



## APsystems (EMEA) Accessories

Rev 1.2

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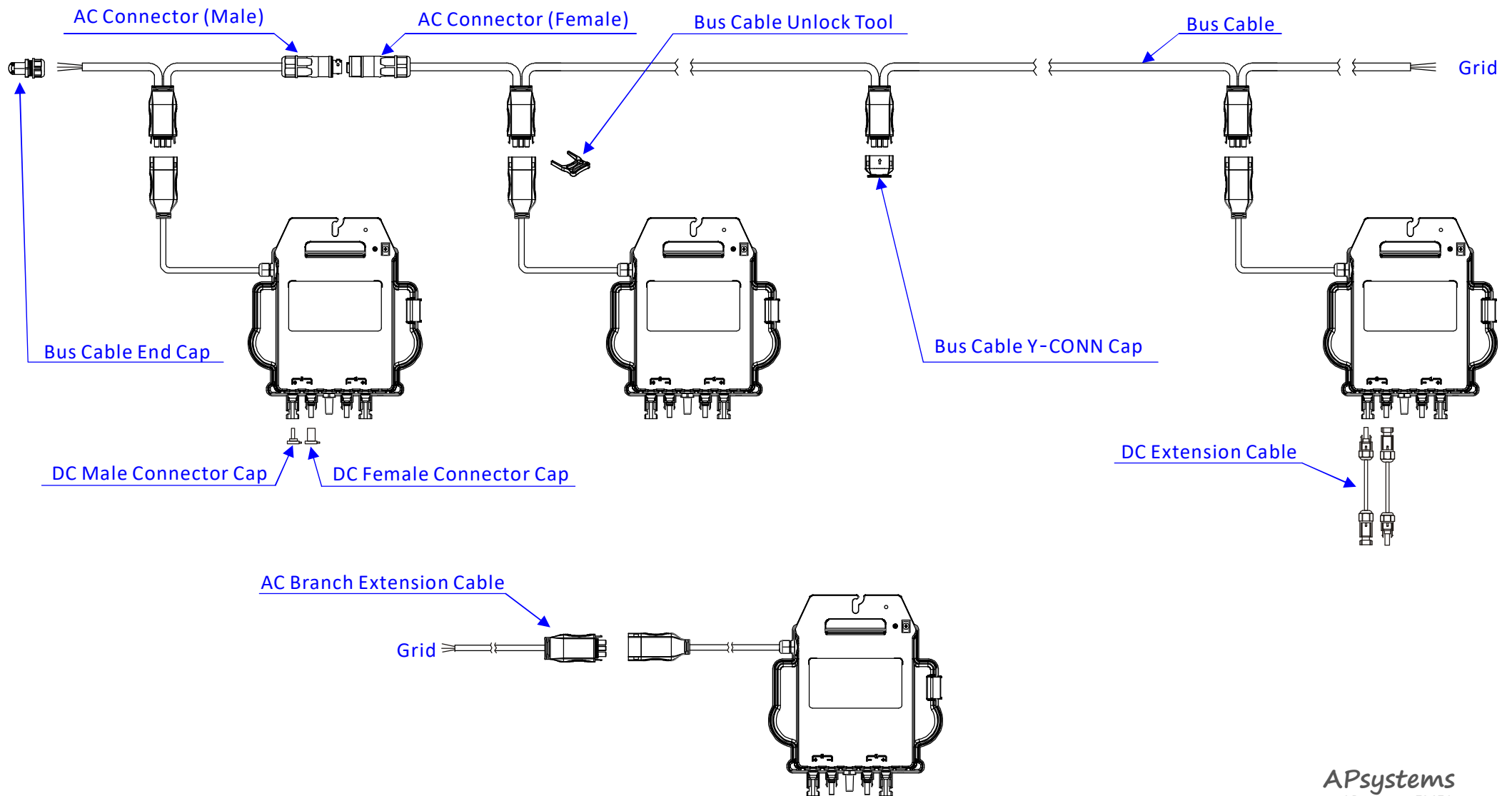
## Contents

DS3 Series Accessories .....	3
1. Wiring Diagram .....	3
2. DS3 Dimensions .....	4
3. Accessories Summary .....	4
4. Physical Picture .....	5
5. Accessories information .....	6
DS3D Accessories .....	18
1. Wiring Diagram .....	18
2. DS3D Dimensions .....	19
3. Accessories Summary .....	19
4. Physical Picture .....	20
5. Accessories information .....	21
QT2 Accessories .....	23
1. Wiring Diagram .....	23
2. QT2 Dimensions .....	24
3. Accessories Summary .....	25
4. Physical Picture .....	26
5. Accessories information .....	27
QT2D Accessories .....	32
1. Wiring Diagram .....	32
2. QT2D Dimensions .....	33
3. Accessories Summary .....	34
4. Physical Picture .....	35
5. Accessories information .....	36
ECU-C Accessories .....	38
1. Wiring Diagram .....	38
2. ECU-C Dimensions .....	39
3. Accessories Summary .....	39

4. Physical Picture .....	40
5. Accessories information .....	41
ECU-R Accessories .....	46
1. Wiring Diagram .....	46
2. ECU-R Dimensions .....	47
3. Accessories Summary .....	47
4. Physical Picture .....	48
5. Accessories information .....	49
ECU-B Accessories .....	51
1. Wiring Diagram .....	51
2. ECU-B Dimensions .....	51
3. Accessories Summary .....	52
4. Physical Picture .....	53

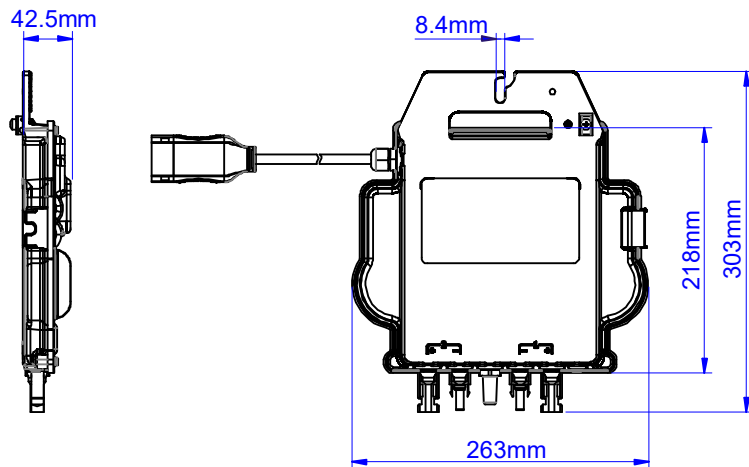
## DS3 Series Accessories

### 1. Wiring Diagram

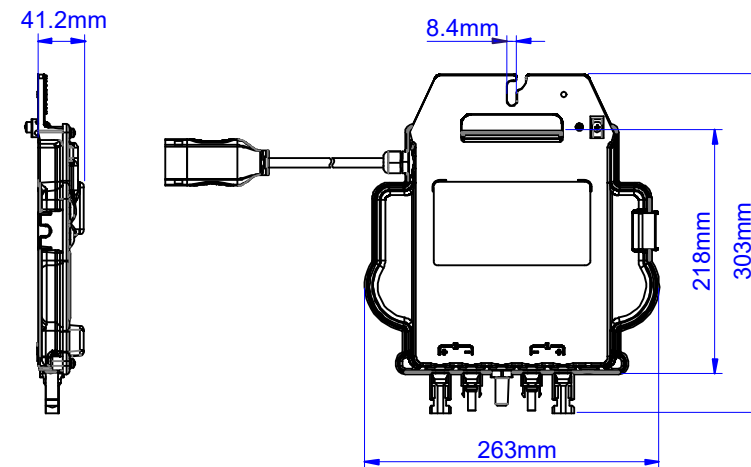


## 2. Dimensions

DS3/DS3-H Dimensions



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



## 3. Accessories Summary

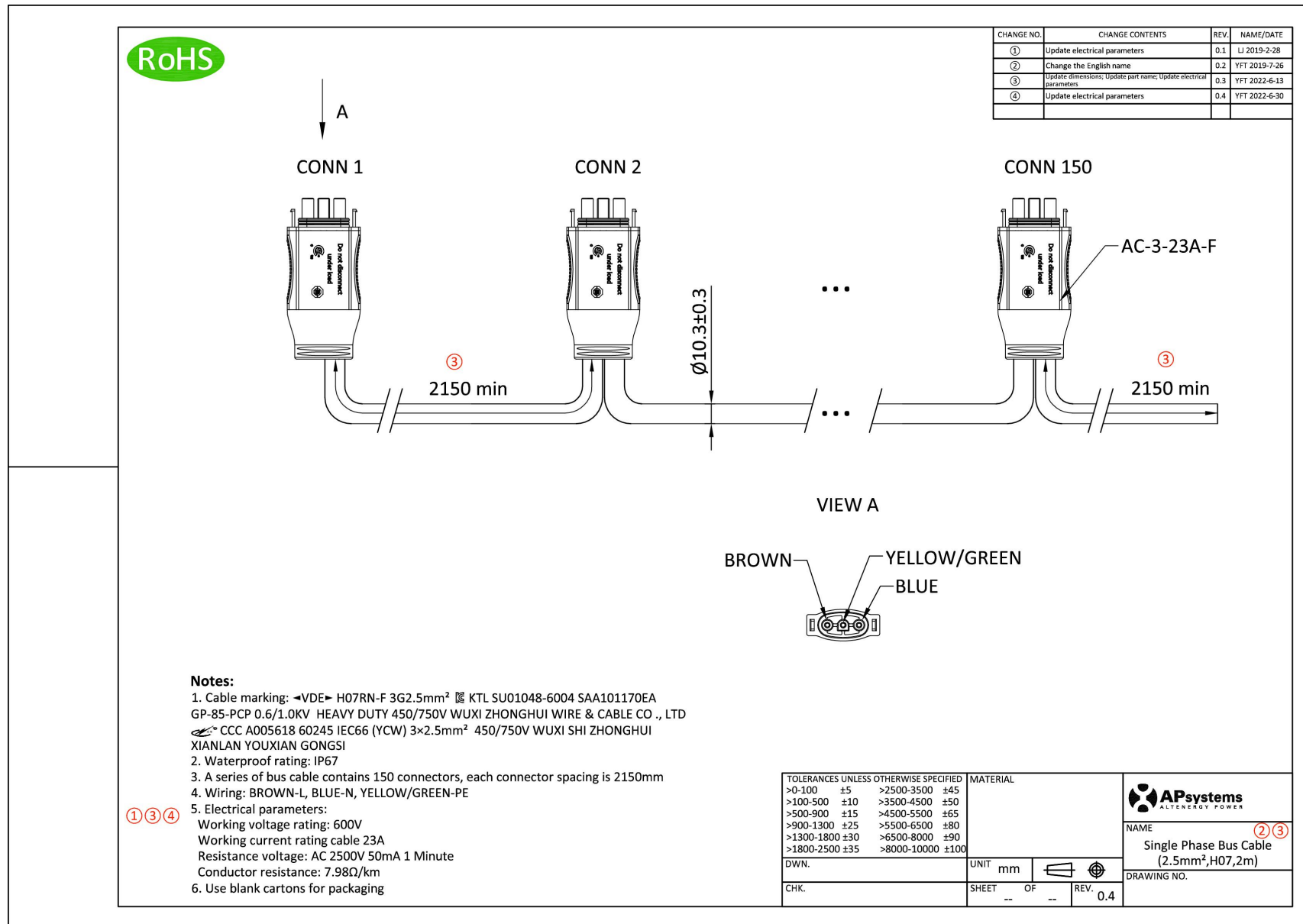
Region	Accessories									
	Bus Cable (Mandatory)	AC Branch Extension Cable (Optional)	Bus Cable End Cap (Mandatory)	Bus Cable Y-CONN Cap (Optional)	Bus Cable Unlock Tool (Mandatory)	DC Male Connector Cap (Optional)	DC Female Connector Cap (Optional)	AC Connector (Male) (Optional)	AC Connector (Female) (Optional)	DC Extension Cable (Optional)
<b>Europe</b> -EU (117018) -L-EU (118018) -S-EU (119018) -H-EU (120018) -M-EU (126018)	2322304903_Single Phase Bus Cable (2.5mm <sup>2</sup> , H07,2m) (See Pic. A)	2334076132_Single Phase Br. Ext-cable (2.5mm <sup>2</sup> ,1m) (See Pic. B)	2060700017_ 3/4-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) (See Pic. J)

#### 4. Physical Picture

Bus Cable	AC Branch Extension Cable	Bus Cable End Cap	Bus Cable Y-CONN Cap	Bus Cable Unlock Tool	DC Male Connector Cap
 <p data-bbox="199 632 264 655">Pic. A</p>	 <p data-bbox="546 632 611 655">Pic. B</p>	 <p data-bbox="891 632 956 655">Pic. C</p>	 <p data-bbox="1240 632 1305 655">Pic. D</p>	 <p data-bbox="1588 632 1653 655">Pic. E</p>	 <p data-bbox="1935 632 2000 655">Pic. F</p>
DC Female Connector Cap	AC Connector (Male)	AC Connector (Female)	DC Extension Cable		
 <p data-bbox="199 1050 264 1074">Pic. G</p>	 <p data-bbox="546 1050 611 1074">Pic. H</p>	 <p data-bbox="891 1050 956 1074">Pic. I</p>	 <p data-bbox="1240 1050 1305 1074">Pic. J</p>		

## 5. Accessories information

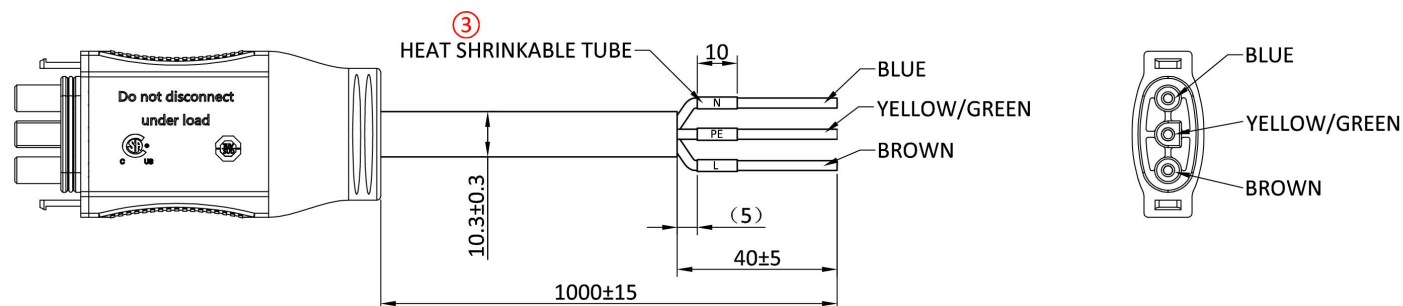
2322304903\_Single Phase Bus Cable (2.5mm<sup>2</sup>,H07,2m)



2334076132\_ Single Phase Br. Ext-cable (2.5mm<sup>2</sup>,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 <sup>2</sup>	COLOR	LABEL
2.5	BROWN	L
	BLUE	N
	YELLOW/GREEN	PE

Notes:

1. Cable: ◀VDE▶ H07RN-F 3G2.5mm<sup>2</sup> 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) 3×2.5mm<sup>2</sup> 450/750V WUXI SHI ZHONGHUI  
XIANLAN YOUXIAN GONGSI

2. Waterproof rating: IP67;

3. Wiring: BROWN-L, BLUE-N, YELLOW/GREEN-PE;

①④⑤

4. Electrical parameters:

Working voltage rating: 600V  
Working current rating cable 23A  
Resistance voltage: AC 2500V 50mA 1 Minute  
Conductor resistance: 7.98Ω/km

5. Use blank cartons for packaging

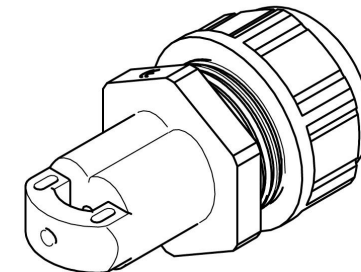
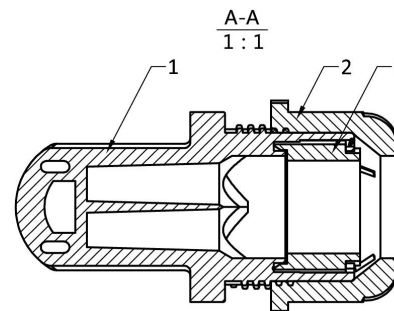
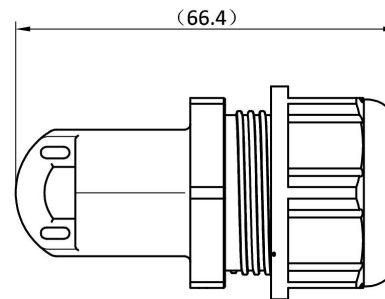
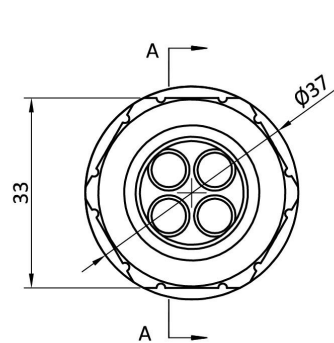
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL		
>0-100 ±5	>2500-3500 ±45			
>100-500 ±10	>3500-4500 ±50			Single Phase Br. ②④
>500-900 ±15	>4500-5500 ±65			Ext-Cable(2.5mm <sup>2</sup> ,1m)
>900-1300 ±25	>5500-6500 ±80			DRAWING NO.
>1300-1800 ±30	>6500-8000 ±90			
>1800-2500 ±35	>8000-10000 ±100			
DWN.	UNIT mm			
CHK.	SHEET -- OF --	REV.	0.5	




2060700017\_ 3/4-wire Bus Cable End Cap

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



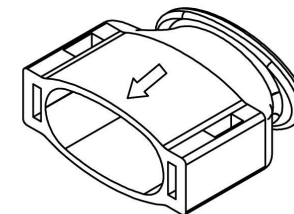
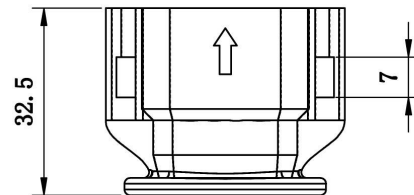
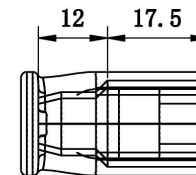
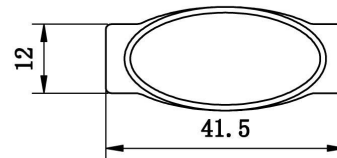
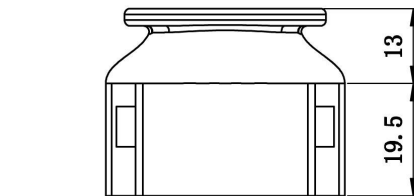
- Notes:
1. Cable Size: 10~16mm;
  2. Nut Torque: 3.0~5.0N·m;
  3. Waterproof Rating: IP68;
  4. Operating Temperature Range: -40~105°C;
  5. Packaging: Blank Cartons

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			
±0.5		-			
DWN.	UNIT	mm	 NAME 3/4-wire Bus Cable End Cap		
CHK.	SHEET	OF	REV.	DRAWING NO.	
	--	--	2.0	-	


2061702007\_Bus Cable Y-CONN Cap

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



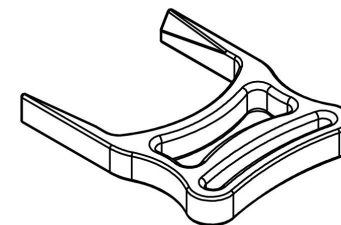
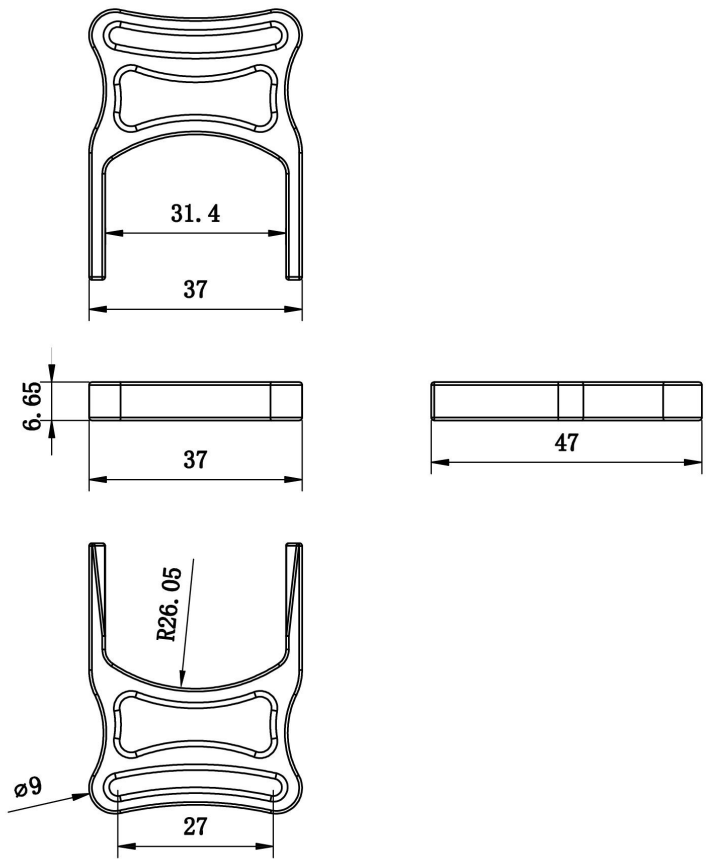
- Notes:
1. Part Number: DUO0050
  2. Undimensioned Features Are Derived From 3D Database
  3. Molded Part Must Meet RoHS
  4. Use Blank Cartons For Packaging

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



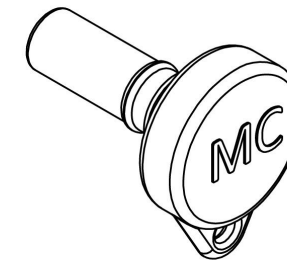
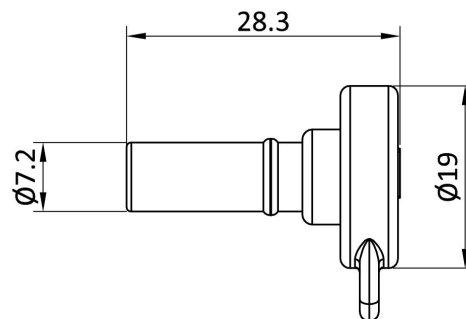
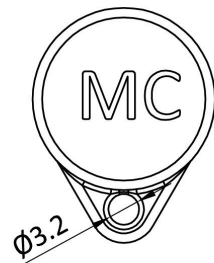
- Notes:
1. Part Number: PPO
  2. Undimensioned Features Are Derived From 3D Database
  3. Molded Part Must Meet Rohs
  4. Use Blank Cartons For Packaging

TOLERANCES UNLESS OTHERWISE SPECIFIED	MATERIAL	 <b>APsystems</b> <small>ALTERNATIVE ENERGY POWER</small>
> 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	NAME Y Bus Cable Unlock Tool
CHK.	SHEET -- OF -- REV. 0.0	DRAWING NO. -


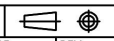
2060401006\_DC Male Connector Cap (MC4)

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



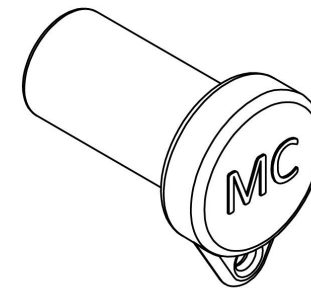
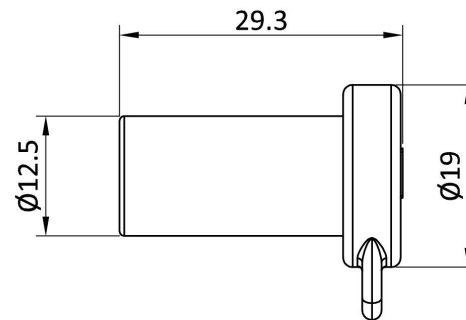
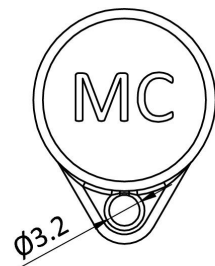
- Notes:
1. Type: PV-SVK4;
  2. Degree of protection: IP67;
  3. Use blank cartons for packaging

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


2060402006\_DC Female Connector Cap (MC4)

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



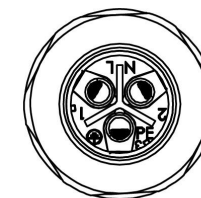
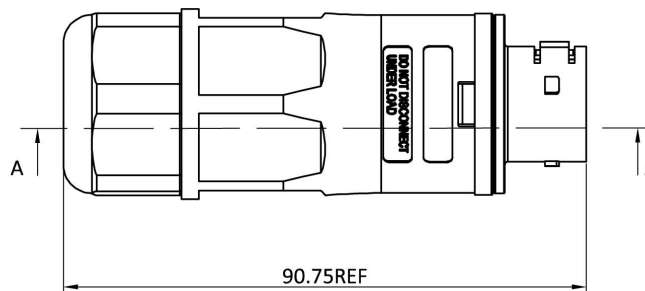
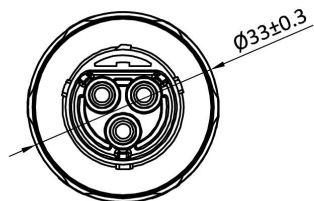
- Notes:
1. Type: PV-BVK4;
  2. Degree of protection: IP67;
  3. Use blank cartons for packaging

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

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

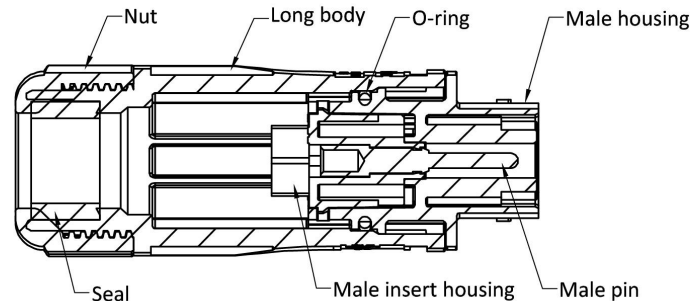
**RoHS**

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 : 4mm<sup>2</sup> or 10AWG
- Seal inner diameter  $\phi 13$  ( grey )  
For cable size : 2.5mm<sup>2</sup> 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:  $\geq 500$ ;
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:**

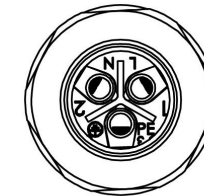
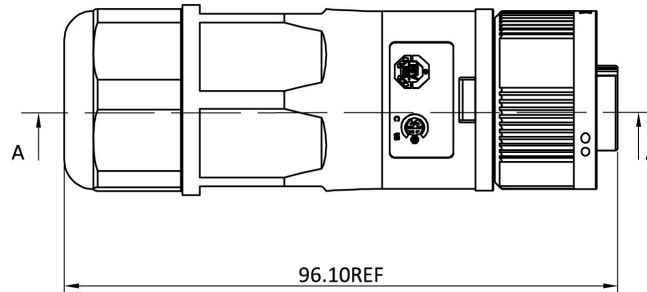
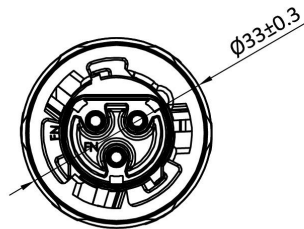
1. Type No.: EN034-2103-101;
2. Packaging: Blank Cartons

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

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

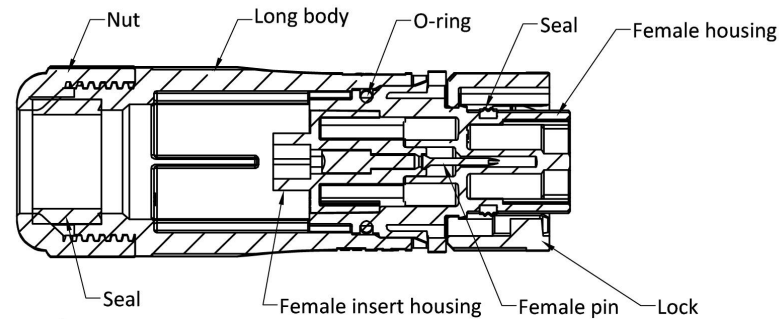
**RoHS**

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 : 4mm<sup>2</sup> or 10AWG
- Seal inner diameter  $\phi 13$  ( grey )  
For cable size : 2.5mm<sup>2</sup> 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:  $\geq 500$ ;
2. Cable Retention Force:  $\geq 120N$ ;
3. Pin Retention Force:  $\geq 80N$ ;
4. Cable O.D:  $10 \sim 15mm$ ;
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:**

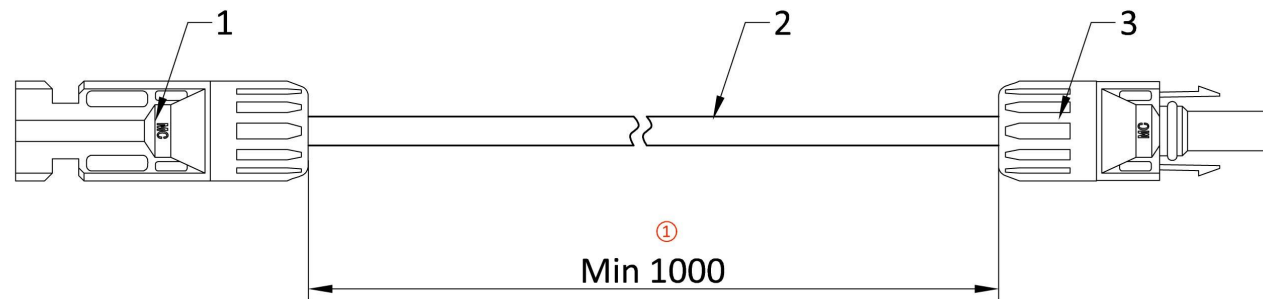
1. Type No.: EN034-2203-101;
2. Packaging: Blank Cartons


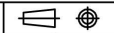
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL	
X.: $\pm 0.20$	X°: $\pm 2.00^{\circ}$	 NAME AC Connector (3 core, two seals, female) DRAWING NO. -	
.X: $\pm 0.10$	.X°: $\pm 1.00^{\circ}$		
.XX: $\pm 0.05$	.XX°: $\pm 0.50^{\circ}$		
.XXX: $\pm 0.03$	.XXX°: $\pm 0.30^{\circ}$		
DWN.	UNIT mm		
CHK.	SHEET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

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		
① ②	DC Cable	H1Z2Z2-K /PV wire	1	4.0mm <sup>2</sup> /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 1m 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.	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.

**systems**  
systems EMEA

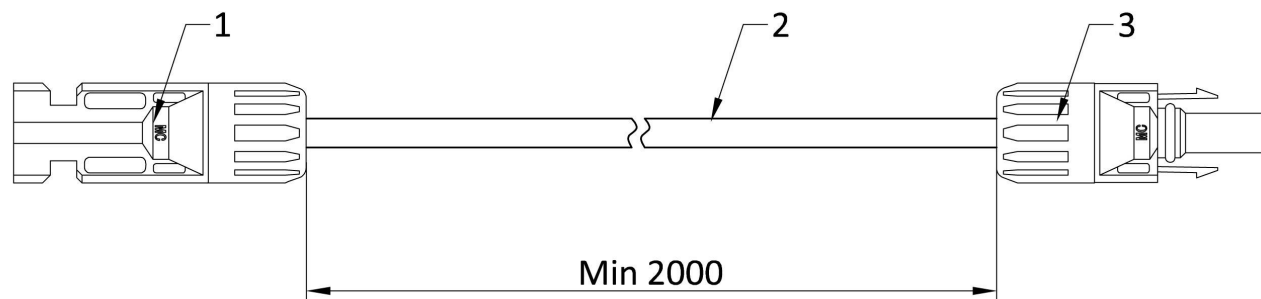
C/Bulnea 244c rue du Point du Jour 01000 Saint Denis lès Bourg, France  
emea.APsystems.com



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 ③	DC Cable	FLEX-SOL-EVO-DX 4.0	1	4.0mm <sup>2</sup> /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		 NAME 2m DC Extension Cable (MC4) DRAWING NO.				
>0-100	±5	>2500-3500	±45				DWN.	
>100-500	±10	>3500-4500	±50				UNIT	mm
>500-900	±15	>4500-5500	±65					
>900-1300	±25	>5500-6500	±80				CHK.	SHEET -- OF --
>1300-1800	±30	>6500-8000	±90	REV.	0.3			
>1800-2500	±35	>8000-10000	±100					

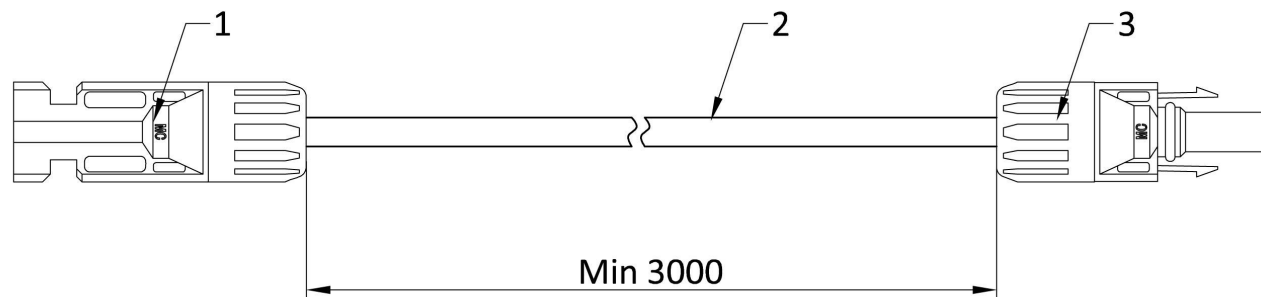
systems  
systems EMEA


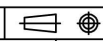
C/Bulnea 244c rue du Point du Jour 01000 Saint Denis lès Bourg, France  
emea.APsystems.com

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

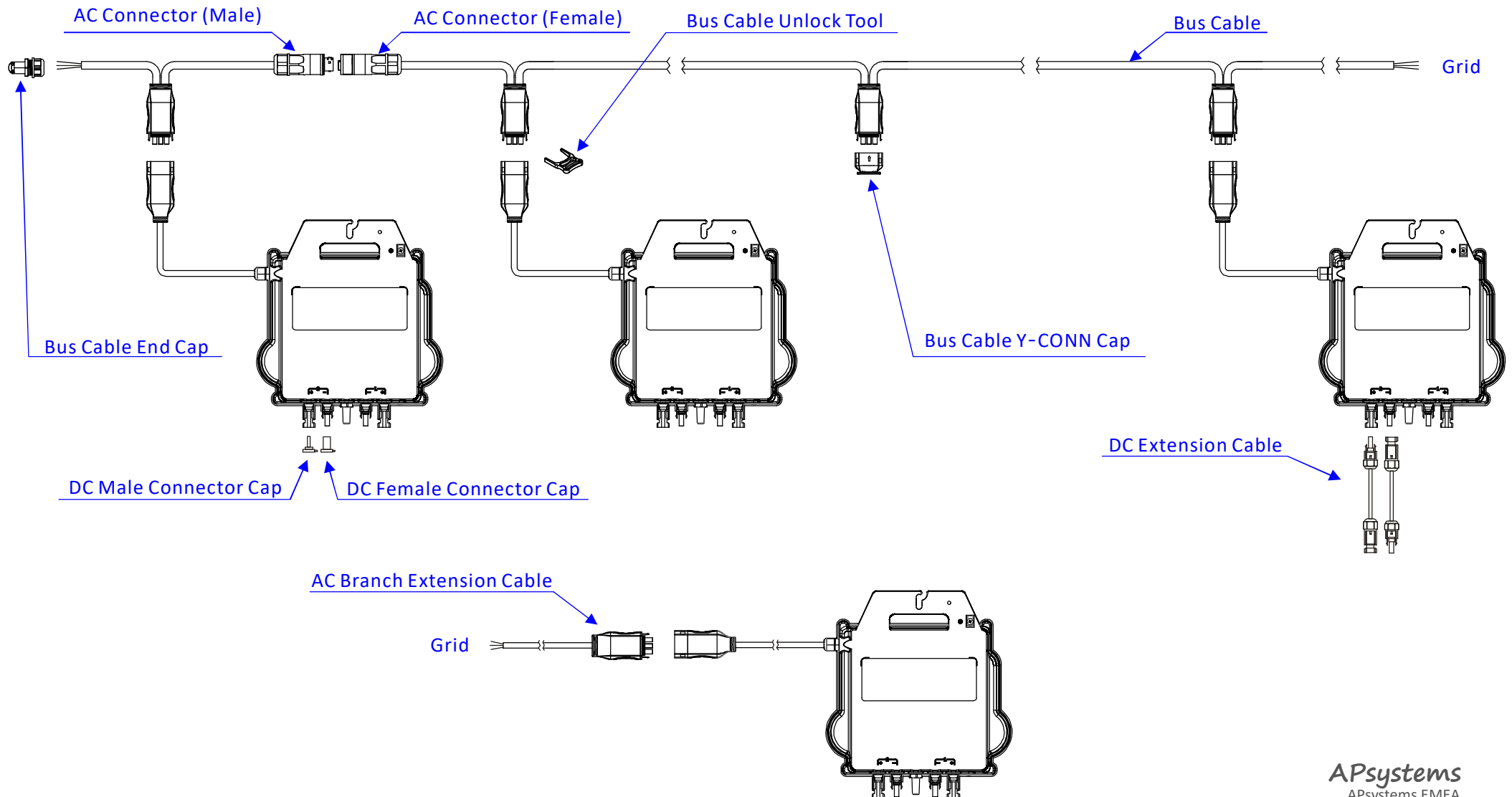


3	DC Connector (female)	MC4 PV-KBT4/6II		1	Female, STAUBLI	
① ②	2	DC Cable	H1Z2Z2-K /PV wire		1	4.0mm <sup>2</sup> /12AWG, TUV/UL certification
	1	DC Connector (male)	MC4 PV-KST4/6II		1	Male, STAUBLI
NO.	NAME	TYPE	MAT.	QTY.	DESCRIPTION	REMARK
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL				
>0-100	±5	>2500-3500	±45	 NAME 3m 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		REV.	1.0
CHK.		SHEET	--	OF	--	

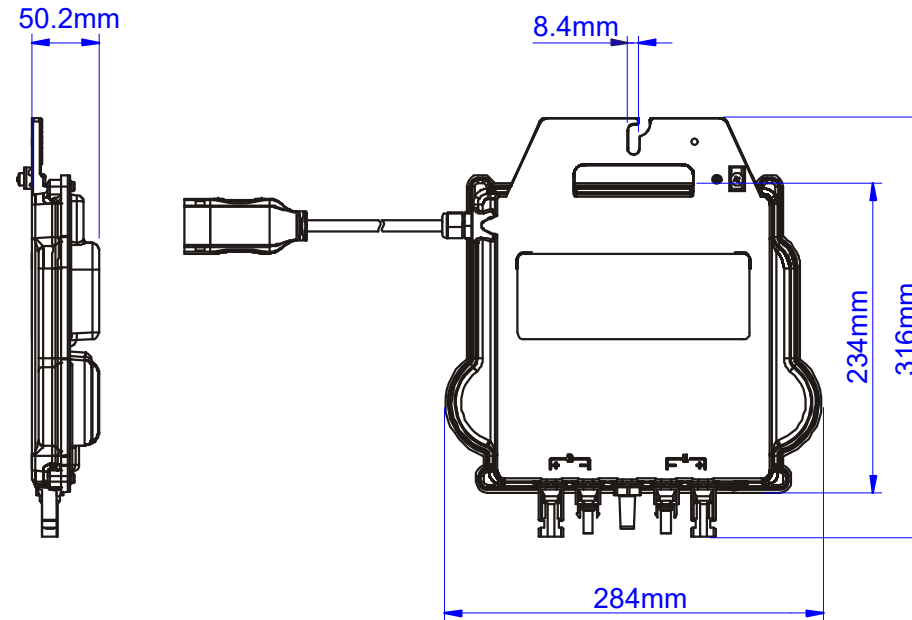
- Notes:
1. The DC cable and connector connect firmly, can sustain 100N-60s tension.
  2. The pin concentric with plastic parts, ensure that there is no contradict phenomenon when male connector inserts into female connector.
  3. Use Blank Cartons For Packaging.

## DS3D Accessories

### 1. Wiring Diagram



## 2. DS3D Dimensions



## 3. Accessories Summary

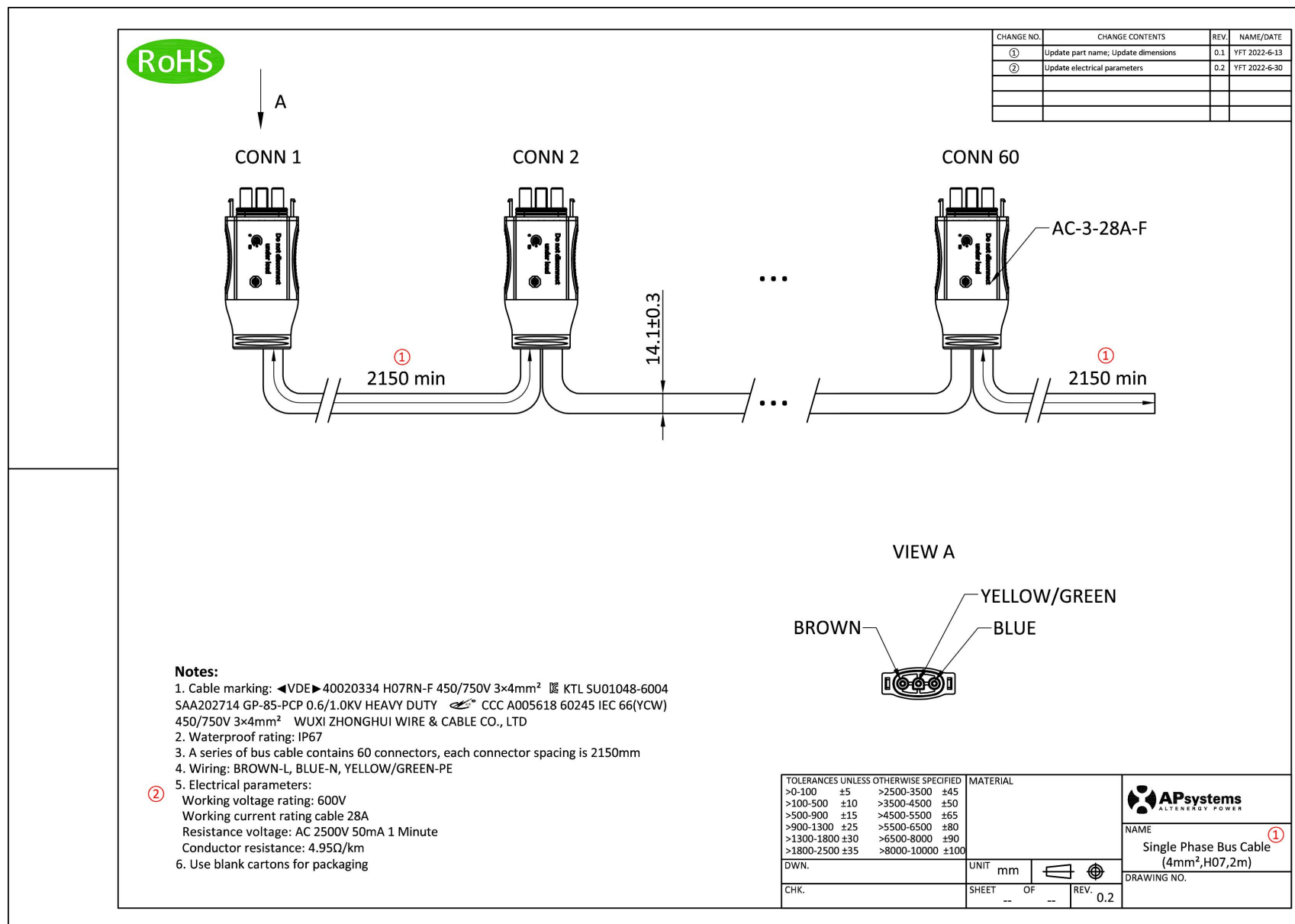
Region	Accessories									
	Bus Cable (Mandatory)	AC Branch Extension Cable (Optional)	Bus Cable End Cap (Mandatory)	Bus Cable Y-CONN Cap (Optional)	Bus Cable Unlock Tool (Mandatory)	DC Male Connector Cap (Optional)	DC Female Connector Cap (Optional)	AC Connector (Male) (Optional)	AC Connector (Female) (Optional)	DC Extension Cable (Optional)
<b>Europe</b> -EU (121018) -L-EU (125018) -SH-EU (128018)	2322320803_ Single Phase Bus Cable (4mm <sup>2</sup> ,H07, 2m) (See Pic. A)	2334076132_ Single Phase Br. Ext-cable (2.5mm <sup>2</sup> ,1m) (See Pic. B)	2060700017_ 3/4-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)

#### 4. Physical Picture

Bus Cable	AC Branch Extension Cable	Bus Cable End Cap	Bus Cable Y-CONN Cap	Bus Cable Unlock Tool	DC Male Connector Cap
 <p data-bbox="197 539 271 564">Pic. A</p>	 <p data-bbox="546 539 620 564">Pic. B</p>	 <p data-bbox="891 539 965 564">Pic. C</p>	 <p data-bbox="1238 539 1312 564">Pic. D</p>	 <p data-bbox="1585 539 1659 564">Pic. E</p>	 <p data-bbox="1933 539 2007 564">Pic. F</p>
DC Female Connector Cap	AC Connector (Male)	AC Connector (Female)	DC Extension Cable		
 <p data-bbox="197 959 271 984">Pic. G</p>	 <p data-bbox="546 959 620 984">Pic. H</p>	 <p data-bbox="898 959 972 984">Pic. I</p>	 <p data-bbox="1238 959 1312 984">Pic. J</p>		

## 5. Accessories information

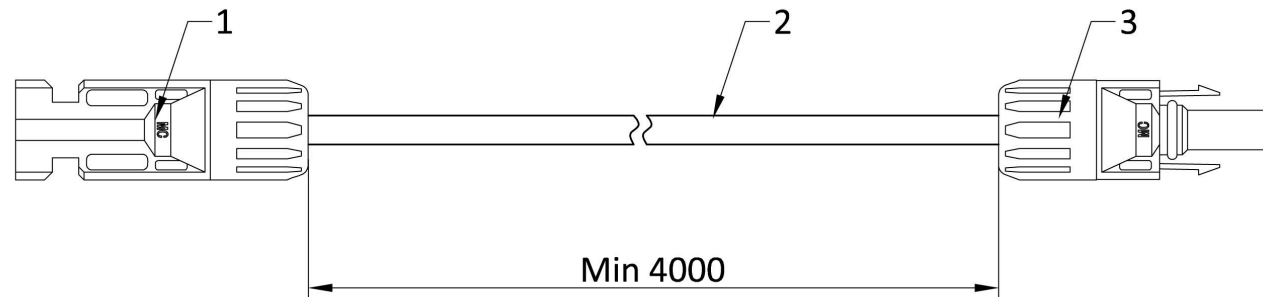
2322320803\_Single Phase Bus Cable(4mm<sup>2</sup>,H07,2m)




2310370236\_4m DC Extension Cable (MC4)

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE

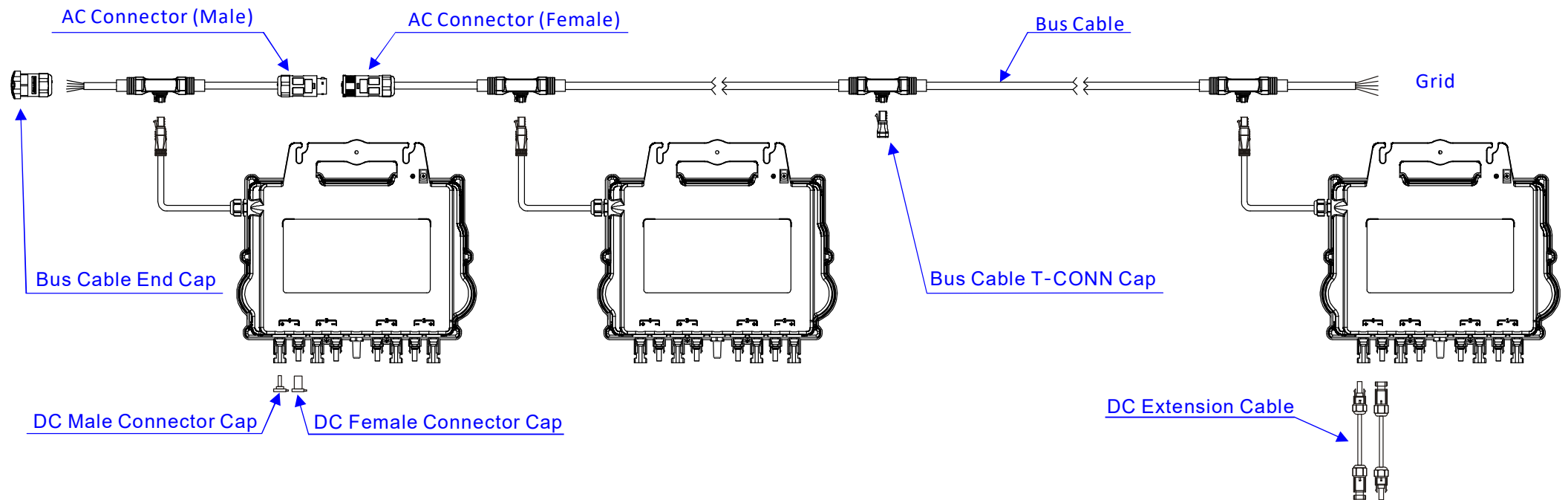


3	DC Connector (female)	MC4 PV-KBT4/6II		1	Female, STAUBLI	
2	DC Cable	H1Z2Z2-K /PV wire		1	4.0mm <sup>2</sup> /12AWG, TUV/UL certification	
1	DC Connector (male)	MC4 PV-KST4/6II		1	Male, STAUBLI	
NO.	NAME	TYPE	MAT.	QTY.	DESCRIPTION	REMARK
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL				
>0-100	±5	>2500-3500	±45	 NAME 4m 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. 0.0

- 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.

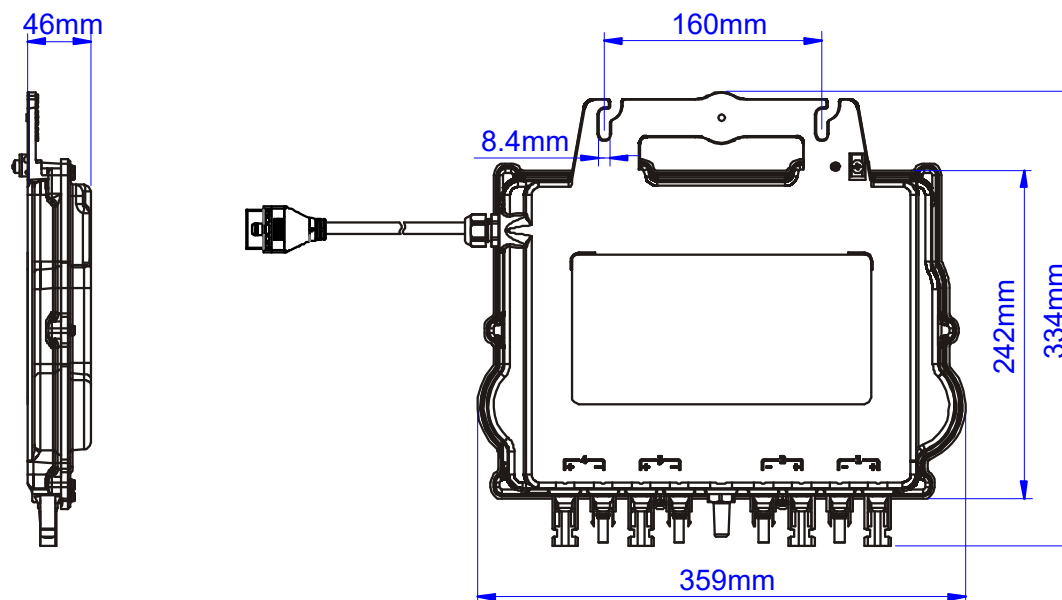
## QT2 Accessories

### 1. Wiring Diagram





## 2. QT2 Dimensions



### 3. Accessories Summary

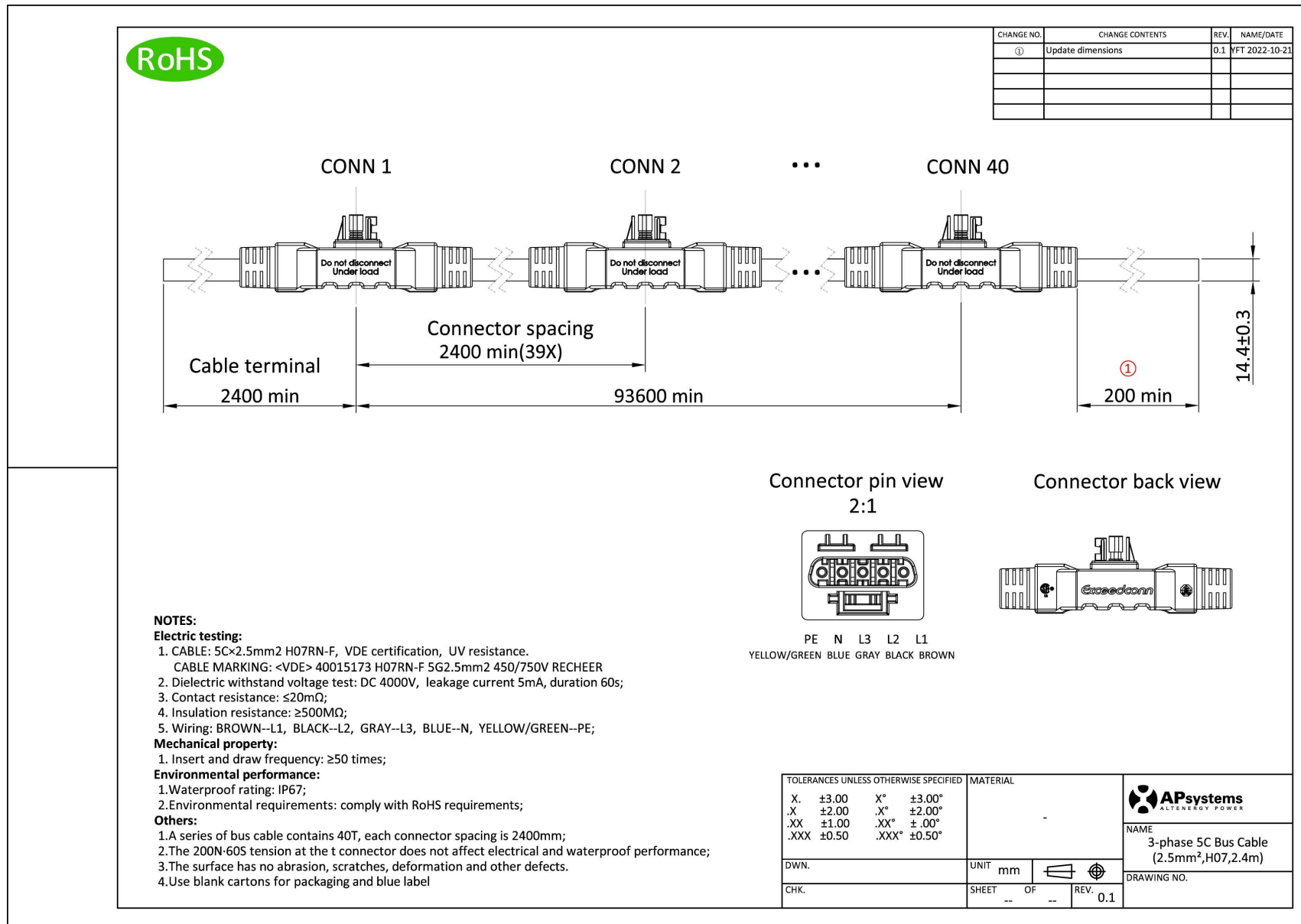
Region	Accessories							
	Bus Cable (Mandatory)	Bus Cable End Cap (Mandatory)	Bus Cable T-CONN Cap (Optional)	DC Male Connector Cap (Optional)	DC Female Connector Cap (Optional)	AC Connector (Male) (Optional)	AC Connector (Female) (Optional)	DC Extension Cable (Optional)
<b>Europe</b> -EU (124056)	2322604802_3-phase 5C Bus Cable (2.5mm <sup>2</sup> ,H07,2.4m) (See Pic. A)	2062050005_5-wire Bus Cable End Cap (See Pic. B)	2061252032_5-wire Bus Cable T-CONN Cap (See Pic. C)	2060401006_DC Male Connector Cap (MC4) (See Pic. D)	2060402006_DC Female Connector Cap (MC4) (See Pic. E)	2300711032_25A AC Male Connector (EN,5-wire) (See Pic. F)	2300812032_25A AC Female Connector (EN,5-wire) (See Pic. G)	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. H)

#### 4. Physical Picture

Bus Cable	Bus Cable End Cap	Bus Cable Y-CONN Cap	DC Male Connector Cap	DC Female Connector Cap	AC Connector (Male)
 <p data-bbox="210 635 271 659">Pic. A</p>	 <p data-bbox="557 635 618 659">Pic. B</p>	 <p data-bbox="904 635 965 659">Pic. C</p>	 <p data-bbox="1249 635 1310 659">Pic. D</p>	 <p data-bbox="1599 635 1659 659">Pic. E</p>	 <p data-bbox="1946 635 2007 659">Pic. F</p>
AC Connector (Female)	DC Extension Cable				
 <p data-bbox="210 1054 271 1078">Pic. G</p>	 <p data-bbox="557 1054 618 1078">Pic. H</p>				

## 5. Accessories information

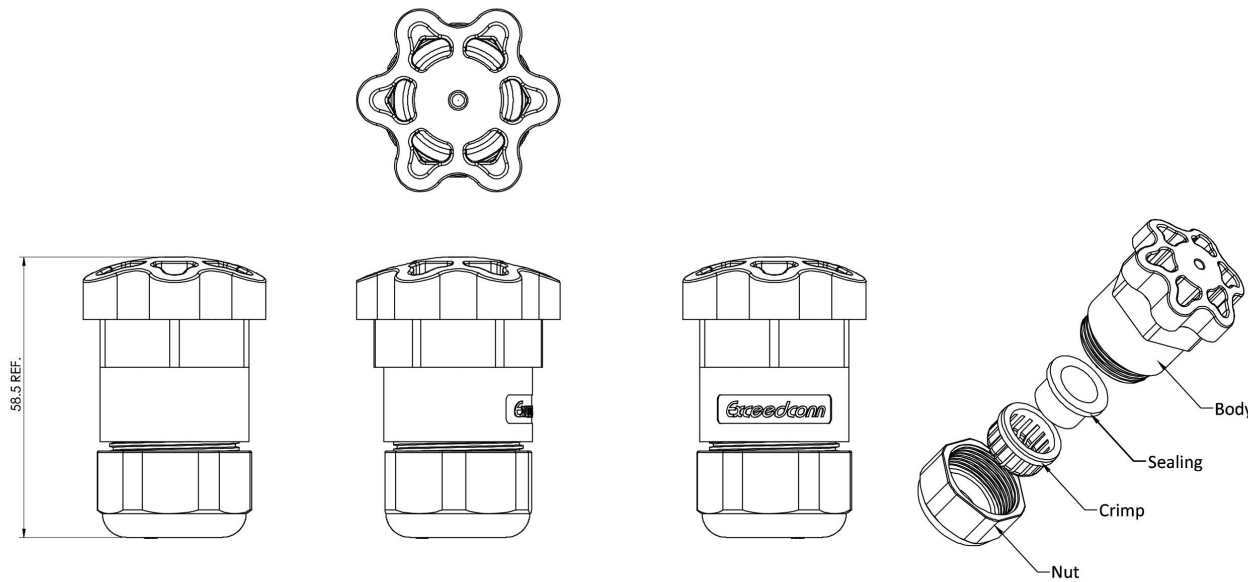
2322604802\_3-phase 5C Bus Cable (2.5mm<sup>2</sup>,H07,2.4m)



2062050005\_5-wire Bus Cable End Cap

**RoHS**

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Change the cable size	0.1	YFT 2019-9-9



**Notes:**

**Mechanical:**




- ① 1. Cable and Connector Retention Force:  $\geq 120\text{N}$ ;
- 2. Cable Size: 11.6~14.0mm;
- 3. Core Wire Size: 3.2~5.2mm;
- 4. Sealing Size: 14mm;

**Environmental:**

- 1. Waterproof Rate: IP68 1m 1H;
- 2. Application Temperature:  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ ;

**Others:**

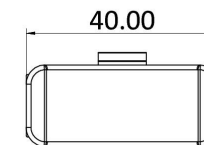
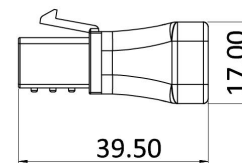
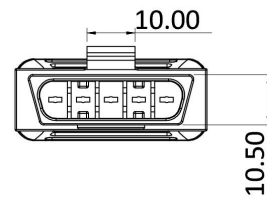
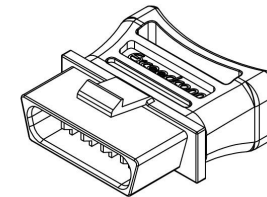
- 1. Part Number: Cable Gland 910014000;
- 2. Packaging: Blank Cartons

TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL		 NAME 5-wire Bus Cable End Cap
X :	$\pm 0.20$	X* :	$\pm 2.00^{\circ}$	
.X :	$\pm 0.10$	.X* :	$\pm 1.00^{\circ}$	
.XX :	$\pm 0.05$	.XX* :	$\pm 0.50^{\circ}$	
.XXX :	$\pm 0.03$	.XXX* :	$\pm 0.30^{\circ}$	
DWN.	UNIT mm	 	REV. 0.1	
CHK.	SHEET -- OF --			




2061252032\_5-wire Bus Cable T-CONN Cap

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



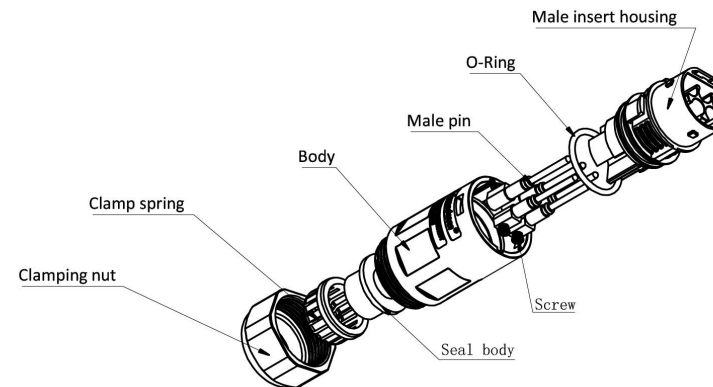
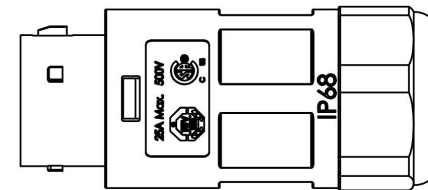
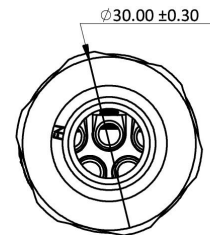
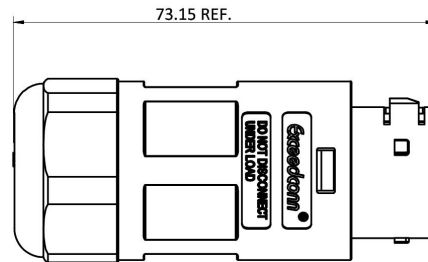
- Notes:
1. PART No.: MIH-1-01;
  2. Waterproof Rate: IP67;
  3. Mating Cycle: ≥50;
  4. Part Retention Force: 100N;
  5. Packaging: Blank Cartons

TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL		 NAME 5-wire Bus Cable T-CONN Cap
X.	±2.00			
.X	±1.00			
.XX	±0.64			
.XXX	±0.38			
DWN.	UNIT mm	 	DRAWING NO.	-
CHK.	SHEET -- OF --	REV. 0.0		

2300711032\_25A AC Male Connector (EN,5-wire)

**RoHS**

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Change the sealing size	0.1	YFT 2019-9-9



**Notes:**

**Electrical**

1. Rated Voltage: 500V AC;
2. Rated Impulse Voltage: 4000V;
3. Rated Current: 25A;
4. Contact Resistance: ≤5mΩ;
5. Insulation Resistance: ≥500MΩ;

**Mechanical:**

1. Mating Cycle: ≥250;
2. Cable Retention Force: ≥120N;
3. Pin Retention Force: ≥80N;
4. Wire Size: ≤4.0mm<sup>2</sup>;
5. Sealing Size: 14mm;

**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: Copper Alloy, Silver Plating;
3. Sealing Material: Silicone Rubber;
4. Screw Material: Fe Alloy, Zinc Plating

**Others:**

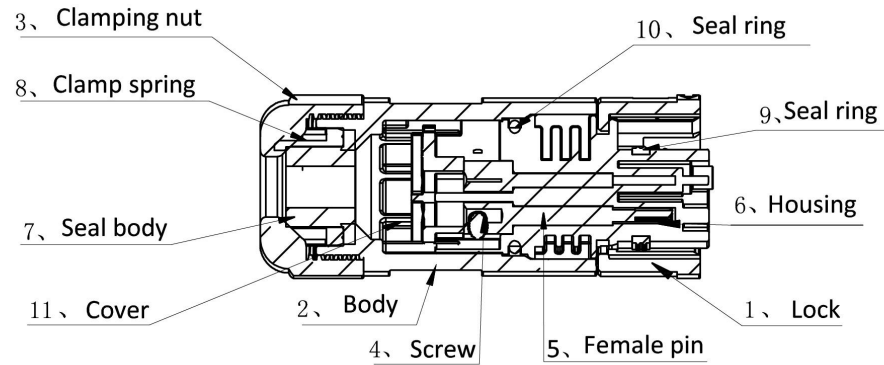
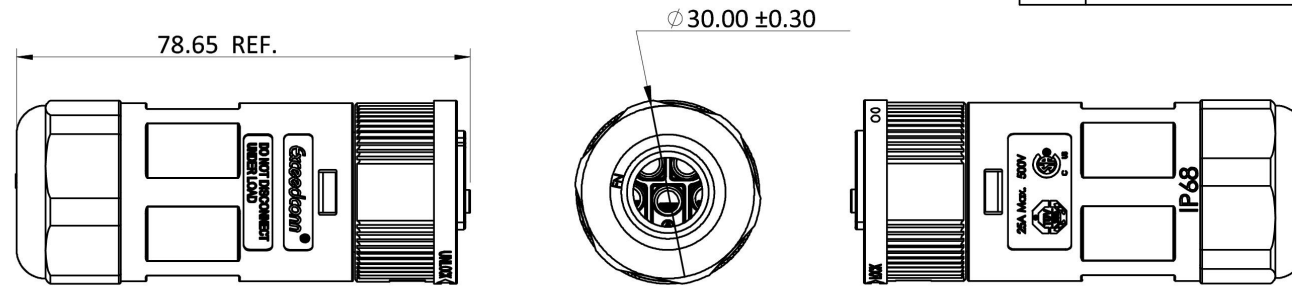
1. Part Number: EN050-1236-00;
2. Packaging: Blank Cartons

TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL		 NAME 25A AC Male Connector (EN,5-wire)
X. : ±0.20	X* : ±2.00°	-		
X. : ±0.10	X* : ±1.00°			
.XX : ±0.05	.XX* : ±0.50°			
.XXX : ±0.03	.XXX* : ±0.30°			DRAWING NO.
DWN.	UNIT mm			-
CHK.	SHEET -- OF --	REV.	0.0	

2300812032\_25A AC Female Connector (EN,5-wire)

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Change the sealing size	0.1	YFT 2019-9-9



**Notes:**

**Electrical**

1. Rated Voltage: 500V AC;
2. Rated Impulse Voltage: 4000V;
3. Rated Current: 25A;
4. Contact Resistance: ≤5mΩ;
5. Insulation Resistance: ≥1000MΩ;

**Mechanical:**

1. Mating Cycle: ≥250;
2. Cable Retention Force: ≥120N;
3. Pin Retention Force: ≥80N;
4. Wire Size: ≤4.0mm<sup>2</sup>;
5. Sealing Size: 14mm;

**Environmental:**

1. Waterproof Rate: IP68 1m24H;
2. Application Temperature: -40°C~+85°C;
3. Flaming Level: UL94-V0;

**Material:**

1. Plastic Material: PC&PBT(f1)
2. Pin: Copper Alloy, Silver Plating;
3. Sealing Material: Silicone Rubber;
4. Screw Material: Fe Alloy, Zin Plating

**Others:**

1. Part Number: EN050-2236-00;
2. Packaging: Blank Cartons

TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL	
X: ±0.20	X*: ±2.00°	-	
.X: ±0.10	.X*: ±1.00°		
.XX: ±0.05	.XX*: ±0.50°		
.XXX: ±0.03	.XXX*: ±0.30°		
DWN.			
CHK.	SHEET	OF	REV. 0.0



NAME  
25A AC Female Connector  
(EN,5-wire)

DRAWING NO.

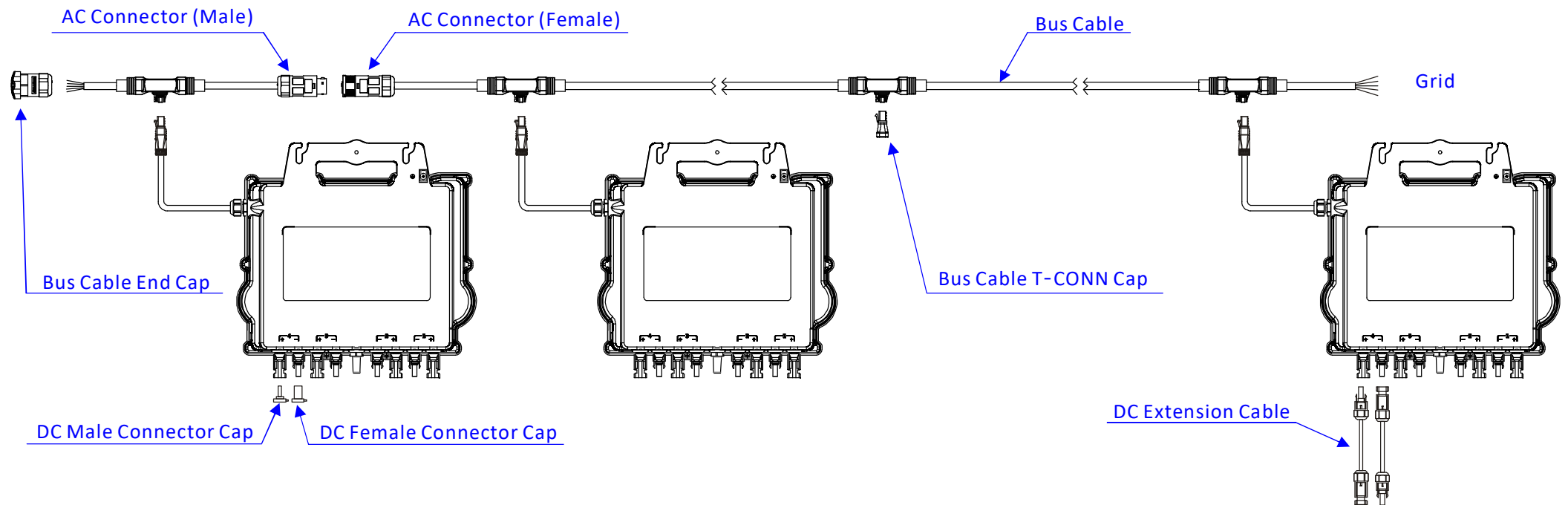
systems  
systems EMEA  
Bourg, France

emea.APsystems.com

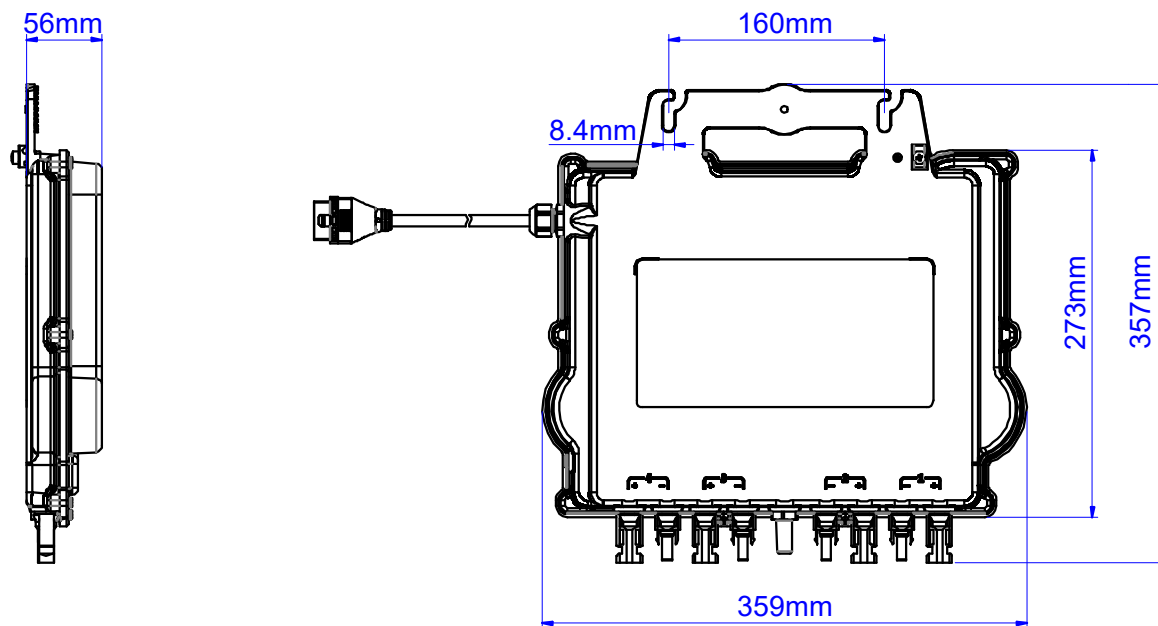


## QT2D Accessories

### 1. Wiring Diagram



## 2. QT2D Dimensions



### 3. Accessories Summary

Region	Accessories							
	Bus Cable (Mandatory)	Bus Cable End Cap (Mandatory)	Bus Cable T-CONN Cap (Optional)	DC Male Connector Cap (Optional)	DC Female Connector Cap (Optional)	AC Connector (Male) (Optional)	AC Connector (Female) (Optional)	DC Extension Cable (Optional)
<b>Europe</b> -EU (122056)	2322900902_3-phase 5C Bus Cable (2.5mm <sup>2</sup> ,H07,4.6m) (See Pic. A)	2062050005_5-wire Bus Cable End Cap (See Pic. B)	2061252032_5-wire Bus Cable T-CONN Cap (See Pic. C)	2060401006_DC Male Connector Cap (MC4) (See Pic. D)	2060402006_DC Female Connector Cap (MC4) (See Pic. E)	2300711032_25A AC Male Connector (EN,5-wire) (See Pic. F)	2300812032_25A AC Female Connector (EN,5-wire) (See Pic. G)	2310310274_1m DC Extension Cable (MC4) 2310360214_2m DC Extension Cable (MC4) 2310360224_3m DC Extension Cable (MC4) 2310370236_4m DC Extension Cable (MC4) 2310370246_6m DC Extension Cable (MC4) (See Pic. H)

#### 4. Physical Picture

Bus Cable	Bus Cable End Cap	Bus Cable Y-CONN Cap	DC Male Connector Cap	DC Female Connector Cap	AC Connector (Male)
 <p data-bbox="210 722 275 746">Pic. A</p>	 <p data-bbox="557 722 622 746">Pic. B</p>	 <p data-bbox="904 722 969 746">Pic. C</p>	 <p data-bbox="1249 722 1314 746">Pic. D</p>	 <p data-bbox="1597 722 1662 746">Pic. E</p>	 <p data-bbox="1946 722 2011 746">Pic. F</p>
AC Connector (Female)	DC Extension Cable				
 <p data-bbox="210 1142 275 1166">Pic. G</p>	 <p data-bbox="557 1142 622 1166">Pic. H</p>				

## 5. Accessories information

2322900902\_3-phase 5C Bus Cable (2.5mm<sup>2</sup>,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:**

- CABLE: 5C×2.5mm<sup>2</sup> H07RN-F, VDE certification, UV resistance.  
CABLE MARKING: <VDE> 40015173 H07RN-F 5G2.5mm<sup>2</sup> 450/750V RECHEER
- Dielectric withstand voltage test: DC 4000V, leakage current 5mA, duration 60s;
- Contact resistance: ≤20mΩ;
- Insulation resistance: ≥500MΩ;
- Wiring: BROWN--L1, BLACK--L2, GRAY--L3, BLUE--N, YELLOW/GREEN--PE;

**Mechanical property:**

- Insert and draw frequency: ≥50 times;

**Environmental performance:**

- Waterproof rating: IP67;
- Environmental requirements: comply with RoHS requirements;

**Others:**

- A series of bus cable contains 24T, each connector spacing is 4700mm;
- The 200N-60S tension at the t connector does not affect electrical and waterproof performance;
- The surface has no abrasion, scratches, deformation and other defects.
- 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

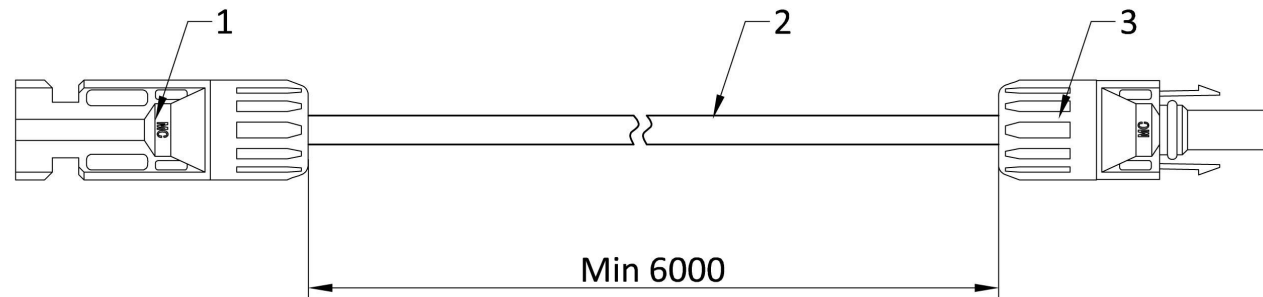
**NAME**  
3-phase 5C Bus Cable  
(2.5mm<sup>2</sup>,H07,4.6m)

**DRAWING NO.**

2310370246\_6m DC Extension Cable (MC4)



RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



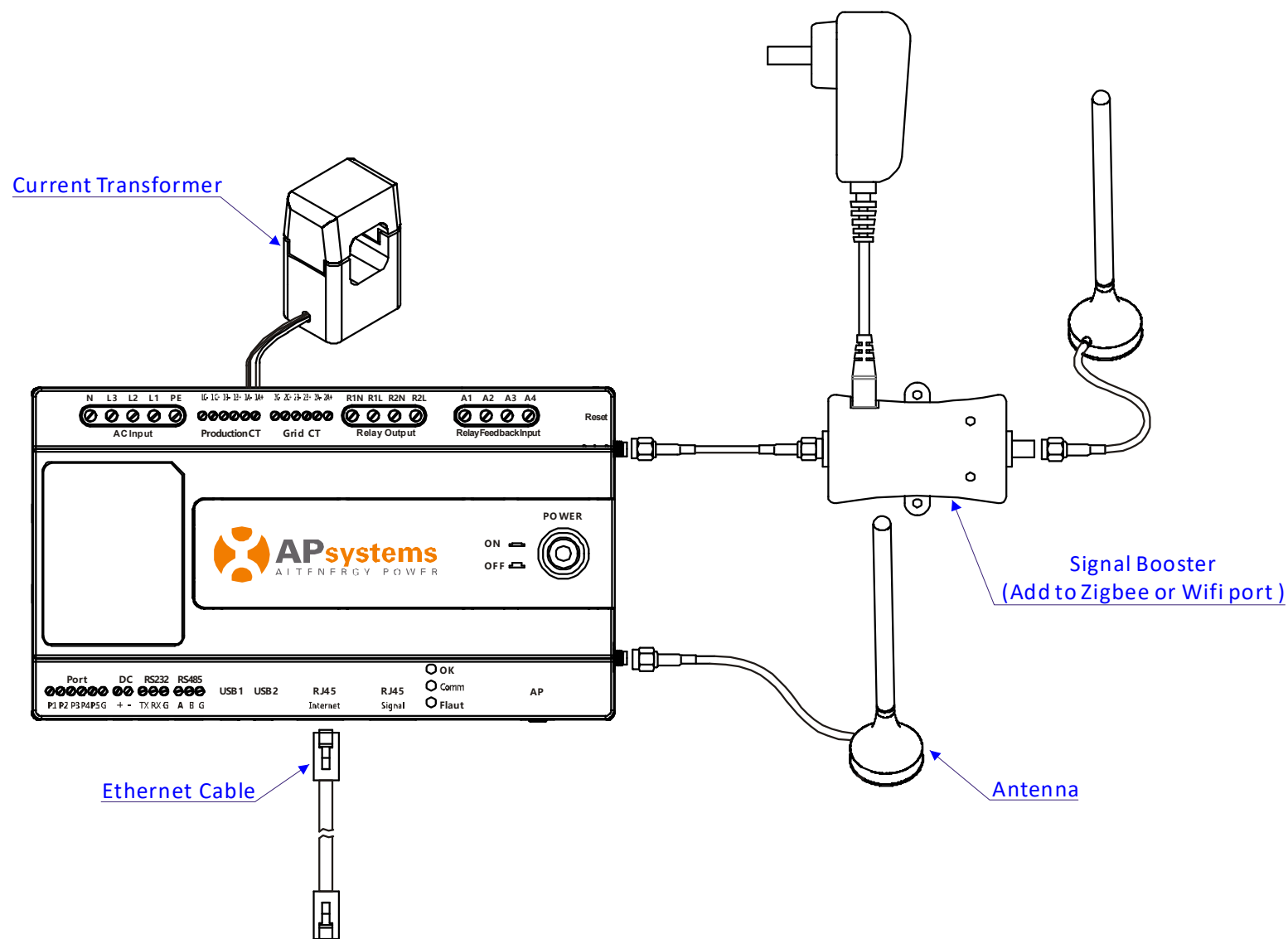
3	DC Connector (female)	MC4 PV-KBT4/6II		1	Female, STAUBLI	
2	DC Cable	H1Z2Z2-K /PV wire		1	4.0mm <sup>2</sup> /12AWG, TUV/UL certification	
1	DC Connector (male)	MC4 PV-KST4/6II		1	Male, STAUBLI	

- 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.

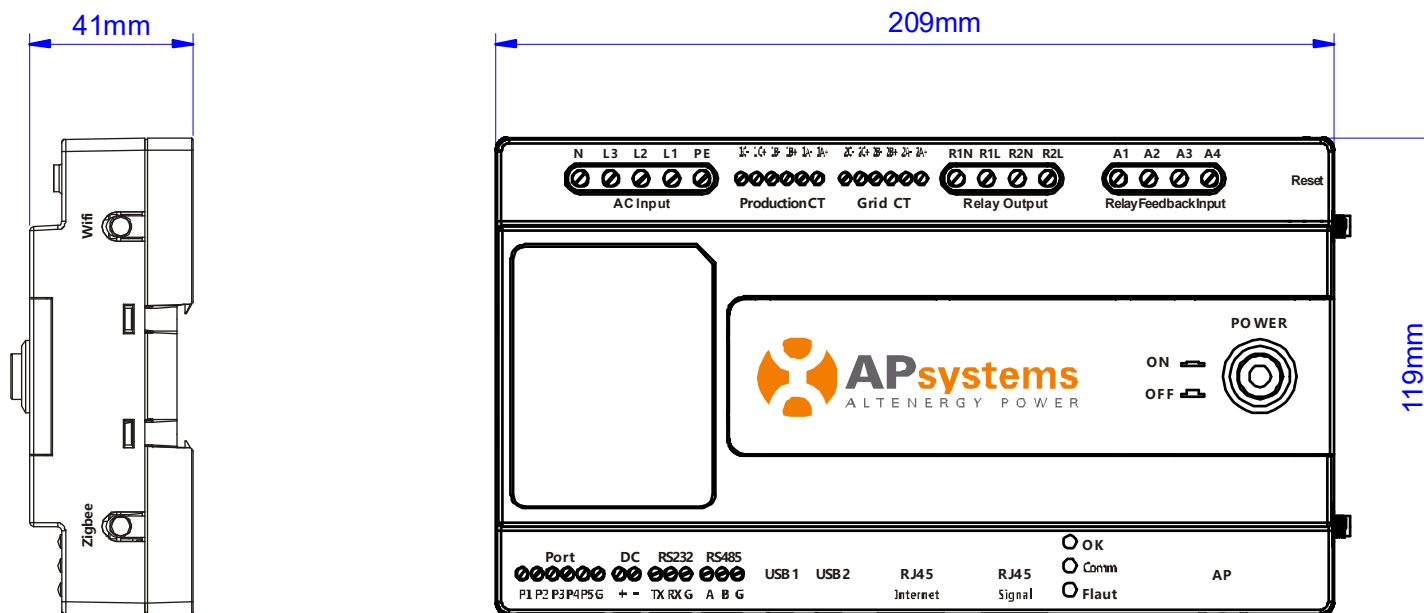
NO.	NAME	TYPE	MAT.	QTY.	DESCRIPTION	REMARK
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL				
>0-100	±5	>2500-3500	±45	 NAME 6m DC Extension Cable (MC4) DRAWING NO.		
>100-500	±10	>3500-4500	±50			
>500-900	±15	>4500-5500	±65			
>900-1300	±25	>5500-6500	±80			
>1300-1800	±30	>6500-8000	±90			
>1800-2500	±35	>8000-10000	±100			
DWN.	UNIT	mm		REV.	0.0	
CHK.	SHEET	OF	--	REV.	0.0	

## ECU-C Accessories

### 1. Wiring Diagram



## 2. ECU-C Dimensions








## 3. Accessories Summary

Region	Accessories			
	Antenna (Supply)	Ethernet Cable (Supply)	Current Transformer (Optional)	Signal Booster (Optional)
Europe -EU (205018)	Sucker Antenna (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

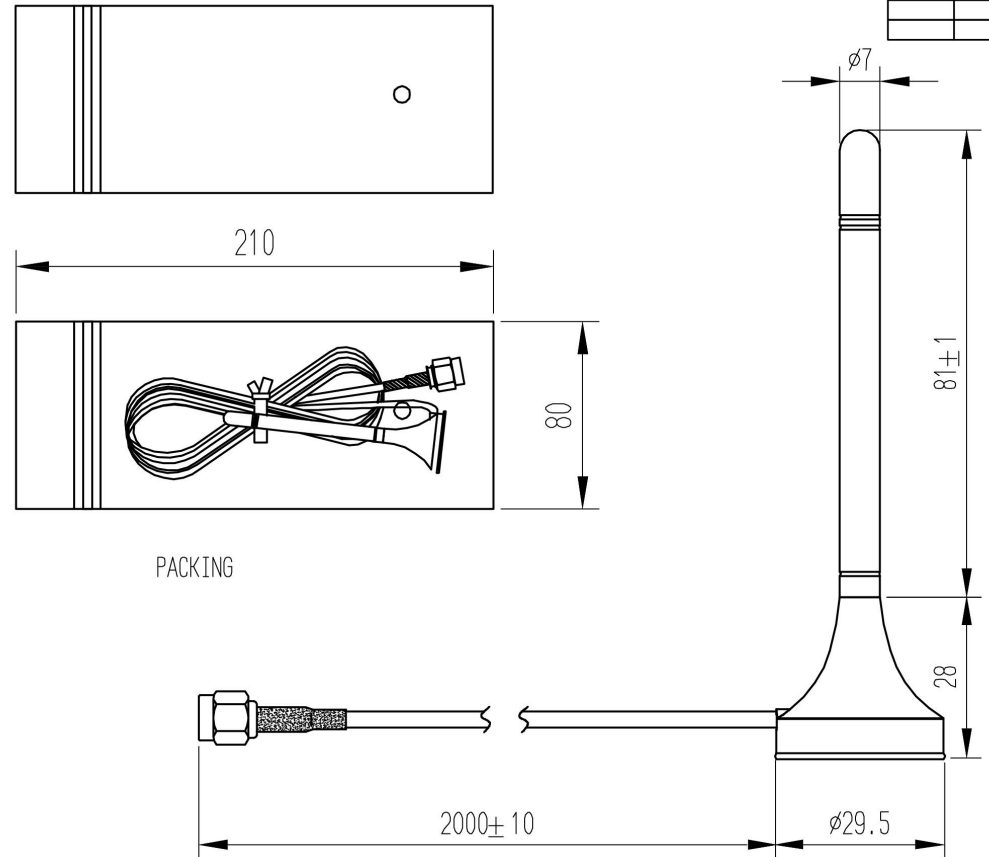
Antenna	Ethernet Cable	Current Transformer		Signal Booster
 <p data-bbox="286 774 358 798">Pic. A</p>	 <p data-bbox="696 774 768 798">Pic. B</p>	 <p data-bbox="1099 774 1171 798">Pic. C</p>	 <p data-bbox="1496 774 1568 798">Pic. D</p>	 <p data-bbox="1906 774 1977 798">Pic. E</p>

5. Accessories information

Sucker Antenna

RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE




PACKING

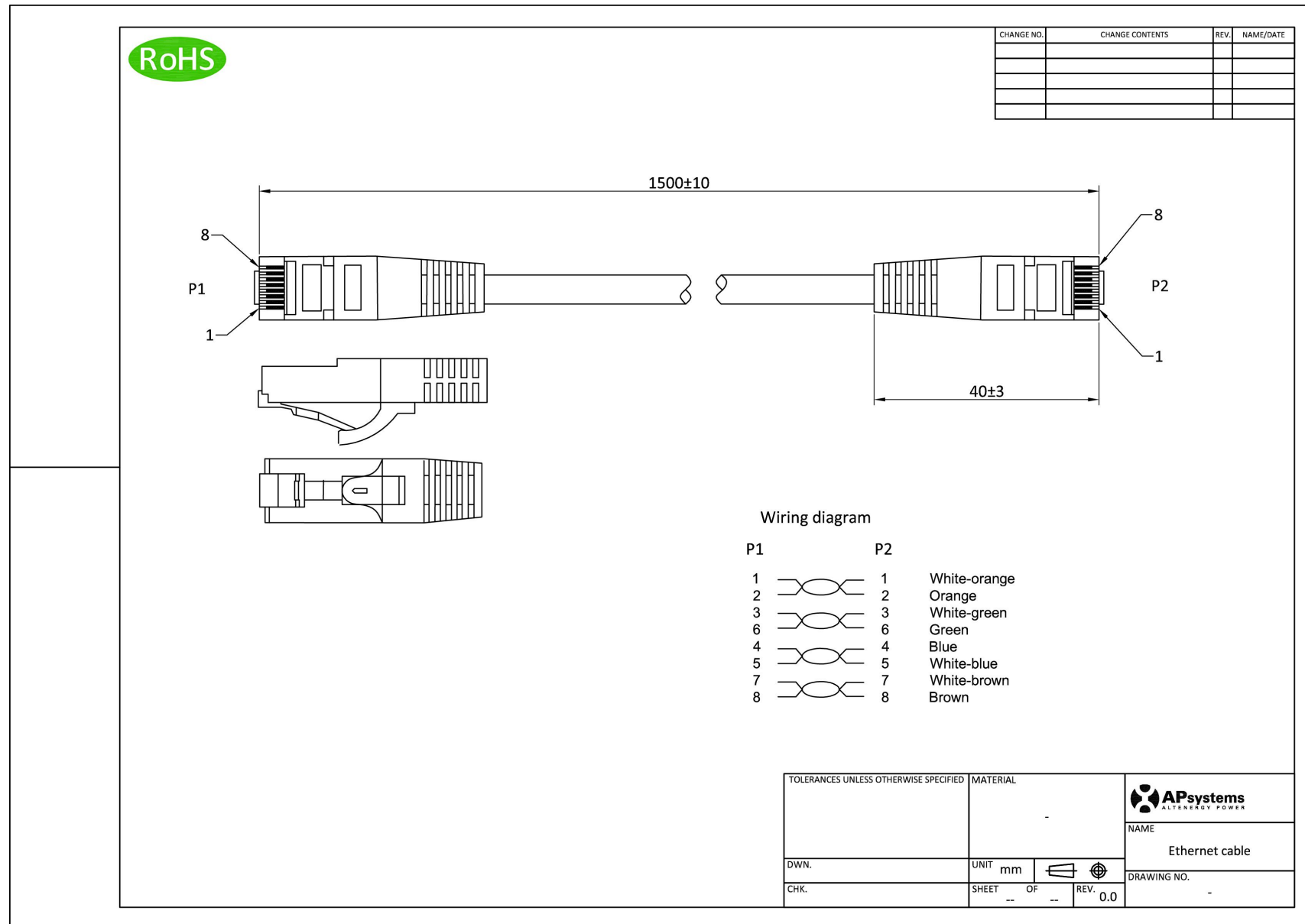
**Notes:**

1. Operating Frequency: 2.4GHz;
2. V.S.W.R: <2 (250mm-RG174 cable, SMA-C-J1.5);
3. Output impedance: 50 OHM;
4. Operating Temperature Range: -20~85°C;
5. Storage Temperature Range: -40~90°C

TOLERANCES UNLESS OTHERWISE SPECIFIED	MATERIAL

	
NAME Sucker Antenna	
DWN.	UNIT mm
CHK.	SHEET -- OF -- REV. 0.0
DRAWING NO. -	

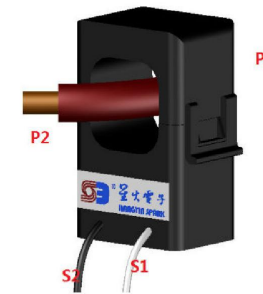
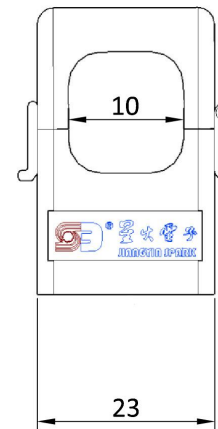
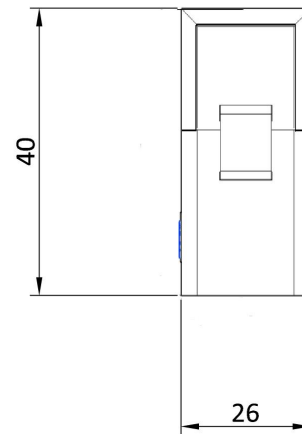
### Ethernet cable



18083020112\_Current Transformer (80A/26.6mA)




RoHS

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE

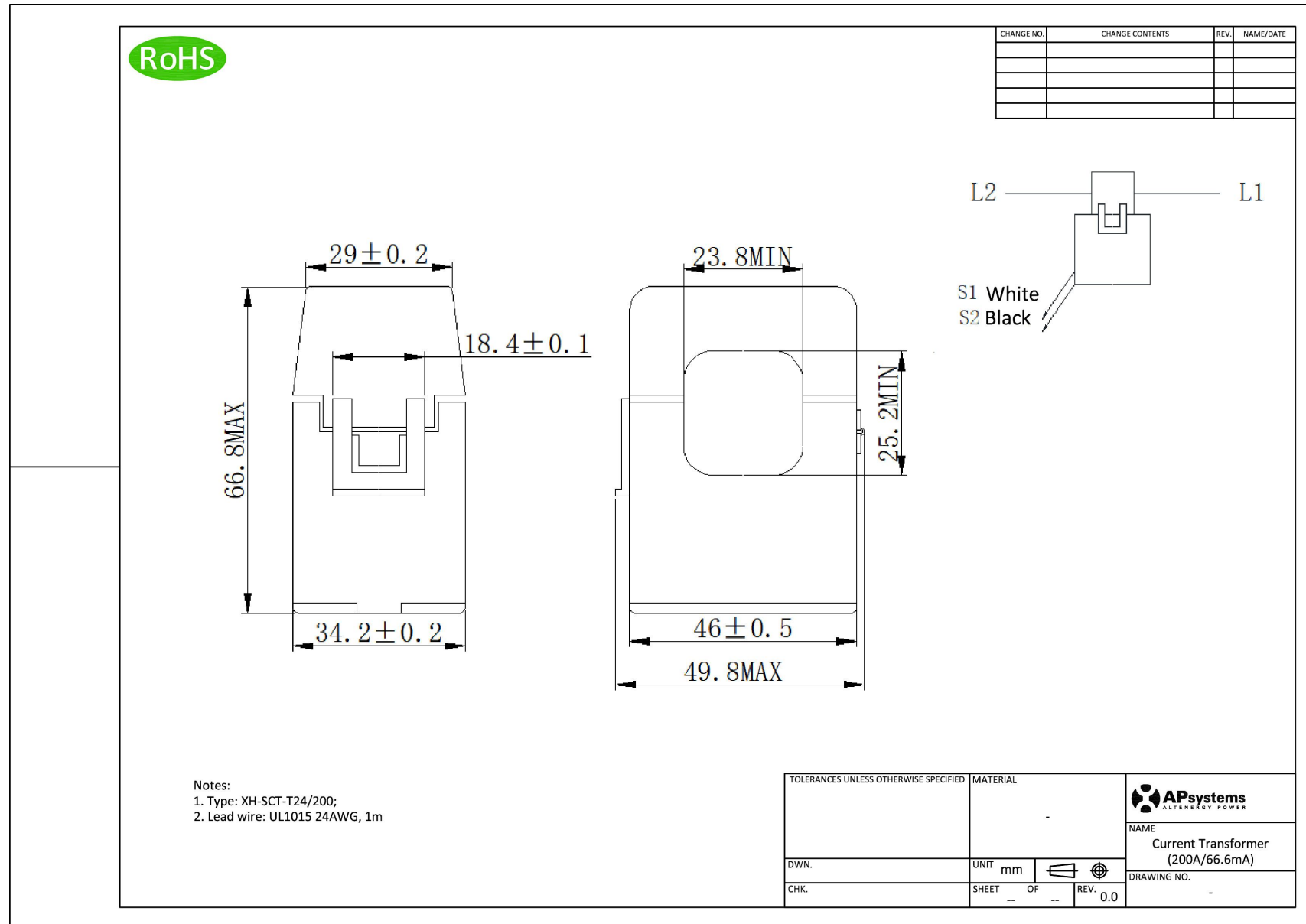


SCT-T10		
Input current(A)	Turn ratio(T)	output voltage(mV)
5-80	1000-3000 Recommended value 3000	333-5000 Recommended value 333

- 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

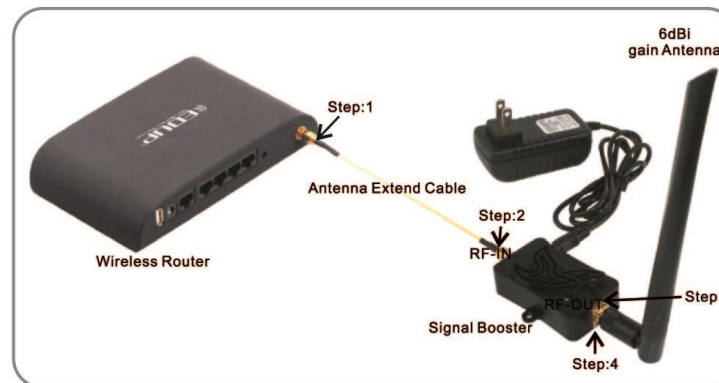
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL		 NAME Current Transformer (80A/26.6mA)	
DWN.	UNIT mm			DRAWING NO.	
CHK.	SHEET -- OF --	REV. 0.0	-		

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



Seep1:Remove the Antenna from the wireless Router (Access Point)

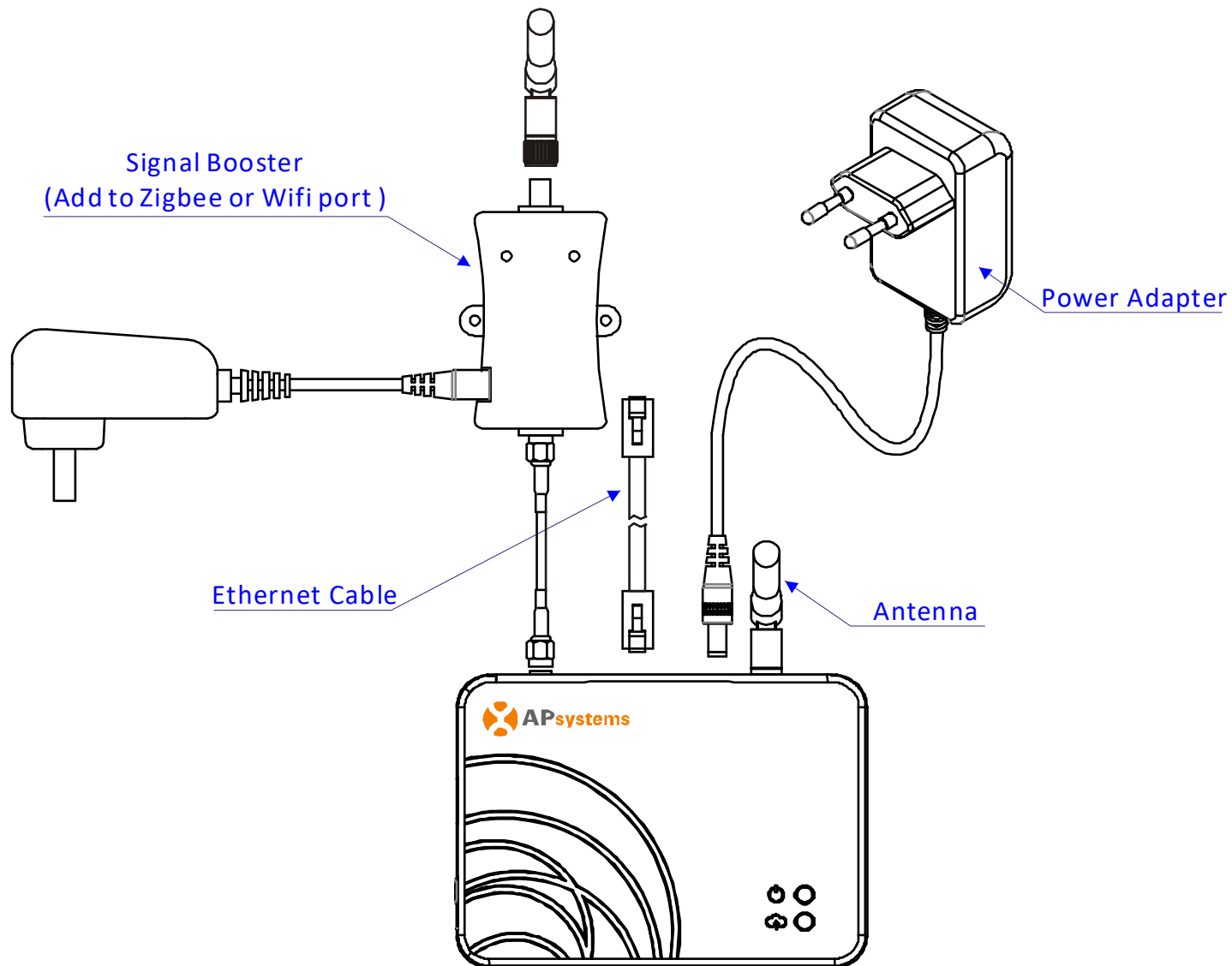
Seep2:Use cable to connect the Booster and AP;

Seep3:Connect the Anerrna to the other end of Booster

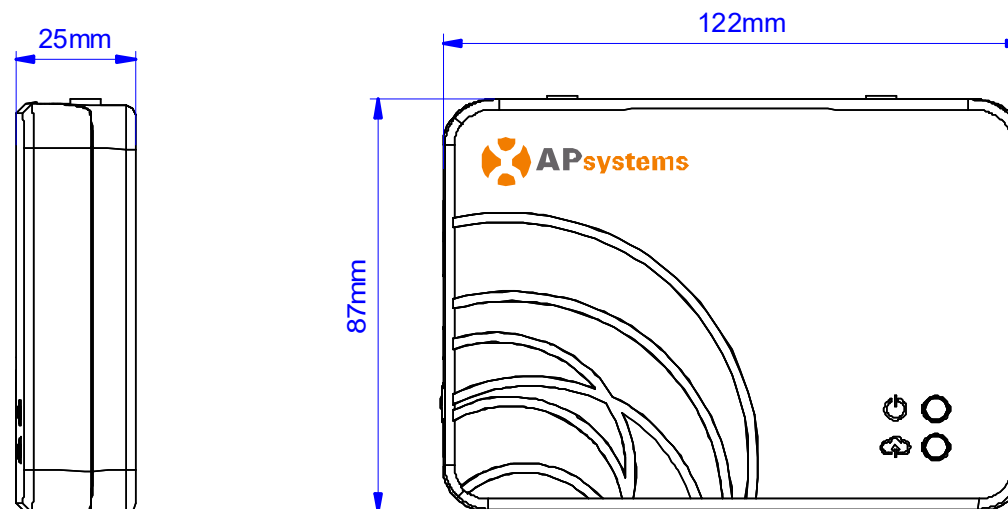
Seep4:Plug in the Power Adapter

## ECU-R Accessories

### 1. Wiring Diagram



## 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

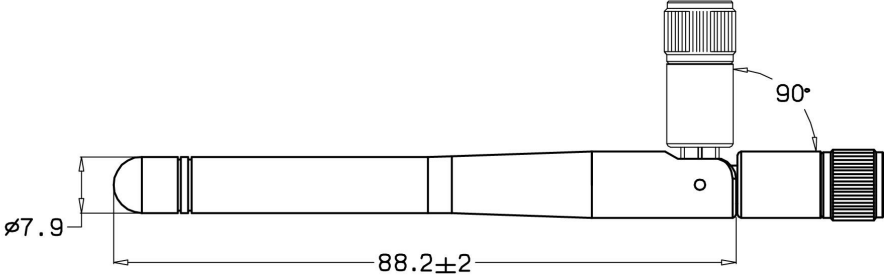
Antenna	Ethernet Cable	Power Adapter	Signal Booster
 <p data-bbox="309 751 376 775">Pic. A</p>	 <p data-bbox="748 751 815 775">Pic. B</p>	 <p data-bbox="1184 751 1252 775">Pic. C</p>	 <p data-bbox="1626 751 1693 775">Pic. D</p>

5. Accessories information

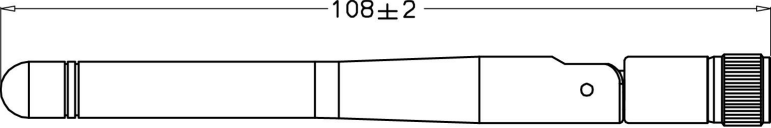
Antenna

RoHS


CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE




$\phi 7.9$        $88.2 \pm 2$        $90^\circ$



$108 \pm 2$





Male pin



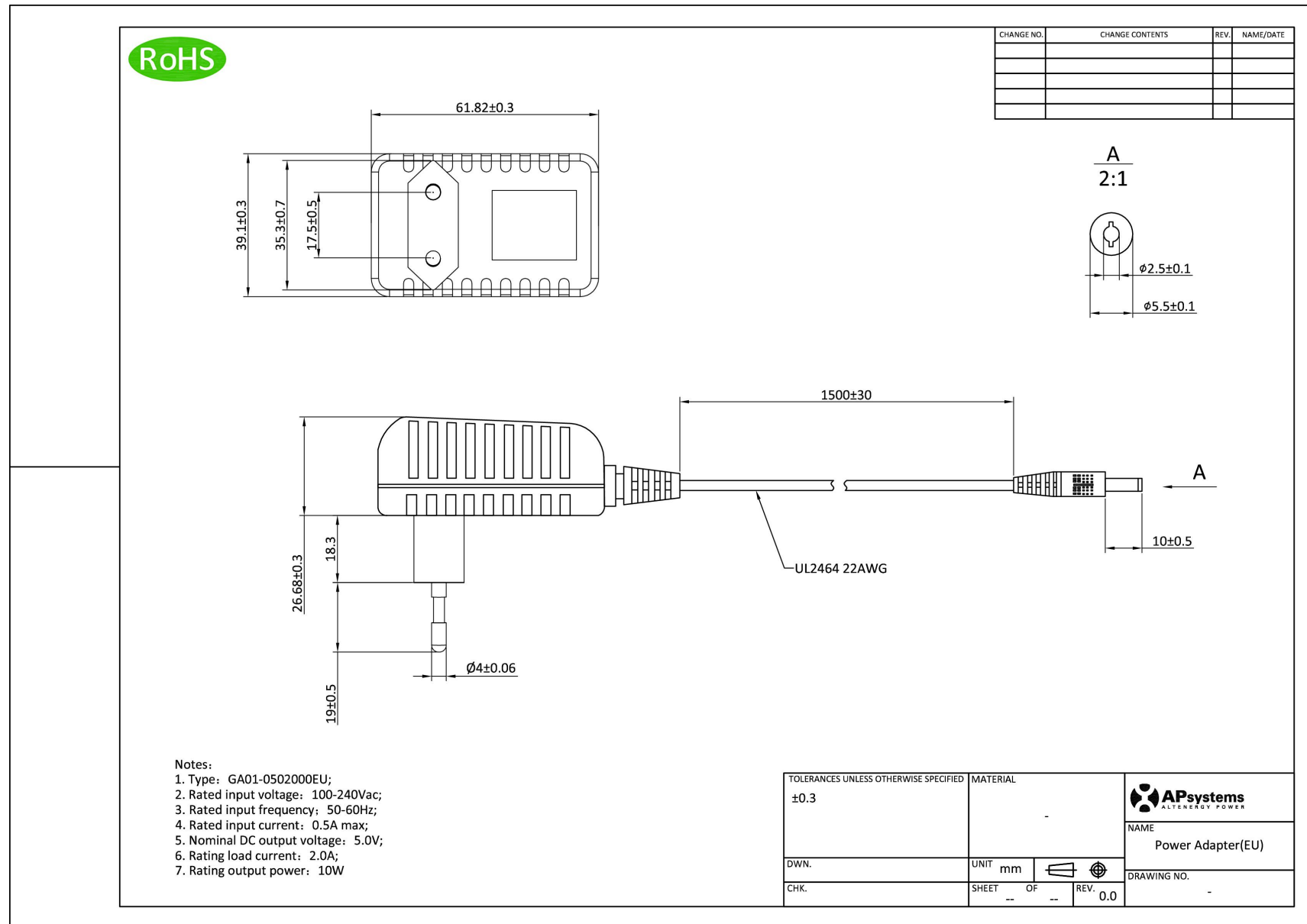
$\phi 10$

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

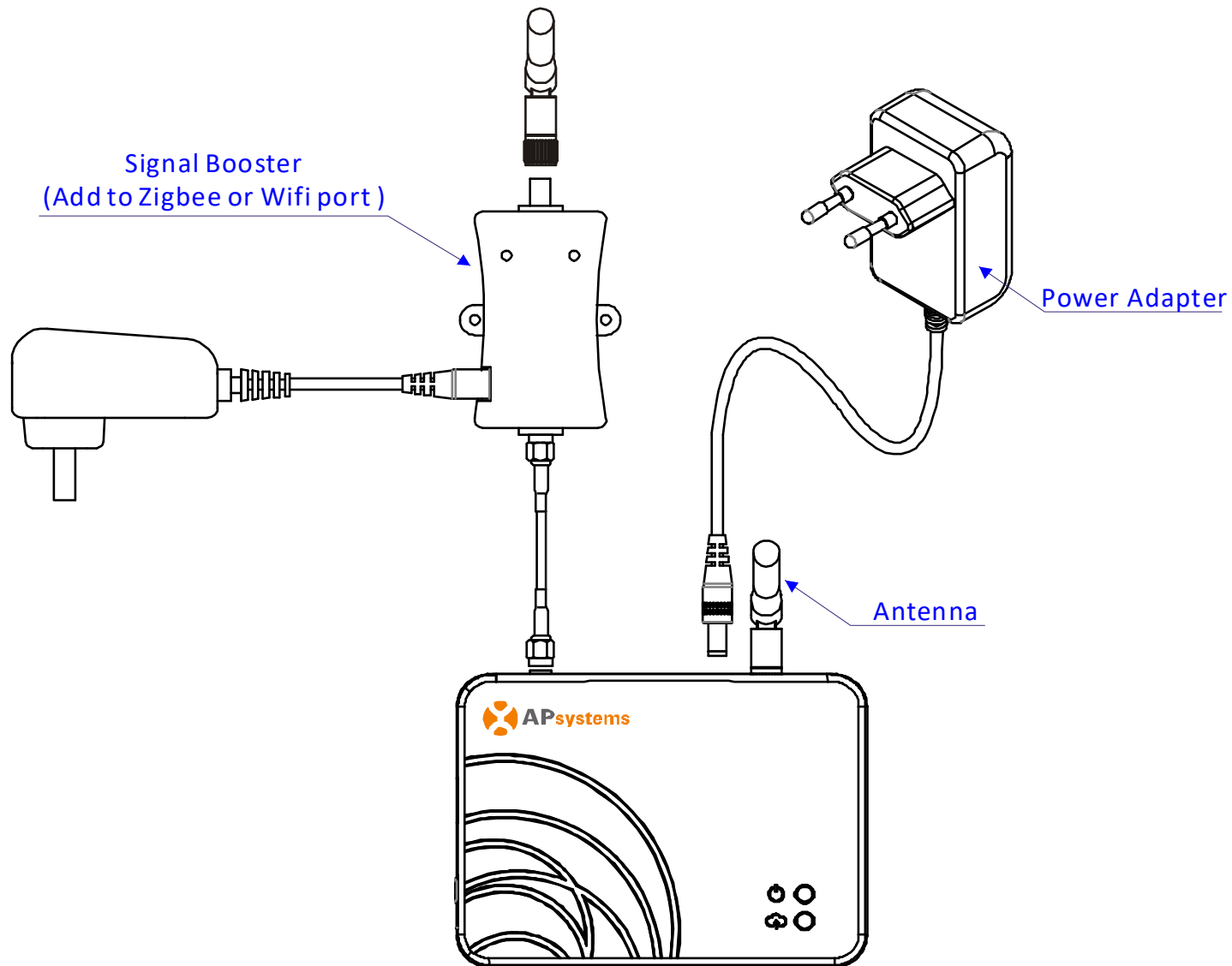
TOLERANCES UNLESS OTHERWISE SPECIFIED			MATERIAL	
0~1	±0.1	ANGLES:	 NAME Antenna DRAWING NO. -	
1~10	±0.3	x° ±1°		
10~30	±0.8	x.x° ±0.5°		
30~100	±1			
100~300	±2			
DWN.	UNIT	mm		
CHK.	SHEET	OF		

Power Adapter (EU)

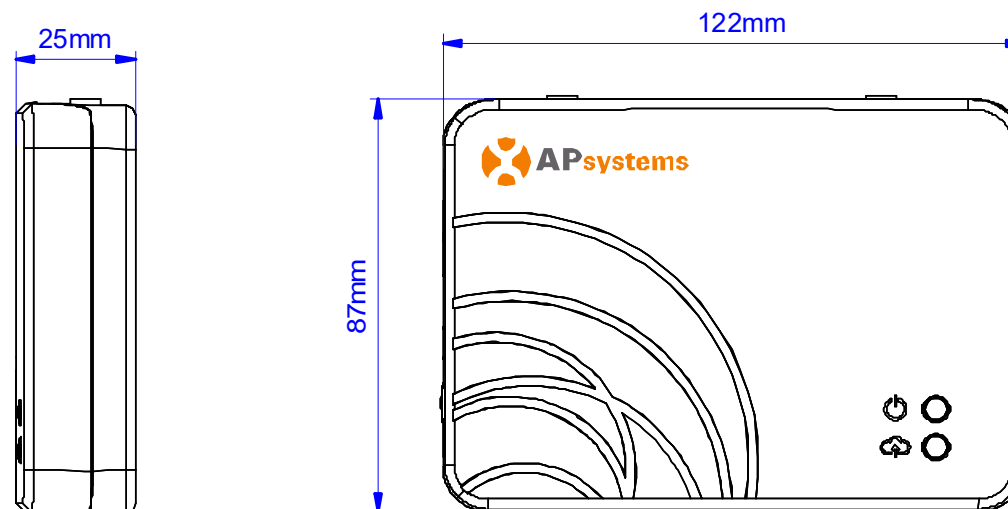


## ECU-B Accessories

### 1. Wiring Diagram



## 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="353 751 421 775">Pic. A</p>	 <p data-bbox="887 751 954 775">Pic. B</p>	 <p data-bbox="1413 751 1480 775">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
<b>Compile: Fanting</b>		<b>Date: 2022-12-08</b>
<b>Audit: Tianxing</b>		<b>Date: 2022-12-08</b>