



APsystems (EMEA) Accessories

Rev 1.4

ALTENERGY POWER SYSTEM Inc.
emea.APsystems.com

APsystems EMEA
22 Avenue Lionel Terray, 69330 Jonage, France
Mail: info.emea@APsystems.com

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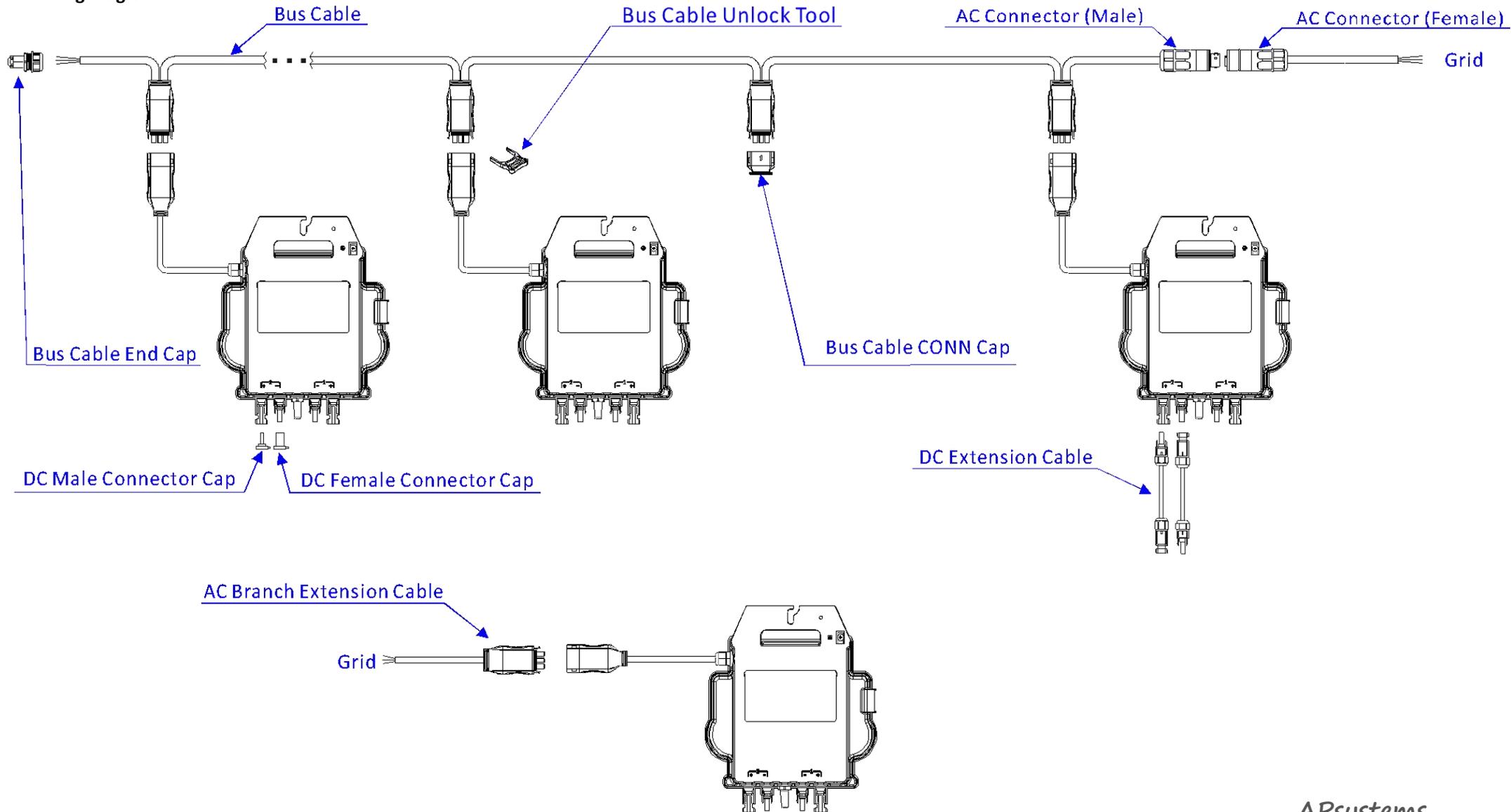
Contents

DS3 Series Accessories	3
1. Wiring Diagram	3
2. Dimensions	4
3. Accessories Summary	4
4. Physical Picture	5
5. Accessories information	6
DS3D Accessories	19
1. Wiring Diagram	19
2. DS3D Dimensions	20
3. Accessories Summary	21
4. Physical Picture	22
5. Accessories information	23
QT2 Accessories	24
1. Wiring Diagram	24
2. QT2 Dimensions	25
3. Accessories Summary	26
4. Physical Picture	27
5. Accessories information	28
QT2D Accessories	37
1. Wiring Diagram	37
2. QT2D Dimensions	38
3. Accessories Summary	39
4. Physical Picture	40
5. Accessories information	41
ECU-C Accessories	42
1. Wiring Diagram	42
2. ECU-C Dimensions	43
3. Accessories Summary	43
4. Physical Picture	44
5. Accessories information	45
ECU-R Accessories	50

1. Wiring Diagram	50
2. ECU-R Dimensions	51
3. Accessories Summary	51
4. Physical Picture	52
5. Accessories information	53
ECU-B Accessories	55
1. Wiring Diagram	55
2. ECU-B Dimensions	56
3. Accessories Summary	56
4. Physical Picture	57

DS3 Series Accessories

1. Wiring Diagram



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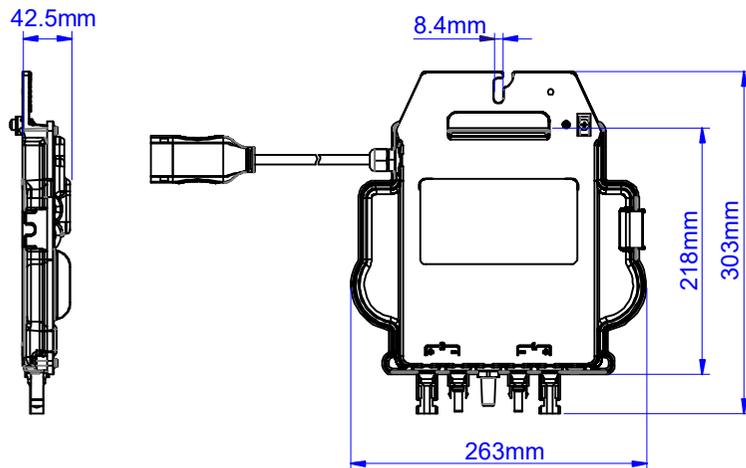
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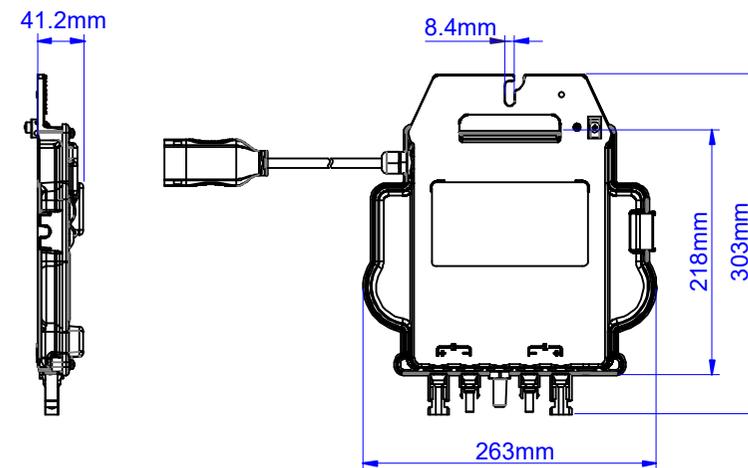
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2. Dimensions

DS3/DS3-H Dimensions



DS3-L/DS3-M/DS3-S Dimensions



3. Accessories Summary

Region	Accessories									
	Bus Cable (Mandatory)	AC Branch Extension Cable (Optional)	Bus Cable End Cap (Mandatory)	Bus Cable CONN Cap (Optional)	Bus Cable Unlock Tool (Mandatory)	DC Male Connector Cap (Optional)	DC Female Connector Cap (Optional)	AC Connector (Male) (Optional)	AC Connector (Female) (Optional)	DC Extension Cable (Optional)
Europe -EU (117018) -L-EU (118018) -S-EU (119018) -H-EU (120018) -M-EU (126018)	2322304903_Single Phase Bus Cable (2.5mm ² , H07,2m) <i>(See Pic. A)</i>	2334076132_Single Phase Br. Ext-cable (2.5mm ² ,1m) <i>(See Pic. B)</i>	2060700017_ 3-wire Bus Cable End Cap <i>(See Pic. C)</i>	2061702007_ Bus Cable Y-CONN Cap <i>(See Pic. D)</i>	2352000001_ Y Bus Cable Unlock Tool <i>(See Pic. E)</i>	2060401006_ DC Male Connector Cap (MC4) <i>(See Pic. F)</i>	2060402006_ DC Female Connector Cap (MC4) <i>(See Pic. G)</i>	2300931212_ AC Connector (3 core, two seals, male) <i>(See Pic. H)</i>	2300932212_ AC Connector (3 core, two seals, female) <i>(See Pic. I)</i>	2310310274_1m DC Extension Cable (MC4) 2310360214_2m DC Extension Cable (MC4) 2310360224_3m DC Extension Cable (MC4) <i>(See Pic. J)</i>
	2322320803_Single Phase Bus Cable (4mm ² , H07,2m) <i>(See Pic. A)</i>									

Notes: The cables in this table are recommended by APsystems, and the O.D. and length of the cable can be customized according to customer needs.

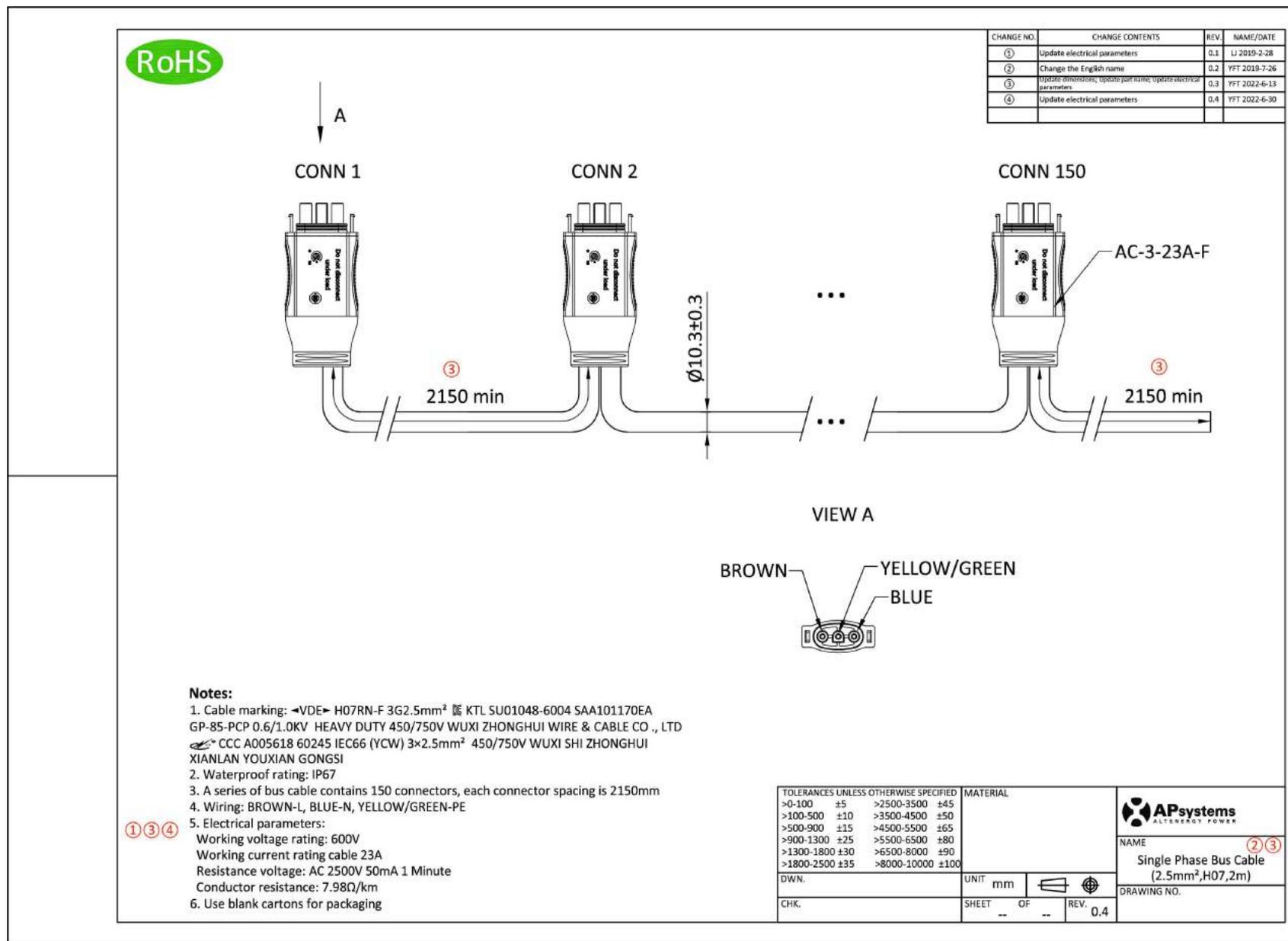
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4. Physical Picture

Bus Cable	AC Branch Extension Cable	Bus Cable End Cap	Bus Cable CONN Cap	Bus Cable Unlock Tool	DC Male Connector Cap
 <p data-bbox="197 635 271 660">Pic. A</p>	 <p data-bbox="546 635 620 660">Pic. B</p>	 <p data-bbox="891 635 965 660">Pic. C</p>	 <p data-bbox="1234 635 1308 660">Pic. D</p>	 <p data-bbox="1585 635 1659 660">Pic. E</p>	 <p data-bbox="1935 635 2009 660">Pic. F</p>
DC Female Connector Cap	AC Connector (Male)	AC Connector (Female)	DC Extension Cable		
 <p data-bbox="197 1054 271 1080">Pic. G</p>	 <p data-bbox="546 1054 620 1080">Pic. H</p>	 <p data-bbox="891 1054 965 1080">Pic. I</p>	 <p data-bbox="1234 1054 1308 1080">Pic. J</p>		

5. Accessories information

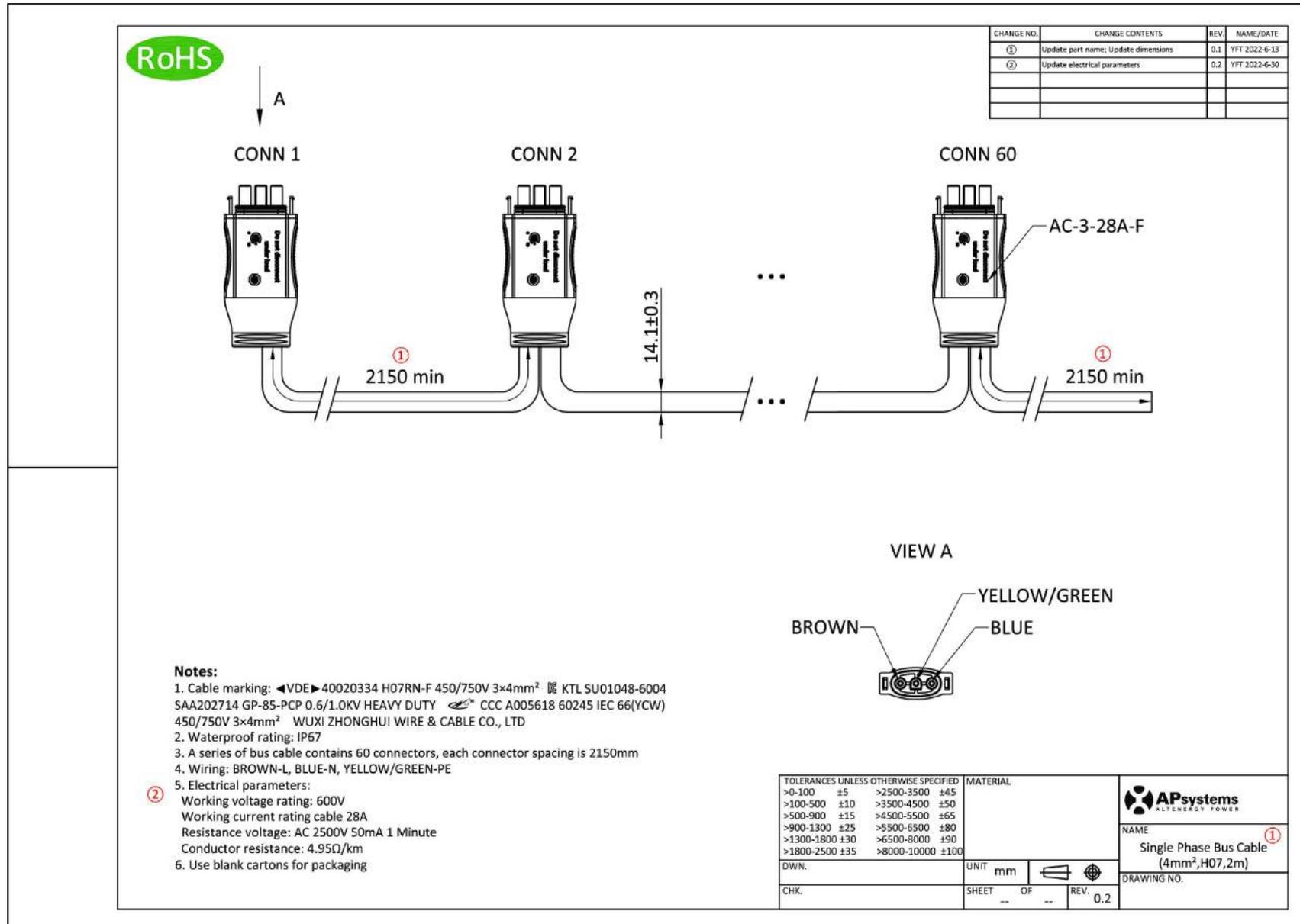
2322304903_Single Phase Bus Cable (2.5mm²,H07,2m)



①③④

②③

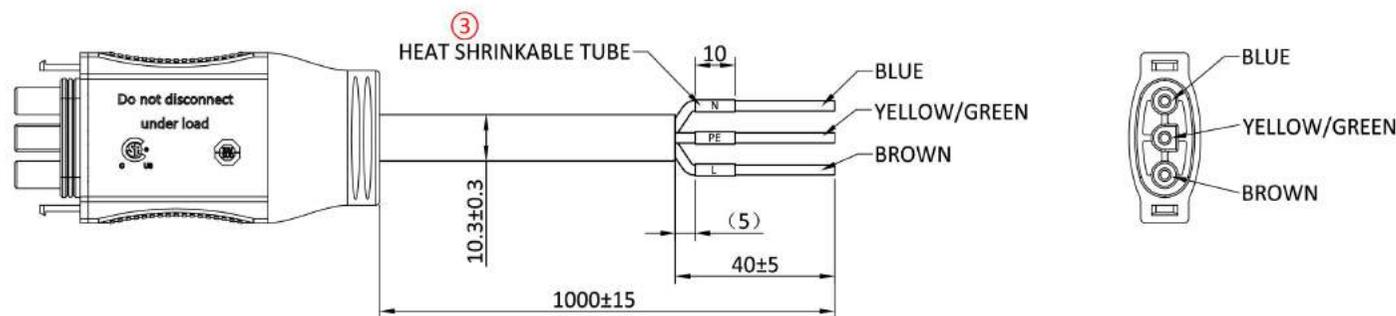
2322320803_Single Phase Bus Cable (4mm², H07,2m)



2334076132_ Single Phase Br. Ext-cable (2.5mm²,1m)



CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Update electrical parameters	0.1	LJ 2019-2-28
②	Change the part name	0.2	YFT 2019-7-26
③	Change the label to heat shrinkable tube	0.3	YFT 2020-5-22
④	Update part name; Update electrical parameters	0.4	YFT 2022-6-13
⑤	Update electrical parameters	0.5	YFT 2022-6-30



WIRE RUN LIST		
mm ²	COLOR	LABEL
2.5	BROWN	L
	BLUE	N
	YELLOW/GREEN	PE

Notes:

- Cable: ◀VDE▶ H07RN-F 3G2.5mm² KTL SU01048-6004 SAA101170EA GP-85-PCP 0.6/1.0KV HEAVY DUTY 450/750V WUXI ZHONGHUI WIRE & CABLE CO., LTD CCC A005618 60245 IEC66 (YCW) 3x2.5mm² 450/750V WUXI SHI ZHONGHUI XIANLAN YOUXIAN GONGSI
- Waterproof rating: IP67;
- Wiring: BROWN-L, BLUE-N, YELLOW/GREEN-PE;
- Electrical parameters:
Working voltage rating: 600V
Working current rating cable 23A
Resistance voltage: AC 2500V 50mA 1 Minute
Conductor resistance: 7.98Ω/km
- Use blank cartons for packaging

①④⑤

TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL
>0-100 ±5	>2500-3500 ±45	
>100-500 ±10	>3500-4500 ±50	
>500-900 ±15	>4500-5500 ±65	
>900-1300 ±25	>5500-6500 ±80	
>1300-1800 ±30	>6500-8000 ±90	
>1800-2500 ±35	>8000-10000 ±100	

DWN.	UNIT	mm	
CHK.	SHEET	OF	REV. 0.5



NAME
Single Phase Br.
Ext-Cable(2.5mm²,1m)

DRAWING NO.

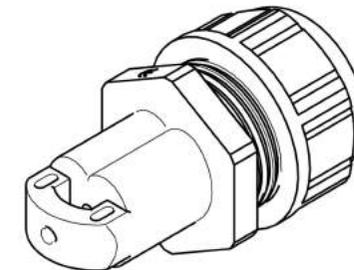
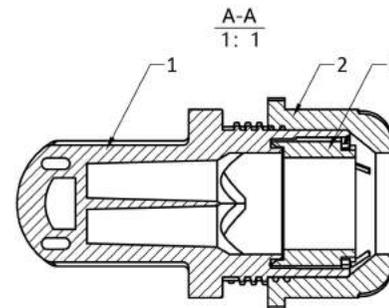
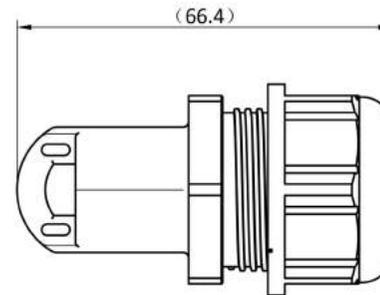
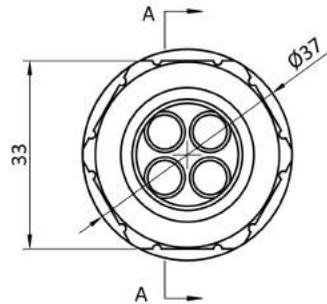
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2060700017_ 3-wire Bus Cable End Cap

RoHS
REACH

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



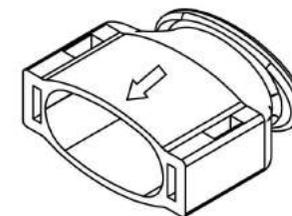
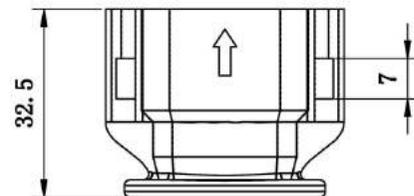
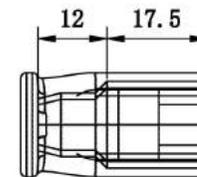
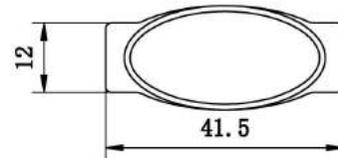
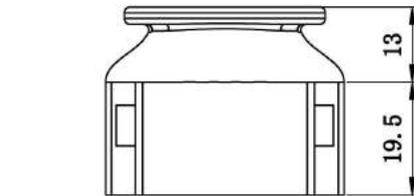
- Notes:
1. Cable Size: 10~16mm;
 2. Nut Torque: 3.0~5.0N·m;
 3. Waterproof Rating: IP68;
 4. Operating Temperature Range: -40~105°C;
 5. Packaging: Blank Cartons

3	Sealing bushing		Rubber	1	
2	Round nut		PA6	1	
1	Joint body		PA6	1	
NO.	NAME	TYPE	MAT.	QTY.	REMARK
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL		 NAME 3-wire Bus Cable End Cap	
±0.5					
DWN.	UNIT	mm			
CHK.	SHEET	OF	REV.		

2061702007_Bus Cable Y-CONN Cap

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



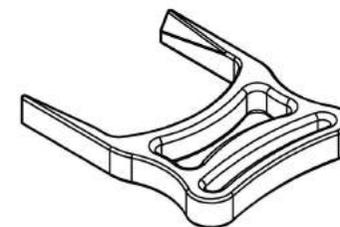
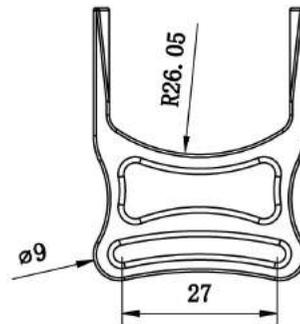
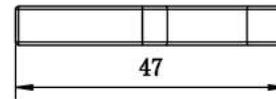
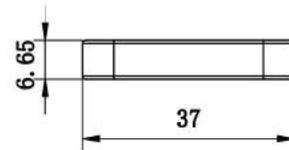
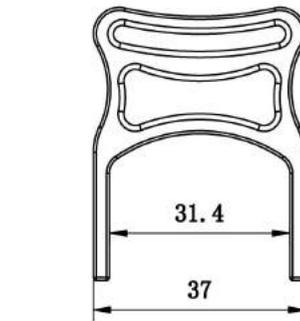
- Notes:
1. Part Number: DU00050
 2. Undimensioned Features Are Derived From 3D Database
 3. Molded Part Must Meet Rohs
 4. Use Blank Cartons For Packaging

TOLERANCES UNLESS OTHERWISE SPECIFIED	MATERIAL	 NAME Bus Cable Y-CONN Cap
> 0.5~3 : ±0.15 > 3~6 : ±0.2 > 6~30 : ±0.5 > 30~120 : ±0.8 > 120~315 : ±1.2 ANGLES: ±1°	PPE	
DWN.	UNIT mm	DRAWING NO.
CHK.	SHEET -- OF -- REV. 0.0	

2352000001_Y Bus Cable Unlock Tool

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



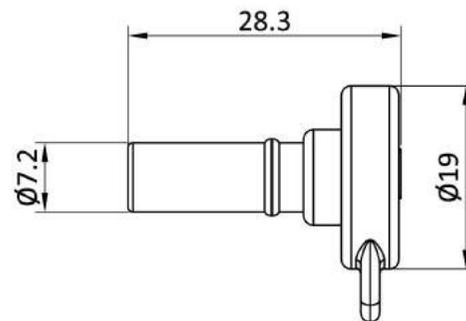
- Notes:
1. Part Number: PPO
 2. Undimensioned Features Are Derived From 3D Database
 3. Molded Part Must Meet RoHS
 4. Use Blank Cartons For Packaging

TOLERANCES UNLESS OTHERWISE SPECIFIED	MATERIAL	 NAME Y Bus Cable Unlock Tool
> 0.5~3 : ±0.15 > 3~6 : ±0.2 > 6~30 : ±0.5 > 30~120 : ±0.8 > 120~315 : ±1.2 ANGLES: ±1°	PPE	
DWN.	UNIT mm	DRAWING NO.
CHK.	SHEET OF REV. 0.0	-

2060401006_DC Male Connector Cap (MC4)

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



- Notes:
1. Type: PV-SVK4;
 2. Degree of protection: IP67;
 3. Use blank cartons for packaging

TOLERANCES UNLESS OTHERWISE SPECIFIED ±0.5	MATERIAL TPE	 NAME DC Male Connector Cap (MC4)
DWN.	UNIT mm	
CHK.	SHEET -- OF -- REV. 0.0	DRAWING NO. --

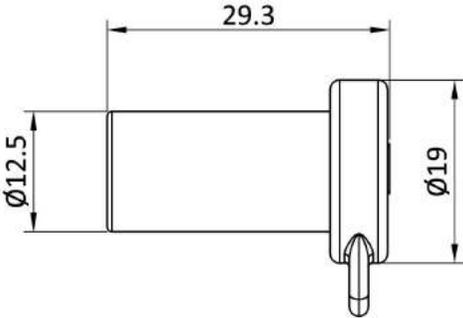
2060402006_DC Female Connector Cap (MC4)



CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



Ø3.2



29.3

Ø12.5

Ø19





Notes:

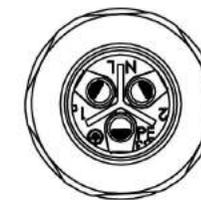
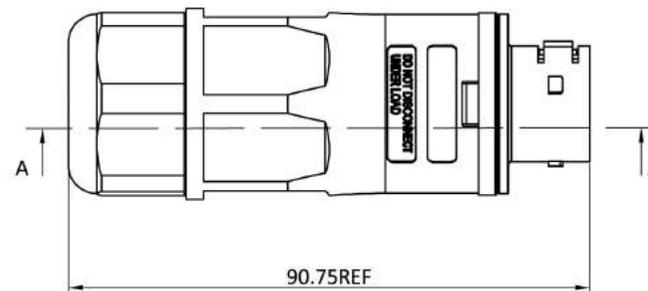
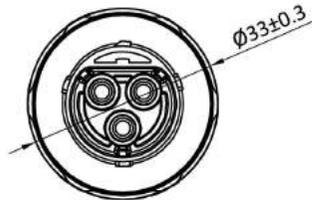
1. Type: PV-BVK4;
2. Degree of protection: IP67;
3. Use blank cartons for packaging

TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL		 NAME DC Female Connector Cap (MC4)
±0.5		TPE		
DWN.	UNIT			DRAWING NO.
CHK.	SHEET	OF	REV.	0,0

2300931212_AC Connector (3 core, two seals, male)

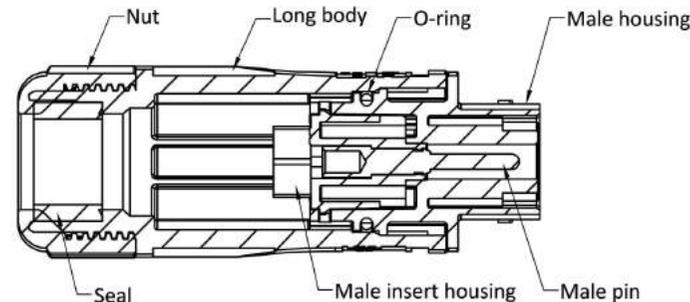
RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Add seal, update Cable O.D, update current, update name	1.0	YFT 2022-8-9



Single-phase connect to L/N/PE
Three-phase connect to 1/2/3

A-A
1:1



- ① Two seals
- Seal inner diameter $\phi 17$ (black)
For cable size : 4mm² or 10AWG
- Seal inner diameter $\phi 13$ (grey)
For cable size : 2.5mm² or 12AWG

Notes:

Electrical

1. Rated Voltage: 250V AC;
2. Rated Impulse Voltage: 4000V;
3. Rated Current: CSA 32A, TUV 35A;
4. Contact Resistance: $\leq 5m\Omega$;
5. Insulation Resistance: $\geq 500M\Omega$;

Mechanical:

1. Mating Cycle: ≥ 500 ;
2. Cable Retention Force: $\geq 120N$;
3. Pin Retention Force: $\geq 80N$;
4. Cable O.D: 10~15mm;
5. Wire Size: $\leq 6.0mm^2$ (10AWG);

Environmental:

1. Waterproof Rate: IP68 1m24H;
2. Application Temperature: $-40^{\circ}C \sim +105^{\circ}C$;
3. Flaming Level: UL94-V0;

Material:

1. Plastic Material: PC&PBT(f1)
2. Pin Material: Copper Alloy, Silver Plating;
3. Sealing Material: Silicone Rubber;
4. Screw Material: SUS, Torque 0.8N.m

Others:

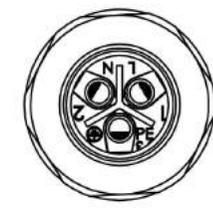
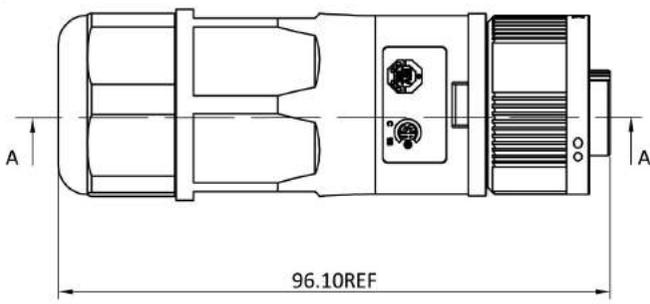
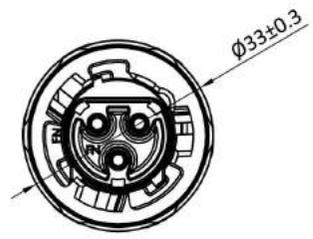
1. Type No.: EN034-2103-101;
2. Packaging: Blank Cartons

TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL	
X.: ± 0.20	X": $\pm 2.00^{\circ}$	 NAME AC Connector (3 core,two seals,male) DRAWING NO.	
.X: ± 0.10	.X": $\pm 1.00^{\circ}$		
.XX: ± 0.05	.XX": $\pm 0.50^{\circ}$		
.XXX: ± 0.03	.XXX": $\pm 0.30^{\circ}$		
DWN.	UNIT mm		
CHK.	SHEET -- OF --	REV. 1.0	

2300932212_AC Connector (3 core, two seals, female)

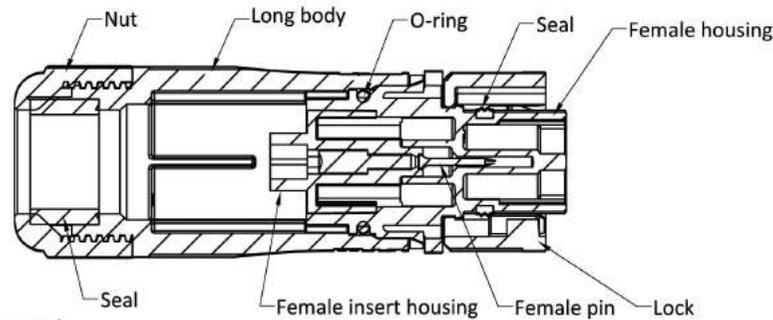


CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Add seal; update Cable O.D; update current; update items	1.0	YFT 2022-8-9



Single-phase connect to L/N/PE
Three-phase connect to 1/2/3

A-A
1:1



- ① Two seals
- Seal inner diameter $\phi 17$ (black)
For cable size : 4mm² or 10AWG
- Seal inner diameter $\phi 13$ (grey)
For cable size : 2.5mm² or 12AWG

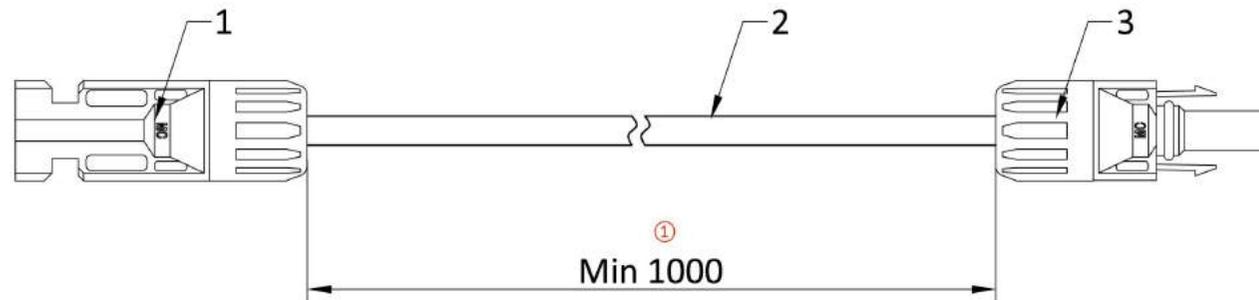
- Notes:**
- Electrical**
1. Rated Voltage: 250V AC;
 2. Rated Impulse Voltage: 4000V;
 3. Rated Current: CSA 32A, TUV 35A;
 4. Contact Resistance: $\leq 5m\Omega$;
 5. Insulation Resistance: $\geq 500M\Omega$;
- Mechanical:**
1. Mating Cycle: ≥ 500 ;
 2. Cable Retention Force: $\geq 120N$;
 3. Pin Retention Force: $\geq 80N$;
 4. Cable O.D: 10~15mm;
 5. Wire Size: $\leq 6.0mm^2$ (10AWG);
- Environmental:**
1. Waterproof Rate: IP68 1m24H;
 2. Application Temperature: -40°C~+105°C;
 3. Flaming Level: UL94-V0;
- Material:**
1. Plastic Material: PC&PBT(f1)
 2. Pin Material: Copper Alloy, Silver Plating;
 3. Sealing Material: Silicone Rubber;
 4. Screw Material: SUS, Torque 0.8N.m
- Others:**
1. Type No.: EN034-2203-101;
 2. Packaging: Blank Cartons

TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL	
X.: ± 0.20	X*: $\pm 2.00^\circ$	 NAME AC Connector (3 core, two seals, female) DRAWING NO.	
.X: ± 0.10	.X*: $\pm 1.00^\circ$		
.XX: ± 0.05	.XX*: $\pm 0.50^\circ$		
.XXX: ± 0.03	.XXX*: $\pm 0.30^\circ$		
DWN.	UNIT mm		REV. 1.0
CHK.	SHEET -- OF --		

2310310274_1m DC Extension Cable (MC4)

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Update cable type; Update dimensions	0.1	YFT 2022-9-14
②	Update cable type; change manufacturer	1.0	YFT 2022-11-16



3	DC Connector (female)	MC4 PV-KBT4/6II	1	Female, STAUBLI	
2	DC Cable	H1Z2Z2-K /PV wire	1	4.0mm ² /12AWG, TUV/UL certification	
1	DC Connector (male)	MC4 PV-KST4/6II	1	Male, STAUBLI	

- Notes:
1. The DC cable and connector connect firmly, can sustain 100N-60s tension.
 2. The pin concentric with plastic parts, ensure that there is no contradict phenomenon when male connector inserts into female connector.
 3. Use Blank Cartons For Packaging.

NO.	NAME	TYPE	MAT.	QTY.	DESCRIPTION	REMARK
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL				
>0-100	±5	>2500-3500	±45			
>100-500	±10	>3500-4500	±50			
>500-900	±15	>4500-5500	±65			
>900-1300	±25	>5500-6500	±80			
>1300-1800	±30	>6500-8000	±90			
>1800-2500	±35	>8000-10000	±100			
DWN.		UNIT	mm			
CHK.		SHEET	OF	REV.	1.0	



NAME
1m DC Extension Cable (MC4)

DRAWING NO.

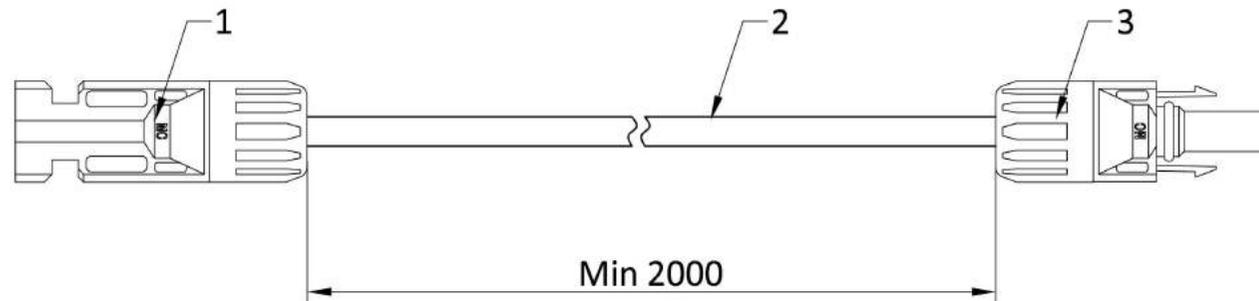
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2310360214_2m DC Extension Cable (MC4)

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
②	Add alternative cable	0.2	YFT 2022-9-14
③	Add alternative cable	0.3	YFT 2022-11-24



3	DC Connector (female)	MC4 PV-KBT4/6II	1	Female, STAUBLI	
2	DC Cable	FLEX-SOL-EVO-DX 4.0	1	4.0mm ² /12AWG, TUV/UL certification	
		62930 IEC 131/PV H1Z2Z2-K /PV wire			
1	DC Connector (male)	MC4 PV-KST4/6II	1	Male, STAUBLI	

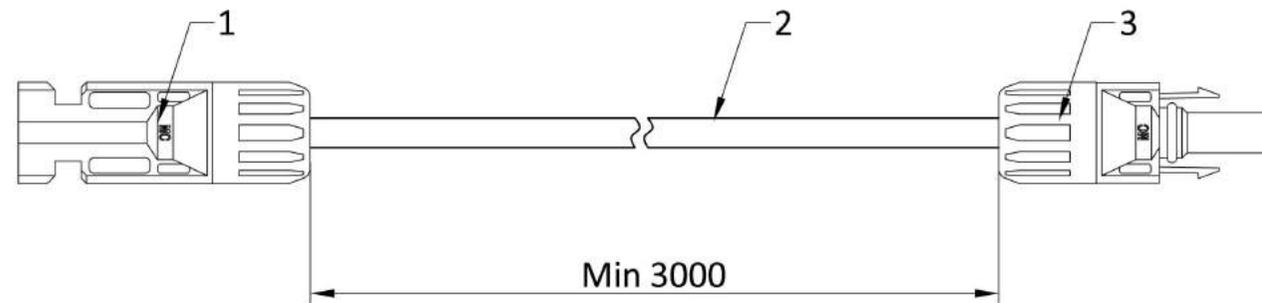
- Notes:
1. The DC cable and connector connect firmly, can sustain 100N-60s tension.
 2. The pin concentric with plastic parts, ensure that there is no contradict phenomenon when male connector inserts into female connector.
 3. Use Blank Cartons For Packaging.

NO.	NAME	TYPE	MAT.	QTY.	DESCRIPTION	REMARK
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL				
>0-100	±5	>2500-3500	±45	 NAME 2m DC Extension Cable (MC4) DRAWING NO.		
>100-500	±10	>3500-4500	±50			
>500-900	±15	>4500-5500	±65			
>900-1300	±25	>5500-6500	±80			
>1300-1800	±30	>6500-8000	±90			
>1800-2500	±35	>8000-10000	±100			
DWN.	UNIT	mm				
CHK.	SHEET	OF	REV.	0.3		

2310360224_3m DC Extension Cable (MC4)

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Add alternative cable	0.1	YFT 2022-9-14
②	Update cable type; change manufacturer	1.0	YFT 2022-11-16



① ②

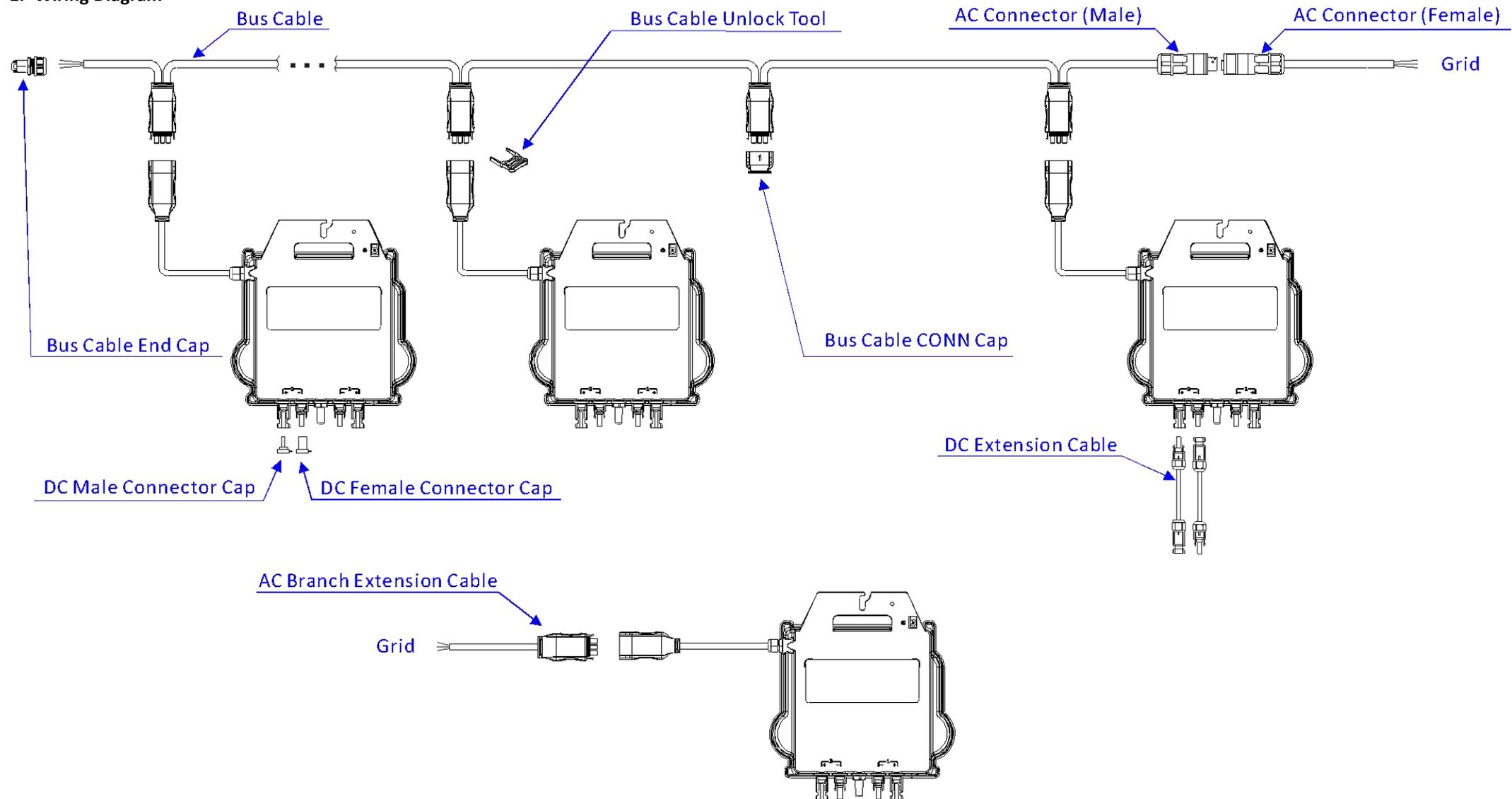
3	DC Connector (female)	MC4 PV-KBT4/6II	1	Female, STAUBLI		
2	DC Cable	H1Z2Z2-K /PV wire	1	4.0mm ² /12AWG, TUV/UL certification		
1	DC Connector (male)	MC4 PV-KST4/6II	1	Male, STAUBLI		
NO.	NAME	TYPE	MAT.	QTY.	DESCRIPTION	REMARK
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL		 NAME 3m DC Extension Cable (MC4) DRAWING NO.		
> 0-100	±5	> 2500-3500	±45			
> 100-500	±10	> 3500-4500	±50			
> 500-900	±15	> 4500-5500	±55			
> 900-1300	±25	> 5500-6500	±80			
> 1300-1800	±30	> 6500-8000	±90			
> 1800-2500	±35	> 8000-10000	±100			
DWN.	UNIT	mm			DRAWING NO.	
CHK.	SHEET	--	OF	--	REV.	1.0

Notes:

1. The DC cable and connector connect firmly, can sustain 100N-60s tension.
2. The pin concentric with plastic parts, ensure that there is no contradict phenomenon when male connector inserts into female connector.
3. Use Blank Cartons For Packaging.

DS3D Accessories

1. Wiring Diagram



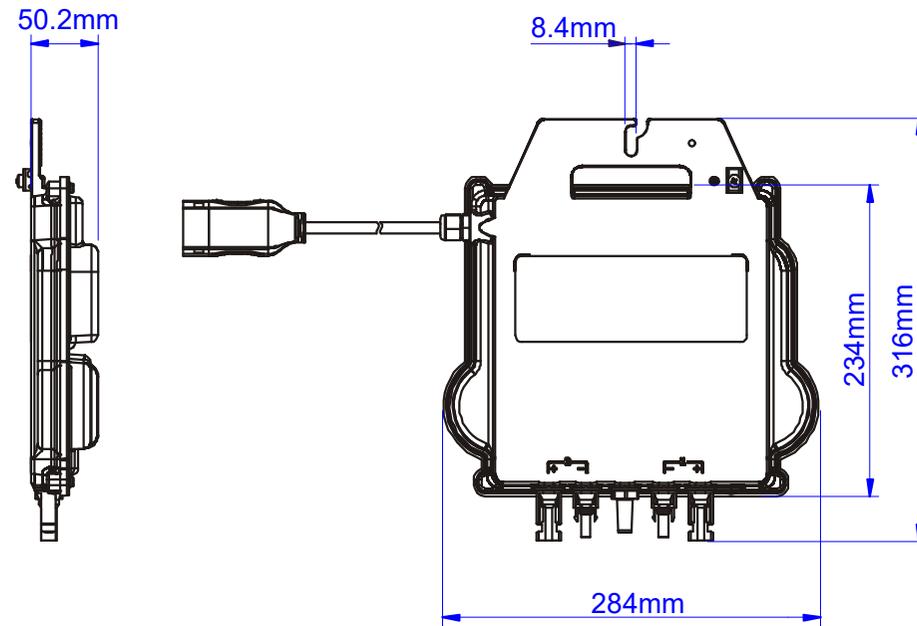
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2. DS3D Dimensions



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3. Accessories Summary

Region	Accessories									
	Bus Cable (Mandatory)	AC Branch Extension Cable (Optional)	Bus Cable End Cap (Mandatory)	Bus Cable CONN Cap (Optional)	Bus Cable Unlock Tool (Mandatory)	DC Male Connector Cap (Optional)	DC Female Connector Cap (Optional)	AC Connector (Male) (Optional)	AC Connector (Female) (Optional)	DC Extension Cable (Optional)
Europe -EU (121018) -L-EU (125018) -SH-EU (128018)	2322320803_ Single Phase Bus Cable (4mm ² ,H07, 2m) (See Pic. A)	2334076132_ Single Phase Br. Ext-cable (2.5mm ² ,1m) (See Pic. B)	2060700017_ 3-wire Bus Cable End Cap (See Pic. C)	2061702007_ Bus Cable Y-CONN Cap (See Pic. D)	2352000001_ Y Bus Cable Unlock Tool (See Pic. E)	2060401006_ DC Male Connector Cap (MC4) (See Pic. F)	2060402006_ DC Female Connector Cap (MC4) (See Pic. G)	2300931212_ AC Connector (3 core, two seals, male) (See Pic. H)	2300932212_ AC Connector (3 core, two seals, female) (See Pic. I)	2310310274_1m DC Extension Cable (MC4) 2310360214_2m DC Extension Cable (MC4) 2310360224_3m DC Extension Cable (MC4) 2310370236_4m DC Extension Cable (MC4) (See Pic. J)
	2322304903_ Single Phase Bus Cable (2.5mm ² ,H07, 2m) (See Pic. A)									

Notes: The cables in this table are recommended by APsystems, and the O.D. and length of the cable can be customized according to customer needs.

4. Physical Picture

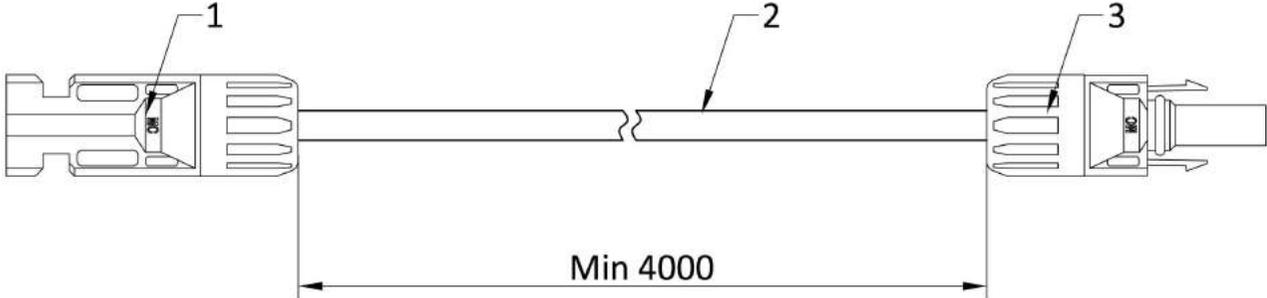
Bus Cable	AC Branch Extension Cable	Bus Cable End Cap	Bus Cable CONN Cap	Bus Cable Unlock Tool	DC Male Connector Cap
 <p data-bbox="199 544 271 568">Pic. A</p>	 <p data-bbox="546 544 618 568">Pic. B</p>	 <p data-bbox="893 544 965 568">Pic. C</p>	 <p data-bbox="1240 544 1312 568">Pic. D</p>	 <p data-bbox="1588 544 1659 568">Pic. E</p>	 <p data-bbox="1935 544 2007 568">Pic. F</p>
DC Female Connector Cap	AC Connector (Male)	AC Connector (Female)	DC Extension Cable		
 <p data-bbox="199 963 271 987">Pic. G</p>	 <p data-bbox="546 963 618 987">Pic. H</p>	 <p data-bbox="898 963 969 987">Pic. I</p>	 <p data-bbox="1240 963 1312 987">Pic. J</p>		

5. Accessories information

2310370236_4m DC Extension Cable (MC4)



CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



Min 4000

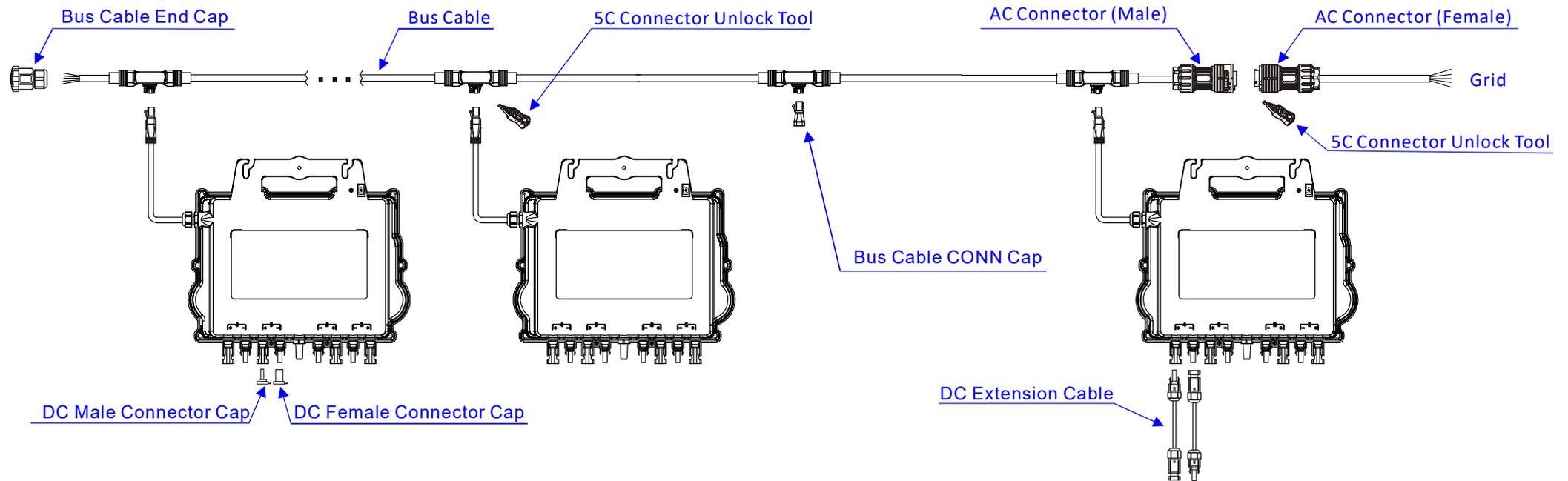
Notes:

- The DC cable and connector connect firmly, can sustain 100N-60s tension.
- The pin concentric with plastic parts, ensure that there is no contradict phenomenon when male connector inserts into female connector.
- Use Blank Cartons For Packaging.

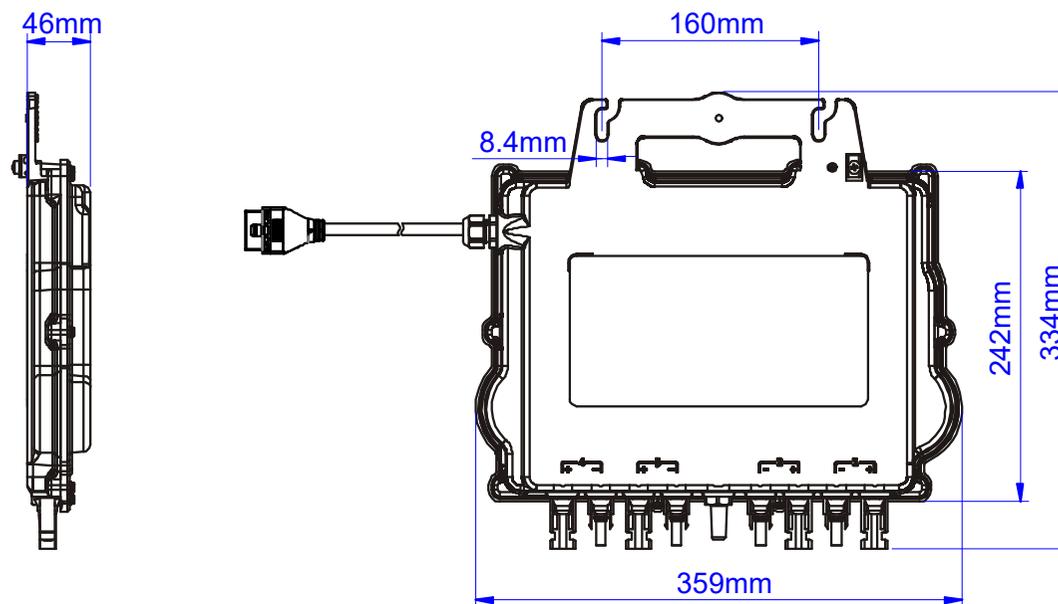
3	DC Connector (female)	MC4 PV-KBT4/6II	1	Female, STAUBLI		
2	DC Cable	H1Z2Z2-K /PV wire	1	4.0mm ² /12AWG, TUV/UL certification		
1	DC Connector (male)	MC4 PV-KST4/6II	1	Male, STAUBLI		
NO.	NAME	TYPE	MAT.	QTY.	DESCRIPTION	REMARK
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL		 APsystems <small>ALTERNATIVE ENERGY POWER</small> NAME 4m DC Extension Cable (MC4) DRAWING NO.		
>0-100	±5	>2500-3500	±45			
>100-500	±10	>3500-4500	±50			
>500-900	±15	>4500-5500	±65			
>900-1300	±25	>5500-6500	±80			
>1300-1800	±30	>6500-8000	±90			
>1800-2500	±35	>8000-10000	±100			
DWN.	UNIT	mm				
CHK.	SHEET	OF	REV.	0.0		

QT2 Accessories

1. Wiring Diagram



2. QT2 Dimensions



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3. Accessories Summary

Region	Accessories								
	Bus Cable (Mandatory)	Bus Cable End Cap (Mandatory)	Bus Cable CONN Cap (Optional)	5C Connector Unlock Tool (Mandatory)	DC Male Connector Cap (Optional)	DC Female Connector Cap (Optional)	AC Connector (Male) (Optional)	AC Connector (Female) (Optional)	DC Extension Cable (Optional)
Europe -EU (124056)	2322604802_3-phase 5C Bus Cable (2.5mm ² ,H07,2.4m) (See Pic. A)	2062050002_5-wire Bus Cable End Cap (See Pic. B)	2061252032_5-wire Bus Cable T-CONN Cap (See Pic. C)	2353000002_ 5C Connector Unlock Tool (See Pic. D)	2060401006_DC Male Connector Cap (MC4) (See Pic. E)	2060402006_DC Female Connector Cap (MC4) (See Pic. F)	2301511002_ AC Connector (5C,40A,male) (See Pic. G)	2301512002_ AC Connector (5C,40A,female) (See Pic. H)	2310310274_1m DC Extension Cable (MC4) 2310360214_2m DC Extension Cable (MC4) 2310360224_3m DC Extension Cable (MC4) 2310370236_4m DC Extension Cable (MC4) (See Pic. I)
	2322900902_3-phase 5C Bus Cable (2.5mm ² ,H07,4.6m) (See Pic. A)								
	2322609122_3-phase 5C Bus Cable (4mm ² ,H07,2.4m) (See Pic. A)								
	2322909102_3-phase 5C Bus Cable (4mm ² ,H07,4.6m) (See Pic. A)								

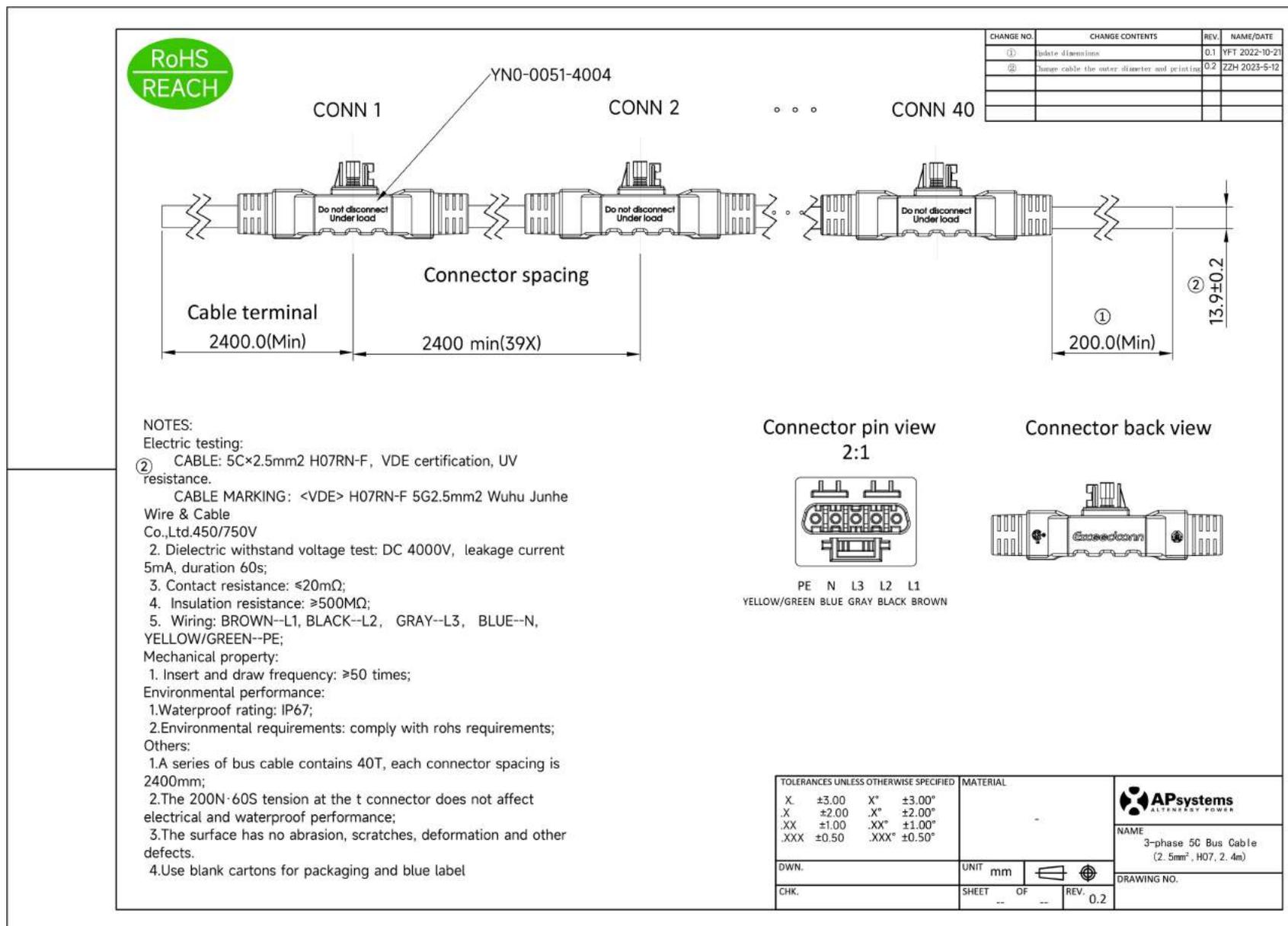
Notes: The cables in this table are recommended by APsystems, and the O.D. and length of the cable can be customized according to customer needs.

4. Physical Picture

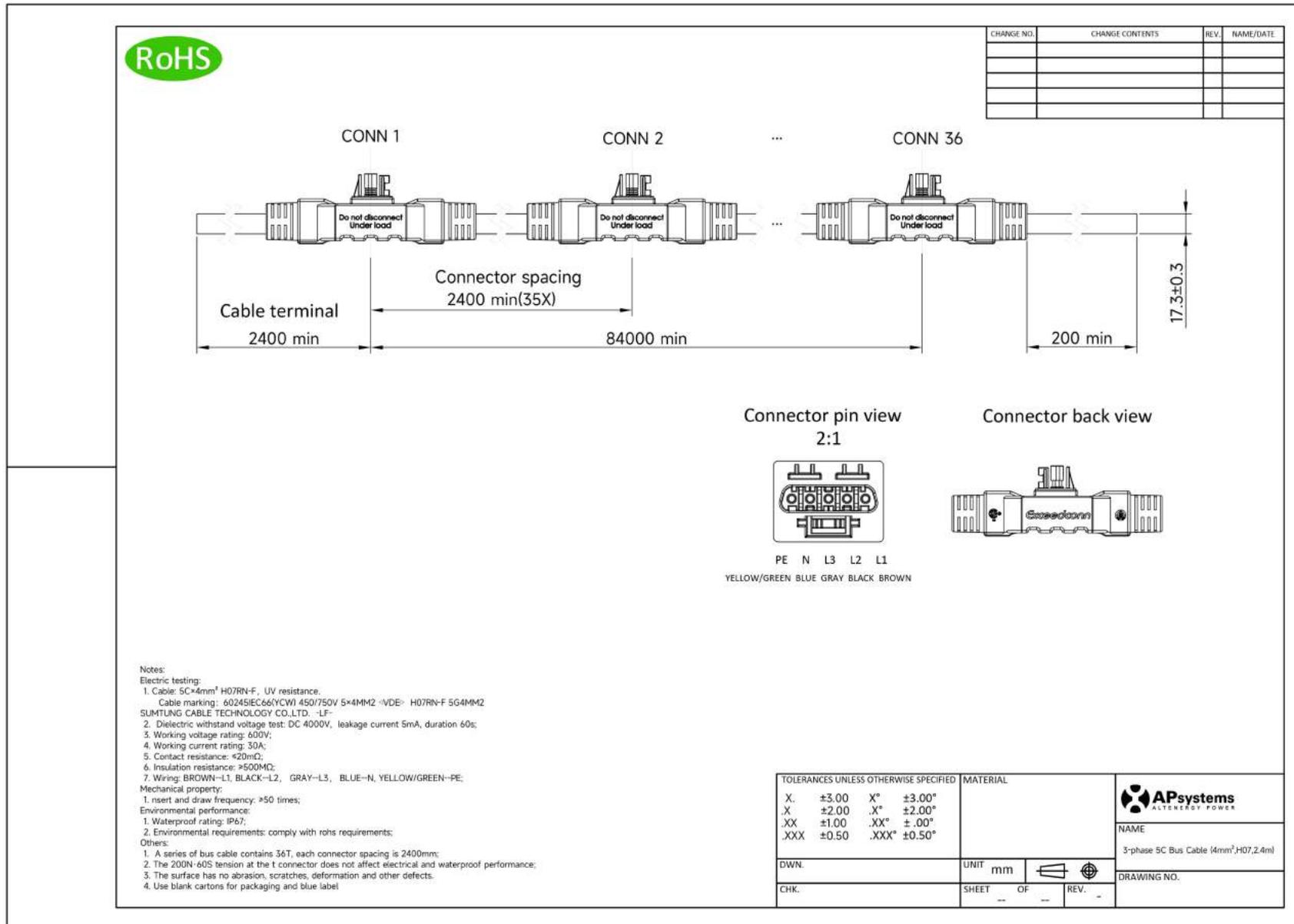
Bus Cable	Bus Cable End Cap	Bus Cable CONN Cap	5C Connector Unlock Tool	DC Male Connector Cap	DC Female Connector Cap
					
Pic. A	Pic. B	Pic. C	Pic. D	Pic. E	Pic. F
AC Connector (Male)	AC Connector (Female)	DC Extension Cable			
					
Pic. G	Pic. H	Pic. I			

5. Accessories information

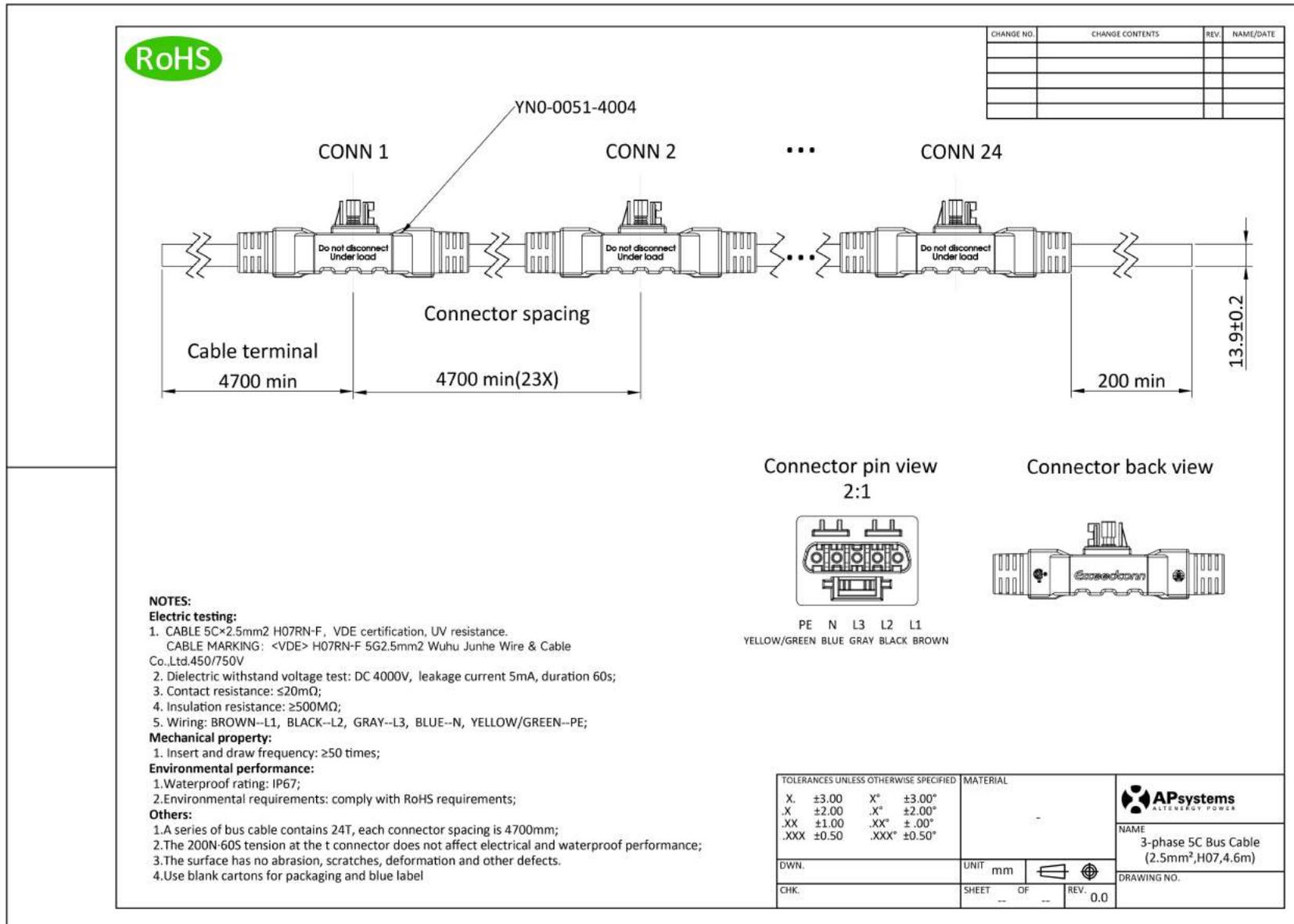
2322604802_3-phase 5C Bus Cable (2.5mm²,H07,2.4m)



2322609122_3-phase 5C Bus Cable (4mm²,H07,2.4m)



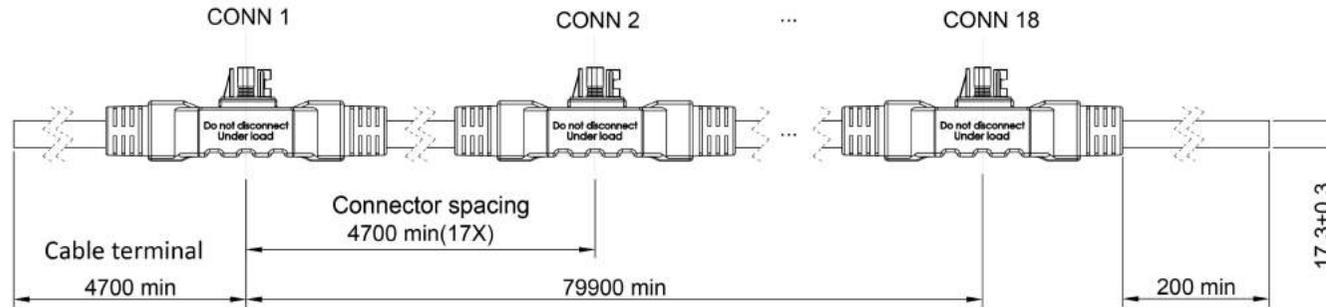
2322900902_3-phase 5C Bus Cable (2.5mm²,H07,4.6m)



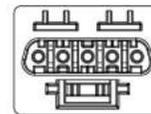
2322909102_3-phase 5C Bus Cable (4mm²,H07,4.6m)

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE

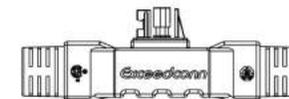


Connector pin view
2:1



PE N L3 L2 L1
YELLOW/GREEN BLUE GRAY BLACK BROWN

Connector back view



- Notes:
- Electric testing:
- 1.Cable: 5C×4mm² H07RN-F, UV resistance.
 - 2.Dielectric withstand voltage test: DC 4000V, leakage current 5mA, duration 60s;
 - 3.Working voltage rating: 600V;
 - 4.Working current rating: 30A;
 - 5.Contact resistance: ≤20mΩ;
 - 6.Insulation resistance: ≥500MΩ;
 - 7.Wiring: BROWN--L1, BLACK--L2, GRAY--L3, BLUE--N, YELLOW/GREEN--PE;
- Mechanical property:
1. Insert and draw frequency: ≥50 times;
- Environmental performance:
- 1.Waterproof rating: IP67;
 - 2.Environmental requirements: comply with rohs requirements;
- Others:
- 1.A series of bus cable contains 18T, each connector spacing is 4700mm;
 - 2.The 200N·60S tension at the t connector does not affect electrical and waterproof performance;
 - 3.The surface has no abrasion, scratches, deformation and other defects.
 - 4.Use blank cartons for packaging and blue label

TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL	
X.	±3.00	X*	±3.00°
.X	±2.00	.X*	±2.00°
.XX	±1.00	.XX*	±1.00°
.XXX	±0.50	.XXX*	±0.50°

DWN.	UNIT	mm	
CHK.	SHEET	OF	REV. 0.0

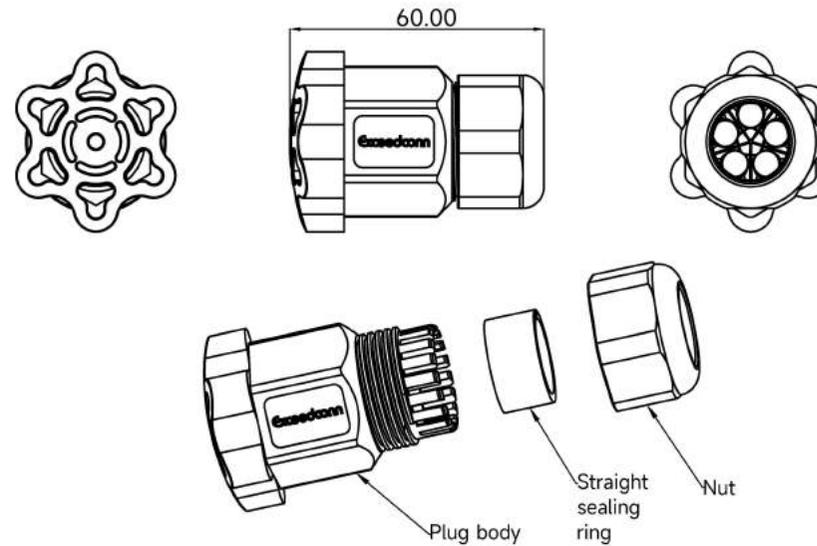
NAME	
3-phase 5C Bus Cable (4mm ² ,H07,4.6m)	
DRAWING NO.	

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2062050002_5-wire Bus Cable End Cap

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



- Notes:
- Mechanical property:
 - 1. Cable Gauge:14-17.5mm
 - Environmental performance:
 - 1. Protection class: IP68 1m-2H(After mating);
 - 2. Operating Temperature: -40°C~105°C
 - Others:
 - 1.Type No:EN050-1423-00

TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL	
.X.	±3.00	X°	±3.00°
.X	±2.00	.X°	±2.00°
.XX	±1.00	.XX°	±.00°
.XXX	±0.50	.XXX°	±0.50°

DWN.	UNIT	mm	
CHK.	SHEET	OF	REV. 0.0

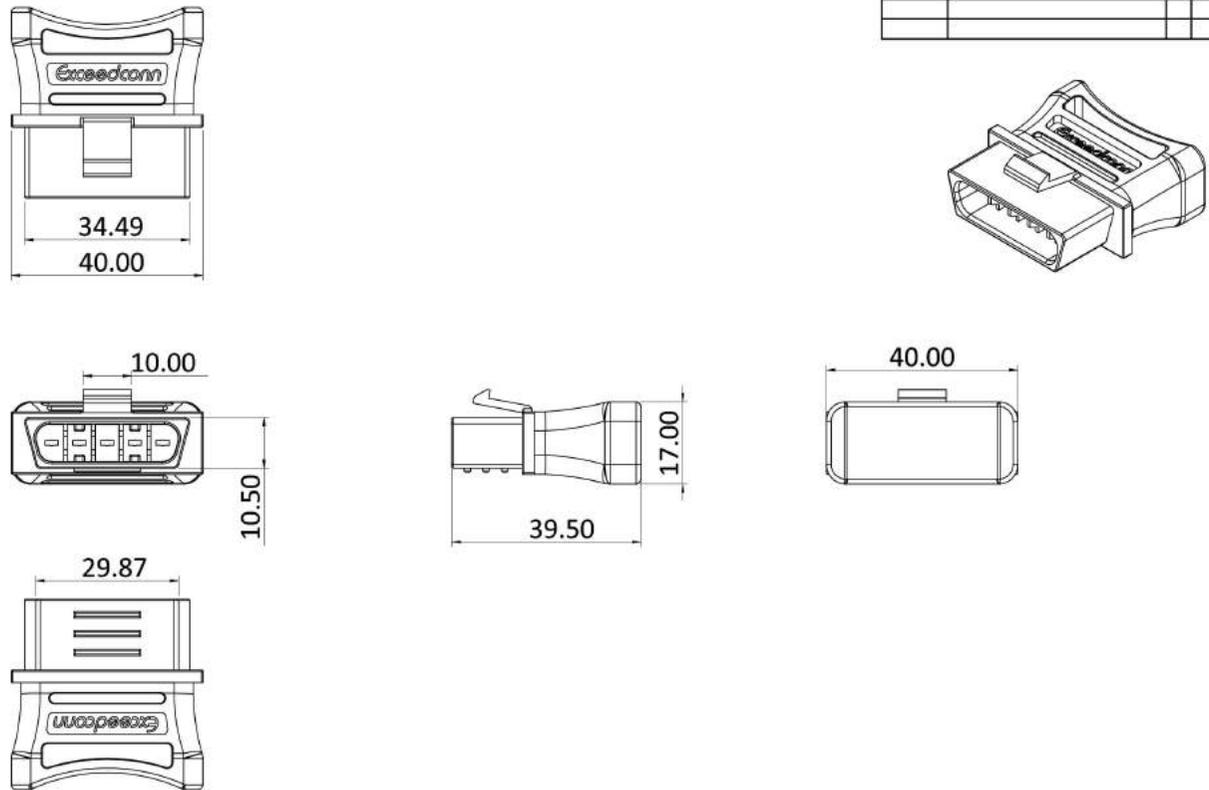

NAME 5-wire Bus Cable End Cap
DRAWING NO.

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France
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22 AVENUE LIONEL TERRAY, 93550 JONAGE, France

2061252032_5-wire Bus Cable T-CONN Cap





CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE

Notes:

- PART No.: MIH-1-01;
- Waterproof Rate: IP67;
- Mating Cycle: ≥50;
- Part Retention Force: 100N;
- Packaging: Blank Cartons

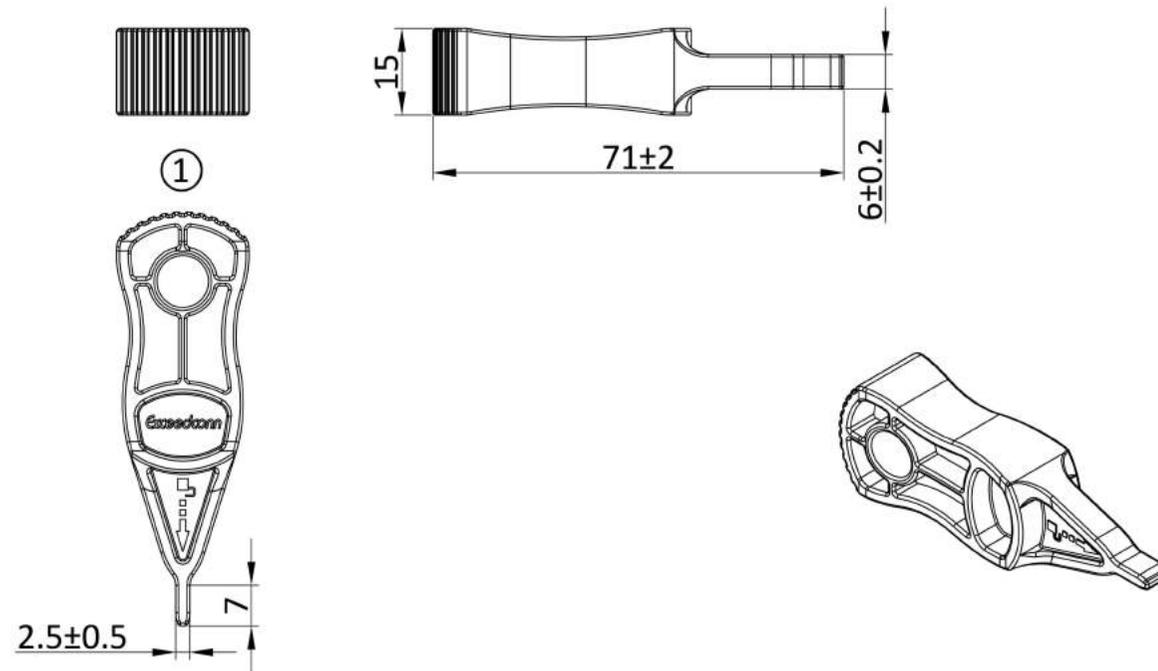
TOLERANCES UNLESS OTHERWISE SPECIFIED	MATERIAL
X. ±2.00	-
.X ±1.00	
.XX ±0.64	
.XXX ±0.38	

DWN.	UNIT mm		 NAME 5-wire Bus Cable T-CONN Cap DRAWING NO.
CHK.	SHEET --	OF --	

235300002_5C Connector unlock tool

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Appearance changes, name changes.	1.0	ZZH 2023/3/31



Technical Data:
 1. Material: PBT
 2. Color: Black

TOLERANCES UNLESS OTHERWISE SPECIFIED				MATERIAL		 NAME ① 5C Connector Unlock Tool
X.	±1.00	X°	±3.00°	PBT		
.X	±0.50	.X°	±2.00°			
.XX	±0.20	.XX°	±.00°			
.XXX	±0.10	.XXX°	±0.50°			
DWN.		UNIT	mm		DRAWING NO.	
CHK.		SHEET	--	OF	--	
		REV.	1.0			

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ms EMEA

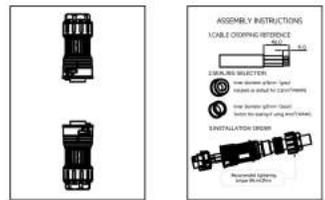
22 Avenue Lionel Jarry, 69330 Jonage, France
 emea.APsystems.com

2301511002_AC Connector(5C,40A,male)



①

Instruction

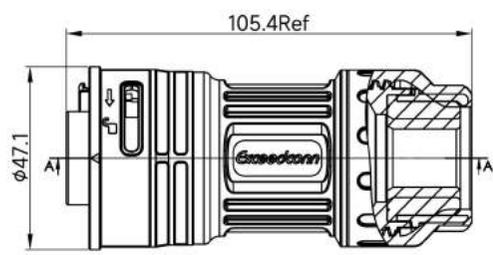


①

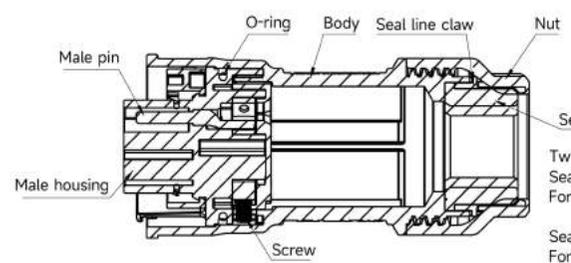
Wrench



CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Add instruction, wrench, seal instruction	0.1	ZZH 2023-4-20



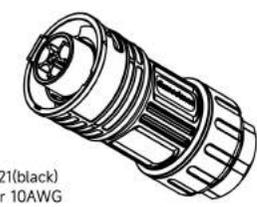
A-A



①

Two seals
 Seal inner diameter $\phi 21$ (black)
 For cable size:4mm² or 10AWG

 Seal inner diameter $\phi 16$ (grey)
 For cable size:2.5mm² or 14AWG



Notes:
 Electric testing:
 1.Rated Voltage:600V;
 2.Rated Current:40A;
 3.Contact Resistance: $\leq 50m\Omega$;
 4.Dielectric Withstanding Voltage:3000V
 5.Insulation resistance: $\geq 500M\Omega$;
 Mechanical property:
 1.Mating Cycle: ≥ 500 次;
 2.Cable Gauge:2.5-10mm²
 Environmental performance:
 1.Protection level: IP67 1m-30min(After mating);
 2.Operating Temperature: -40°C-105°C
 Others:
 1.Type No:EN200-2105-101-02
 2.Packaging: Blank Cartons

TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL	
X: ± 1.00	X: $\pm 3.00^{\circ}$	 NAME AC Connector (5C,40A,male)	
.X: ± 0.50	.X: $\pm 2.00^{\circ}$		
.XX: ± 0.20	.XX: $\pm 1.00^{\circ}$		
.XXX: ± 0.10	.XXX: $\pm 0.50^{\circ}$	DRAWING NO.	
DWN.	UNIT mm		
CHK.	SHEET -- OF --	REV. 0.1	

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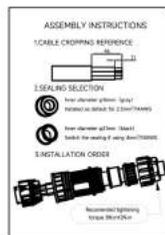
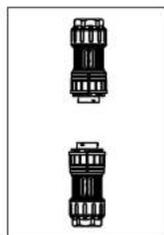
22 Avenue Lionel Jarry, 69330 Jonage, France
 emea.APsystems.com

2301512002_AC Connector(5C,40A,female)



①

Instruction



①

Wrench



Notes:

Electric testing:

- 1.Rated Voltage:600V;
- 2.Rated Current:40A;
- 3.Contact Resistance:≤50mΩ;
- 4Dielectric Withstanding Voltage:3000V
- 5.Insulation resistance: ≥500MΩ;

Mechanical property:

- 1.Mating Cycle: ≥500次;
- 2.Cable Gauge:2.5-10mm²

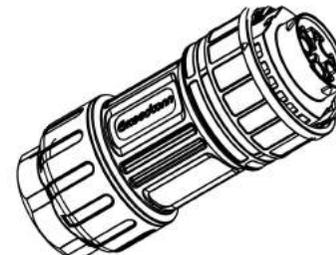
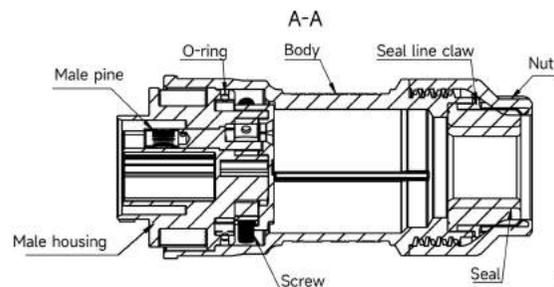
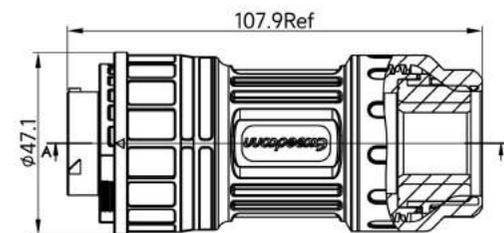
Environmental performance:

- 1.Protection level: IP67 1m-30min(After mating);
- 2.Operating Temperature: -40°C-105°C

Others:

- 1.Type No:EN200-2205-101
- 2.Packaging: Blank Cartons

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Add instruction, wrench, seal instruction	0.1	ZZH 2023-4-20



①
Two seals
Seal inner diameter Φ21(black)
For cable size:4mm² or 10AWG

Seal inner diameter Φ16(grey)
For cable size:2.5mm² or 14AWG

TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL	
X.	±1.00	X	±3.00°
X	±0.50	X	±2.00°
.XX	±0.20	.XX	±1.00°
.XXX	±0.10	.XXX	±0.50°

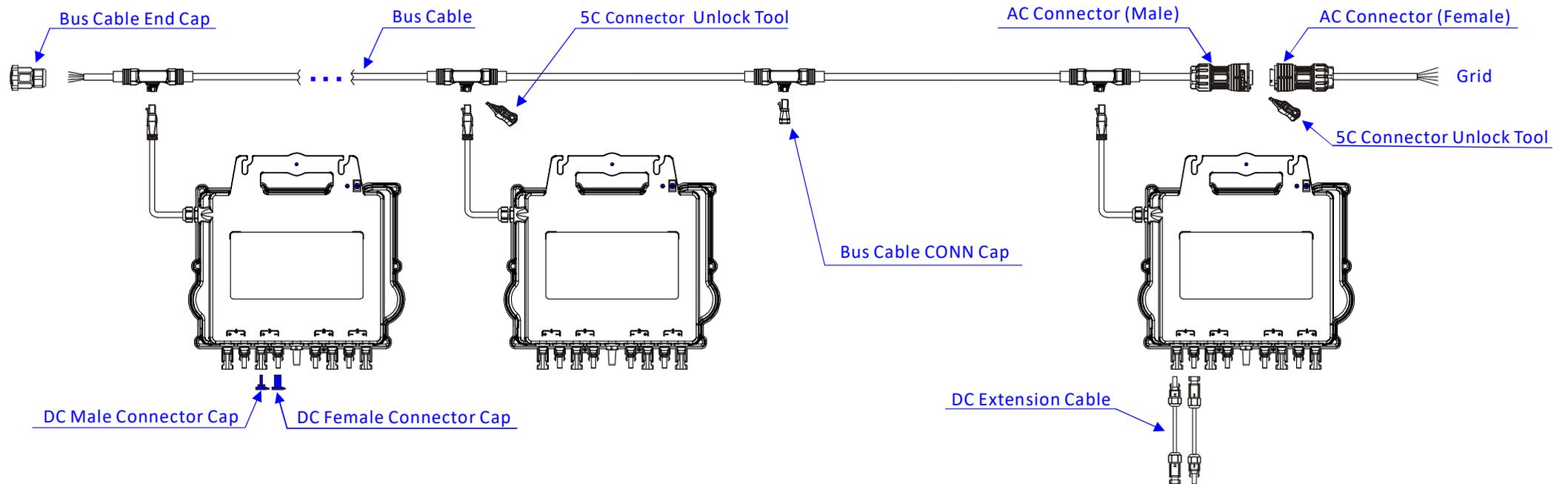
NAME	
AC Connector (5C,40A,female)	
DRAWING NO.	
-	

DWN.	UNIT	mm	
CHK.	SHEET	OF	REV.
			0.1

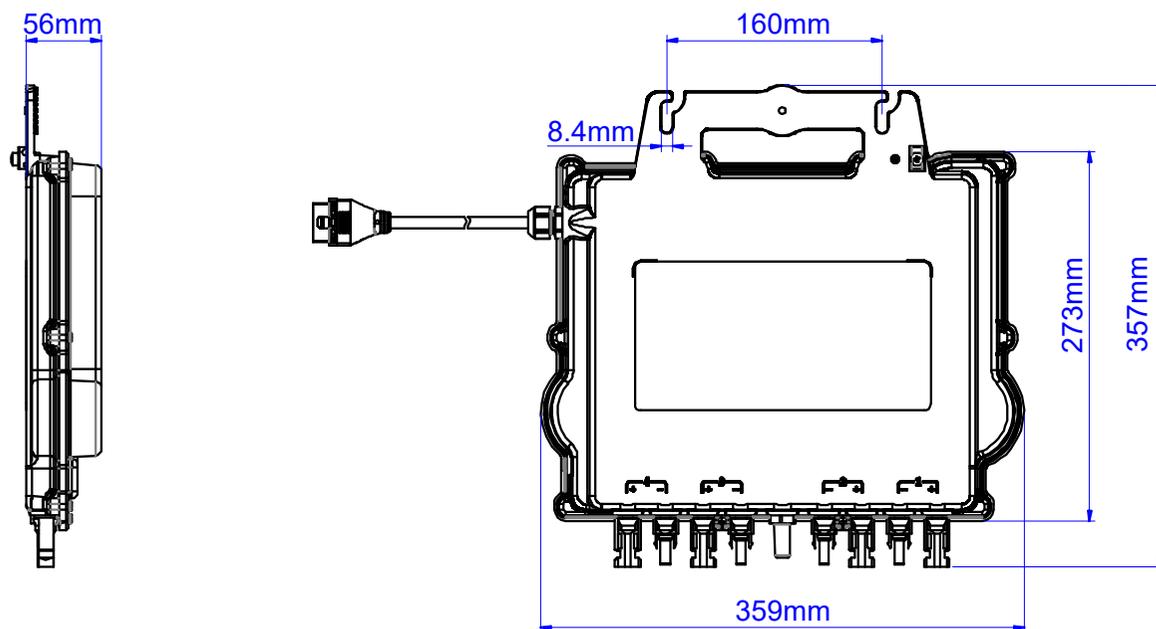
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APsystems EMEA
Paris, France
www.apsystems.com

QT2D Accessories

1. Wiring Diagram



2. QT2D Dimensions



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3. Accessories Summary

Region	Accessories								
	Bus Cable (Mandatory)	Bus Cable End Cap (Mandatory)	Bus Cable CONN Cap (Optional)	5C Connector Unlock Tool (Mandatory)	DC Male Connector Cap (Optional)	DC Female Connector Cap (Optional)	AC Connector (Male) (Optional)	AC Connector (Female) (Optional)	DC Extension Cable (Optional)
Europe -EU (122056)	2322900902_3-phase 5C Bus Cable (2.5mm ² ,H07,4.6m) (See Pic. A)	2062050002_5-wire Bus Cable End Cap (See Pic. B)	2061252032_5-wire Bus Cable T-CONN Cap (See Pic. C)	2353000002_ 5C Connector Unlock Tool (See Pic. D)	2060401006_DC Male Connector Cap (MC4) (See Pic. E)	2060402006_DC Female Connector Cap (MC4) (See Pic. F)	2301511002_AC Connector (5C,40A,male) (See Pic. G)	2301512002_AC Connector (5C,40A,female) (See Pic. H)	2310310274_1m DC Extension Cable (MC4)
	2322909102_3-phase 5C Bus Cable (4mm ² ,H07,4.6m) (See Pic. A)								2310360214_2m DC Extension Cable (MC4)

Notes: The cables in this table are recommended by APsystems, and the O.D. and length of the cable can be customized according to customer needs.

4. Physical Picture

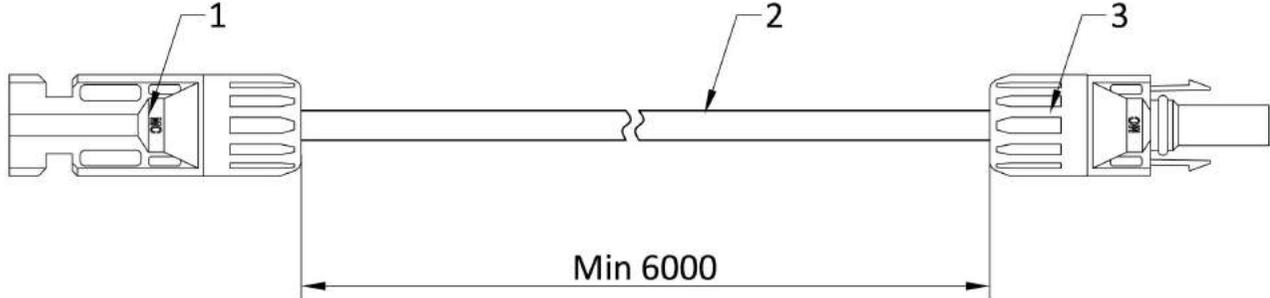
Bus Cable	Bus Cable End Cap	Bus Cable CONN Cap	5C Connector Unlock Tool	DC Male Connector Cap	DC Female Connector Cap
					
Pic. A	Pic. B	Pic. C	Pic. D	Pic. E	Pic. F
AC Connector (Male)	AC Connector (Female)	DC Extension Cable			
					
Pic. G	Pic. H	Pic. I			

5. Accessories information

2310370246_6m DC Extension Cable (MC4)



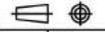
CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



Min 6000

Notes:

1. The DC cable and connector connect firmly, can sustain 100N-60s tension.
2. The pin concentric with plastic parts, ensure that there is no contradict phenomenon when male connector inserts into female connector.
3. Use Blank Cartons For Packaging.

3	DC Connector (female)	MC4 PV-KBT4/6II	1	Female, STAUBLI		
2	DC Cable	H1Z2Z2-K /PV wire	1	4.0mm ² /12AWG, TUV/UL certification		
1	DC Connector (male)	MC4 PV-KST4/6II	1	Male, STAUBLI		
NO.	NAME	TYPE	MAT.	QTY.	DESCRIPTION	REMARK
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL				
>0-100	±5	>2500-3500	±45			
>100-500	±10	>3500-4500	±50			
>500-900	±15	>4500-5500	±65			
>900-1300	±25	>5500-6500	±80			
>1300-1800	±30	>6500-8000	±90			
>1800-2500	±35	>8000-10000	±100			
DWN.	UNIT	mm				
CHK.	SHEET	OF	REV.	0.0		

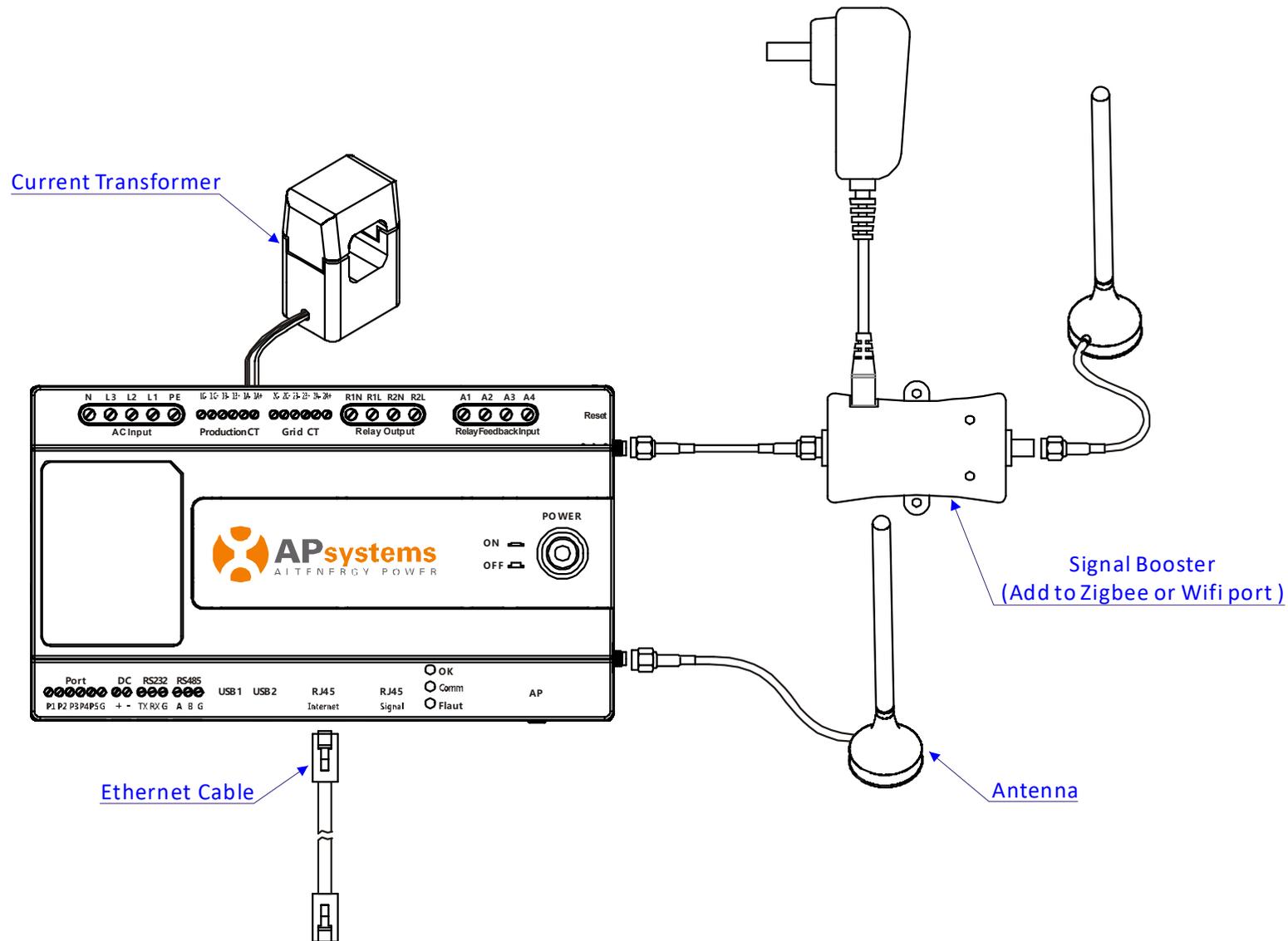


NAME
6m DC Extension Cable (MC4)

DRAWING NO.

ECU-C Accessories

1. Wiring Diagram



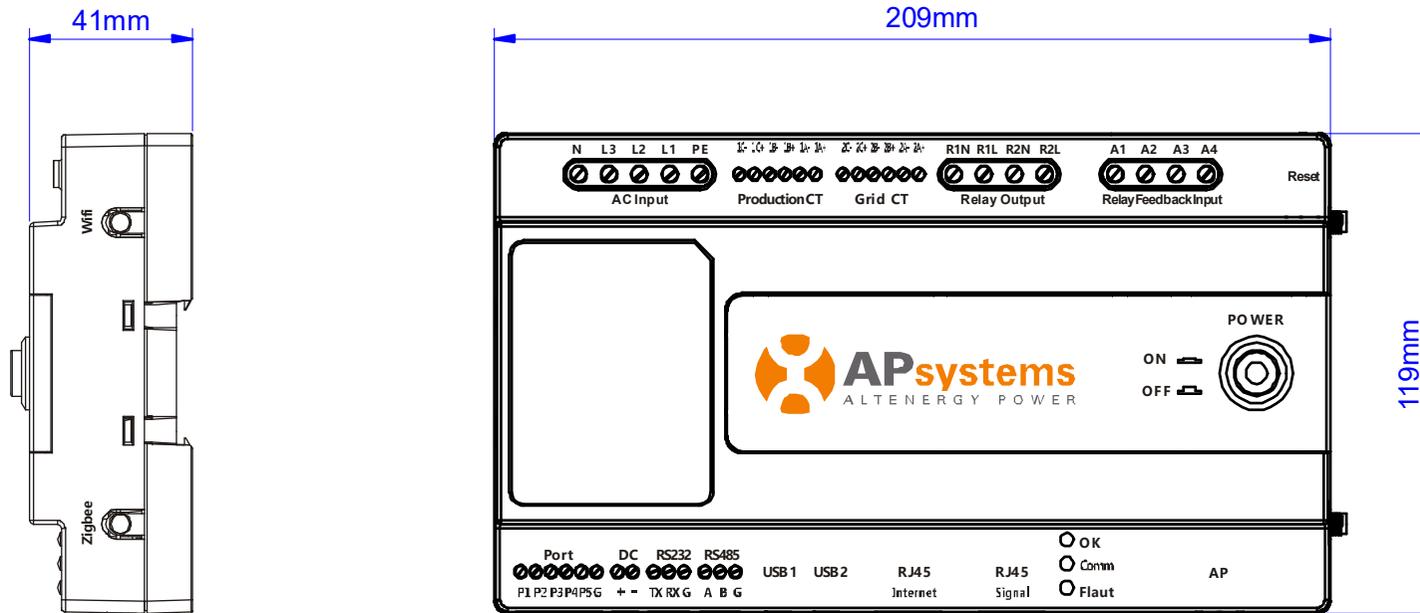
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2. ECU-C Dimensions



3. Accessories Summary

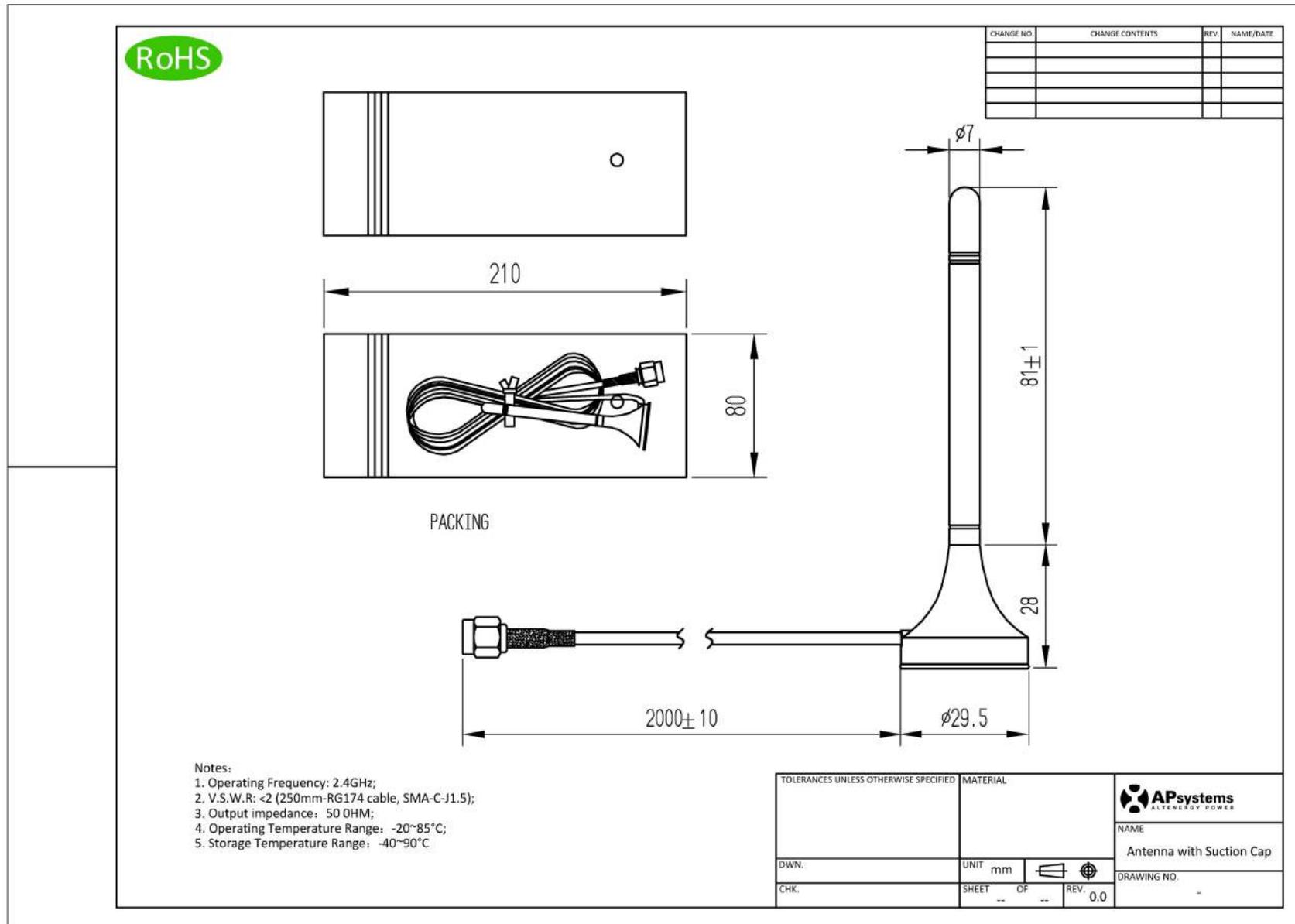
Region	Accessories			
	Antenna (Supply)	Ethernet Cable (Supply)	Current Transformer (Optional)	Signal Booster (Optional)
Europe -EU (205018)	Antenna with Suction Cap (See Pic. A)	Ethernet cable (See Pic. B)	18083020112_Current Transformer (80A/26.6mA) (See Pic. C) 18083020012_Current Transformer (200A/66.6mA) (See Pic. D)	2376010003_Signal Booster (European Standard) (See Pic. E)

4. Physical Picture

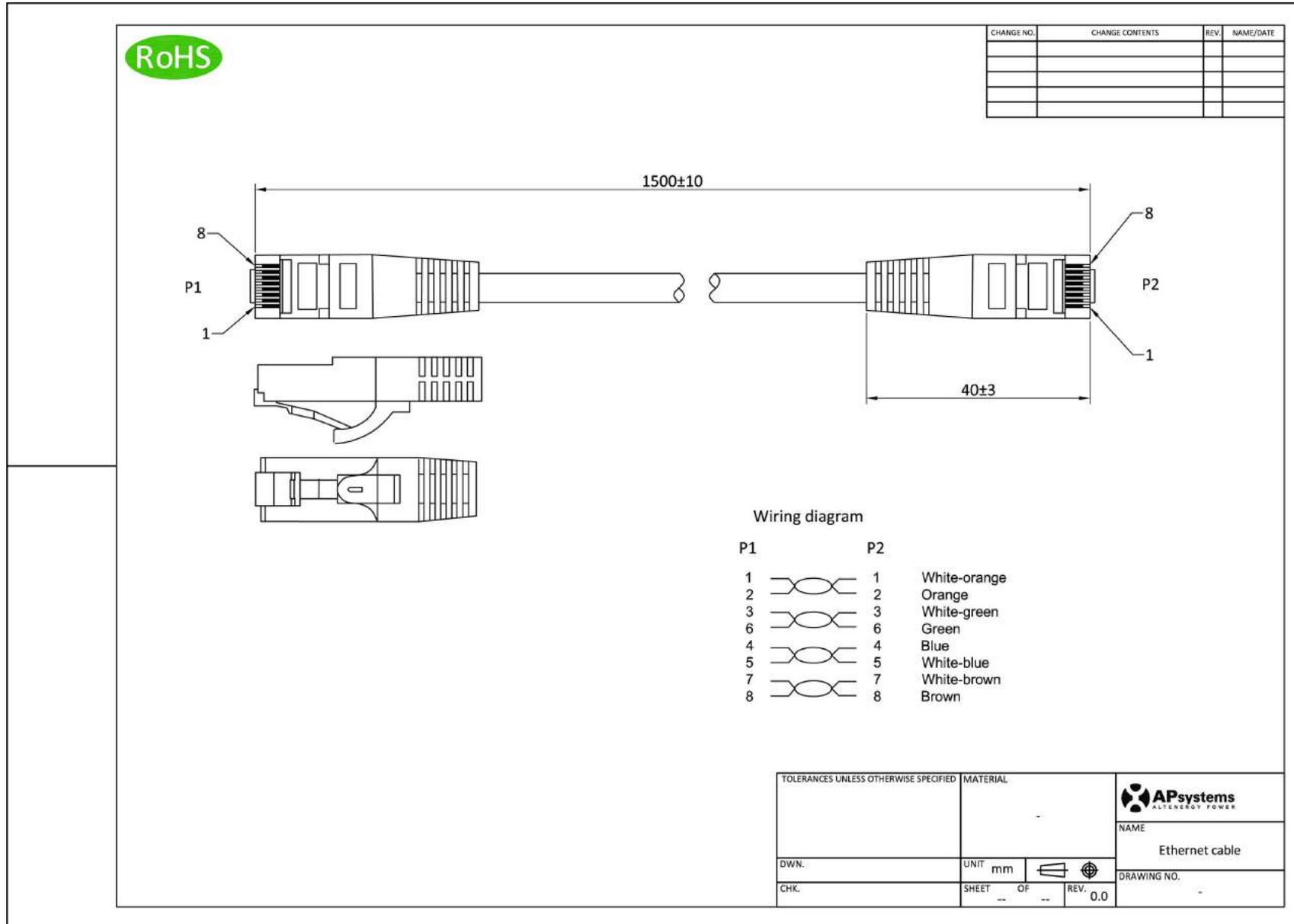
Antenna	Ethernet Cable	Current Transformer		Signal Booster
 <p data-bbox="286 774 358 798">Pic. A</p>	 <p data-bbox="696 774 768 798">Pic. B</p>	 <p data-bbox="1099 774 1171 798">Pic. C</p>	 <p data-bbox="1498 774 1570 798">Pic. D</p>	 <p data-bbox="1906 774 1977 798">Pic. E</p>

5. Accessories information

Antenna with Suction Cap



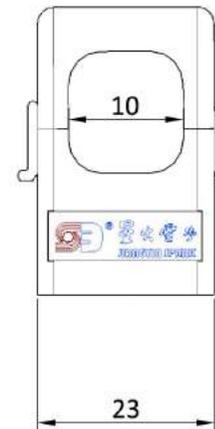
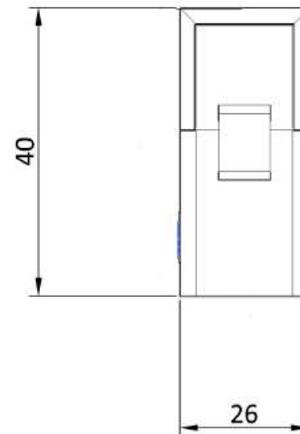
Ethernet cable



18083020112_Current Transformer (80A/26.6mA)

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE

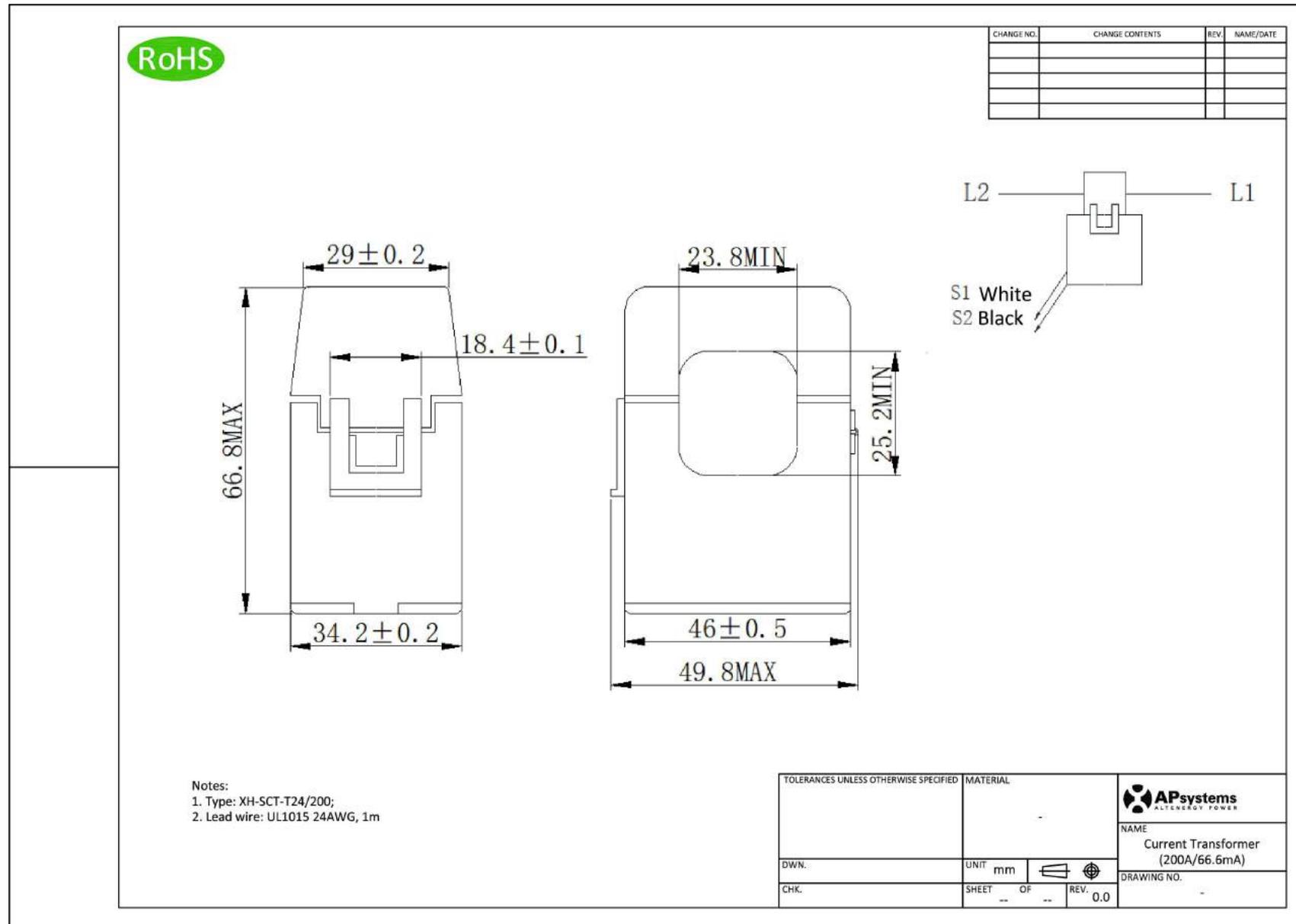


SCT-T10		
Input current(A)	Turn ratio(T)	output voltage(mV)
5-80	1000-3000 Recommended value 3000	333-5000 Recommended value 333

- Notes:
1. Type: SCT-T10;
 2. Primary current range: 10-3000Arms;
 3. Lead wire: UL1007 24AWG, 1m;
 4. Working temperature: -25°C~50°C;
 5. Certification: UL, CE, ETL, ROHS

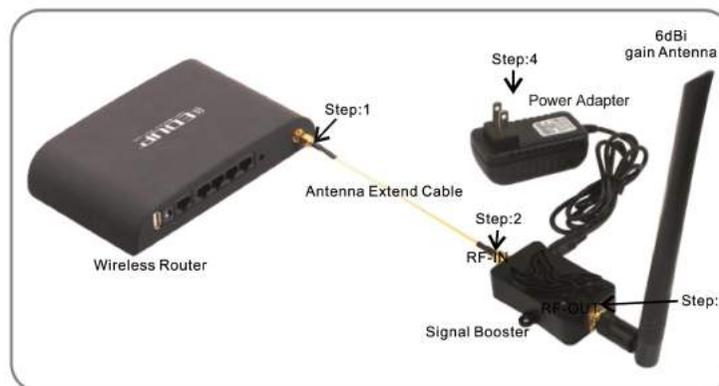
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL		 NAME Current Transformer (80A/26.6mA)	
DWN.	UNIT mm			DRAWING NO.	
CHK.	SHEET -- OF --	REV. 0.0	-		

18083020012_Current Transformer (200A/66.6mA)



Wifi booster instruction Manual

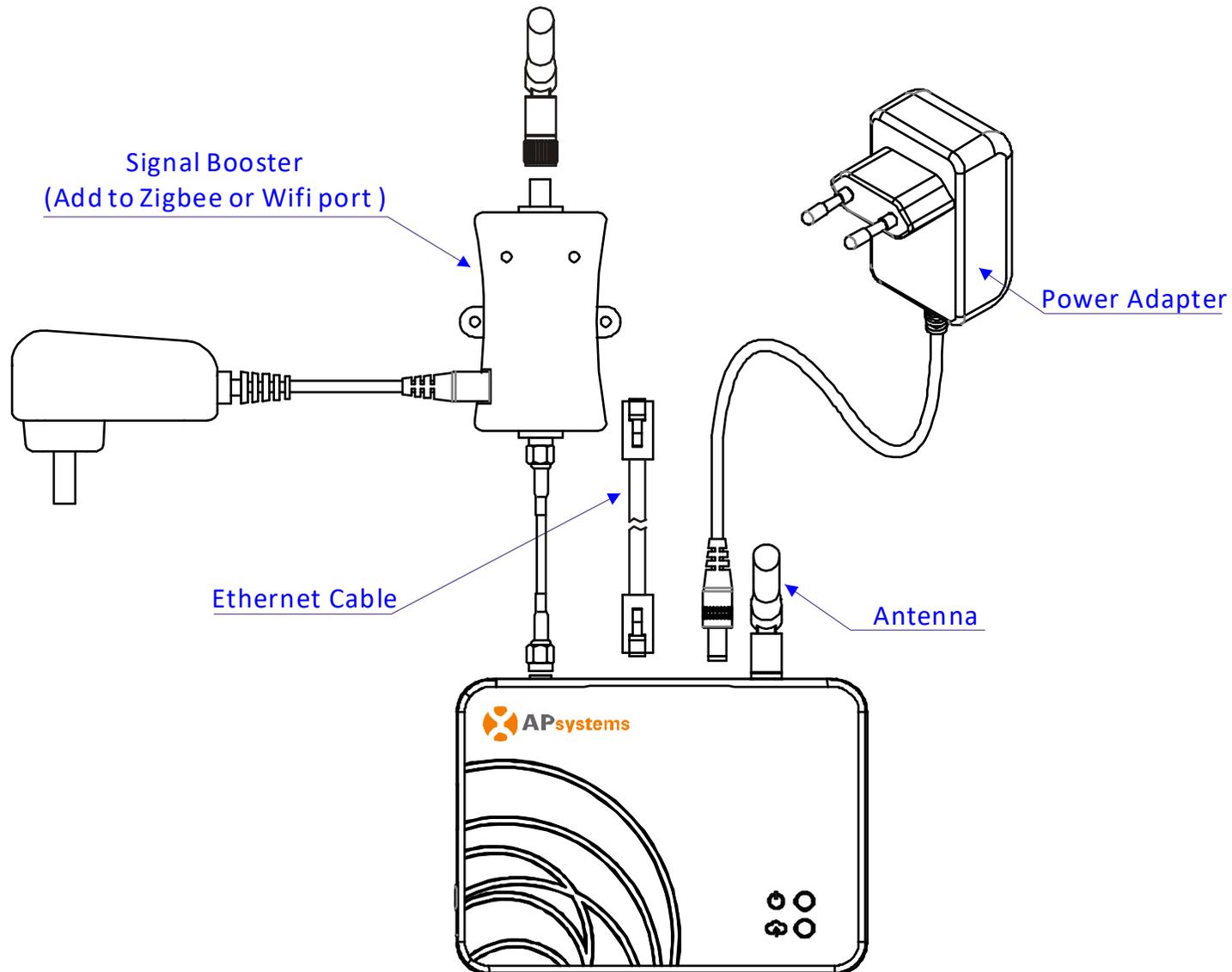
- 1.Support Standards:IEEE 802.11b/g/n
- 2.Frequency:2400~2500MHz
- 3.Working Pattern:TDD
- 4.RF Output Power:36dBm[4W]
- 5.Input Trigger Power:Min:3dBm Max:20dBm
- 6.Transmit Gain:13 dB±1
- 7.Receiver Gain:10 dB±1
- 8.TX/RX Switch Time Delay: < 1us
- 9.Noise Figure: < 2.5dB(typical)
- 10.Operating Temp:-40°C~+70°C
- 11.Working Voltage:6-18VDC
- 12.Operating Humidity:up to 95% rel humidity



- Step1:Remove the Antenna from the wireless Router (Access Point)
 Step2:Use cable to connect the Booster and AP
 Step3:Connect the Antenna to the other end of Booster
 Step4:Plug in the Power Adapter

ECU-R Accessories

1. Wiring Diagram



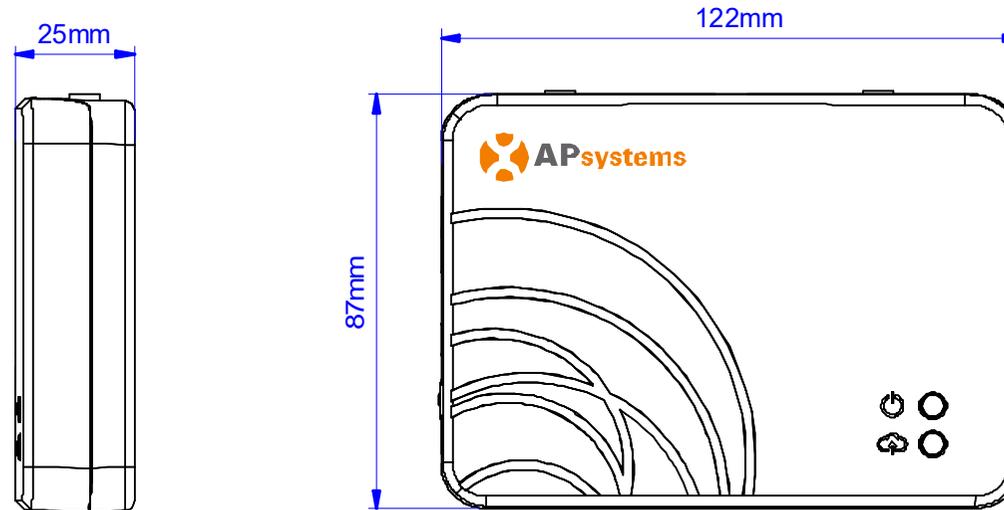
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2. ECU-R Dimensions



3. Accessories Summary

Region	Accessories			
	Antenna (Supply)	Ethernet Cable (Supply)	Power Adapter (Supply)	Signal Booster (Optional)
Europe -EU (209018)	Antenna (See Pic. A)	Ethernet cable (See Pic. B)	Power Adapter (EU) (See Pic. C)	2376010003_Signal Booster (European Standard) (See Pic. D)

4. Physical Picture

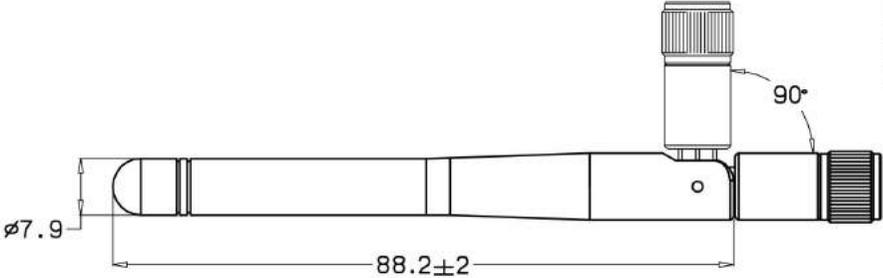
Antenna	Ethernet Cable	Power Adapter	Signal Booster
 <p data-bbox="309 751 376 777">Pic. A</p>	 <p data-bbox="748 751 815 777">Pic. B</p>	 <p data-bbox="1184 751 1252 777">Pic. C</p>	 <p data-bbox="1626 751 1693 777">Pic. D</p>

5. Accessories information

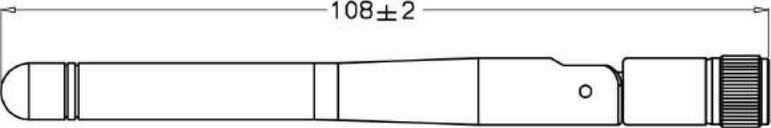
Antenna

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



$\phi 7.9$ 88.2 ± 2 90°



108 ± 2



Male pin



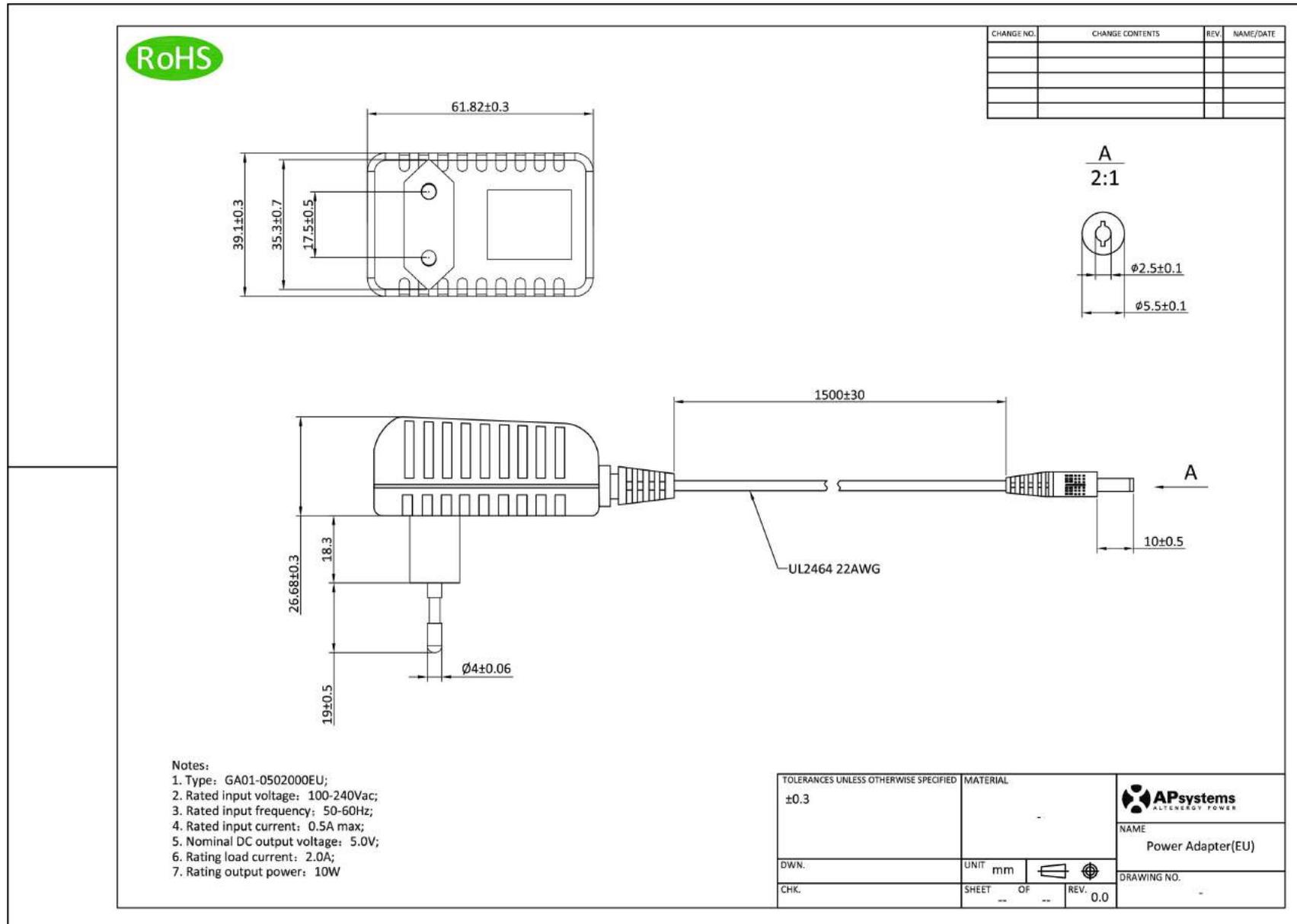
$\phi 10$

Electrical parameters:

1. Frequency range: 2400-2500 MHz;
2. Gain: 2dBi;
3. VSWR: <2:1;
4. Polarization: linear, Vertical;
5. Max power rating: 50W;
6. Impedance: 50 OHM

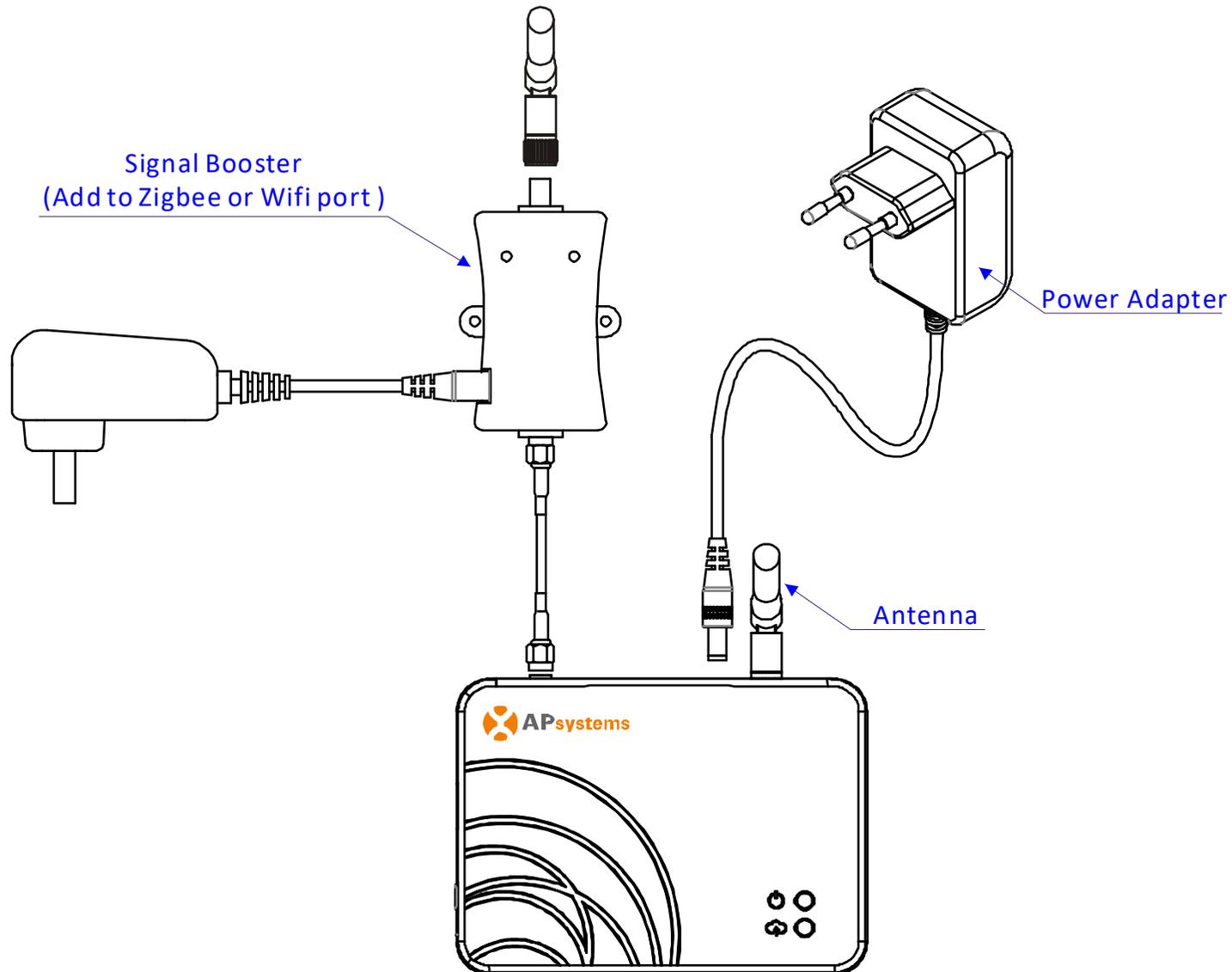
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL	
0~1	±0.1	 NAME: Antenna DRAWING NO.: -	
1~10	±0.3		
10~30	±0.8		
30~100	±1		
100~300	±2		
DWN.		UNIT	mm
CHK.		SHEET	OF
		REV.	0.0

Power Adapter (EU)



ECU-B Accessories

1. Wiring Diagram



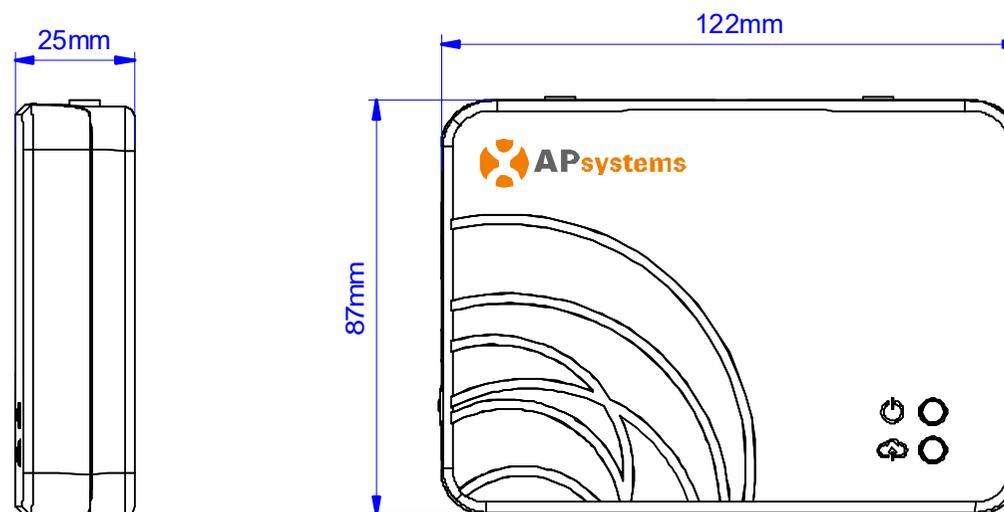
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2. ECU-B Dimensions



3. Accessories Summary

Region	Accessories		
	Antenna (Supply)	Power Adapter (Supply)	Signal Booster (Optional)
Europe -EU (211018)	Antenna (See Pic. A)	Power Adapter (EU) (See Pic. B)	2376010003_Signal Booster (European Standard) (See Pic. C)

4. Physical Picture

Antenna	Power Adapter	Signal Booster
 <p data-bbox="353 751 427 777">Pic. A</p>	 <p data-bbox="884 751 958 777">Pic. B</p>	 <p data-bbox="1413 751 1487 777">Pic. C</p>

Revision history		
Version	Change contents	Date
REV1.0	First edition	2022-08-23
REV1.1	Update DS3/DS3D wiring diagram; DS3/DS3D add AC branch extension cable; DS3/DS3D/QT2/QT2D add DC extension cable(MC4); Change QT2/QT2D wiring diagram/Dimensions/Accessories; Delete Tel	2022-12-03
REV1.2	Update DS3 dimensions; Add DS3/DS3D article no.; Delete QT2 6m DC extension cable(MC4); Update ECU-C/ECU-R/ECU-B wiring diagram	2022-12-08
REV1.3	Update address; Update DS3/DS3D/QT2/QT2D wiring diagram; Add EZ1 accessories; Add QT2/QT2D accessories	2023-02-25
REV1.4	Update QT2/QT2D wiring diagram; Update QT2/QT2D accessories; Add DS3/DS3D/QT2 bus cable; Update the name of DS3/DS3D bus cable end cap; Delete EZ1	2023-06-16
Compile: Fanting		Date: 2023-06-16
Audit: Tianxing		Date: 2023-06-16