



WORK INSTRUCTION

TAPING ASSEMBLY PROCESS

Process Name/Title:

Product Name/Code:

370B

/ 7L0046-7022A

Customer:

TRQSS

Purpose:



PROTOTYPE



PRE-LAUNCH



MASSPRO

Effectivity Date:

July 01,2021

Validity Date:

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Document No.:



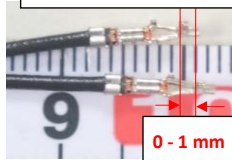


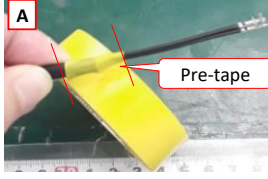
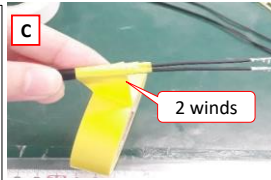
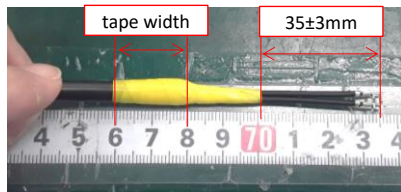
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PARTS:		1. AVSSf 0.3 Wires B L=397mm [2pcs] 2. Black Vinyl tube ø4 L=27±3mm				3. Black tape		JIG:	n/a								
NO.		PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION				TOOLS/PPE		QUALITY POINTERS							
1		Wire insertion to Black Vinyl tube ø4 L=27±3mm		<div></div> <div>1. Get the Vinyl tube ø4 L=27±3mm using right hand then get the 2 Black wires using left hand and insert to Vinyl tube.</div>				<div>Safety Instruction Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.)</div> <div>Housekeeping 1. Maintain and always practice 5's. 2. Personal things on the workplace is prohibited. Keep it in your locker.</div> <div>Alert level For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.</div> <div>MEASURING TAPE </div>		<div>Wire alignment tolerance <p>0 - 1 mm</p></div> <div>1. No wrong use of parts</div>							
2		P1 Taping 1 Black Vinyl tube to wire near terminal		<div><p>55±3mm</p><p>1/3 shifting</p></div> <div>1. Hold the vinyl tube using left hand and measure from vinyl tube to terminal tip 55±3mm.</div> <div><p>1/3 shifting</p></div> <div>3. Make 1/3 shifting to wire. Note: No folding required for Vinyl tube with ø4. Make 3 winds on wire then cut the tape.</div> <div><p>Pre-tape</p><p>1/3 shifting</p></div> <div>2. Get Black tape, conduct pre-taping between vinyl tube and wires. Make 1/3 shifting going to Vinyl tube then make 2 winds (must be tape width).</div> <div><p>2 winds</p></div> <div><p>tape width</p><p>35±3mm</p></div> <div>4. After taping, check the measurement, wire alignment and taping condition.</div>													
Revision History										Prepared by		Reviewed by		Approved by		Noted by	
07/01/21		4		Removal of validity date.				J. Loterte		C. Villanueva		A. Shimamura		A. Arañes			
01/04/21		3		Change procedure of Taping of VT Dia.4; Change 2x pulling to Pull-Push-Pull-Push on insertion quality pointers Change connector color in accordance to standardization for plastic parts; Remove cycle time				J. Loterte		R. Peñaloza		A. Shimamura		A. Arañes			
12/01/17		n/a		Previously established Engineering Instruction (EI-ENG-PDE-007).Initial issue.				J. Loterte		R. Alcantara		A. Arañes		T. Sugiyama			
Eff. Date		Rev. No		Details of Change				Prepare		Check		Approve		Noted		Est. Date:	
																April 14, 2018	

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PROTOTYPE



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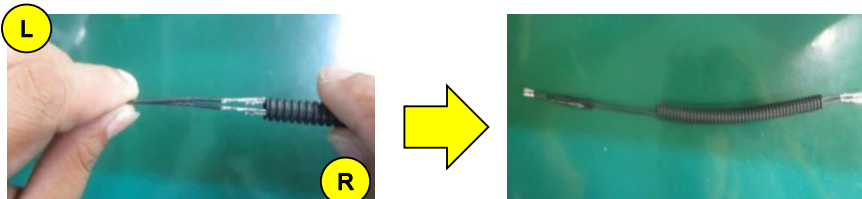

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PARTS:		1. Black Corrugated tube $\phi 5$ L=170 \pm 3mm (no slit) 2. AVSSf 0.3 Wires V L=437mm [2pcs]			3. Black Vinyl tube $\phi 4$ L=70 \pm 3mm		JIG	N/A
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION				TOOLS/PPE		QUALITY POINTERS
3	P1	Wire insertion to Black Corrugated tube $\phi 5$ L=170 \pm 3mm (no slit)	 <div>1. Get the Corrugated tube $\phi 5$ L=170\pm3mm (no slit) using right hand and insert the black wires (n=2) using left hand. Set aside the parts.</div>				n/a	1. No wrong use of parts 2. No deformed terminal
4		Wire insertion to Black Vinyl tube $\phi 4$ L=70 \pm 3mm	 <div>1. Get the Vinyl tube $\phi 4$ L=70\pm3mm using right hand then insert the 2pcs Violet wires.</div>				n/a	1. No wrong use of parts 2. No deformed terminal

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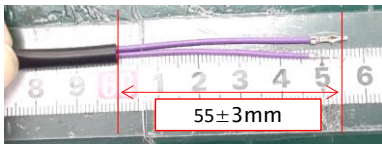


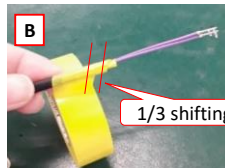
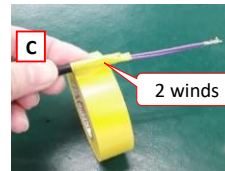
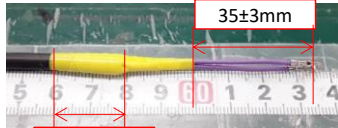

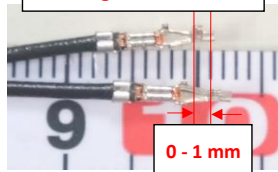


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PARTS:		1. Black tape 2. Black Corrugated tube $\phi 5$ L=170 \pm 3mm (no slit)	JIG	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
5	P1 Taping 2 Black Vinyl tube to wire near terminal	 <p>55\pm3mm</p> <p>1. Hold the vinyl tube using left hand and measure from vinyl tube to terminal tip <u>55\pm3mm</u>.</p>  <p>1/3 shifting</p> <p>2. Get Black tape, conduct pre-taping between vinyl tube and wires. Make 1/3 shifting going to Vinyl tube then make 2 winds (must be tape width).</p>  <p>A Pre-tape</p>  <p>B 1/3 shifting</p>  <p>C 2 winds</p> <p>3. Make 1/3 shifting to wire. <i>Note: No folding required for Vinyl tube with $\phi 4$.</i> Make 3 winds on wire then cut the tape.</p>  <p>35\pm3mm tape width</p> <p>4. After taping, check the measurement, wire alignment and taping condition.</p>	MEASURING TAPE 	 <p>Wire alignment tolerance 0 - 1 mm</p> <p>1. No loose tape 2. No flip-out tape 3. No peel-off tape</p> <p>NOTE: USED YELLOW TAPE TO EASY VISUALIZE TAPE WINDINGS, BUT ACTUAL SHOULD BE BLACK.</p> <p>Note: Please use Calibrated/verified measuring tape when getting the measurement.</p>
6	Wire insertion to Black corrugated tube $\phi 5$ L=170 \pm 3mm (no slit)	 <p>L R</p> <p>1. Get the corrugated $\phi 5$ L=170\pm3mm (no slit) using right hand and insert violet wires (n=2) using left hand.</p> 	n/a	<p>1. No wrong use of parts 2. No deformed terminal</p>

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PARTS:		1. Connector 6098-3810 (W) 2. Black Corrugated tube $\phi 7$ L=136 \pm 3mm (no slit)	3. Assy parts	JIG	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
7		Wire insertion to Black corrugated tube $\phi 7$ L=136 \pm 3mm (no slit)	<p>Hold the 2 black wires and 2 violet wires using right hand and insert to corrugated tube $\phi 7$ L=136\pm3mm (no slit) using left hand.</p>	n/a	1. No wrong use of parts 2. No deformed terminal
8	P1	Connector setting to Insertion jig 6098-3810 (W)	<p>1. Press the lock using left thumb and insert the connector 6098-3810 (W) using right hand, release after insertion. Check the holes for 2 Black wires.</p>	n/a	<p>1. Use provided jig per model 2. No wrong usage of parts 3. No wrong orientation of connector 4. No damaged connector</p>

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PARTS:

1. Assy parts

JIG

1. Insertion jig

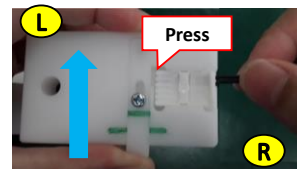
NO.**PROCESS NAME****WORK PROCEDURE/ ILLUSTRATION****TOOLS/PPE****QUALITY POINTERS**

9

P1

Wire insertion to
connector
6098-3810 (W)**Wire facing**

1. Get assy parts using right hand insert the 2 Black wires to terminal slot using right hand.
Conduct one by one insertion from left to right.



2. Press the lock using left hand,
remove the harness using right
hand.

n/a

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

Make sure wires are properly inserted.
Conduct **Pull-Push-Pull-Push** after
insertion

Do not exert extra force.

*Note: Please hold the wire near
terminal during insertion.*

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PARTS:

1. Assy parts

JIG

1. Insertion jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

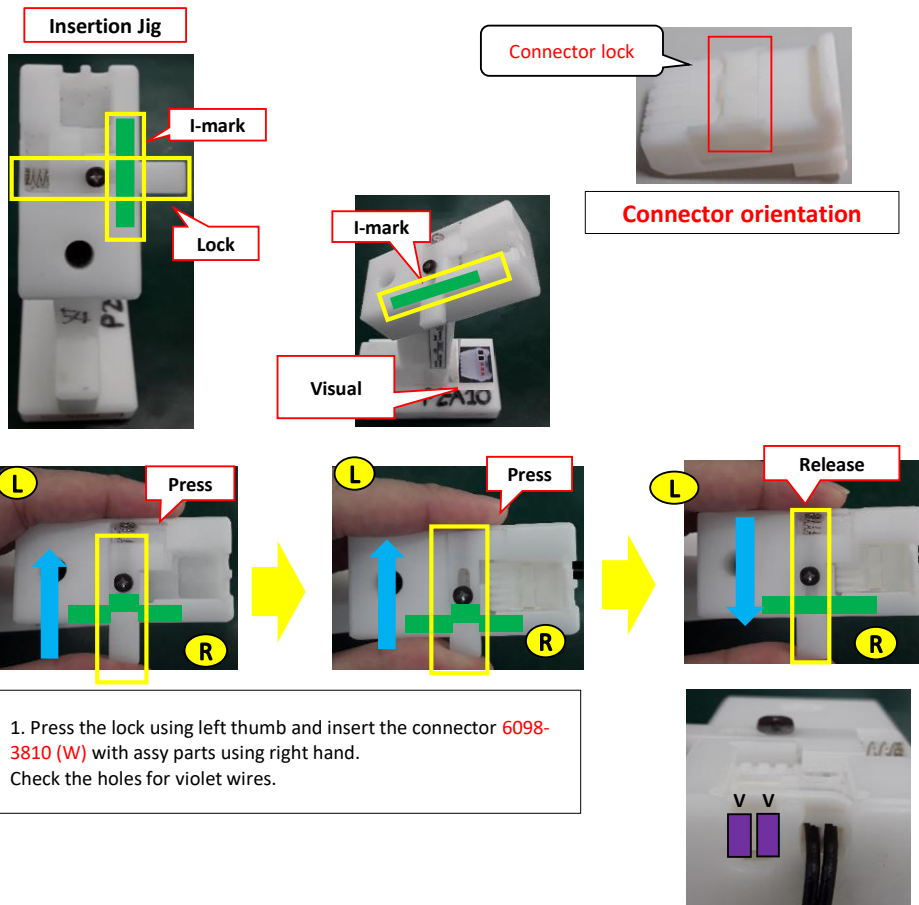
TOOLS/PPE

QUALITY POINTERS

10

P1

Connector setting to
Insertion jig
6098-3810 (W)



n/a

Connector Orientation Illustration



1. Use provided jig per model
2. No wrong usage of parts
3. No wrong orientation of connector
4. No damaged connector

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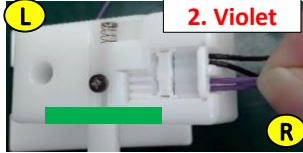
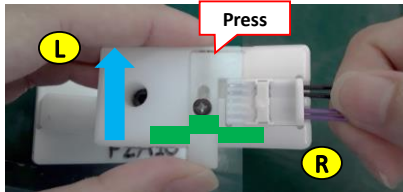
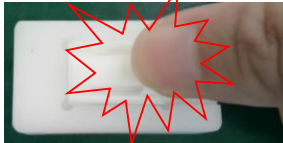





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PARTS:		1. Assy parts			JIG	1. Insertion jig 2. Locking jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE	QUALITY POINTERS
11	P1	<div><p>Wire facing</p></div> <div><p>1. Violet</p></div> <div><p>2. Violet</p></div> <div><p>Press</p></div> <div>1. Insert the Violet wires. Conduct one by one insertion from left to right.</div> <div>2. Press the lock using left hand, remove the harness using right hand.</div>			n/a	1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deform terminal 5. No wrong wire facing. Make sure wires are properly inserted. Conduct Pull-Push-Pull-Push after insertion Do not exert extra force. <i>Note: Please hold the wire near terminal during insertion.</i>
12		<div></div> <div>1. Put the connector into locking jig using right hand then press 2x to lock. <i>Refer to GL-PRO-ASY-017 for verification of connector lock.</i></div> <div><p>Before Pressing</p></div> <div><p>After Pressing</p></div> <div><p>GOOD Fully Locked</p></div> <div><p>NG Unlocked</p></div>			LOCKING JIG 	<i>NOTE: MANUAL LOCKING MAY CAUSE DAMAGED CONNECTOR LOCK</i> 1. No unlocked connector 2. No half-locked connector

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PARTS:

1. Black tape
2. Assy parts

JIG

n/a

NO.**PROCESS NAME****WORK PROCEDURE/ ILLUSTRATION****TOOLS/PPE****QUALITY POINTERS**

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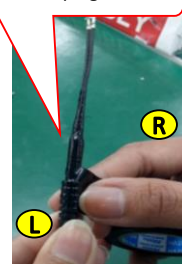
P1

Taping 3
Black Corrugated tube to
Black Vinyl tube



1. Measure from corrugated tube up to terminal tip $77\pm3\text{mm}$ using both hands.

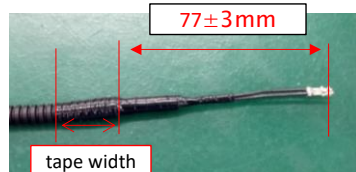
Start taping here



2. Hold the corrugated tube using left hand and get **Black tape** using right hand then begin taping process.
Note: Refer to WI-PRO-ASY-001 for taping procedure.

MEASURINGTAPE

*Note:
Please use Calibrated/verified
measuring tape when getting the
measurement.*



3. After taping, check the measurement, terminal appearance and taping condition.

1. No loose tape
2. No flip-out tape
3. No peel-off tape

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