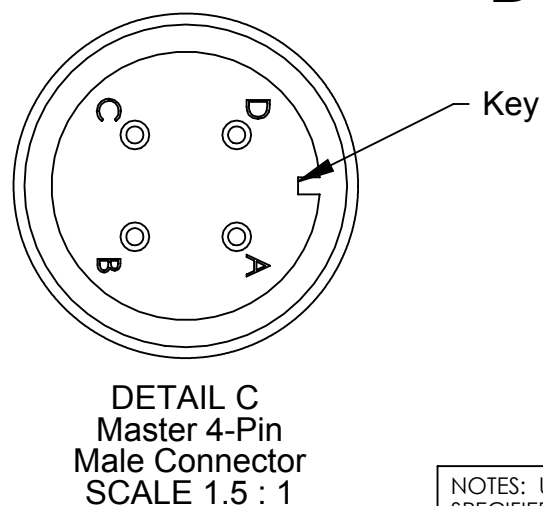
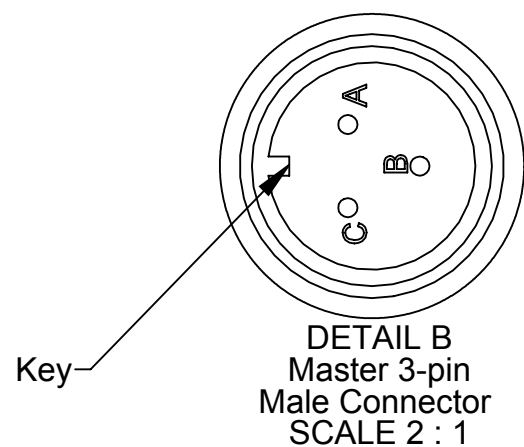
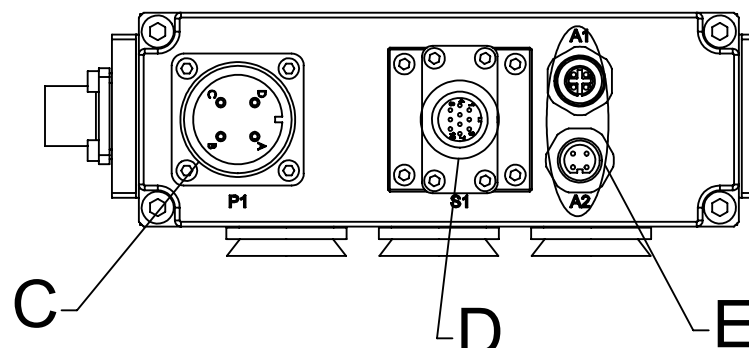
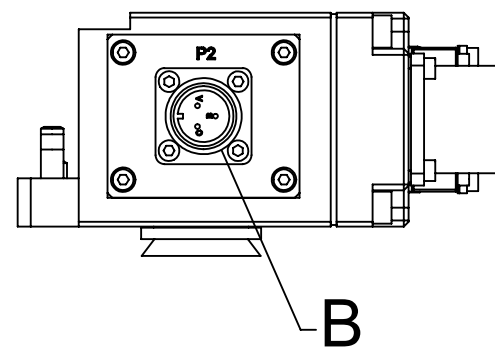
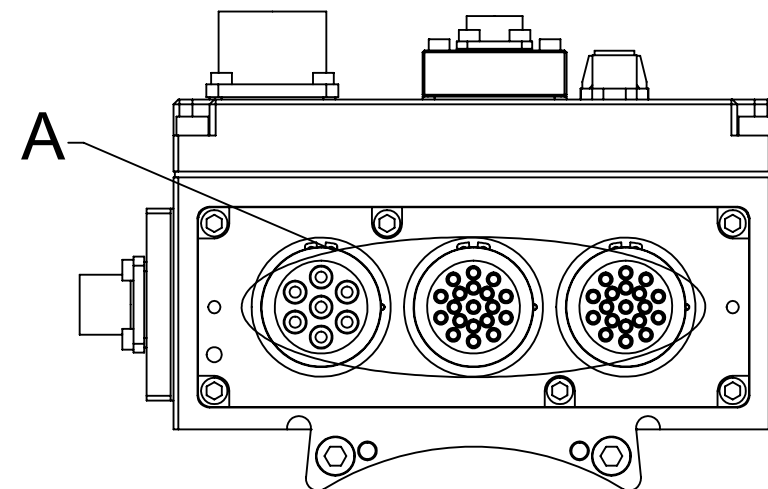
PROPERTY OF ATI INDUSTRIAL AUTOMATION, INC. NOT TO BE REPRODUCED IN ANY MANNER EXCEPT ON ORDER OR WITH PRIOR WRITTEN AUTHORIZATION OF ATI.

DRAWN BY: R.Robinson 01/09/19		TITLE	
CHECKED BY: B.Smith 01/22/19 K.Davis 01/21/19		EF61-Module Customer Drawing	
PROJECT #	190104-2 SHEET 1 OF 4	SCALE	1:2
SIZE	B	DRAWING NUMBER	9630-20-EF61
REVISION			04



**9121-EF61-M**  
**Master Module**

DETAIL A  
SCALE 1.5 : 1



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.



3rd ANGLE PROJECTION

DRAWN BY: R.Robinson 01/09/19

CHECKED BY: B.Smith 01/22/19

K.Davis 01/21/19

PROJECT # 190104-2 SHEET 2 OF 4

TITLE

EF61-Module Customer Drawing

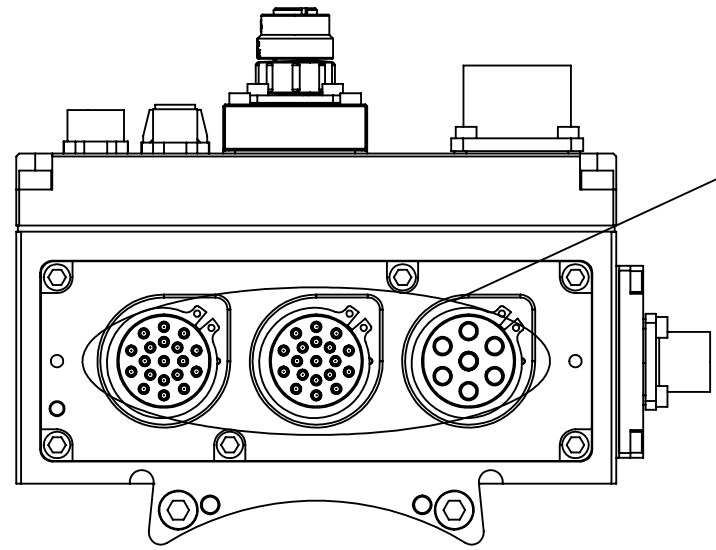
SCALE  
1:2

SIZE  
B

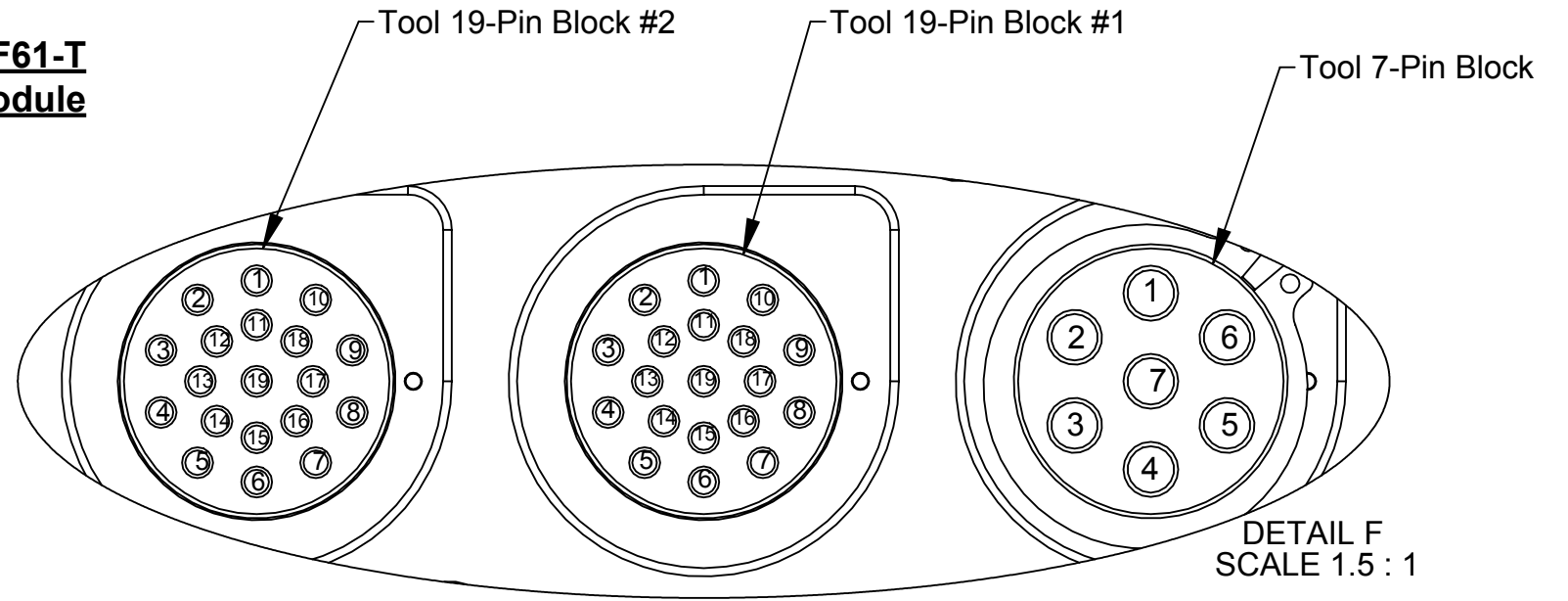
DRAWING NUMBER  
9630-20-EF61

REVISION  
04

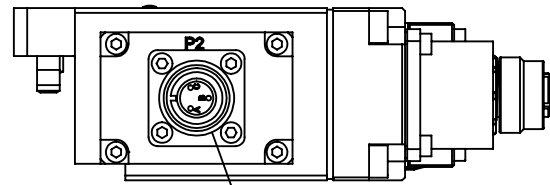
**9121-EF61-T  
Tool Module**



F

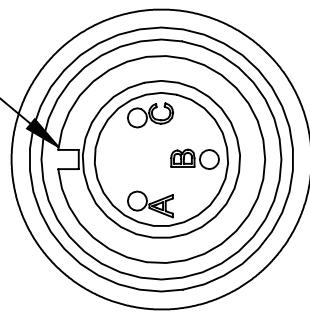


DETAIL F  
SCALE 1.5 : 1

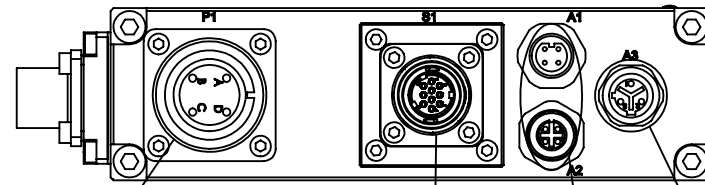


G

Key



DETAIL G  
Tool 3-pin  
Female Connector  
SCALE 2 : 1

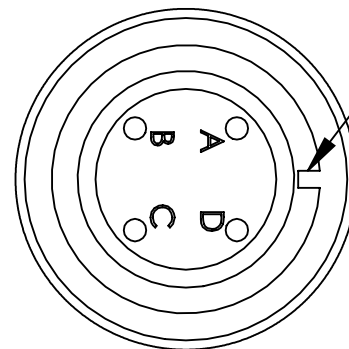


H

J

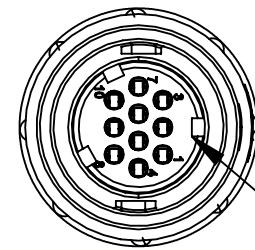
L

K



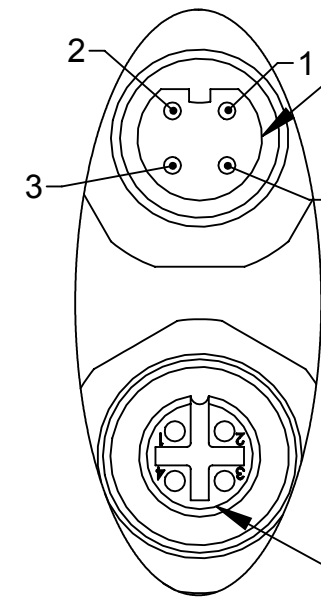
DETAIL H  
Tool 4-Pin  
Female Connector  
SCALE 1.5 : 1

Key



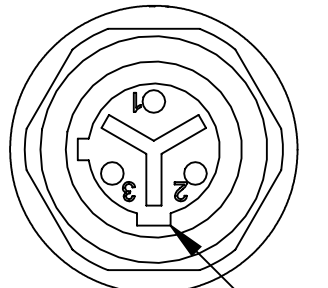
DETAIL J  
Tool 10-Pin  
Female Connector  
SCALE 1.5 : 1

Key



Tool 4-Pin  
Male Connector  
connector orientation  
not guaranteed

DETAIL L  
SCALE 2 : 1  
Tool 4-Pin  
Female Connector  
connector orientation  
not guaranteed



DETAIL K  
Tool 3-Pin  
Female Connector  
SCALE 2 : 1

Key

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: R.Robinson 01/09/19

CHECKED BY: B.Smith 01/22/19

K.Davis 01/21/19

PROJECT # 190104-2 SHEET 3 OF 4

TITLE

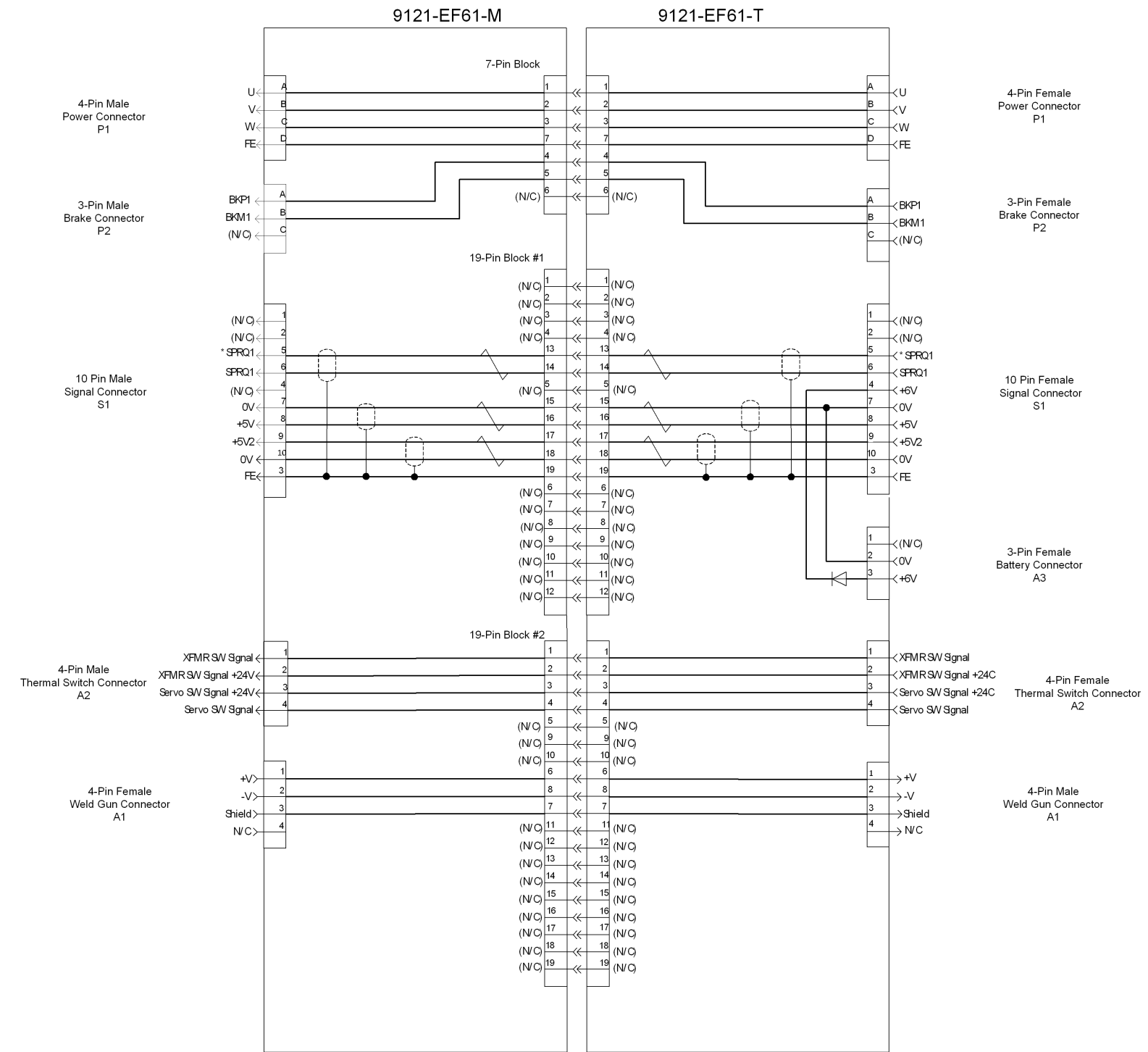
EF61-Module Customer Drawing

SCALE  
1:2

SIZE  
B

DRAWING NUMBER  
9630-20-EF61

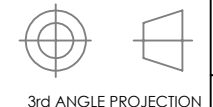
REVISION  
04



- Notes:
1. Pin 7 for the 7-Pin block and Pin 19 for the 19-Pin Blocks are the first-to-mate and last-to-break contact and are recommended as ground.
  2. The 3-Pin Amphenol connector power pass-through is rated to 13A, 500VAC maximum.
  3. The 4-Pin Amphenol connector power pass-through is rated to 13A, 500VAC maximum.
  4. The 10-Pin JAE connector signal pass-through is rated to 3A, 200VAC maximum.
  5. The 4-Pin Turck connector signal pass through is rated to 4A, 250VAC maximum.
  6. The 3-Pin Turck connector battery pass-through is rated to 4A, 250VDC. A remotely mounted servo battery backup box is required to maintain the servo settings during periods when the tool is not in use. ATI 9005-20-1257 (not included) can be used for this purpose. ATI cable 9120-C-3UM-3UF-010 (not included) can be used to connect the EF61 Tool Module to the 9005-20-1257 battery backup box. Reference ATI drawing 9230-20-2171.

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: R.Robinson 01/09/19		TITLE	
CHECKED BY: B.Smith 01/22/19		EF61-Module Customer Drawing	
K.Davis 01/21/19		SCALE	SIZE
PROJECT # 190104-2	SHEET 4 OF 4	1:2	B
		DRAWING NUMBER	REVISION
		9630-20-EF61	04