

**WORK INSTRUCTION**

Process Name/Title:

TAPING ASSEMBLY PROCESS

Effectivity Date:

January 06, 2022

Model Code/Part Number:

178D / 7N0128-7020

Customer:

TRJ

Validity Date:

n/a

Document No.:

WI-ENG-PDE-331A

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

1

Page No.:

1 of 10

PARTS:

1

1. All parts: Connector 6188-0066 (GR); AVSSf 0.3 wires Y-OR L=364±2mm; Black Corrugated tube ø7 L=27±3mm (no slit); Connector 6189-1161 (B); Black Corrugated tube ø5 L=285±3mm (no slit); Black Corrugated tube ø7 L=537±5mm (no slit); Black tape [1pc.]

JIG:

1. Insertion jig with switch cover
2. Locking jig
3. Terminal cover jig

NO.**PROCESS NAME**

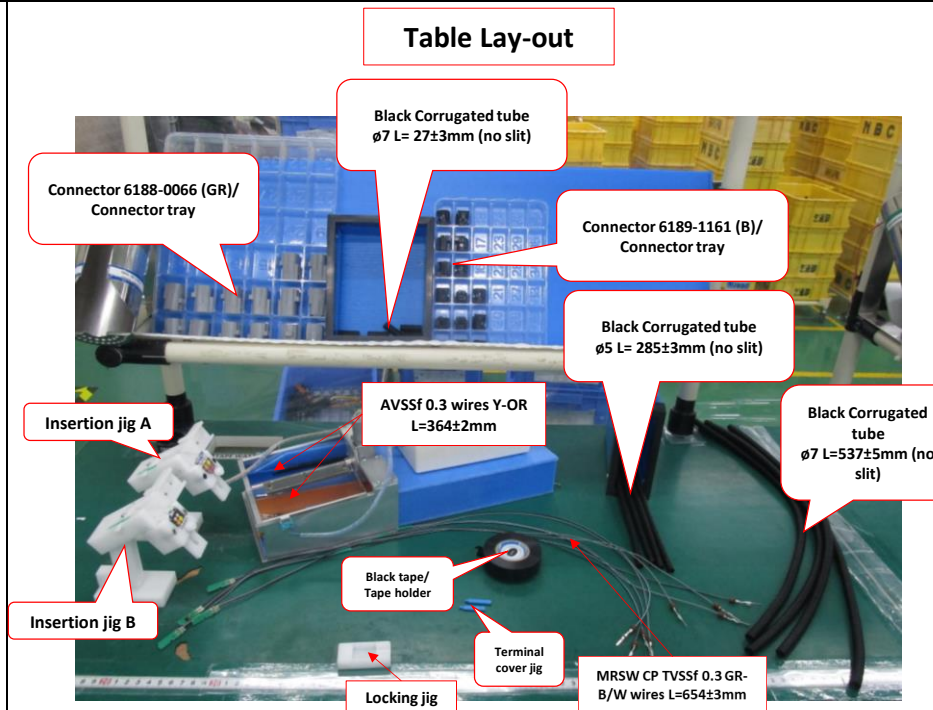
1

WORK PROCEDURE/ ILLUSTRATION**TOOLS/PPE****QUALITY POINTERS**

1

P1

1 Table Lay-out

**Safety Instruction**

Be sure to wear required personal protective equipment during operation (gloves, finger cots, etc.)

Housekeeping

1. Maintain and always practice 5's.
2. Personal things on the workplace is prohibited. Keep it in your locker.

Alert level

For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.

1 **Note: Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance**

1. No missing parts/tools
2. No excess parts/tools

Revision History

Eff. Date	Rev. No	Details of Change	Revised	Reviewed	Approved	Noted	Prepared by	Reviewed by	Approved by	Noted by
01/06/22	1	Change from Pre-launch to Masspro. Improve work procedure/Illustration and quality pointers; Additional Table Lay-out; checkpoint in checking of wire tolerance (Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance.)	M. Catapang	J. Loterte	C. Villanueva	A. Arañes	M. Catapang	J. Loterte	C. Villanueva	A. Arañes
09/09/21	0	Initial issue	M. Catapang	J. Loterte	C. Villanueva	A. Arañes	M. Catapang	J. Loterte	C. Villanueva	A. Arañes

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp



WORK INSTRUCTION

TAPING ASSEMBLY PROPCESS

Effectivity Date:

January 06, 2022

Process Name/Title:

Model Code/Part Number: 178D / 7N0128-7020

Customer:

TRJ

Validity Date:

n/a

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Document No.:

WI-ENG-PDE-331A

Revision No.:

1

Page No.:

2 of 10

PARTS:		1. Connector 6188-0066 (GR)		JIG	1. Insertion jig with switch cover
NO.	PROCESS NAME	1 WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	P1	<div><div><div>1</div><div><div>Insertion jig with switch cover</div><div><div>Orange wire</div><div>Yellow wire</div><div>Visual reference</div></div></div></div><div><div><div>I-mark</div><div>Lock</div><div>INSERTION JG ORIENTATION</div></div><div><div>CONNECTOR ORIENTATION</div></div></div></div> <div><div><div><div>L</div><div>↑</div><div>Press</div></div><div><div>L</div><div>↑</div><div>Press</div></div><div><div>L</div><div>↓</div><div>Release</div></div></div><div><div>1. Press the lock using left thumb.</div><div>2. Get the connector 6188-0066 (GR) using right hand and insert to insertion jig. Release the lock after insertion. <i>Note: Follow the connector orientation.</i></div></div><div><div><div>L</div><div>Hole</div></div><div>3. Push the lower wire guide upward using left thumb. Slot for Yellow wire will be opened.</div></div></div> <td>n/a</td> <td><div><div>1</div><div><div>CONNECTOR ORIENTATION ILLUSTRATION</div><div><div>I-mark is align</div><div>1 hole is open</div><div>GOOD</div></div><div><div>I-mark is not align</div><div>2 holes are open</div><div>NG</div></div></div></div><div><div>1. Use the provided jig per model</div><div>2. No wrong orientation of connector</div><div>3. No wrong use of connector</div><div>4. No damaged connector</div></div></td>		n/a	<div><div>1</div><div><div>CONNECTOR ORIENTATION ILLUSTRATION</div><div><div>I-mark is align</div><div>1 hole is open</div><div>GOOD</div></div><div><div>I-mark is not align</div><div>2 holes are open</div><div>NG</div></div></div></div> <div><div>1. Use the provided jig per model</div><div>2. No wrong orientation of connector</div><div>3. No wrong use of connector</div><div>4. No damaged connector</div></div>

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp



WORK INSTRUCTION

TAPING ASSEMBLY PROPCESS

Effectivity Date:

January 06, 2022

Process Name/Title:

Model Code/Part Number: 178D / 7N0128-7020

Customer:

TRJ

Validity Date:

n/a

Document No.:

WI-ENG-PDE-331A

Purpose:


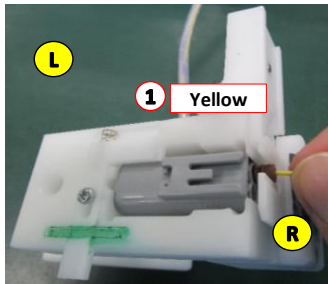
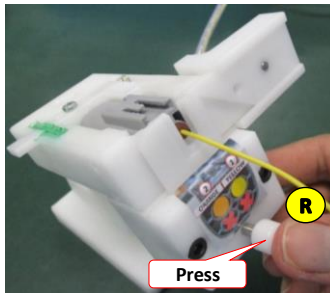
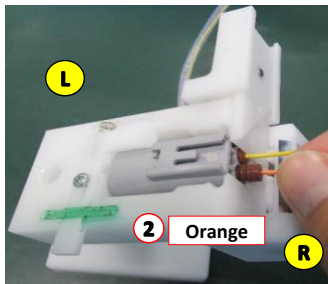
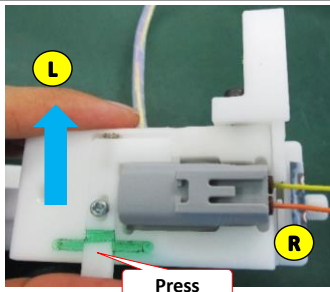
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

1

Page No.:

3 of 10

PARTS:		1. AVSSf 0.3 wires Y L=364±2mm; OR L=364±2mm		JIG	1. Insertion jig with switch cover
NO.	PROCESS NAME		1 WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
3	P1	Wire insertion to connector 6188-0066 (GR)	<div><div><p>WIRE FACING</p></div><div><p>1. Hold the insertion jig using left hand. Get the Yellow wire then insert to terminal slot 1 using right hand.</p></div><div><p>2. Press the button using right thumb. The slot for Orange wire will be opened.</p></div><div><p>3. Get the Orange wire then insert to terminal slot 2 using right hand.</p></div><div><p>4. After insertion, push the lock using left thumb and then hold the wires and gently pull out the connector from jig using right hand.</p></div></div> <div>n/a</div> <td><div><div>1</div><div>Note: Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance</div></div><div><div>1. No loose insertion</div><div>2. No wrong insertion</div><div>3. One by one insertion</div><div>4. No deformed terminal</div><div>5. No wrong wire facing</div></div><div><div>Make sure wires are properly inserted. Conduct Pull-Push-Pull-Push after insertion. Do not exert extra force.</div></div><div><div>Note: Refer to GL-PRO-ASY-029 for Pull-Push procedure.</div></div></td>	<div><div>1</div><div>Note: Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance</div></div> <div><div>1. No loose insertion</div><div>2. No wrong insertion</div><div>3. One by one insertion</div><div>4. No deformed terminal</div><div>5. No wrong wire facing</div></div> <div><div>Make sure wires are properly inserted. Conduct Pull-Push-Pull-Push after insertion. Do not exert extra force.</div></div> <div><div>Note: Refer to GL-PRO-ASY-029 for Pull-Push procedure.</div></div>	

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp



WORK INSTRUCTION

Effectivity Date:

January 06, 2022

Process Name/Title:

TAPING ASSEMBLY PROPCESS

Validity Date:

n/a

Model Code/Part Number:

178D / 7N0128-7020

Customer:

TRJ

Document No.:

WI-ENG-PDE-331A

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

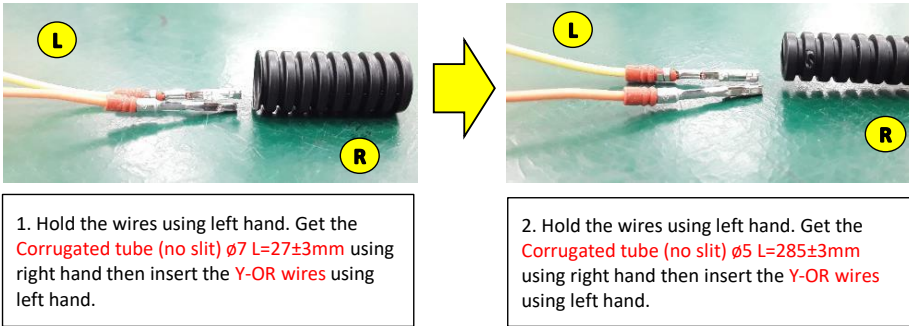
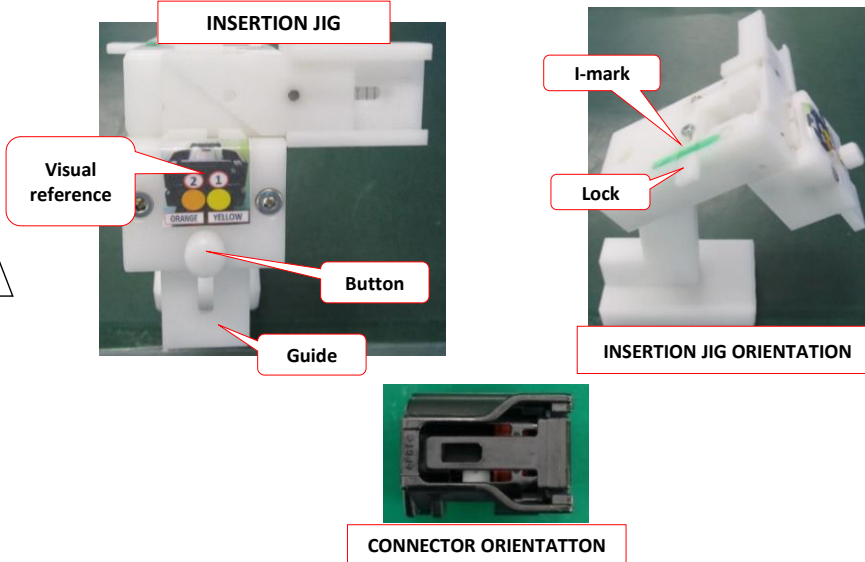
☒ MASSPRO

Revision No.:

1

Page No.:

4 of 10

PARTS:		1. Black Corrugated tube $\varnothing 7$ L=27 \pm 3mm (no slit) 2. Black Corrugated tube $\varnothing 5$ L=285 \pm 3mm (no slit)			3. Assy parts	JIG	1. Insertion jig
NO.	PROCESS NAME	1 WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE	QUALITY POINTERS	
4		Wire insertion to COT (no slit) $\varnothing 7$ L=27 \pm 3mm (1ST) $\varnothing 5$ L=285 \pm 3mm (2ND)				n/a	1. No wrong use of parts 2. No deformed terminal
5	P1	Connector setting to insertion jig 6189-1161 (B)				n/a	1. Use the provided jig per model 2. No wrong orientation of connector 3. No wrong use of connector 4. No damaged connector

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp



WORK INSTRUCTION

TAPING ASSEMBLY PROPCESS

Effectivity Date:

January 06, 2022

Process Name/Title:

Model Code/Part Number: 178D / 7N0128-7020

Customer:

TRJ

Validity Date:

n/a

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

Document No.:

WI-ENG-PDE-331A

Revision No.:

1

Page No.:

5 of 10

PARTS:

1. Connector 6189-1161 (B)

JIG

1. Insertion jig

NO.

PROCESS NAME

1

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

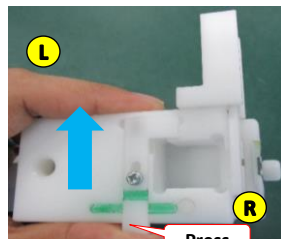
QUALITY POINTERS

5

P1

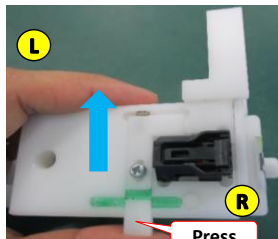
Connector setting to
insertion jig
6189-1161 (B)
(Continuation)

1

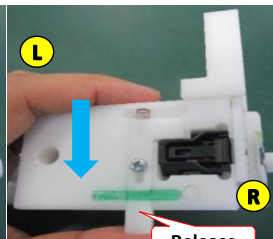


Press

1. Press the lock using left thumb.



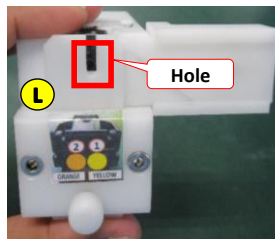
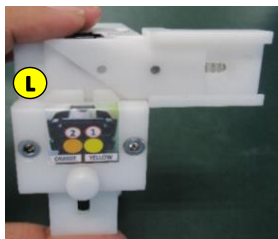
Press



Release

2. Get the connector 6189-1161 (B) using right hand and insert to insertion jig. Release the lock after insertion.

Note: Follow the connector orientation.



3. Push the lower wire guide upward using left thumb. Slot for Yellow wire will be opened.

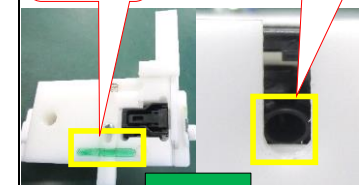
n/a

1

CONNECTOR ORIENTATION
ILLUSTRATION

I-mark is
align

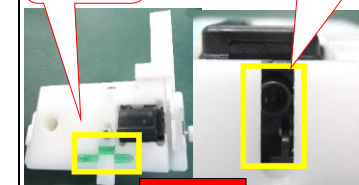
1 hole is open



GOOD

I-mark is
not align

2 holes are open



NG

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

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp



WORK INSTRUCTION

Process Name/Title: **TAPING ASSEMBLY PROPCESS**

Model Code/Part Number: **178D / 7N0128-7020**

Customer: **TRJ**

Purpose: ☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

Effectivity Date:

January 06, 2022

Validity Date:

n/a

Document No.:

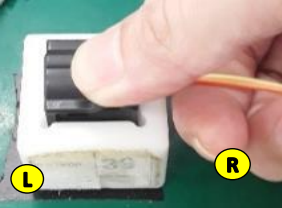
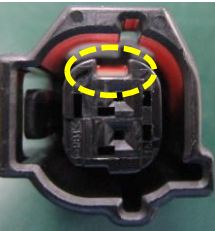



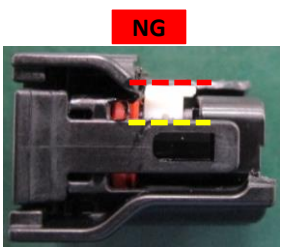
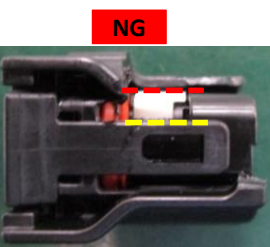
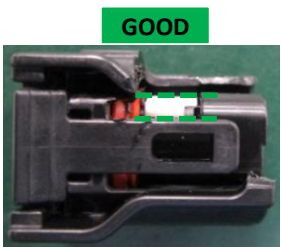
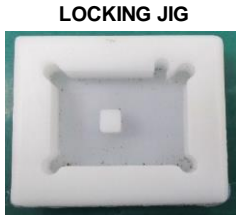
WI-ENG-PDE-331A

Revision No.:

1

Page No.:

7 of 10

PARTS:	1. Assy parts			JIG	1. Locking jig
NO.	PROCESS NAME	1 WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
7	P1 Connector lock	<div data-bbox="566 579 600 619">1</div> <div data-bbox="768 467 1048 675"></div> <div data-bbox="1059 515 1473 627"><p>1. Put the connector into locking jig and push down 2x using both hands. Check the connector lock if properly locked.</p></div> <div data-bbox="600 699 1048 930"></div> <div data-bbox="622 938 813 962">BEFORE PRESSING</div> <div data-bbox="846 938 1025 962">AFTER PRESSING</div> <div data-bbox="1093 699 1272 738">GOOD</div> <div data-bbox="1093 746 1272 962"></div> <div data-bbox="1317 699 1507 738">NO GOOD</div> <div data-bbox="1317 746 1507 962"></div> <div data-bbox="622 994 902 1241"></div> <div data-bbox="701 1249 835 1313">UNLOCK CONDITION</div> <div data-bbox="925 994 1193 1241"></div> <div data-bbox="992 1249 1126 1313">HALF LOCKED CONDITION</div> <div data-bbox="1216 994 1496 1241"></div> <div data-bbox="1294 1249 1429 1313">FULLY LOCKED CONDITION</div> <div data-bbox="1541 866 1776 1082"></div> <div data-bbox="1597 866 1731 890">LOCKING JIG</div> <div data-bbox="1507 1249 1865 1321">NOTE: SET ASIDE THE ASSY PARTS</div>		1	<p>Note: MANUAL LOCKING MAY CAUSE DAMAGED CONNECTOR LOCK.</p> <p>1. Use the provided locking jig per model 2. No unlock/half-locked connector 3. No damaged lock</p>

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp



WORK INSTRUCTION

TAPING ASSEMBLY PROPCESS

Effectivity Date:

January 06, 2022

Process Name/Title:

Validity Date:

n/a

Model Code/Part Number: 178D / 7N0128-7020

Customer:

TRJ

Document No.:

WI-ENG-PDE-331A

Purpose:

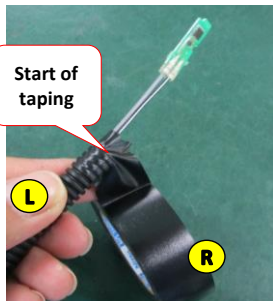
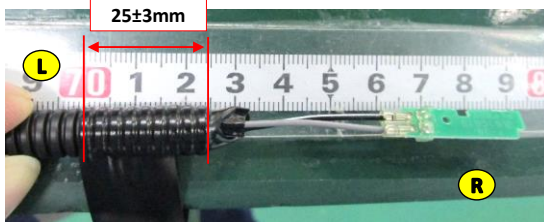
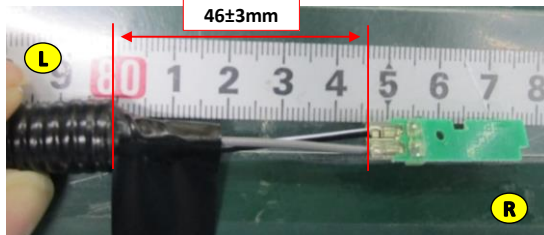
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

1

Page No.:

9 of 10

PARTS:		1. Assy parts 2. Black tape			JIG	n/a
NO.	PROCESS NAME		1 WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS	
9	P1	Taping 1 Black corrugated tube to wire near PCB	<div><div><div>1</div><div><p>Start of taping</p><p>1. Hold the assy parts using left hand, get Black tape then conduct pre-taping using both hands.</p></div></div><div><p>25±3mm</p><p>2. Confirm measurement of 25±3mm from end of tape up to end of COT then continue the taping process using both hands.</p></div><div><p>46±3mm</p><p>3. Measure from end of COT up to edge of hotmelted wires 46±3mm then continue the taping process using both hands.</p></div></div> <td>n/a</td> <td><div>1. No flip-out tape 2. No peel-off tape 3. No loose tape 4. No missing tape 5. No wrong dimension 6. No wrong use of tape</div><p>Note: <i>Please use calibrated/verified measuring tape when getting the measurement.</i></p></td>	n/a	<div>1. No flip-out tape 2. No peel-off tape 3. No loose tape 4. No missing tape 5. No wrong dimension 6. No wrong use of tape</div> <p>Note: <i>Please use calibrated/verified measuring tape when getting the measurement.</i></p>	

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp



WORK INSTRUCTION

TAPING ASSEMBLY PROPCESS

Effectivity Date:

January 06, 2022

Process Name/Title:

Validity Date:

n/a

Model Code/Part Number: 178D / 7N0128-7020

Customer: TRJ

Document No.:

WI-ENG-PDE-331A

Purpose: ☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

1

Page No.:

10 of 10

PARTS:

1. Assy parts
2. Black tape

JIG

n/a

NO.

PROCESS NAME

1

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

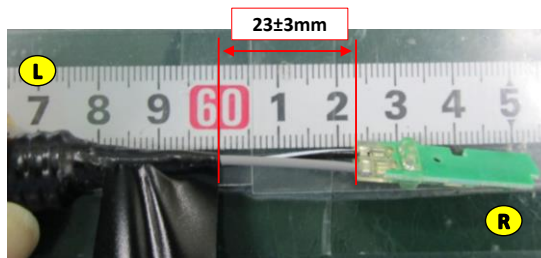
QUALITY POINTERS

10

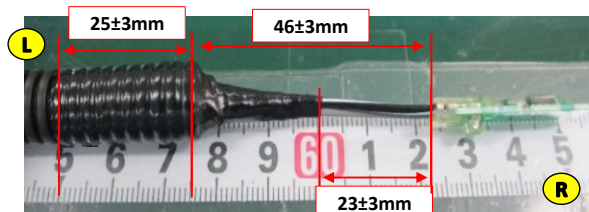
P1

Taping 1
Black corrugated tube to
wire near PCB
(Continuation)

1



4. Confirm measurement of **23±3mm**
from end of tape up to edge of PCB then
continue the taping process using both
hands.



5. After taping, check the measurement and taping
condition.

1. No flip-out tape
2. No peel-off tape
3. No loose tape
4. No missing tape
5. No wrong dimension
6. No wrong use of tape

Note:

Please use calibrated/verified
measuring tape when getting the
measurement.

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp