

- Specification -

Ku-band 16W BUC

Model No. NJT8319 series

RF Frequency	Local Frequency	IF Frequency
13.75 to 14.5 GHz	12.8 GHz	950 to 1,700 MHz
14 to 14.5 GHz	13.05 GHz	950 to 1,450 MHz

Output Power @ 1dB G.C.P.: +42 dBm (16W)

IF Input Interface: N-type / F-type, Female Connector

DC Power / Ref. (10MHz) Input: MS Connector / IF Connector

RF Output Interface: Waveguide, WR-75

DC Power Voltage Range: +36 to +60 V

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Microwave Business Headquarters

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2. The product is designed and tested to function in accordance with its specifications. Do not use under conditions that deviate from the product specifications included in the delivery specifications. NISD assume no responsibility and shall not be liable for any injuries, accidents, or social repercussions resulting from the product being in a poor or damaged state because it was used under conditions that depart from the specifications.
3. The product is covered by a warranty for one year following delivery unless otherwise stipulated in the contract or delivery conditions. In the event of a failure for which NISD are responsible occurring during the warranty period, NISD undertake to repair or replace the product free of charge. Note, however, that the warranty does not cover failures such as those listed here (see bullets below), even if they occur within the warranty period. In addition, in the case of a product being repaired or replaced by us, the starting date for the warranty period is still the original delivery date of the product.
 - Failure due to the product being used in conditions other than those stipulated in the data sheet, specification sheet, etc.
 - Failure due to modifications or repairs carried out by some entity other than our company
 - Failure determined to be the result of unsuitable maintenance or replacement of a consumable item that requires due maintenance
 - Failure due to circumstances that were unforeseeable given the scientific/technological standards at the time of shipment
 - Other failures due to external factors such as fire, earthquake, flood and power supply anomalies for which NISD are not responsible

In addition, the product warranty is limited to the provision of repair services or replacement at no cost. It does not cover secondary damage (to equipment, business opportunities, profits, etc.) or any other damage that may have resulted from failure of the product.

4. The product must be handled appropriately to ensure its continued reliability. Since it can be damaged by the intrusion of water, dust, oil, chemicals, etc., it must be given appropriate protection. Even in the case of a product with an airtight construction, avoid using it in an environment that exceeds the stated levels of waterproofing/dustproofing. Also, be sure to use connectors and waveguides properly.
If replacement parts such as fans are included, proper maintenance is necessary. To maintain product performance and functionality, it is necessary to conduct inspections and maintenance at appropriate intervals and exchange replacement parts when necessary. Improper inspections or maintenance may result in failure.
In addition, the warranty does not cover the use of the product in areas where salt damage can be expected or where there is a substantial presence of corrosive gases such as Cl₂, H₂S, SO₂, and NO₂. If the product is to be used in such areas, at the time of installation you must take appropriate steps to protect the product.
5. If the product is to be used with equipment/systems that must meet special quality and reliability standards (aerospace equipment, medical equipment, power generation control equipment, automotive/railway transportation equipment, safety equipment, disaster prevention and security equipment, etc.), please consult with our sales staff in advance.
6. Some products contain gallium arsenide (GaAs), classified as a harmful substance. To avoid danger, do not incinerate, crush, or chemically treat the product in such a way that gases or dust are released. When disposing of the product, comply with all applicable laws and regulations and do not treat it as general industrial waste or household waste.
7. When exporting a product or technology, observe export laws and regulations such as those governing foreign exchange and foreign trade, and obtain any necessary licenses for export, service transactions, etc.
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8. The product specifications in this document are subject to change without notice. If you are considering using a product, delivery specifications must first be settled.

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Scope

This BUC is designed for the block up-converter intended for the satellite communication data uplink application in Ku-band. It can transmit an RF signal (Ku-band: 14.0 to 14.5 GHz or 13.75 to 14.5 GHz) output with up to 6W (+37.8 dBm) linear as output power @ 1 dB G.C.P. (P1dB). It is combined a GaAs high power amplifier and a block up-converter with a phase locked local oscillator (13.05 GHz or 12.8 GHz) which is synchronized with external 10MHz reference.

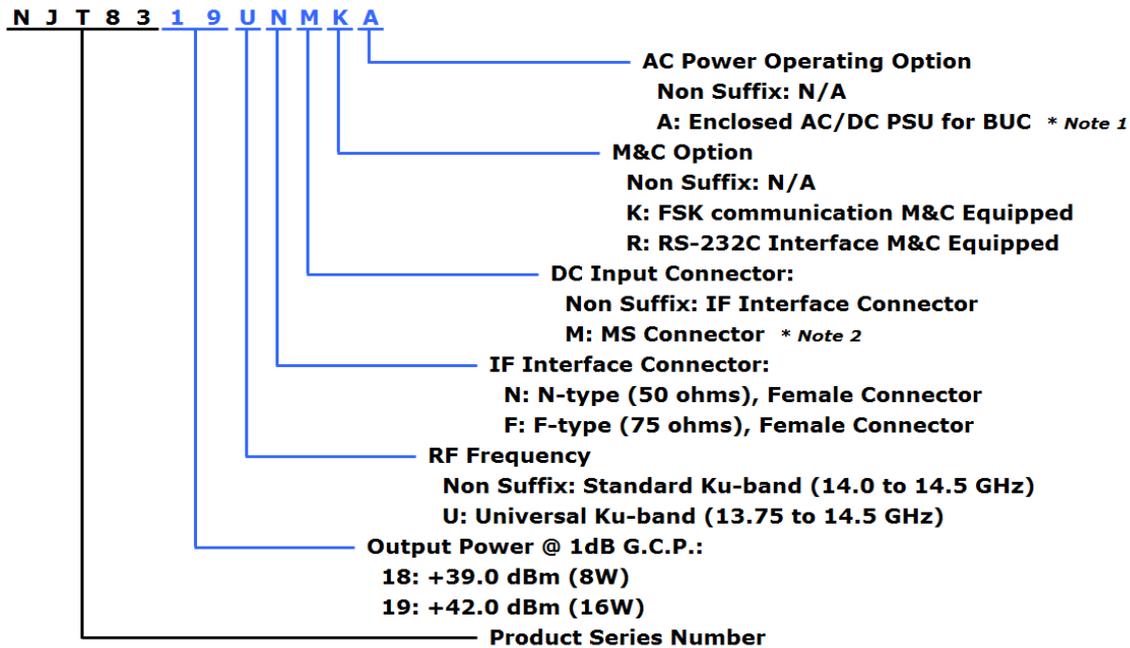
The BUC receives a reference signal (10 MHz) and an IF signal (L-band: 950 to 1,450 MHz or 950 to 1,700 MHz) input and transmits an RF signal (Ku-band: 14.0 to 14.5 GHz or 13.75 to 14.5 GHz) output. It is operated by +24 V DC power (Range: +12 to +30 V) input.

The BUC comes in a single, weatherized housing rated for outdoor use and has either an N-Type or F-type female connector as IF input, a WR-75 waveguide flange as RF output.

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Series Model Number

- Numbering System



- Line-up

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	Power Supply	Port for Voltage Input	M&C Option	
NJT8319N	14.0 to 14.5 GHz (Standard Ku-band)	13.05 GHz	950 to 1,450 MHz	16W Linear (+42dBm min.)	N-type	+36 to +60 V DC Power	IF Connector	N/A	
NJT8319F					F-type		MS Connector * Note 2 (IF Connector Option)		
NJT8319NM					N-type	AC Power	MS Connector * Note 1		
NJT8319FM					F-type				
NJT8319NMA					N-type	+36 to +60 V DC Power	IF Connector		FSK M&C
NJT8319FMA					F-type		MS Connector * Note 2 (IF Connector Option)		
NJT8319NK					N-type	AC Power	MS Connector * Note 1		
NJT8319FK					F-type		IF Connector		
NJT8319NMK					N-type	+36 to +60 V DC Power	MS Connector * Note 2 (IF Connector Option)		RS-232C M&C
NJT8319FMK					F-type		MS Connector * Note 1		
NJT8319NMKA					N-type	AC Power	MS Connector * Note 1		
NJT8319FMKA					F-type		IF Connector (IF Connector Option)		
NJT8319NMR					N-type	+36 to +60 V DC Power	MS Connector * Note 2 (IF Connector Option)		RS-232C M&C
NJT8319FMR					F-type		MS Connector * Note 1		
NJT8319NMRA	N-type	AC Power	MS Connector * Note 1						
NJT8319FMRRA	F-type		IF Connector						
NJT8319UN	13.75 to 14.5 GHz (Universal Ku-band)	12.80 GHz	950 to 1,700 MHz	16W Linear (+42dBm min.)	N-type	+36 to +60 V DC Power	IF Connector	N/A	
NJT8319UF					F-type		MS Connector * Note 2 (IF Connector Option)		
NJT8319UNM					N-type	AC Power	MS Connector * Note 1		
NJT8319UFM					F-type		IF Connector		FSK M&C
NJT8319UNMA					N-type	+36 to +60 V DC Power	MS Connector * Note 2 (IF Connector Option)		
NJT8319UFMA					F-type		MS Connector * Note 1		
NJT8319UNK					N-type	AC Power	MS Connector * Note 1		
NJT8319UFK					F-type		IF Connector		
NJT8319UNMK					N-type	+36 to +60 V DC Power	MS Connector * Note 2 (IF Connector Option)		RS-232C M&C
NJT8319UFMK					F-type		MS Connector * Note 1		
NJT8319UNMKA					N-type	AC Power	MS Connector * Note 1		
NJT8319UFMKA					F-type		IF Connector (IF Connector Option)		
NJT8319UNMR					N-type	+36 to +60 V DC Power	MS Connector * Note 2 (IF Connector Option)		RS-232C M&C
NJT8319UFMR					F-type		MS Connector * Note 1		
NJT8319UNMRA	N-type	AC Power	MS Connector * Note 1						
NJT8319UFMRA	F-type		IF Connector						

*Note1: Additional outdoor 250W AC/DC PSU is enclosed for AC Power Option and DC Power is supplied at MS connector of BUC from AC/DC PSU via power cable.

*Note2: MS Connector models are available to apply DC voltage via either MS Connector or IF Connector.

* Above Specifications are subject to change without notice.

1. Electrical Specifications

#	Items	Specifications
1.1.	Output RF Frequency Range	
	<Universal Ku-band>	13.75 to 14.5 GHz
	<Standard Ku-band>	14 to 14.5 GHz
1.2.	Input IF Frequency Range	
	<Universal Ku-band>	950 to 1,700 MHz
	<Standard Ku-band>	950 to 1,450 MHz
1.3.	Maximum IF Input Level (without damage)	+13 dBm max.
1.4.	Conversion Type	Single, fixed L.O.
1.5.	L.O. Frequency	
	<Universal Ku-band>	12.8 GHz
	<Standard Ku-band>	13.05 GHz
1.6.	Frequency Sense	Positive
1.7.	Output Power @ 1dB G.C.P. (P1dB)	+42 dBm min. over temperature
1.8.	Linear Gain	68 dB nom., 62 dB min.
1.9.	Gain Variation over frequency @ fixed temperature	
	<Universal Ku-band>	5 dBp-p max. over 750 MHz 2 dBp-p max. over any 54 MHz
	<Standard Ku-band>	5 dBp-p max. over 500 MHz 2 dBp-p max. over any 54 MHz
1.10.	Gain Stability over temperature @ fixed frequency	4 dBp-p max. 2 dBp-p typ.
1.11.	IM3	-28 dBc typ., -24 dBc max. @ total power ≤ +42 dBm - 3 dB
1.12.	ACPR	-28 dBc typ. @ Pout = +41 dBm
1.13.	Requirement for External Reference	
	[Frequency]	10 MHz (sine-wave)
	[Input Power]	-5 to +5 dBm @ Input port
	[Phase Noise]	-125 dBc/Hz max. @ 100 Hz -135 dBc/Hz max. @ 1 kHz -140 dBc/Hz max. @ 10 kHz
1.14.	L.O. Phase Noise	
		-60 dBc/Hz max. @ 100 Hz
		-70 dBc/Hz max. @ 1 kHz
		-80 dBc/Hz max. @ 10 kHz
		-90 dBc/Hz max. @ 100 kHz
		-100 dBc/Hz max. @ 1MHz

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#	Items	Specifications
1.15.	Spurious @ P1dB Output <div style="text-align: right; margin-right: 20px;"> [In-band] [Receive band] [Out-of-band] </div>	-50 dBc max. @ RF Frequency -70 dBm max. @ 10.95 to 12.75 GHz -50 dBc max.
1.16.	Receive Band Noise Density <div style="text-align: center; margin-top: 10px;"> <Universal Ku-band> </div>	Tx: 14.0 to 14.5 GHz -156 dBm/Hz max. @10.95 to 12.75 GHz Tx: 13.75 to 14.0 GHz -156 dBm/Hz max. @10.95 to 12.25 GHz -125 dBm/Hz max. @12.25 to 12.75 GHz
	<div style="text-align: center; margin-top: 10px;"> <Standard Ku-band> </div>	Tx: 14.0 to 14.5GHz -156 dBm/Hz max. @ 10.95 to 12.75 GHz
1.17.	Noise Figure	20 dB max.
1.18.	Group Delay over any 54MHz	2.5 nS p-p max.
1.19.	Input Impedance <div style="text-align: center; margin-top: 10px;"> <N-type Model> <F-type Model> </div>	50 ohms nom 75 ohms nom.
1.20.	Input V.S.W.R.	2 : 1 max.
1.21.	Output V.S.W.R.	2 : 1 max.
1.22.	Output Load V.S.W.R. <div style="text-align: right; margin-right: 20px;"> [Recommendation] [Non Damage] </div>	1.3 : 1 max. 2 : 1 max.
1.23.	DC Power Requirement <div style="text-align: right; margin-right: 20px;"> [Voltage Range] [Power Consumption] </div>	+48 VDC (+36 to +60 VDC) 140 W typ. @ No IF signal 160 W typ., 180 W max. @ Pout = +42 dBm
1.24.	Mute	Shut off the HPA in case of L.O. unlocked, no 10 MHz reference signal, or Over temperature. * Note 3
1.25.	LED Indicator	GREEN: L.O. locked RED: L.O. unlocked (or no 10 MHz reference signal)

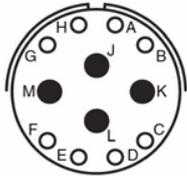
*Note3: Regardless of cooling fan status, the unit will operate until status of over temperature which turn out at internal temperature of around 103 °C, and the Mute and Alarm will function at status of over temperature.

* Above Specifications are subject to change without notice.

#	Items	Specifications
1.26.	Monitor and Control	
	<p style="text-align: center;"><FSK Communication M&C></p> <p style="text-align: right;">[Interface] [Functions]</p> <p style="text-align: right;">[Performance]</p>	<p>650kHz FSK Signal on IF Connector</p> <p>Monitor: Tx Output Power / Temperature / Tx Status / Alarm (Over temperature * Note 3 / L.O. unlock) / Step Attenuator</p> <p>Control: Transmit On/Off / Step Attenuator</p> <p>Tx Output Power: Detector Range: 15 dB (up to P1dB) Reading Accuracy: +/- 1.0 dB</p> <p>Step Attenuator: Attenuator Range: 0 to 15.5 dB Attenuator Step: 0.5 dB</p> <p><i>*Details are mentioned on Appendix of "<u>Specifications of Monitor & Control</u>".</i></p>
	<p style="text-align: center;"><RS-232C Interface M&C ></p> <p style="text-align: right;">[Interface] [Functions]</p> <p style="text-align: right;">[Performance]</p>	<p>RS-232C Interface on MS connector</p> <p>Monitor: Tx Output Power / Temperature / Tx Status / Alarm (Over temperature * Note 3 / L.O. unlock) / Step Attenuator</p> <p>Control: Transmit On/Off / Step Attenuator</p> <p>Tx Output Power: Detector Range: 15 dB (up to P1dB) Reading Accuracy: +/- 1.0 dB</p> <p>Step Attenuator: Attenuator Range: 0 to 15.5 dB Attenuator Step: 0.5 dB</p> <p><i>*Details are mentioned on Appendix of "<u>Specifications of Monitor & Control</u>".</i></p>

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2. Mechanical Specifications

#	Items	Specifications
2.1.	Input Interface <div style="text-align: right; margin-right: 50px;"> [IF Connector] [DC Input] </div>	N-type or F-type, female IF / Ref. / FSK M&C Signal (/ DC) Input IF Connector or MS Connector * Note 4 - MS Connector - Part No.: PT02E-14-12P (025) Mating connector: PT06E-14-12S (470) Assignment: <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p>Pin A: N.C.</p> <p>Pin B: N.C.</p> <p>Pin C: N.C.</p> <p>Pin D: N.C.</p> <p>Pin E: GND COMMON (RS-232C)</p> <p>Pin F: N.C.</p> <p>Pin G: RS-232C TxD*</p> <p>Pin H: RS-232C RxD*</p> <p>Pin J: DC Power (+) / Prime</p> <p>Pin K: DC Power (-) / Return; GND COMMON (RS-232C)</p> <p>Pin L: N.C.</p> <p>Pin M: N.C.</p> </div> </div> <p style="font-size: small; margin-top: 10px;">* Pin G: RS-232C TxD and Pin H: RS-232C RxD are available for only RS-232C Interface M&C models.</p>
2.2.	Output Interface	Waveguide, WR-75 (with Grooved)
2.3.	Cooling	Forced-air-cooled
2.4.	Dimension & Housing	180(L) × 130(W) × 80(H) mm [7.09" (L) × 5.12" (W) × 3.15" (H)] without interface connectors and screws
2.5.	Weight	2.4 kg [5.3 lbs]

*Note4: MS Connector models are available to apply DC voltage via either MS Connector or IF Connector.

Caution: DO NOT apply DC voltage via both MS Connector and IF Connector.

If DC voltage is applied on both connectors, it may damage the unit or the unit may not operate properly.

* Above Specifications are subject to change without notice.

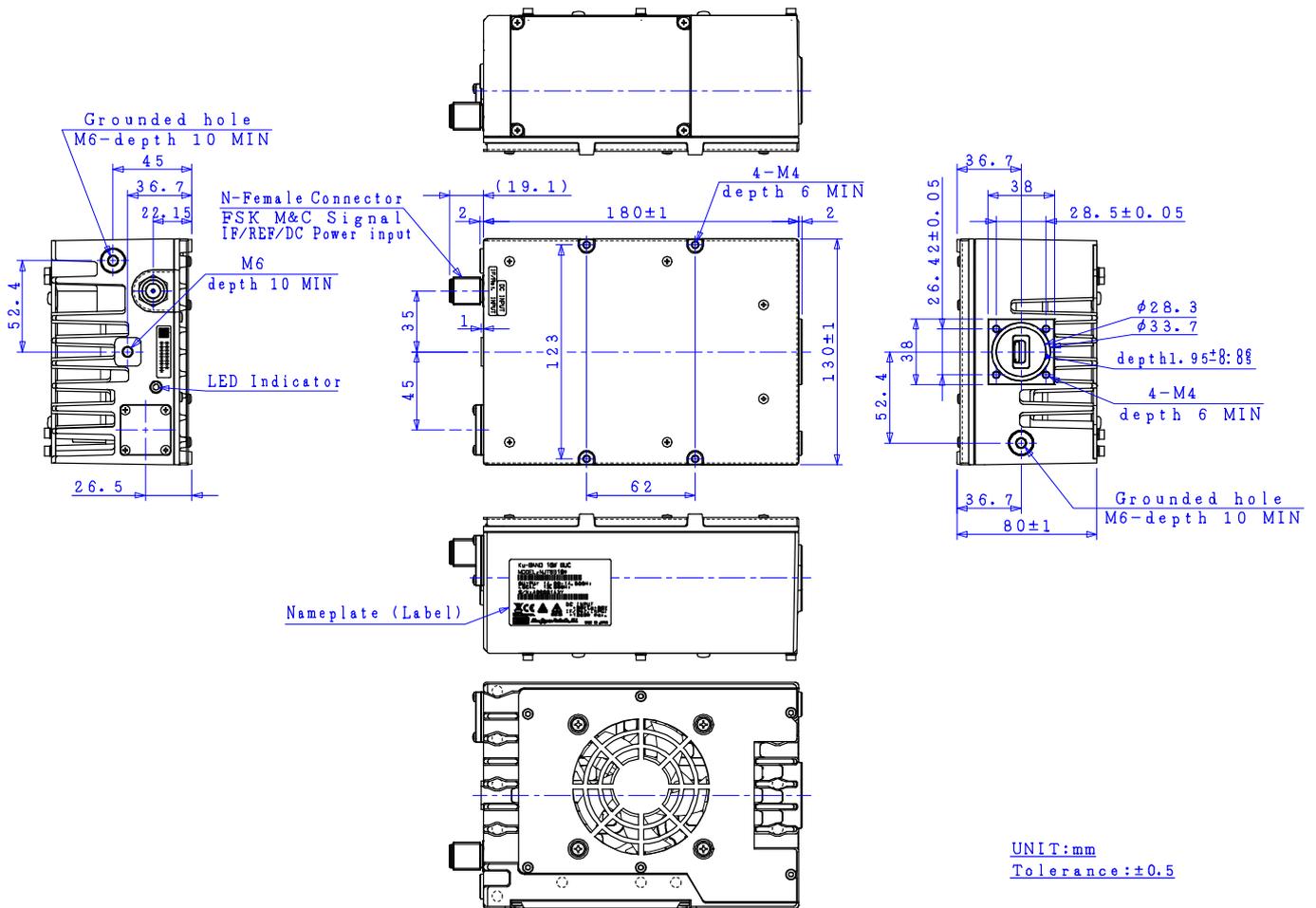
3. Environmental Specifications

#	Items	Specifications
3.1.	Temperature Range (ambient) [Operating] [Storage]	Operation Guarantee: -40 to +75 °C Performance Guarantee: -40 to +55 °C -40 to +75 °C
3.2.	Humidity	0 to 100 % RH
3.3.	Altitude	15,000 feet (4,572 m)
3.4.	Vibration	5 G [49.03 m/s ²] (3 axis, 50 Hz to 2 kHz) 1 mm p-p (3 axis, 5 to 50 Hz)
3.5.	Shock	30 G [294.20 m/s ²] (3 axis)
3.6.	Waterproof / Dustproof (IP Code)	IP 67
3.7.	Regulations	EU Directive (CE Marking) EMC (2014/30/EC) RoHS (2011/65/EU) Safety: EN60950-1
3.8.	Comply with RoHS (Restricting the use of Hazardous Substances) directives	

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4. Outline Drawing

4.1. N-type Model, DC Input: IF Connector

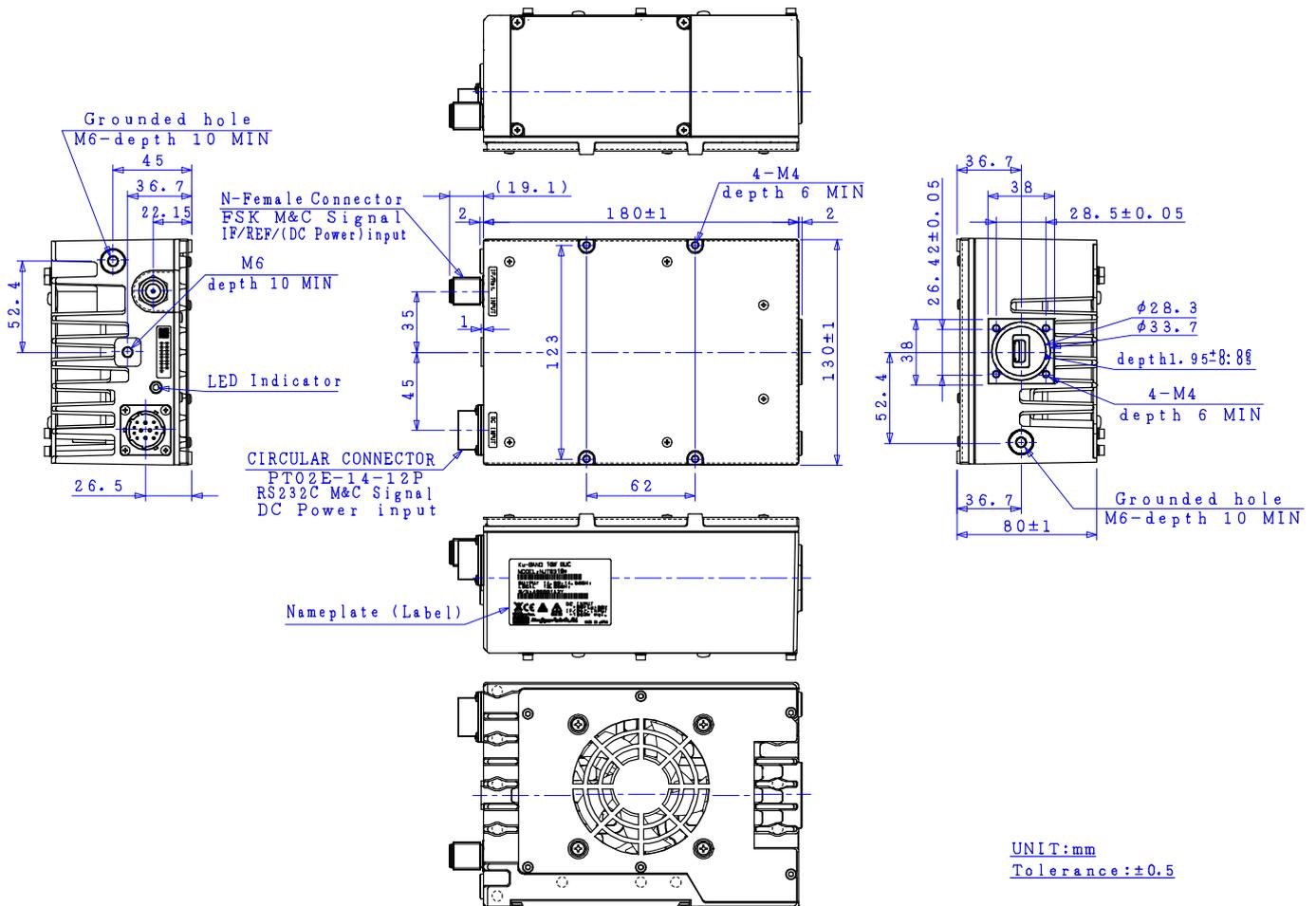


Accessories

- O-ring, Qty (1), for waveguide flange
- Wrench Key, Qty (1), M4, Hexagon
- Bolts, Qty (4), M4 x 10, Hexagon socket head with spring washer and flat washer, SUS, for waveguide flange
- Screws, Qty (2), M6 x 10, Phillips head with spring washer and flat washer, SUS, for grounded hole

* Above Specifications are subject to change without notice.

4.2. N-type Model, DC Input: MS Connector

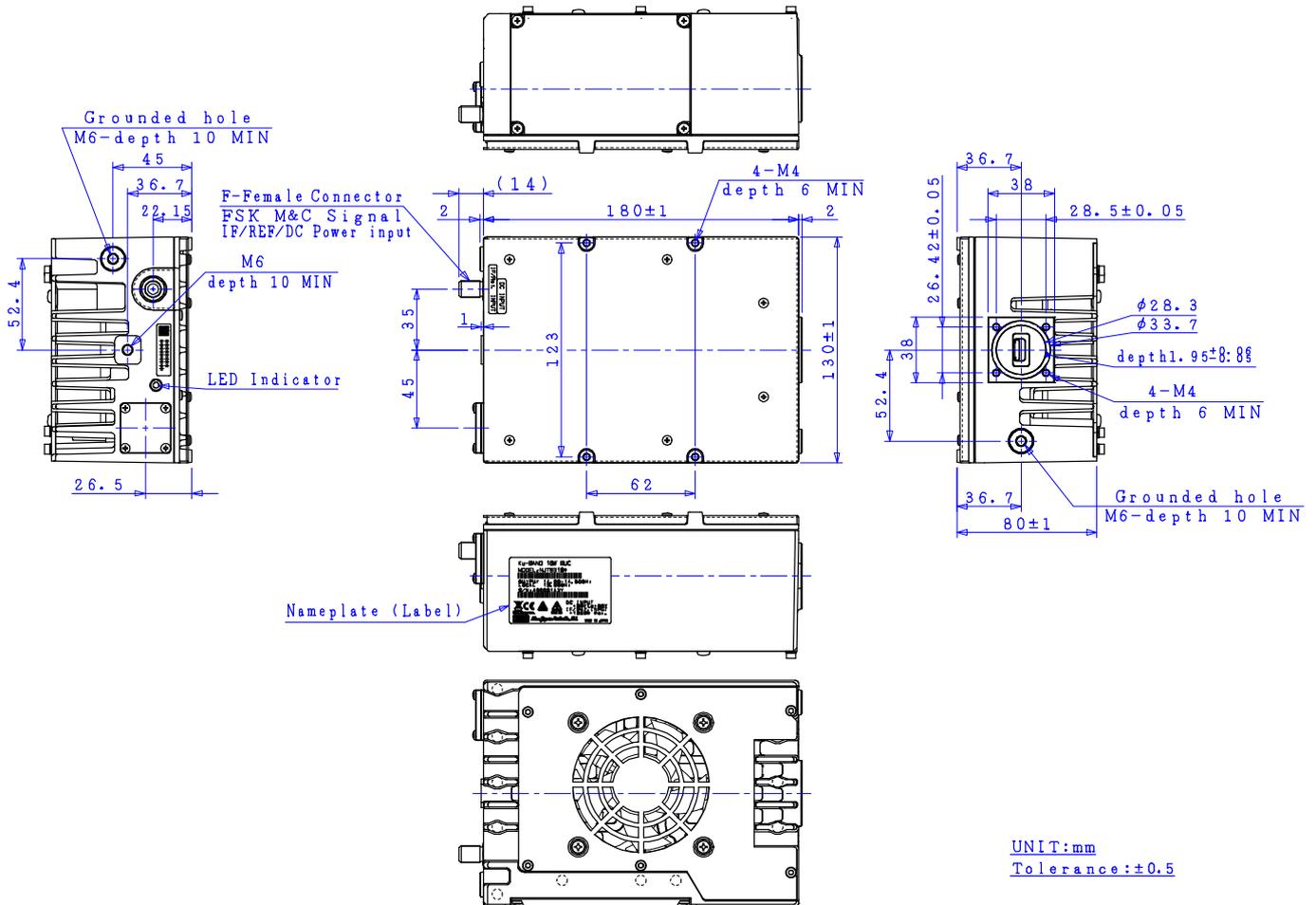


Accessories

- O-ring, Qty (1), for waveguide flange
- Wrench Key, Qty (1), M4, Hexagon
- Bolts, Qty (4), M4 x 10, Hexagon socket head with spring washer and flat washer, SUS, for waveguide flange
- Screws, Qty (2), M6 x 10, Phillips head with spring washer and flat washer, SUS, for grounded hole
- Connector, Qty (1), MS Mating connector: PT06E-14-12S (470)

* Above Specifications are subject to change without notice.

4.3. F-type Model, DC Input: IF Connector

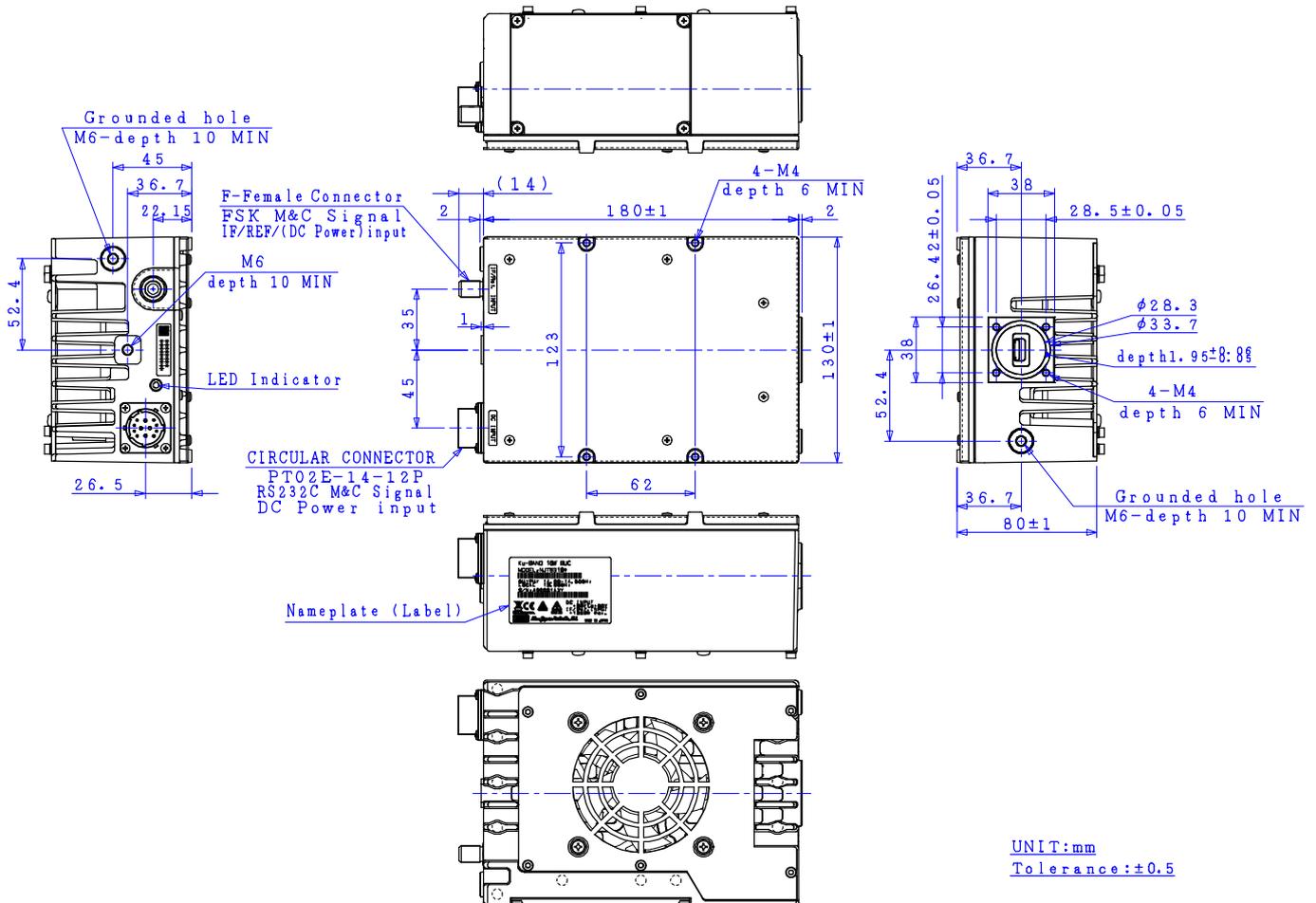


Accessories

- O-ring, Qty (1), for waveguide flange
- Wrench Key, Qty (1), M4, Hexagon
- Bolts, Qty (4), M4 x 10, Hexagon socket head with spring washer and flat washer, SUS, for waveguide flange
- Screws, Qty (2), M6 x 10, Phillips head with spring washer and flat washer, SUS, for grounded hole

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4.4. F-type Model, DC Input: MS Connector



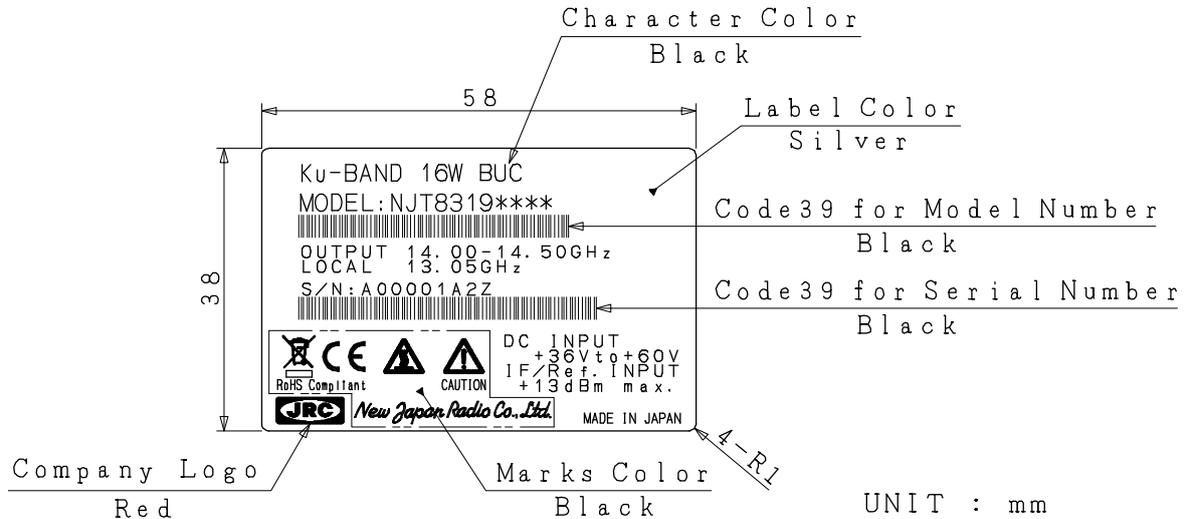
Accessories

- O-ring, Qty (1), for waveguide flange
- Wrench Key, Qty (1), M4, Hexagon
- Bolts, Qty (4), M4 x 10, Hexagon socket head with spring washer and flat washer, SUS, for waveguide flange
- Screws, Qty (2), M6 x 10, Phillips head with spring washer and flat washer, SUS, for grounded hole
- Connector, Qty (1), MS Mating connector: PT06E-14-12S (470)

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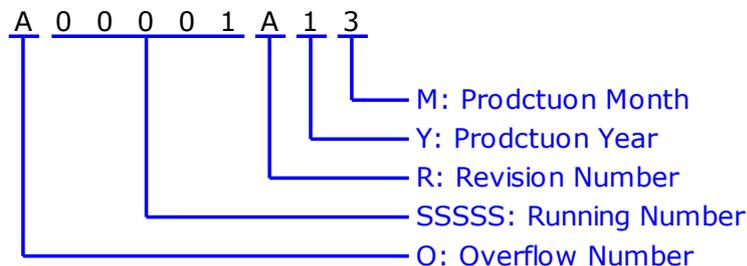
5. Label

5.1. Label Outline



5.2. Definitions

Serial Number (OSSSSRYM) - ALPHANUMERIC (9 characters)



O: Overflow Number - ALPHABET (1 character)

"A" to "T" except "I" and "O", e.g.: A99999 ⇒ B00001

"V" to "Z": Specified Numbers

SSSSS: Running Number - NUMBER (5 digits)

"00001" to "99999"

R: Revision Number - ALPHABET (1 character)

"A" to "Z" except "I", "O", and "U"

Y: Production Year - NUMBER (1 digit)

"0" to "9", Last Digit of Calendar Number

e.g.: 2021:"1", 2022:"2", 2023:"3".....

M: Production Month - ALPHANUMERIC (1 character)

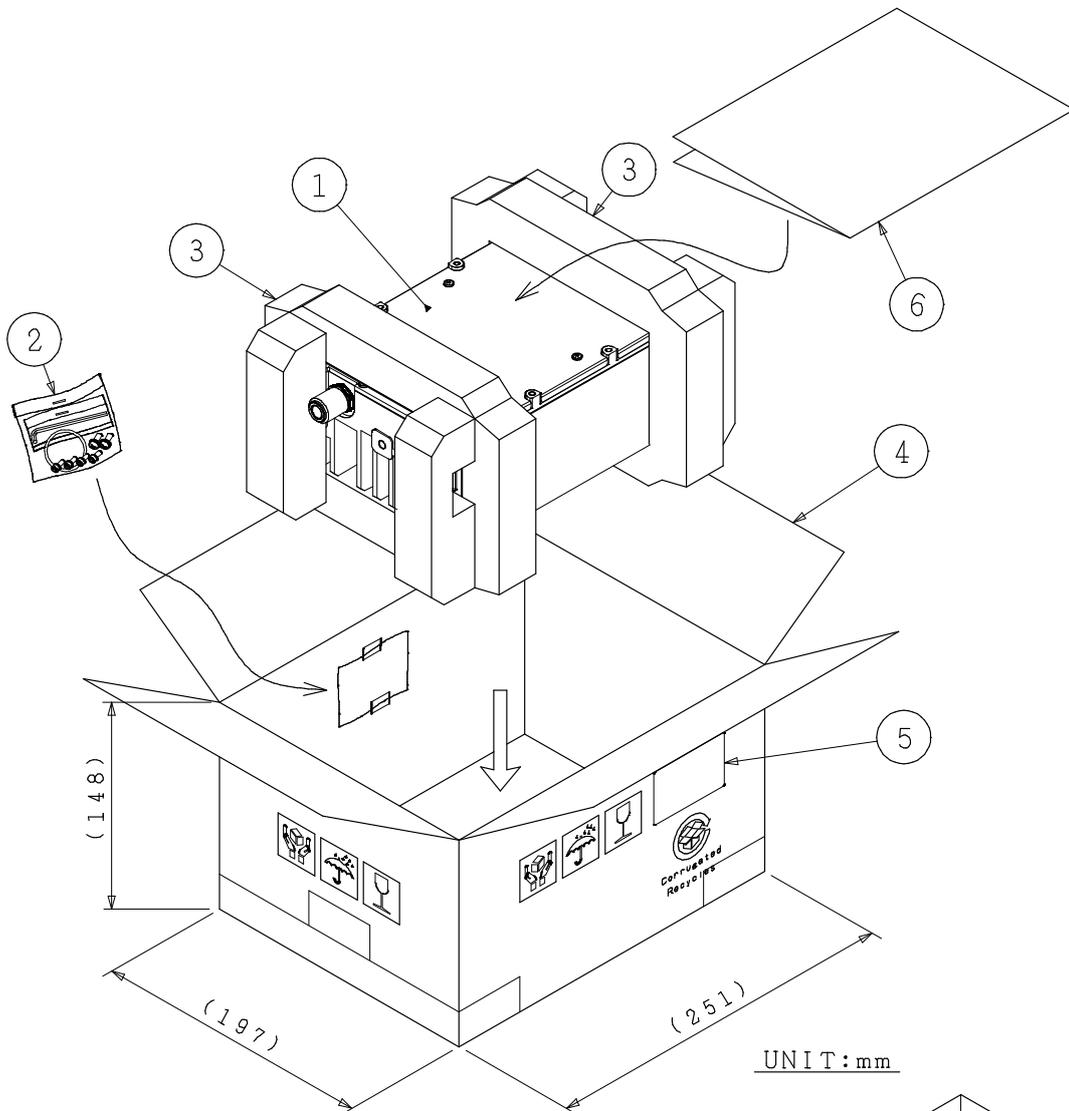
"1" to "9", "X" as October, "Y" as November, "Z" as December

* Above Specifications are subject to change without notice.

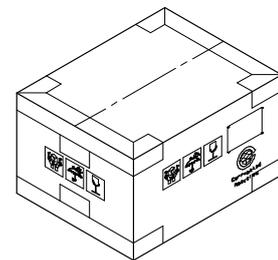
6. Package

6.1. Individual Package

Models of IF connector for DC Input

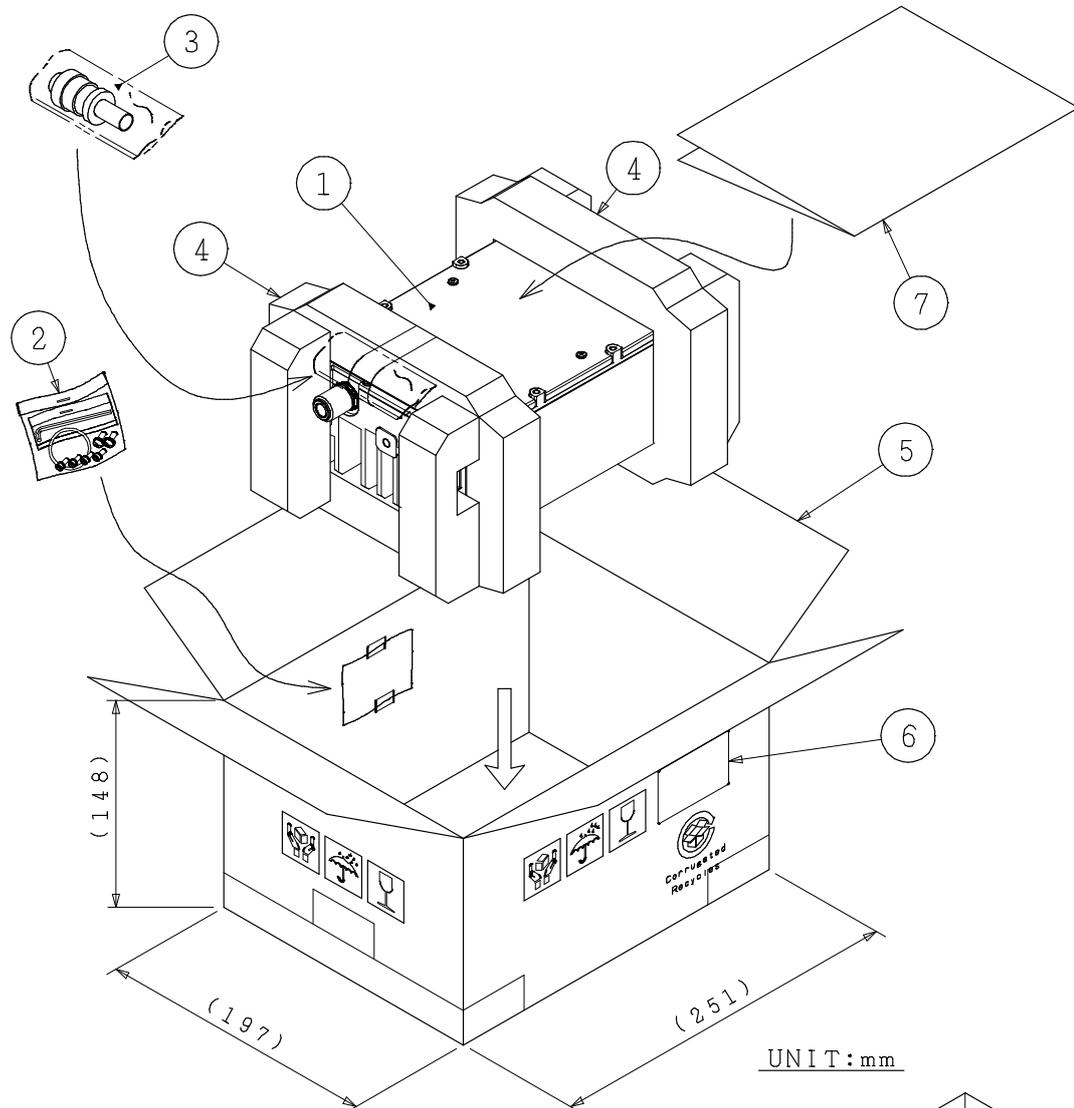


- ①: BUC
- ②: Accessories
 - O-RING
 - Hexagon Socket Head Bolts
M4×10 4 Pieces (SUS, SW and W)
 - Hexagon Wrench Keys (M4 Type)
 - Cross Recessed Head Machine Screw
M6×10 2 Pieces (SUS, SW)
- ③: Polyethylene foam for package cushioning
- ④: Double-faced corrugated fiberboard
- ⑤: Label
- ⑥: Test Data

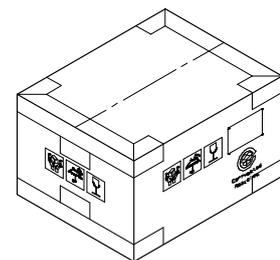


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Models of MS connector for DC Input



- ①: BUC
- ②: Accessories
 - O-RING
 - Hexagon Socket Head Bolts
M4×10 4Pieces (SUS, SW and W)
 - Hexagon Wrench Keys (M4 Type)
 - Cross Recessed Head Machine Screw
M6×10 2Pieces (SUS, SW)
- ③: Accessory
 - MS mating connector
- ④: Polyethylene foam for package cushioning
- ⑤: Double-faced corrugated fiberboard
- ⑥: Label
- ⑦: Test Data



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Appendix Outdoor 250W AC/DC Power Supply Unit

This appendix mentions about Outdoor 250W AC/DC Power Supply Unit(PSU) for AC power operation option.

Outdoor 250W AC/DC Power Supply Unit(PSU)

Model No. NJZ1289

Input AC Voltage Range: 100 to 240 V

Output DC Power: 250 W

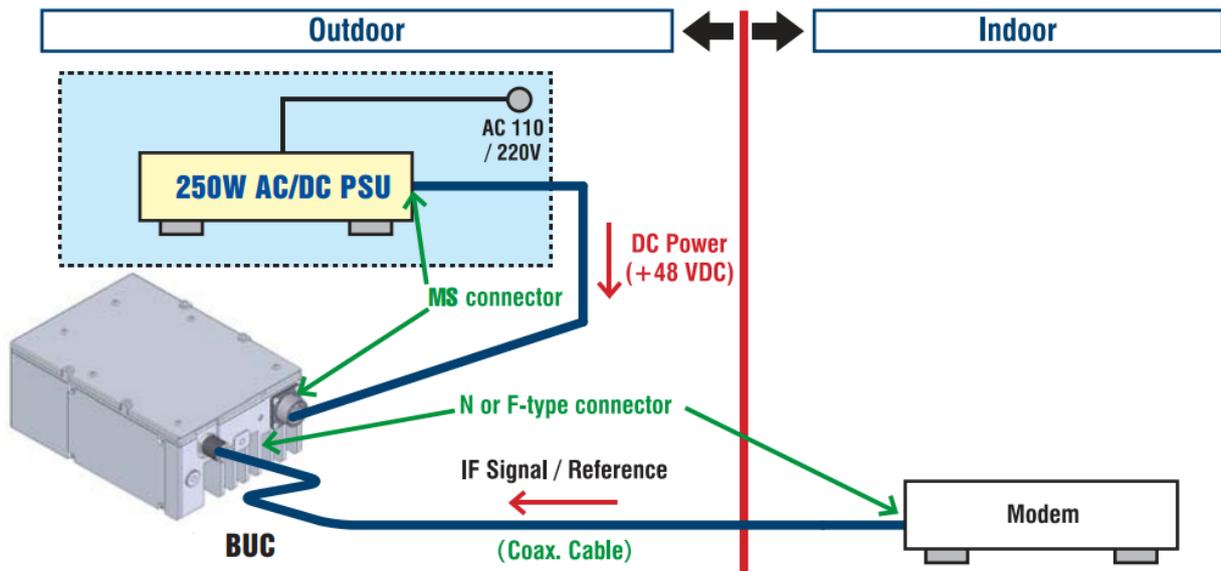
Output DC Voltage: +48 VDC

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Appendix Outdoor 250W AC/DC Power Supply Unit

1. Overview

The features of Outdoor 250W AC/DC Power Supply Unit (PSU) are to provide the stable +48V DC power to operate BUCs, even if power supply of the equipment is not capable enough to operate the BUC. This unit employs the aluminum housing with corrosion-proof treatment on the surface and has waterproof and dust-proof constructor in order to use perfectly as the outdoor unit. In addition, the outdoor AC/DC PSU complies with EC DIRECTIVE.



2. Electrical Specifications

#	Items	Specifications
2.1.	Input AC Voltage Range [Rated Range] [Absolute Maximum Rating]	100 to 240 VAC 90 to 264 VAC
2.2.	Input AC Frequency Range	50/60 Hz
2.3.	Input AC Current	3.6 A max.
2.4.	Output Voltage	+48 VDC nom. * Note 5
2.5.	Output Current	5.5 A max.
2.6.	Efficiency	90 % typ. * Note 6
2.7.	Maximum Output Power	250 W
2.8.	Power Factor	0.94 typ. * Note 6

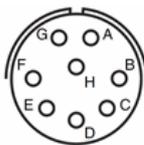
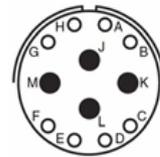
*Note5: Voltage ripple corresponding to output power arises.

*Note6: The condition is 100 VAC as AC voltage input and 200 W as output power load.

* Above Specifications are subject to change without notice.

Appendix Outdoor 250W AC/DC Power Supply Unit

3. Mechanical Specifications

#	Items	Specifications
3.1.	<p>Input Interface</p> <p style="text-align: right;">[AC Input]</p> <p style="text-align: right;">[Option Port]</p>	<p>AC Connector: C016 20C003 200 12 Mating Connector: C016 20D003 210 12 (Amphenol eco mate connector)</p> <p>Assignment:</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>Pin 1: Live AC input Pin 2: Nutral AC input Pin 3: N.C. Pin PE: Frame Ground (GND)</p> </div> </div> <p>MS Connector: PT02E-12-8P(025) Mating Connector: PT06E-12-8S(470) (Amphenol connector)</p> <p>Assignment:</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>Pin A: Through Pin A in Output MS cconnector Pin B: Through Pin B in Output MS cconnector Pin C: Through Pin C in Output MS cconnector Pin D: Through Pin D in Output MS cconnector Pin E: Through Pin E in Output MS cconnector Pin F: Through Pin F in Output MS cconnector Pin G: Through Pin G in Output MS cconnector Pin H: Through Pin H in Output MS cconnector</p> </div> </div>
3.2.	<p>Output Interface</p> <p style="text-align: right;">[DC & Option Output]</p>	<p>MS Connector: PT02E-14-12S(025) Mating Connector: PT06E-14-12P(470) (Amphenol connector)</p> <p>Assignment:</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>Pin A: Through Pin A in Input MS cconnector Pin B: Through Pin B in Input MS cconnector Pin C: Through Pin C in Input MS cconnector Pin D: Through Pin D in Input MS cconnector Pin E: Through Pin E in Input MS cconnector Pin F: Through Pin F in Input MS cconnector Pin G: Through Pin G in Input MS cconnector Pin H: Through Pin H in Input MS cconnector Pin J: DC Output (+) / Prime Pin K: DC Output (-) / Return Pin L: N.C. Pin M: N.C.</p> </div> </div>
3.3.	Dimension & Housing	<p>186(L) x 133(W) x 60(H) mm [7.33" (L) x 5.24" (W) x 2.36" (H)] without interface connectors</p>
3.4.	Weight	1.6 kg [3.5 lbs]

* Above Specifications are subject to change without notice.

Appendix Outdoor 250W AC/DC Power Supply Unit

#	Items	Specifications
3.5.	Surface Finish [Protective & Conformal Coating] [Finish Paint]	Trivalent Chromate Treatment Acrylic Paint, Ivory Color
3.6.	Cooling	Convection air cooling

4. Environmental Specifications

#	Items	Specifications
4.1.	Temperature Range (ambient) [Operating] [Storage]	0 to +55 °C -40 to +75 °C
4.2.	Humidity	0 to 100 % Rh
4.3.	Dust/Waterproof	IP67
4.4.	Vibration	5 G [49.03 m/s ²] (3 axis, 50 Hz to 2 kHz) 1 mm p-p (3 axis, 5 to 50 Hz)
4.5.	Shock	30 G [294.20 m/s ²] (3 axis)
4.6.	Regulations	EU Directive (CE Marking) EMC (2014/30/EC) Low Voltage (2006/95/EC)
4.7.	Standard [Safety] [EMC]	IEC60950-1:2005 (2 nd Edition) EN60950-1:2006 EN61000-3-2 (Harmonic Current Emission Test) EN61000-3-3 (Voltage Fluctuations and Flicker Test) EN61000-4-2 (ESD Test) EN61000-4-3 (Radio-Frequency Electromagnetic Field Test) EN61000-4-4 (Electrical Fast Transient/Burst Test) EN61000-4-5 (Surge Test) EN61000-4-6 (Conducted Disturbance Radio-Frequency Test) EN61000-4-8 (Power Frequency Magnetic Field Test) EN61000-4-11 (Voltage Dips and Interruptions Test)
4.8.	Comply with RoHS (Restricting the use of Hazardous Substances) directives	

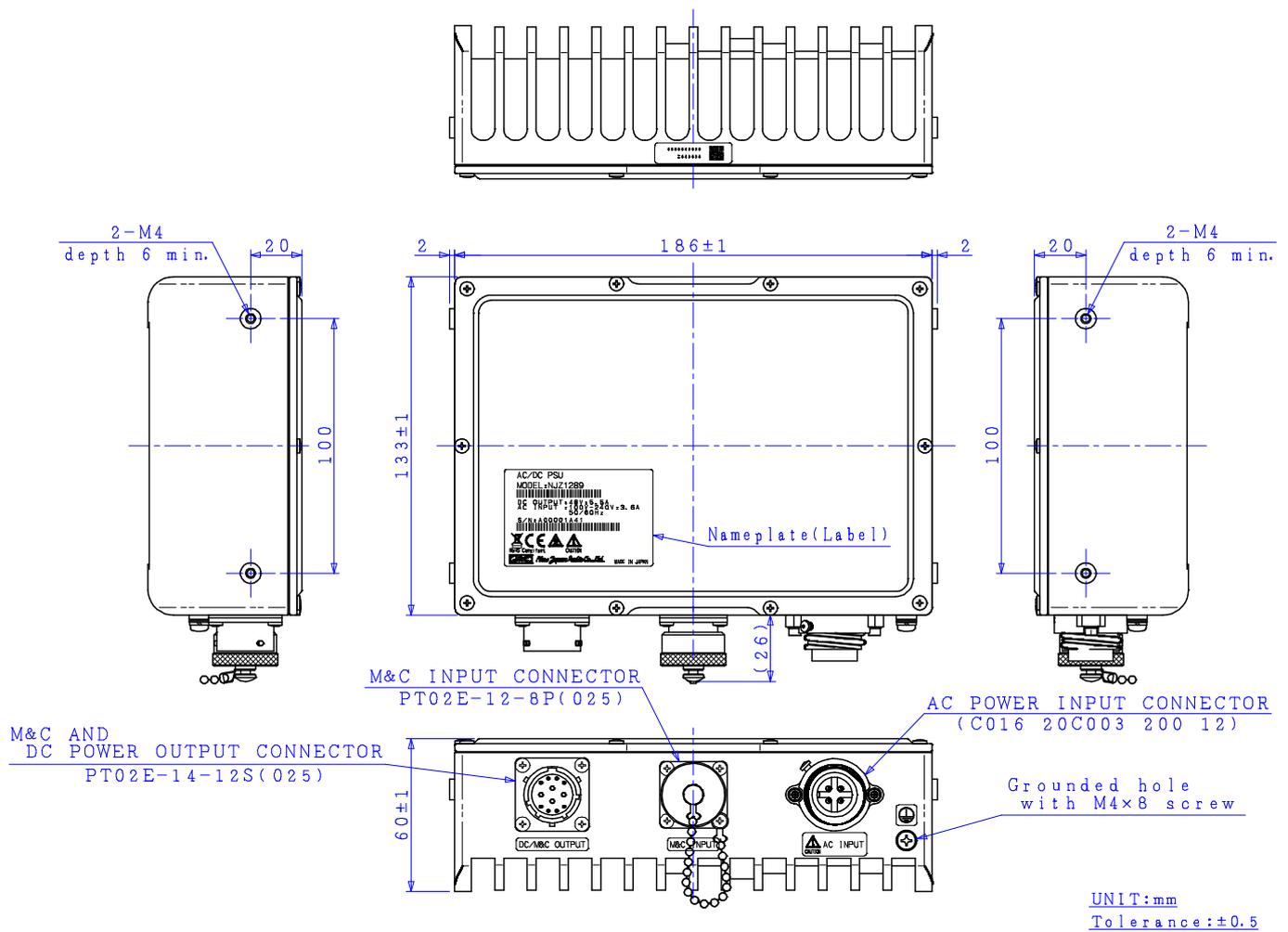
* Above Specifications are subject to change without notice.

Appendix Outdoor 250W AC/DC Power Supply Unit

5. Accessories

- AC Connector (Plug socket) , Qty (1), Mating connector: C016 20D003 210 12 (Amphenol)
- MS Connector (Plug pin) , Qty (1), Mating connector: PT06E-14-12P (470) (Amphenol)

6. Outline Drawing

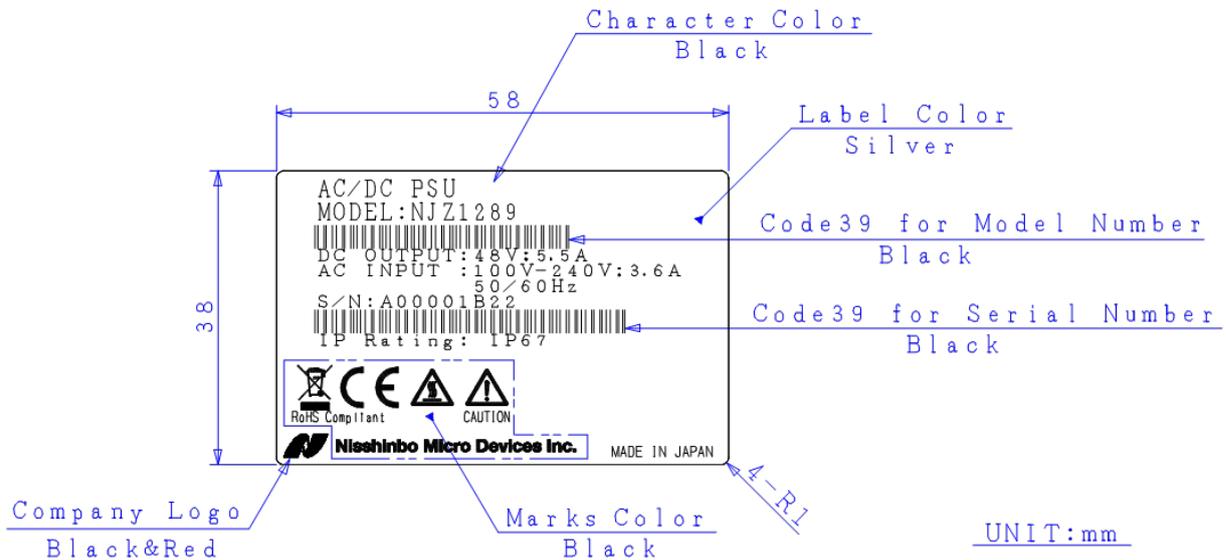


* Above Specifications are subject to change without notice.

Appendix Outdoor 250W AC/DC Power Supply Unit

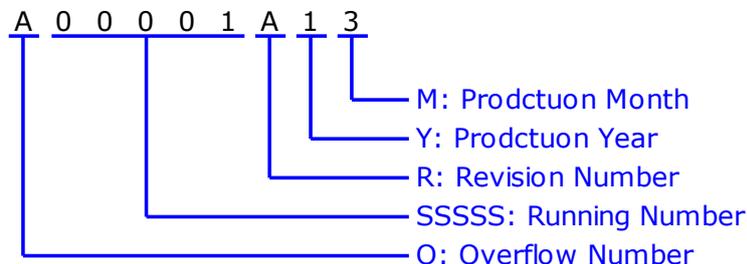
7. Label

7.1. Label Outline



7.2. Definitions

Serial Number (OSSSSSRYM) - ALPHANUMERIC (9 characters)



O: Overflow Number - ALPHABET (1 character)

"A" to "T" except "I" and "O", e.g.: A99999 ⇒ B00001

"V" to "Z": Specified Numbers

SSSSS: Running Number - NUMBER (5 digits)

"00001" to "99999"

R: Revision Number - ALPHABET (1 character)

"A" to "Z" except "I", "O", and "U"

Y: Production Year - NUMBER (1 digit)

"0" to "9", Last Digit of Calendar Number

e.g.: 2021:"1", 2022:"2", 2023:"3".....

M: Production Month - ALPHANUMERIC (1 character)

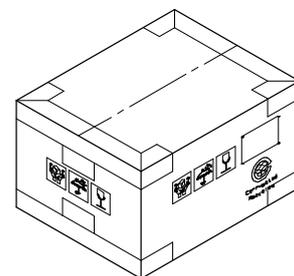
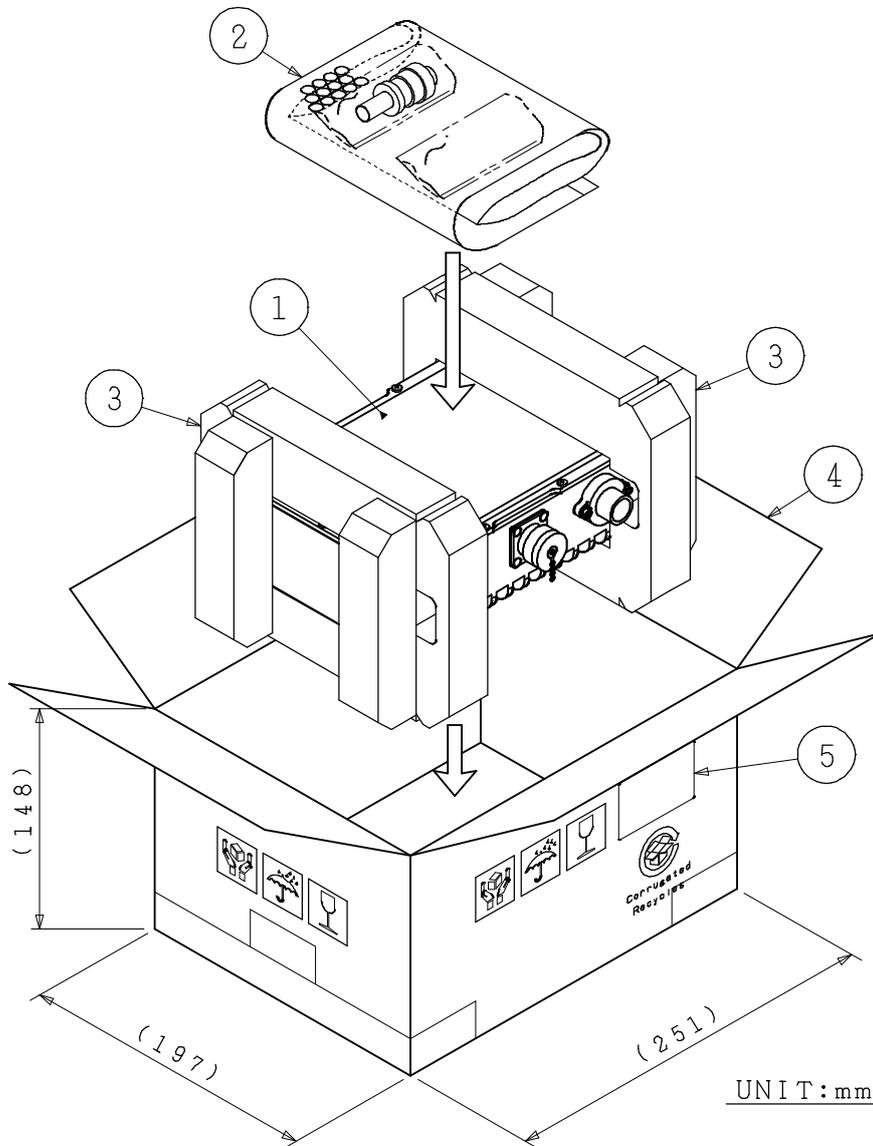
"1" to "9", "X" as October, "Y" as November, "Z" as December

* Above Specifications are subject to change without notice.

Appendix Outdoor 250W AC/DC Power Supply Unit

8. Package

8.1. Package for PSU

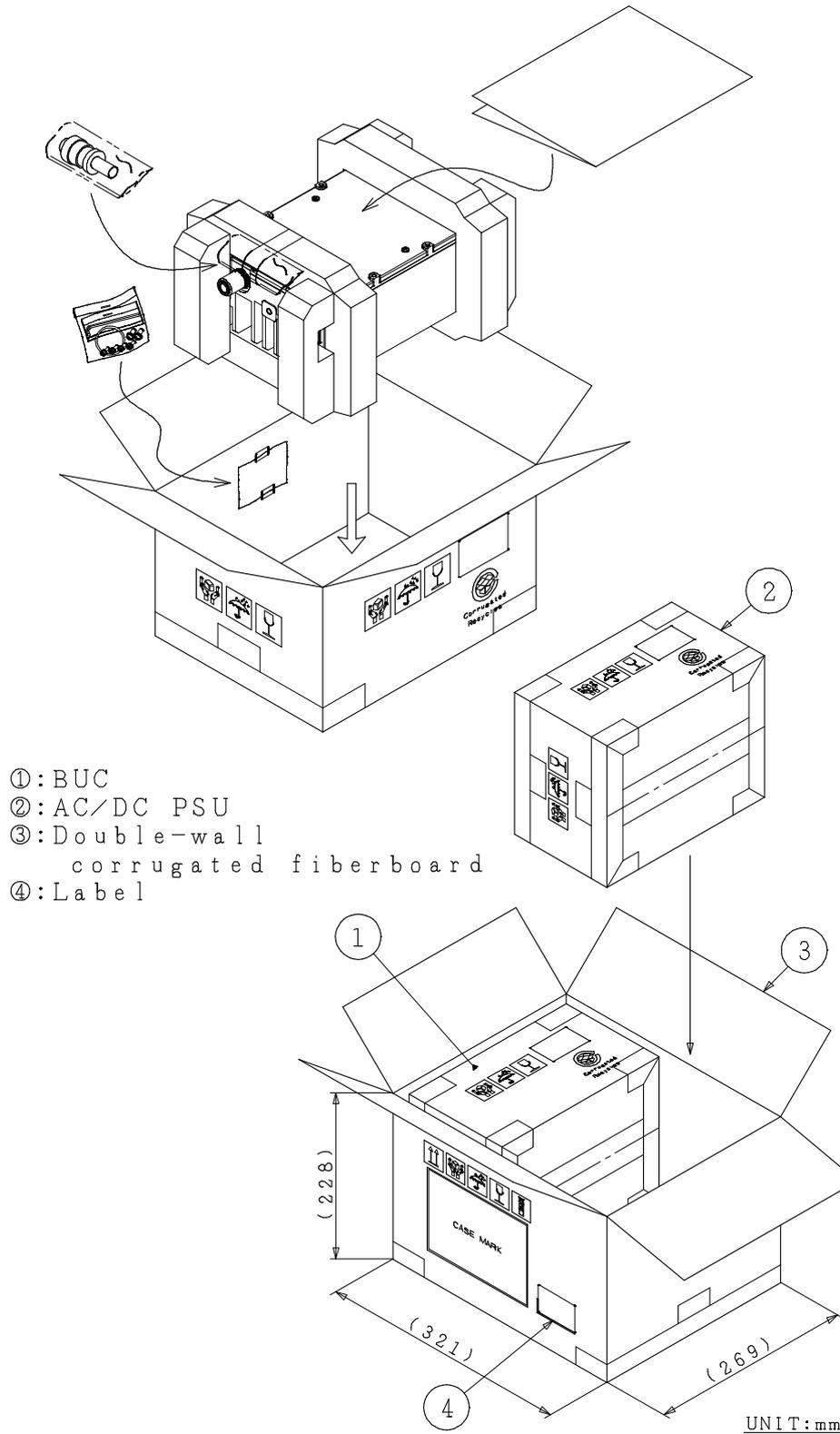


- ①: BUC
- ②: Accessories
 - MS mating connector
PT06E-14-12P-470:1 piece
 - AC mating connector
C016 20D003 210 12:1 piece
- ③: Polyethylene foam for package cushioning
- ④: Double-faced corrugated fiberboard
- ⑤: Label

* Above Specifications are subject to change without notice.

Appendix Outdoor 250W AC/DC Power Supply Unit

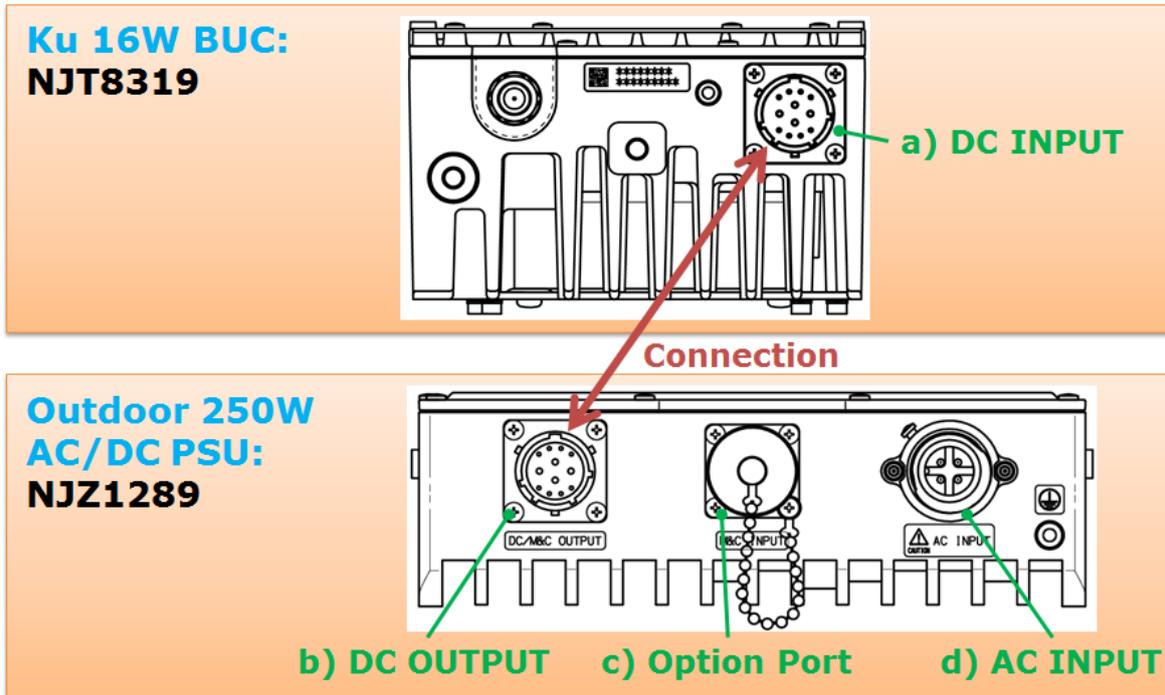
8.2. Package with BUC



* Above Specifications are subject to change without notice.

Appendix Outdoor 250W AC/DC Power Supply Unit

9. Connection Overview between Ku 16W BUC and 250W AC/DC PSU



a) DC INPUT at NJT8319 (Ku 16W BUC)

- Product connector: PT02E-14-12P(025) [Amphenol / 12 pins, male]
 - Mating connector: PT06E-14-12S(470) [Amphenol / 12 sockets, female]
- * Mating connector is enclosed in the shipping package of NJT8319*



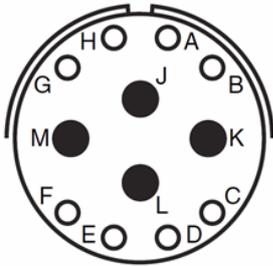
Pin No.	Item	Description
A	N.C.	-
B	N.C.	-
C	N.C.	-
D	N.C.	-
E	RS-232C GND	-
F	N.C.	-
G	RS-232C TxD	-
H	RS-232C RxD	-
J	DC Input (+)	Prime: +36 to +60 V / DC Voltage
K	DC Input (-)	Return: GND
L	RS-232C GND	-
M	N.C.	-

* Above Specifications are subject to change without notice.

Appendix Outdoor 250W AC/DC Power Supply Unit

b) DC OUTPUT at NJZ1289 (AC/DC PSU)

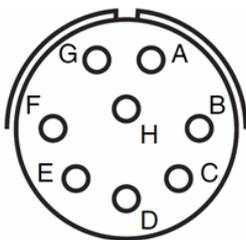
- Product connector: PT02E-14-12S(025) [Amphenol / 12 sockets, male]
 - Mating connector: PT06E-14-12P(470) [Amphenol / 12 pins, female]
- * Mating connector is enclosed in the shipping package of NJZ1289



Pin No.	Item	Description
A	By-pass Port	Through Pin A in (c)'s MS connector
B	By-pass Port	Through Pin B in (c)'s MS connector
C	By-pass Port	Through Pin C in (c)'s MS connector
D	By-pass Port	Through Pin D in (c)'s MS connector
E	By-pass Port	Through Pin E in (c)'s MS connector
F	By-pass Port	Through Pin F in (c)'s MS connector
G	By-pass Port	Through Pin G in (c)'s MS connector
H	By-pass Port	Through Pin H in (c)'s MS connector
J	DC Output (+)	Prime: +48V typical, DC Voltage
K	DC Output (-)	Return: GND
L	N.C.	-
M	N.C.	-

c) Option Port at NJZ1289 (AC/DC PSU)

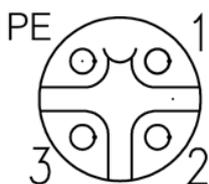
- Product connector: PT02E-12-8P(025) [Amphenol / 8 pins, male]
 - Mating connector: PT06E-12-8S(470) [Amphenol / 8 sockets , female]
- * Product connector is covered by the waterproof cap.



Pin No.	Item	Description
A	By-pass Port	Through Pin A in (b)'s MS connector
B	By-pass Port	Through Pin B in (b)'s MS connector
C	By-pass Port	Through Pin C in (b)'s MS connector
D	By-pass Port	Through Pin D in (b)'s MS connector
E	By-pass Port	Through Pin E in (b)'s MS connector
F	By-pass Port	Through Pin F in (b)'s MS connector
G	By-pass Port	Through Pin G in (b)'s MS connector
H	By-pass Port	Through Pin H in (b)'s MS connector

d) AC INPUT at NJZ1289 (AC/DC PSU)

- Product connector: C016 20C003 200 12 [Amphenol / 3 pins + PE, male]
 - Mating connector: C016 20D003 210 12 [Amphenol / 3 sockets + PE, female]
- * Mating connector is enclosed in the shipping package of NJZ1289



Pin No.	Item	Description
1	L (Live)	100 to 240 V, AC Voltage
2	N (Neutral)	100 to 240 V, AC Voltage
3	N.C.	-
PE	FG	GND

* Above Specifications are subject to change without notice.

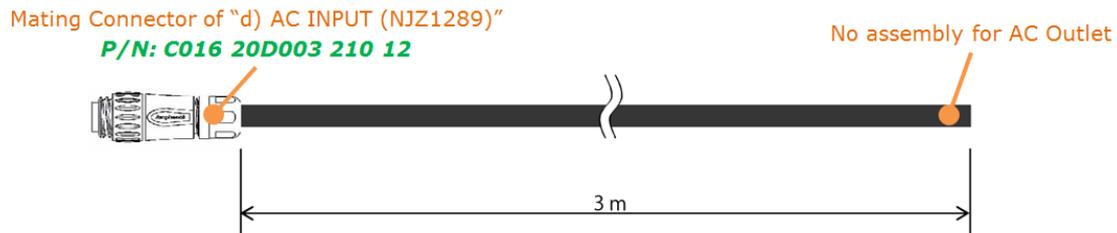
Appendix Outdoor 250W AC/DC Power Supply Unit

Cable Option

- **Model No. NJZ1290A01**

Cable between NJZ1289 (250W AC/DC PSU) and AC Outlet

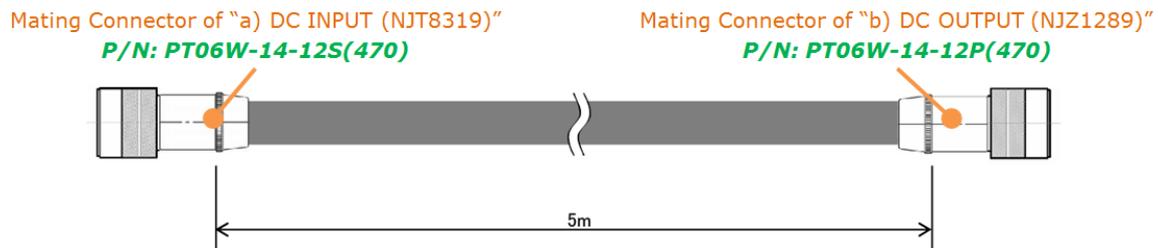
Weatherized Cable / Length: 3m / AC Mating Connector assembled
/ No assembly in AC Outlet Side



- **Model No. NJZ1290A02**

Connection Cable between NJT8319 (Ku 16W BUC) and NJZ1289 (250W AC/DC PSU)

Weatherized Cable / Length: 5m / Two Mating Connectors assembled

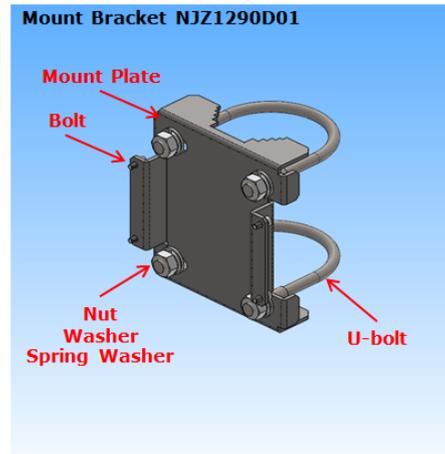
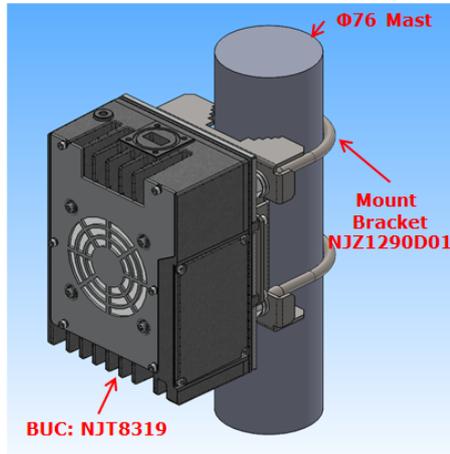


* Above Specifications are subject to change without notice.

Mounting Bracket Option

1. $\Phi 76$ Mast Mount Bracket of NJT8319 series

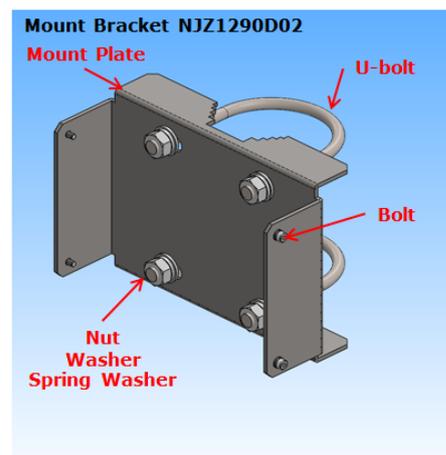
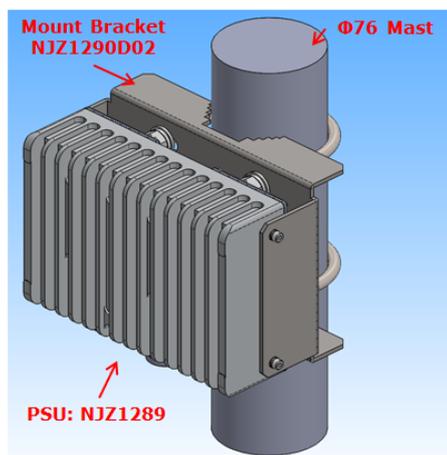
- Model No. NJZ1290D01



Item	Qty	Description
Mount Plate	1	SUS
Bolt	4	SUS, M4, with W & SW, for fixing BUC
U-bolt	2	SUS, 65A(2-1/2"), M10
Nut	4	SUS, M10
Washer	4	SUS, for M10
Spring Washer	4	SUS, for M10

2. 76 Mast Mount Bracket of NJZ1289

- Model No. NJZ1290D02



Item	Qty	Description
Mount Plate	1	SUS
Bolt	4	SUS, M4, with W & SW, for fixing PSU
U-bolt	2	SUS, 65A(2-1/2"), M10
Nut	4	SUS, M10
Washer	4	SUS, for M10
Spring Washer	4	SUS, for M10

* Above Specifications are subject to change without notice.