

**WORK INSTRUCTION****TAPING ASSEMBLY PROCESS**

Effectivity Date:

March 1, 2021

Process Name/Title:

Product Name/Code:

**780B**/  $\Delta$ **7R0102-7020B**

Customer:

**TRMX**

Validity Date:

-

Document No.:

WI-ENG-PDE-201A

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

1

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PARTS:		1. Connector 6189-1142 (W)				JIG:	1. Insertion jig with switch cover																																	
NO.		PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION				TOOLS/PPE		QUALITY POINTERS																														
1		P1		Connector setting to Insertion jig 6189-1142 (W)				<div><div><b>Safety Instruction</b></div><div>Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.)</div></div> <div><div><b>Housekeeping</b></div><div>1. Maintain and always practice 5's. 2. Personal things on the workplace is prohibited. Keep it in your locker.</div></div> <div><div><b>Alert level</b></div><div>For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.</div></div>		<div><b>CONNECTOR ORIENTATION ILLUSTRATION</b></div> <div><div>I-mark is align</div><div>1 hole is open</div></div> <div><div>GOOD</div></div> <div>1. Use the provided jig per model 2. No wrong orientation of connector</div>																														
<div>Revision History</div> <table><tr><td>03/01/21</td><td>1</td><td colspan="4">Part number change; change status from pre-launch to masspro; change Sunprene tube length from 111mm to 135mm; change wire length of MR SW CP A7475-7R0102-7040 from (TVSSf 0.3 wires GR L=618mm, B/W L=618mm) to MR SW CP A7475-7R0102-7040A (TVSSf 0.3 wires GR L=642mm, B/W L=642mm)</td><td>J. Loterte</td><td>C. Villanueva</td><td>A. Shimamura</td><td>A. Arañes</td><td>J. Loterte</td><td>C. Villanueva</td><td>A. Shimamura</td><td>A. Arañes</td></tr><tr><td>Eff. Date</td><td>Rev. No</td><td colspan="4">Details of Change</td><td>Revise</td><td>Check</td><td>Approve</td><td>Noted</td><td>Est. Date:</td><td colspan="4">December 1, 2020</td></tr></table>												03/01/21	1	Part number change; change status from pre-launch to masspro; change Sunprene tube length from 111mm to 135mm; change wire length of MR SW CP A7475-7R0102-7040 from (TVSSf 0.3 wires GR L=618mm, B/W L=618mm) to MR SW CP A7475-7R0102-7040A (TVSSf 0.3 wires GR L=642mm, B/W L=642mm)				J. Loterte	C. Villanueva	A. Shimamura	A. Arañes	J. Loterte	C. Villanueva	A. Shimamura	A. Arañes	Eff. Date	Rev. No	Details of Change				Revise	Check	Approve	Noted	Est. Date:	December 1, 2020			
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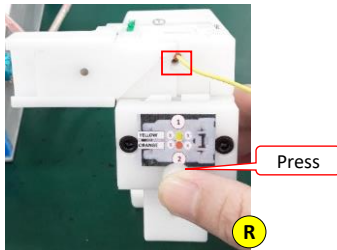
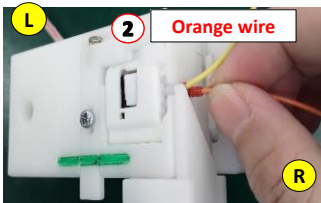
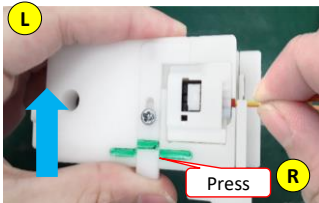
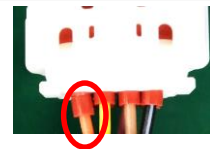
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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PARTS:		1. AVSSf 0.3 wires Y L=460mm, OR L=460mm		JIG	1. Insertion jig with switch cover
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	P1	<div><div><p>Wire facing</p></div><div><p>1. Hold the insertion jig using left hand. Get the <b>Yellow wire</b> and insert to connector using right hand.</p></div><div><p>2. Press the button using right thumb. slot for <b>Orange wire</b> will be open.</p></div></div> <div><div><p>3. Get the <b>Orange wire</b> and insert to connector using right hand.</p></div><div><p>4. After insertion, push the lock button using left thumb and then hold the wires and gently pull out the connector from jig using right hand.</p></div></div>		n/a	<div><p>Note: During insertion, hold the wire not <u>rubber seal</u> to prevent sagging.</p></div> <div><p>1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deformed terminal 5. No wrong wire facing</p><p>Make sure wires are properly inserted. Conduct <b>Pull-Push-Pull-Push</b> after insertion. Do not exert extra force.</p></div>

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PROTOTYPE



PRE-LAUNCH



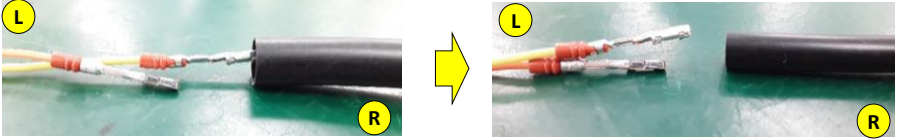
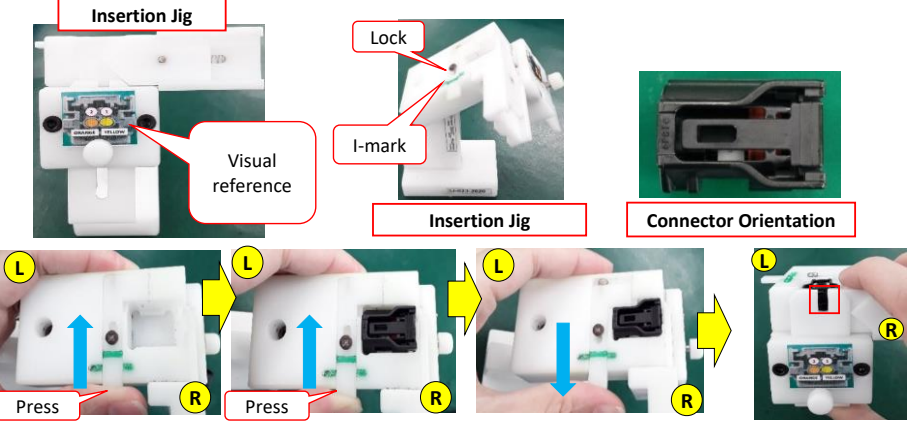
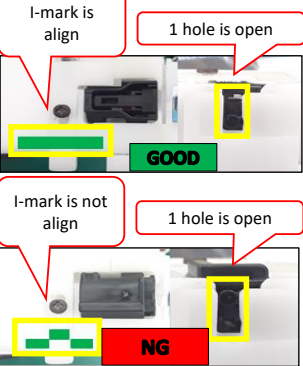
MASSPRO

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PARTS:		1. Assy parts 2. Black Vinyl tube $\phi 7$ L= 219 $\pm$ 3mm 3. Black Vinyl tube $\phi 5$ L= 194 $\pm$ 3mm 4. Connector 6189-1161 (B)			JIG	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE	QUALITY POINTERS
3	Wire insertion to Vinyl tube $\phi 7$ L= 219 $\pm$ 3mm $\phi 5$ L= 194 $\pm$ 3mm	 1. Get the Vinyl tube $\phi 7$ L= 219 $\pm$ 3mm using right hand then insert the yellow wire and orange wire by using left hand. 2. Get the Vinyl tube $\phi 5$ L= 194 $\pm$ 3mm using right hand then insert the yellow wire and orange wire by using left hand.			n/a	1. No wrong use of parts 2. No deformed terminal
4	P1 Connector setting to Insertion jig 6189-1161 (B)	 1. Press the insertion jig lock using left hand. 2. Get the connector 6189-1161 (B) using right hand and insert to insertion jig. Release the lock after insertion. 3. Push the lower wire guide upward using right hand. Slot for yellow wire will be open.			n/a	<b>CONNECTOR ORIENTATION ILLUSTRATION</b>  1. Use the provided jig per model 2. No wrong orientation of connector

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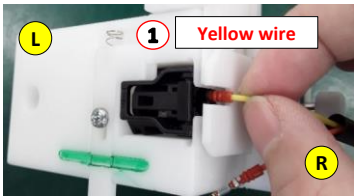
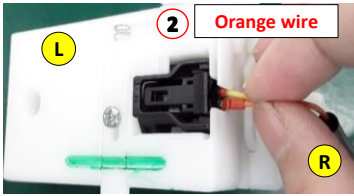
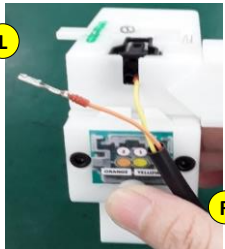
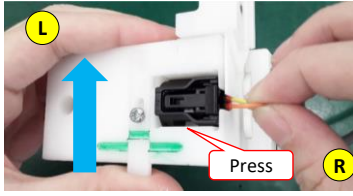
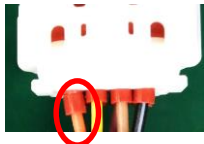
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PARTS:		1. Assy parts		JIG	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
5	P1	<div><p>Wire facing</p></div> <div><p>1. Hold the insertion jig using left hand. Get the <b>Yellow wire</b> and insert to connector using right hand.</p></div> <div><p>3. Get the <b>Orange wire</b> and insert to connector using right hand.</p></div> <div><p>2. Press the button using right thumb. slot for <b>Orange wire</b> will be open.</p></div> <div><p>4. After insertion, push the lock button using left thumb and then hold the wires and gently pull out the connector from jig using right hand.</p></div>		n/a	<div><p>Note: During insertion, hold the wire not <b>rubber seal</b> to prevent sagging.</p></div>  <div><p>1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deformed terminal 5. No wrong wire facing</p><p>Make sure wires are properly inserted. Conduct <b>Pull-Push-Pull-Push</b> after insertion. Do not exert extra force.</p></div>

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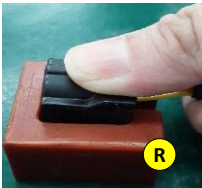


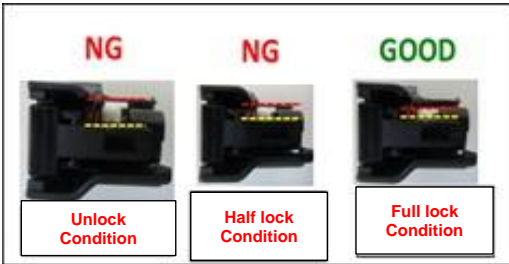


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PARTS:		1. Ass'y parts 2. Black Sunprene tube $\phi 5$ L= 135 $\pm$ 3mm		3. MR SW CP A7475-7R0102-7040A (TVSSf 0.3 wires GR L=642mm, B/W L=642mm)	JIG	1. Locking jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE	QUALITY POINTERS
6	P1 Connector lock	<div> 1. Put the connector into locking jig and push down to lock 2x using right thumb. Check the connector if properly locked.</div> <div> Before Pressing</div> <div> After Pressing</div> <div> Unlock Condition    Half lock Condition    Full lock Condition</div>			<b>LOCKING JIG</b> 	1. No unlock/Half-locked connector 2. No damaged lock
7	P1 Wire insertion to Sunprene tube $\phi 5$ L= 135 $\pm$ 3mm	<div> 1. Get the Sunprene tube <math>\phi 5</math> L= 135<math>\pm</math>3mm using left hand then insert the GR and B/W hotmelted wires by using right hand.</div>			n/a	1. No wrong use of parts 2. No deformed terminal

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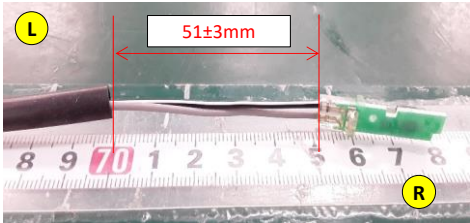

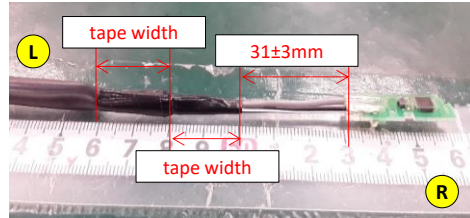

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PARTS:		1. Black tape			JIG	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE	QUALITY POINTERS
8	P1	<div><div></div><div></div><div></div><div>1. Hold the Sunprene tube using left hand. Measure the end of Sunprene up to the edge of hotmelted wires <math>51\pm3\text{mm}</math> using right hand.</div><div>2. Hold the Sunprene tube using left hand. Get the Black tape using right hand and start taping. <i>Refer to WI-PRO-ASY-001 for taping procedure.</i></div><div>3. After taping, check the measurement and taping condition.</div></div>			<div>MEASURING TAPE</div> 	<div><b>Note:</b> Please use calibrated/verified measuring tape when getting the measurement.</div> <div>1. No peel-off tape 2. No flip out tape 3. No loose tape 4. No wrong use of tape</div>

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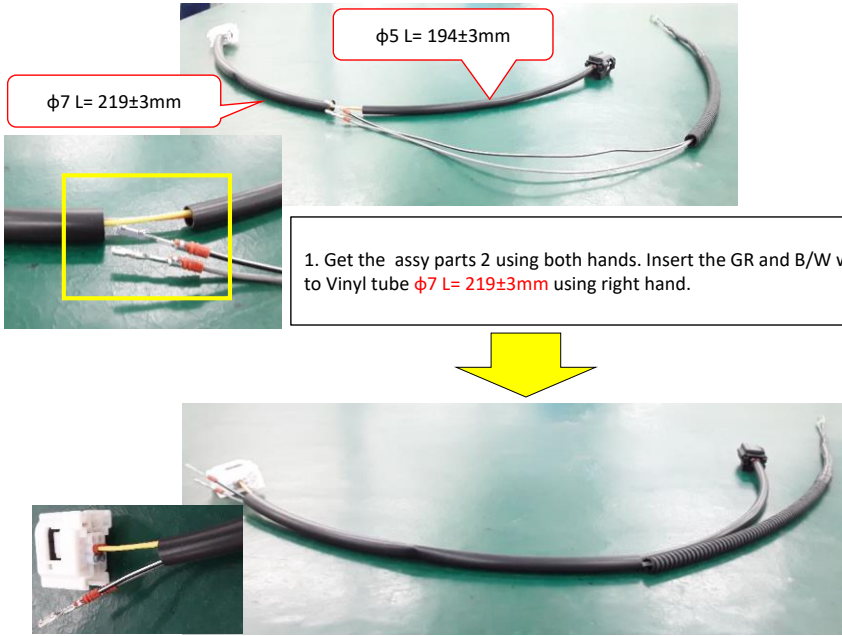
Purpose: ☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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<b>PARTS:</b>		1. Black Corrugated tube $\phi 7$ L= 205 $\pm$ 3mm (no slit) 2. Assy parts 1 (GR and B/W wires) 3. Assy parts 2 (Y and OR wires)			<b>JIG</b>	n/a
<b>NO.</b>	<b>PROCESS NAME</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>			<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>
9	Wire insertion to COT $\phi 7$ L= 205 $\pm$ 3mm (no slit)	 <div>1. Get the Corrugated tube <math>\phi 7</math> L= 205<math>\pm</math>3mm (no slit) using left hand then insert the GR and B/W wires from assy parts 2 by using right hand.</div>			n/a	1. No wrong use of parts 2. No deformed terminal
10	P1 Wire insertion to Assy parts 2	 <div><math>\phi 7</math> L= 219<math>\pm</math>3mm <math>\phi 5</math> L= 194<math>\pm</math>3mm</div> <div>1. Get the assy parts 2 using both hands. Insert the GR and B/W wire to Vinyl tube <math>\phi 7</math> L= 219<math>\pm</math>3mm using right hand.</div>			n/a	1. No wrong insertion 2. No deformed terminal

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☐ PROTOTYPE

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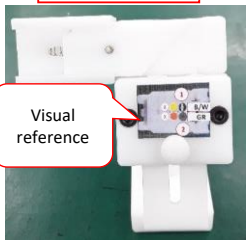
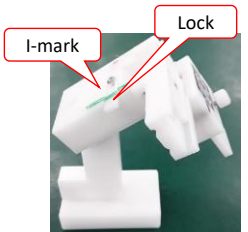
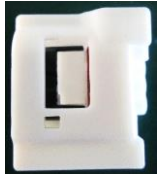
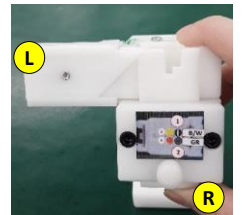

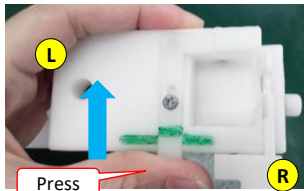

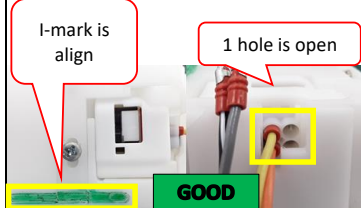
☒ MASSPRO

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PARTS:		1. Assy parts		JIG	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
11	P1	<div><div><p>Insertion Jig</p><p>Visual reference</p></div><div><p>I-mark</p><p>Lock</p><p>Insertion Jig Orientation</p><p>Connector Orientation</p></div><div><p>1. Press the lower wire guide using right thumb to make sure connector with inserted wires will be inserted.</p></div><div><p>2. Press the Insertion jig lock using left thumb. Get the assy parts and insert the connector using right hand.</p></div><div><p>3. After insertion, release the insertion jig lock using left thumb.</p></div></div>		n/a	<div><p>CONNECTOR ORIENTATION ILLUSTRATION</p><p>I-mark is align</p><p>1 hole is open</p><p>GOOD</p></div> <p>1. Use the provided jig per model 2. No wrong orientation of connector</p>

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PROTOTYPE



PRE-LAUNCH



MASSPRO

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PARTS:

1. Assy parts

JIG

1. Insertion jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

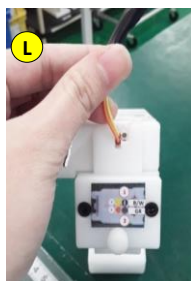
TOOLS/PPE

QUALITY POINTERS

12

P1

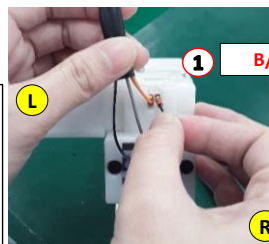
Wire insertion to  
Connector  
(Assy parts)



1. Hold the assy parts  
upward using left hand. Slot  
for B/W wire must be open.



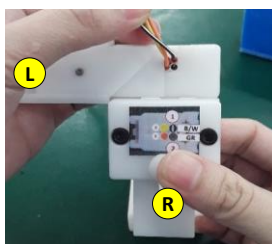
Wire facing



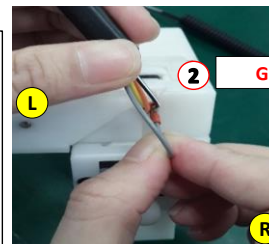
1

B/W wire

2. Insert the B/W  
wire using right  
hand.



3. Press the push  
button using right  
hand. Slot for GR  
wire will be open.



2

GR wire

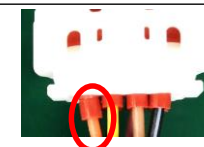
4. Insert the GR wire  
using right hand.



5. After insertion, press the lock button  
using left thumb and then hold the wires  
and gently pull out the connector from jig  
using right hand.

n/a

Note: During insertion, hold the  
wire not rubber seal to prevent  
sagging.



1. No loose insertion
2. No wrong insertion
3. One by one insertion
4. No deformed terminal
5. No wrong wire facing

Make sure wires are properly inserted.  
Conduct **Pull-Push-Pull-Push** after  
insertion.  
Do not exert extra force.

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Purpose:


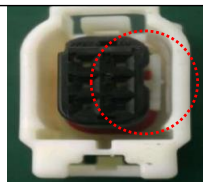
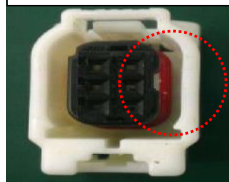

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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PARTS:		1. Assy parts			JIG	1. Locking jig
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
13	P1	Connector lock	<div><div>1. Put the connector into locking jig and push down to lock 2x using right thumb. Check the connector if properly locked.</div></div> <div><div>BEFORE PRESSING</div></div> <div><div>AFTER PRESSING</div></div> <div><div>LOCKING JIG</div></div>			1. No unlock/Half-locked connector 2. No damaged lock

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