



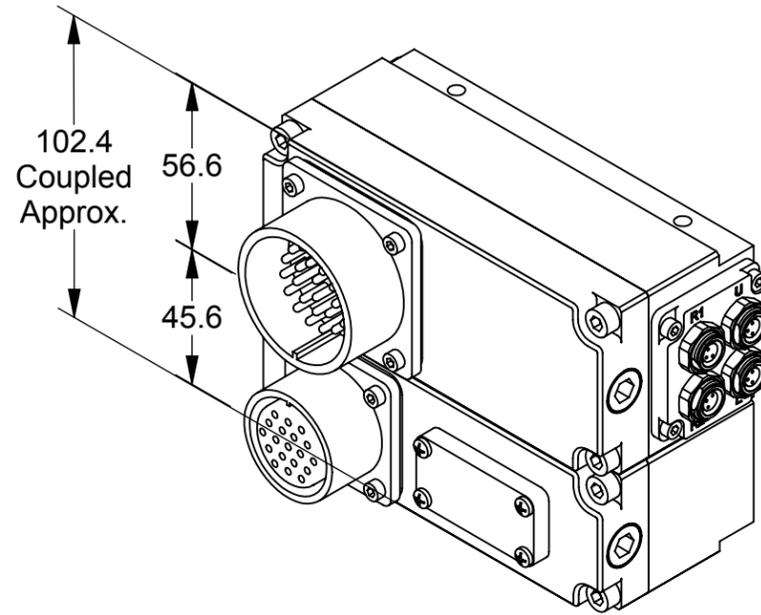
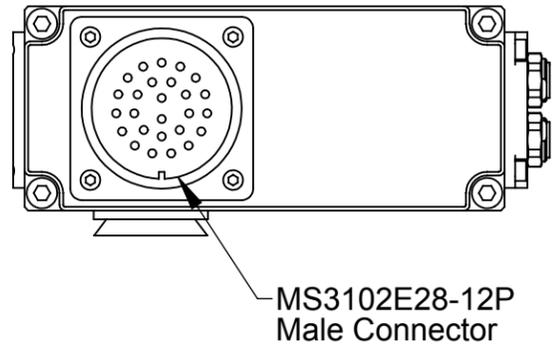
"DANGER!" - Electrical Shock Hazard

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.

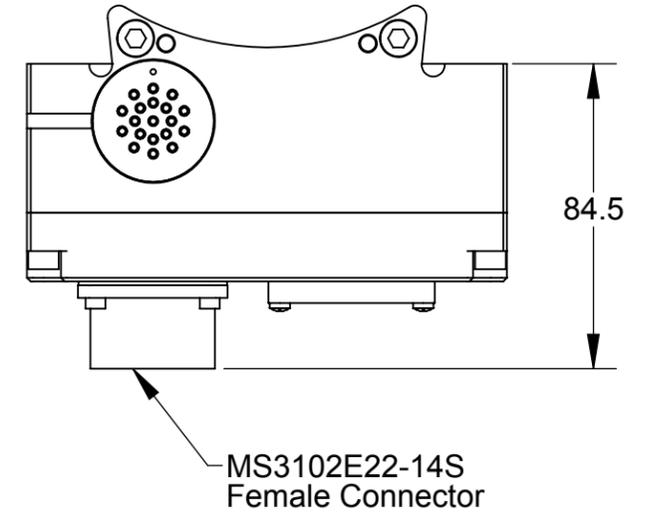
Rev.	Description	Initiator	Date
03	ECO 18688: Sheet 1: Updated drawing for new Tool ID location. Sheet 3: Note 2: 30V was 50V & 0.1mA was 100 mA.	TBC	2/5/2020

SA2-M/SA7-T Dimensions

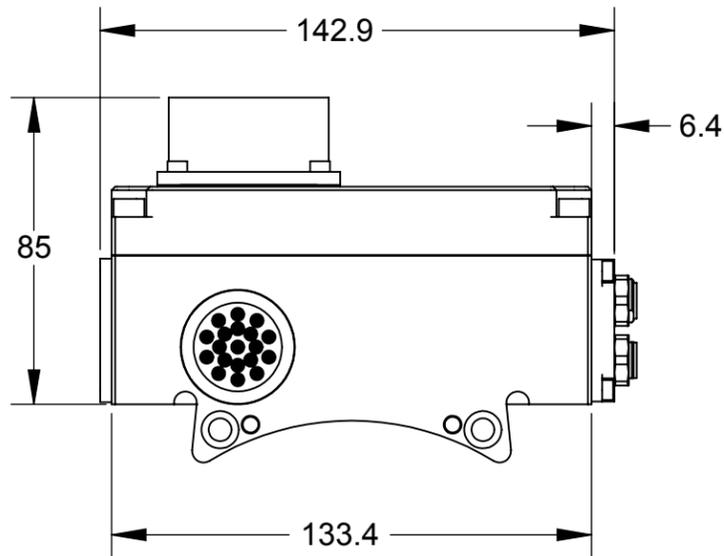
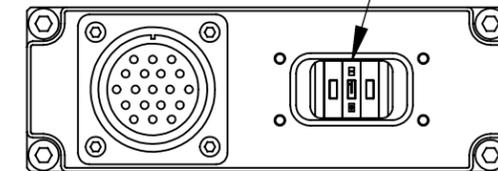
SA2 Master Module
(9121-SA2-M)



SA7 Tool Module
(9121-SA7-T)



Tool ID Switch
Accessible Through Window
(Window Not Shown for Clarity)



Sheet Configurations
Sheet 1: SA2-M/SA7-T Dimensions
Sheet 2: SA2-M/SA7-T Serviceable Parts
Sheet 3: SA2 Master with SA7 Tool (0-9 Tool ID)

NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING.
ALL DIMENSIONS ARE IN MILLIMETERS.



3rd ANGLE PROJECTION

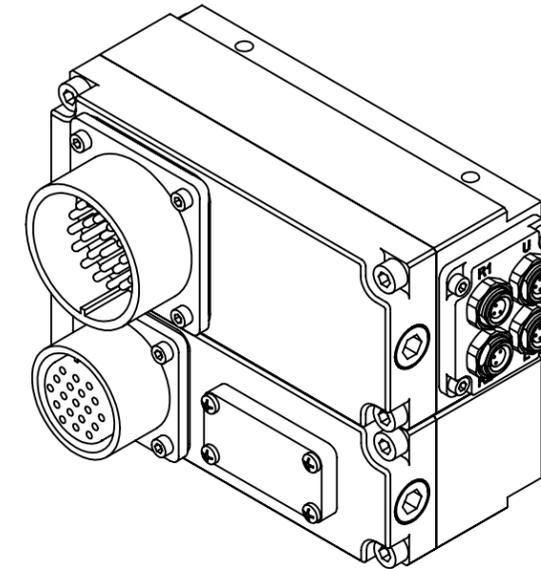
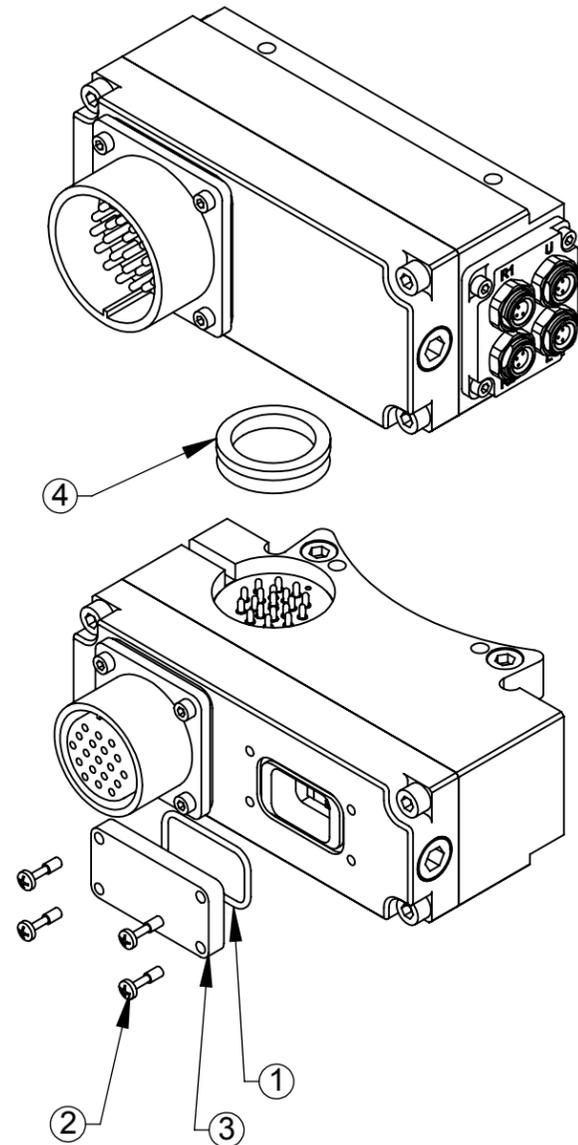


1031 Goodworth Drive, Apex, NC 27539, USA
Tel: +1.919.772.0115 Email: info@ati-ia.com
Fax: +1.919.772.8259 www.ati-ia.com
ISO 9001 Registered Company

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: C. Flesock, 5/7/07		TITLE		
CHECKED BY: R. Heavner, 5/7/07		SA2-M/SA7-T Customer Drawing		
PROJECT #	SHEET 1 OF 3	SCALE	SIZE	DRAWING NUMBER
		1:2	B	9630-20-SA2M SA7T
				REVISION
				03

SA2-M/SA7-T Serviceable Parts



ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	3410-0001092-01	O-ring AS568-023
2	4	3500-9957012-21	CAPTIVE SCREW M3 X 12 SLOTTED HEAD SS
3	1	3700-20-2696	Thick Window for DP/DE45 Master
4	1	4010-0000030-01	V-Ring Seal

NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN MILLIMETERS.



3rd ANGLE PROJECTION

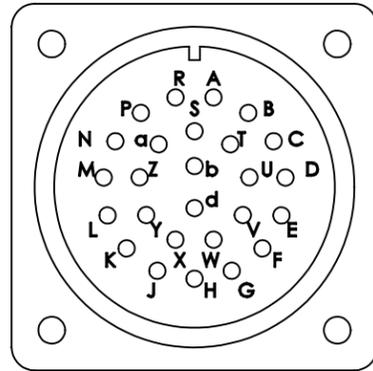


1031 Goodworth Drive, Apex, NC 27539, USA
 Tel: +1.919.772.0115 Email: info@ati-ia.com
 Fax: +1.919.772.8259 www.ati-ia.com
 ISO 9001 Registered Company

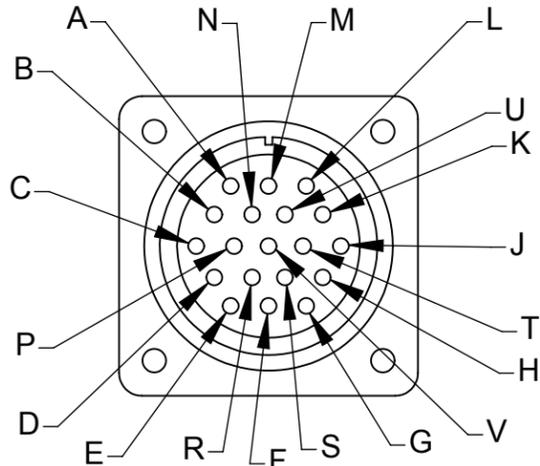
PROPERTY OF ATI INDUSTRIAL AUTOMATION, INC. NOT TO BE REPRODUCED IN ANY MANNER EXCEPT ON ORDER OR WITH PRIOR WRITTEN AUTHORIZATION OF ATI.

DRAWN BY: C. Flesock, 5/7/07		TITLE		
CHECKED BY: R. Heavner, 5/7/07		SA2-M/SA7-T Customer Drawing		
PROJECT #	SHEET 2 OF 3	SCALE	SIZE	DRAWING NUMBER
		1:2	B	9630-20-SA2M SA7T
				REVISION
				03

SA2 Master with SA7 Tool



Amphenol Connector
Master Side
MS3102E28-12P
Face View
Scale 1:1



Amphenol Connector
Tool Side
MS3102E22-14S
Face View
Scale 1:1

SA2-M to SA7-T Pin Out

SA2 Master
MS3102A28-15P
Male Connector

SA7 Tool
MS3102E22-14S
Female Connector

0 Vdc Reference	A ----- >> ----- A	0 Vdc Reference
24 Vdc (I/P)	B ----- >> ----- B	24 Vdc (I/P)
available	C ----- >> ----- C	available
available	D ----- >> ----- D	available
available	E ----- >> ----- E	available
available	F ----- >> ----- F	available
available	G ----- >> ----- G	available
available	H ----- >> ----- H	available
available	J ----- >> ----- J	available
available	K ----- >> ----- K	available
available	L ----- >> ----- L	available
available	M ----- >> ----- M	available
available	N ----- >> ----- N	available
available	P ----- >> ----- P	available
available	R ----- >> ----- R	available
Tool ID, Bit Value 8	S ----- >> ----- S	not available
Tool ID, Bit Value 4	T ----- >> ----- T	not available
Tool ID, Bit Value 2	U ----- >> ----- U	not available
Tool ID, Bit Value 1	V ----- >> ----- V	not available
not available	W	
not available	X	
not available	Y	
RTL #1	Z	
RTL #2	a	
Lock I/P	b	
Unlock I/P	d	

Controller Outputs		
Pin:	Signal:	Description:
A	0 VDC	Voltage Reference
B	24 VDC	Voltage Supply
Controller Inputs		
Pin:	Signal:	Description:
S	Tool ID	Bit Value 8 (See Table)
T	Tool ID	Bit Value 4 (See Table)
U	Tool ID	Bit Value 2 (See Table)
V	Tool ID	Bit Value 1 (See Table)
Z	RTL #1	Ready-To-Lock Input #1
a	RTL #2	Ready-To-Lock Input #2
b	Lock	Tool Changer Lock Input
d	Unlock	Tool Changer Unlock Input

Switch 1	Pin "S"	Pin "T"	Pin "U"	Pin "V"
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1

General Notes:

1. Pin A is first mate and last break during a tool change and is specified for use as 0 VDC and/or ground service.
2. The common for Tool ID is tied into the 0 VDC line (Pin A). The Tool ID switches are Rated for service at 30V and 0.1 mA max. Refer to the Tool ID table for switch setup information.

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: C. Flesock, 5/7/07		TITLE	
CHECKED BY: R. Heavner, 5/7/07		SA2-M/SA7-T Customer Drawing	
PROJECT #	SHEET 3 OF 3	SCALE	SIZE
		1:2	B
DRAWING NUMBER		REVISION	
9630-20-SA2M SA7T		03	