



APsystems DS&QS&QT&ECU(EMEA) Accessories EN

Rev 1.7

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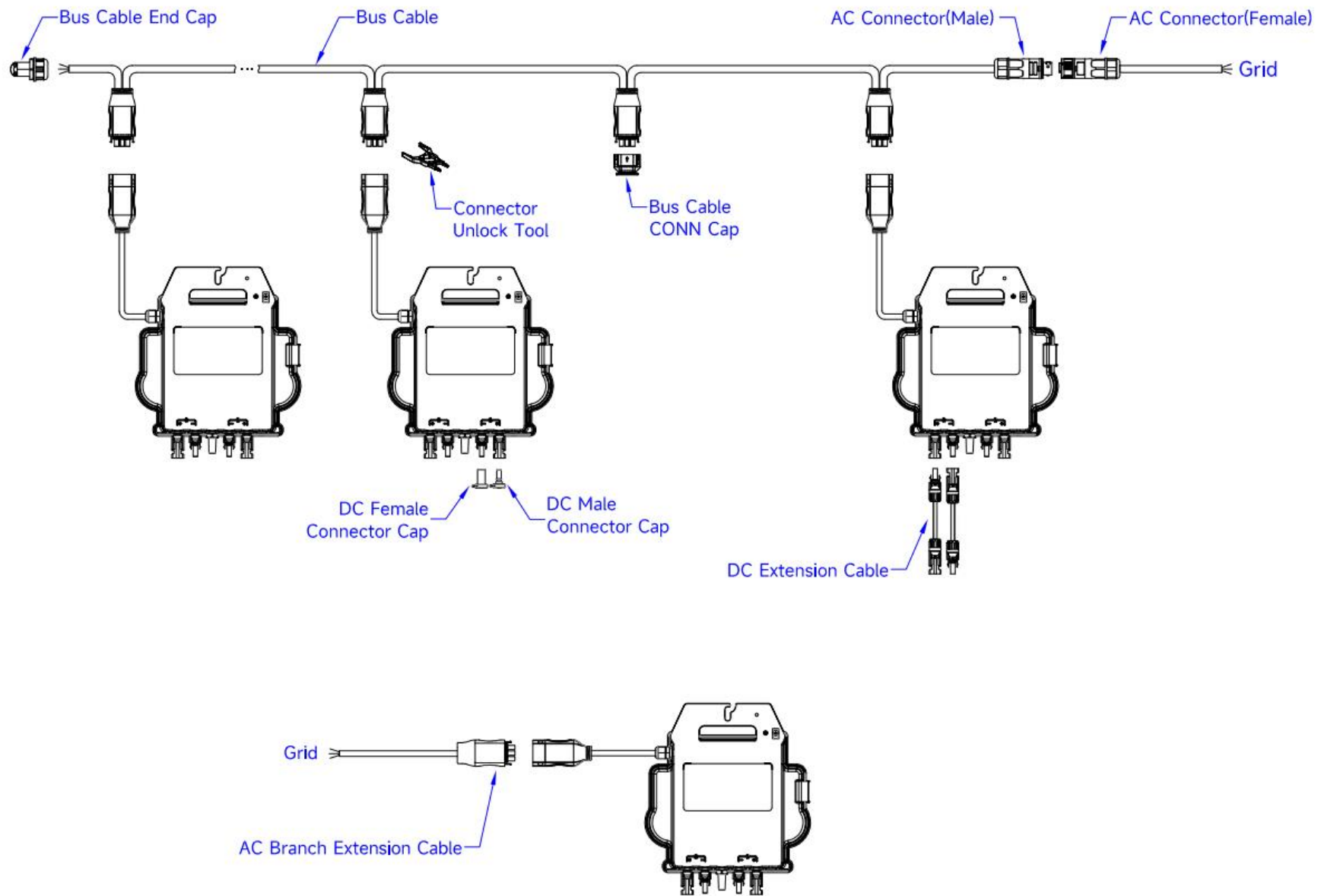
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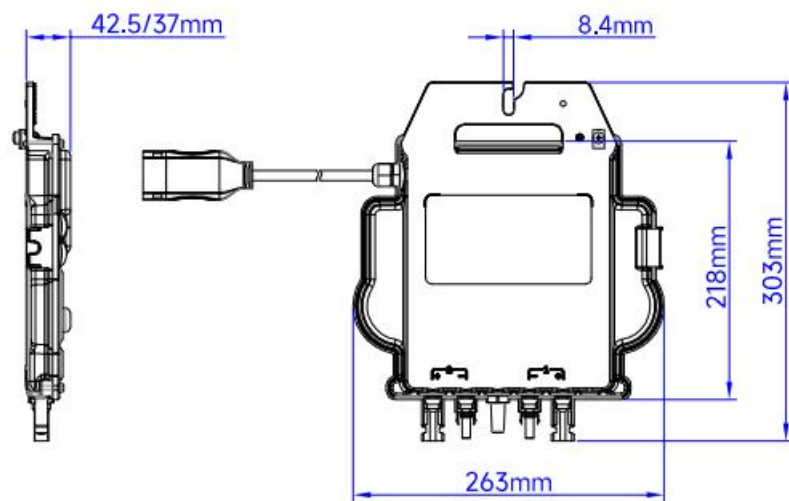
DS3 Series Accessories

1. Wiring Diagram

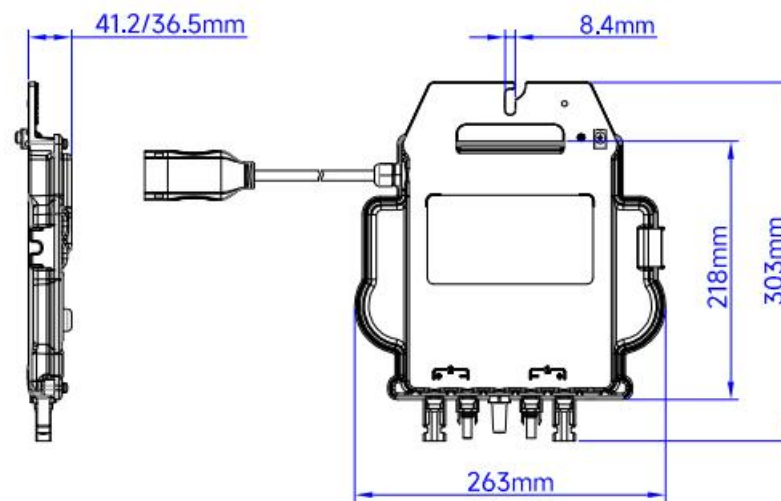


2. Dimensions

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 CONN Cap (Optional)	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: 117018 -L-EU: 118018 -S-EU: 119018 -H-EU: 120018 -M-EU: 126018	2322304903_Single Phase Bus Cable (2.5mm ² , H07,2m)	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)	2355000003_ Y3-DC Connector 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)

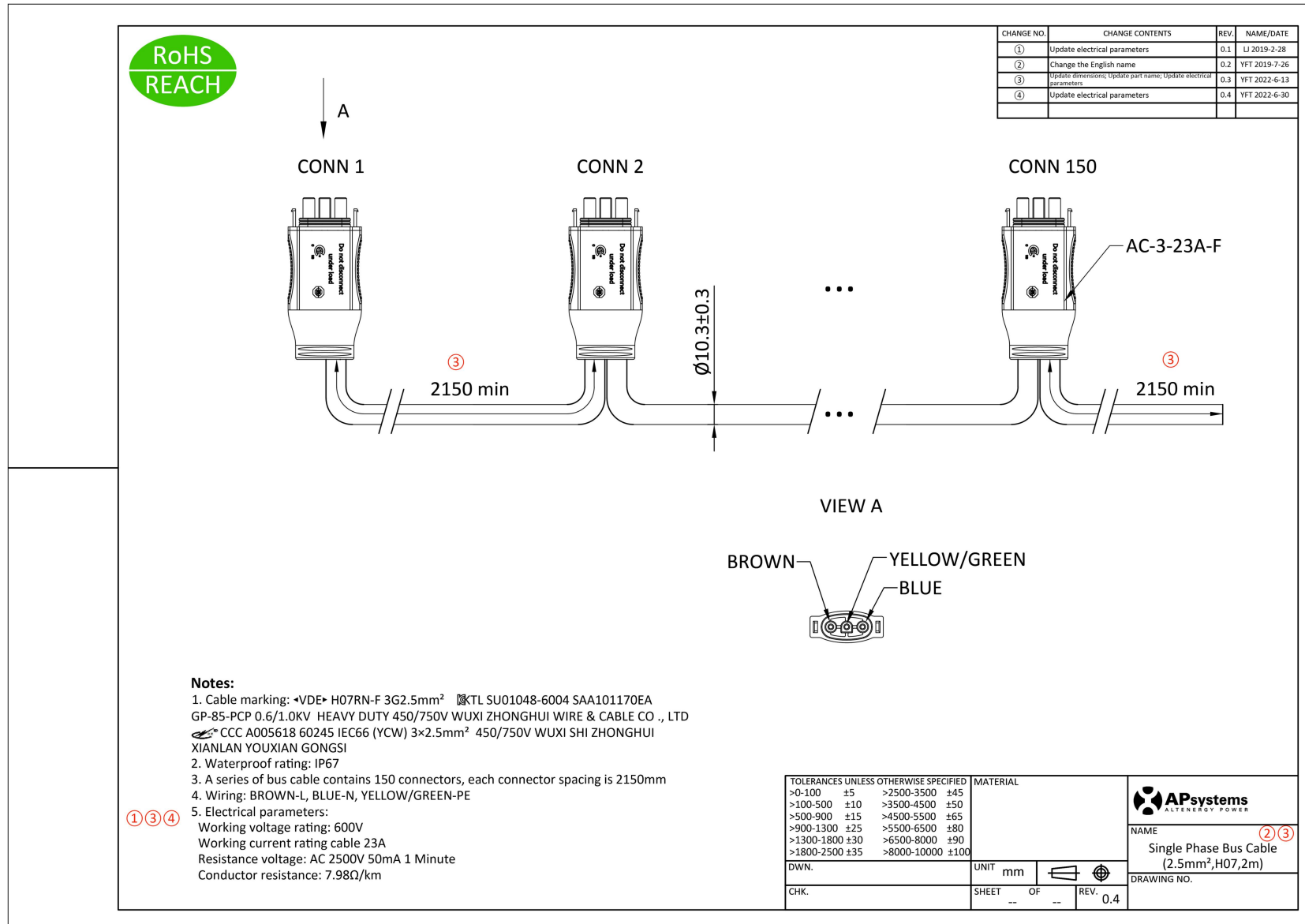
Notes: The cables in this table are recommended by APsystems, and the O.D. and length of the cable can be customized according to customer needs.

4. Physical Picture

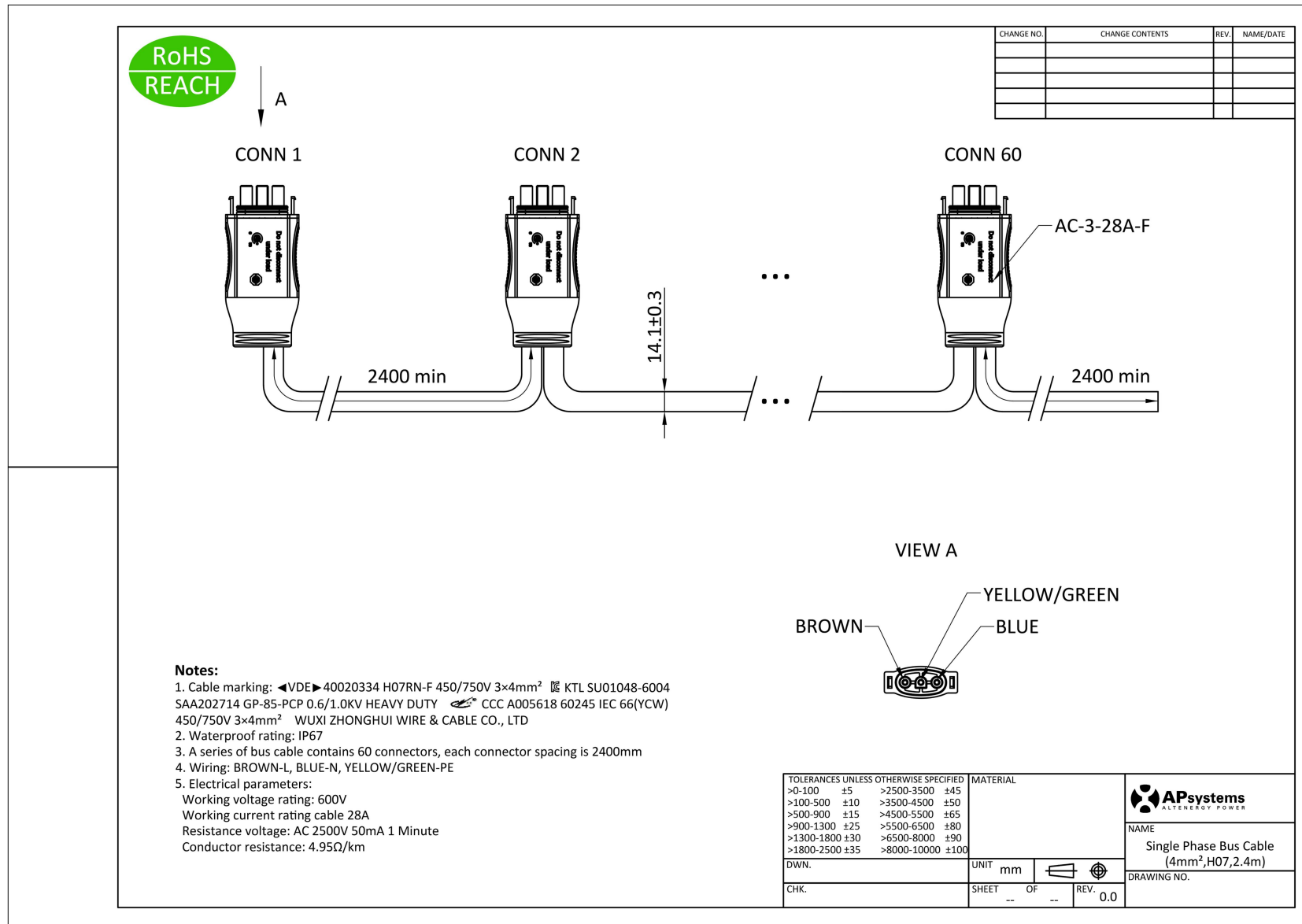
Bus Cable	AC Branch Extension Cable	Bus Cable End Cap	Bus Cable CONN Cap	Connector Unlock Tool	DC Male Connector Cap
 <p data-bbox="199 632 271 655">Pic. A</p>	 <p data-bbox="546 632 618 655">Pic. B</p>	 <p data-bbox="893 632 965 655">Pic. C</p>	 <p data-bbox="1240 632 1312 655">Pic. D</p>	 <p data-bbox="1588 632 1659 655">Pic. E</p>	 <p data-bbox="1935 632 2007 655">Pic. F</p>
DC Female Connector Cap	AC Connector (Male)	AC Connector (Female)	DC Extension Cable		
 <p data-bbox="199 1050 271 1074">Pic. G</p>	 <p data-bbox="546 1050 618 1074">Pic. H</p>	 <p data-bbox="893 1050 965 1074">Pic. I</p>	 <p data-bbox="1240 1050 1312 1074">Pic. J</p>		

5. Accessories information

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



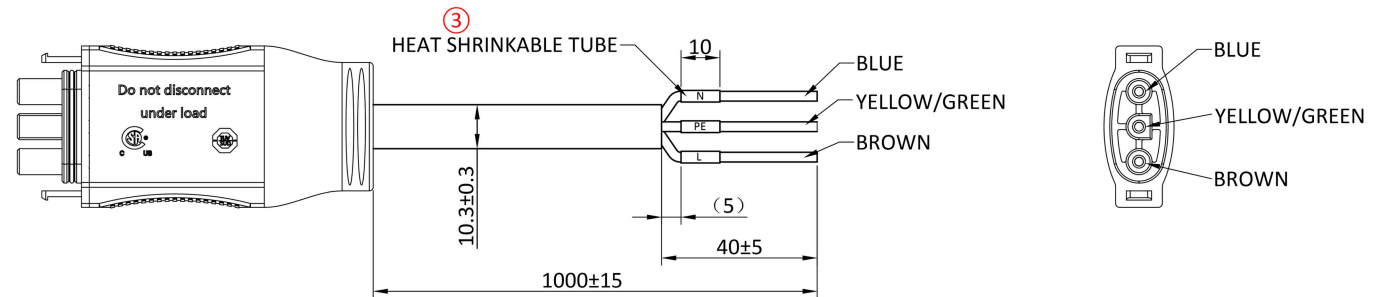
2322601403_Single Phase Bus Cable (4mm², H07,2.4m)



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

① ④ ⑤

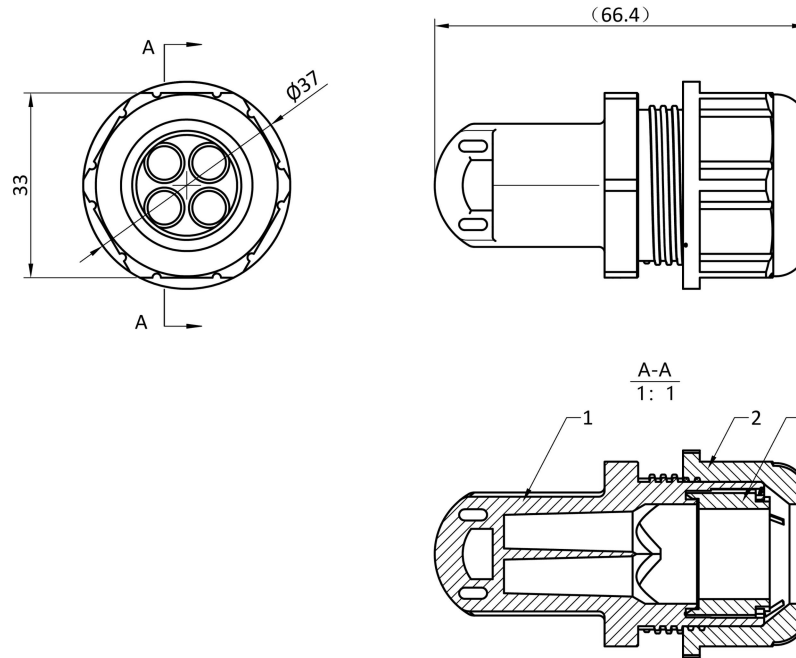
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL	
>0-100	±5	>2500-3500	±45
>100-500	±10	>3500-4500	±50
>500-900	±15	>4500-5500	±65
>900-1300	±25	>5500-6500	±80
>1300-1800	±30	>6500-8000	±90
>1800-2500	±35	>8000-10000	±100

DWN.	UNIT	mm	
CHK.	SHEET	OF	REV. 0.5

NAME
Single Phase Br. ② ④ Ext-Cable(2.5mm ² ,1m)
DRAWING NO.



2060700017_ 3-wire Bus Cable End Cap

RoHS
REACH



CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Change the name	0.2	ZZH 2023-6-9

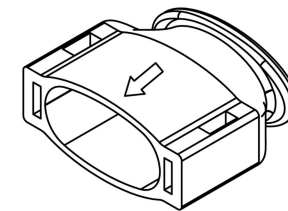
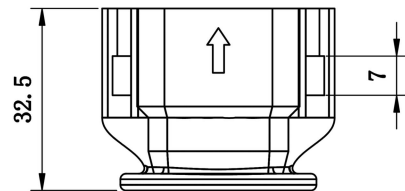
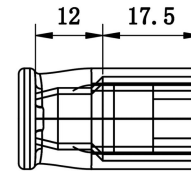
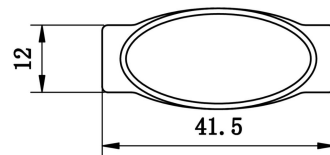
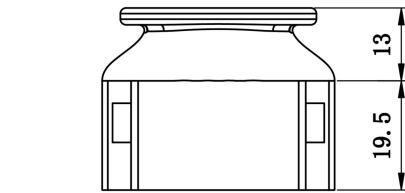
- Notes:
 1. Cable Size: 10~16mm;
 2. Nut Torque: 3.0~5.0N·m;
 3. Waterproof Rating: IP68;
 4. Operating Temperature Range: -40~105°C;

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 ① 3-wire Bus Cable End Cap		
CHK.	SHEET -- OF --	REV. 2.1	DRAWING NO. -		



2061702007_Bus Cable Y-CONN Cap



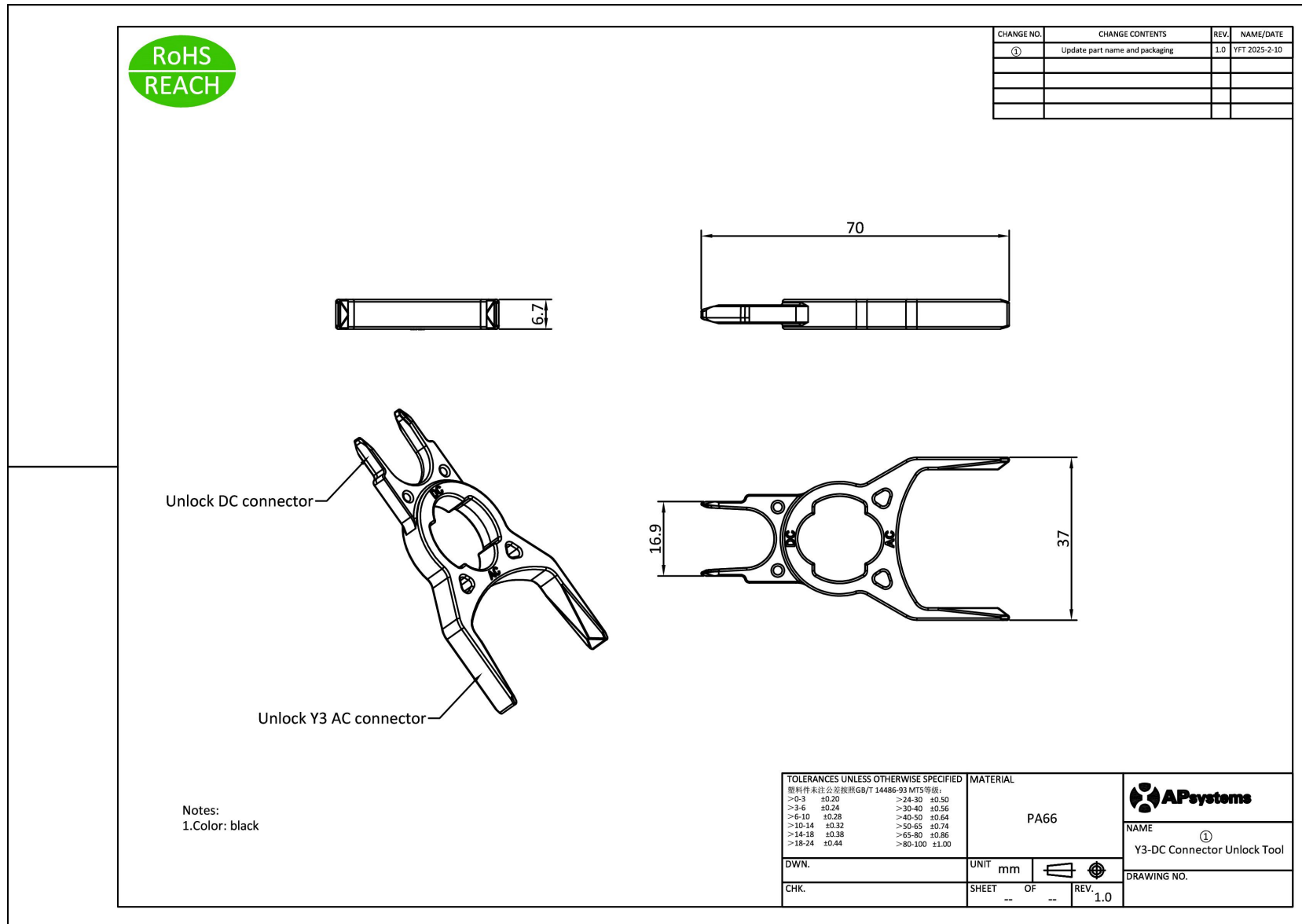
CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



Notes:
1. Type: DUO0050

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

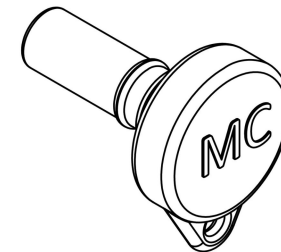
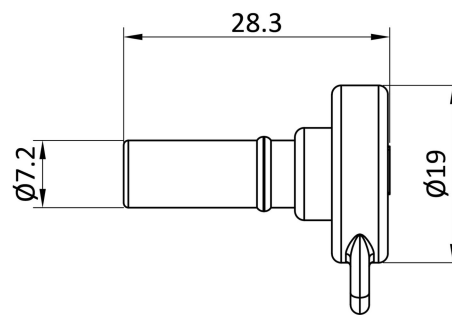
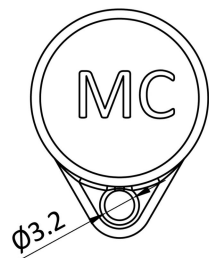
235500003_Y3-DC Connector Unlock Tool




2060401006_DC Male Connector Cap (MC4)

RoHS
REACH

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



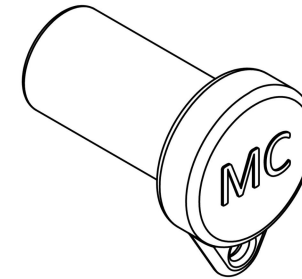
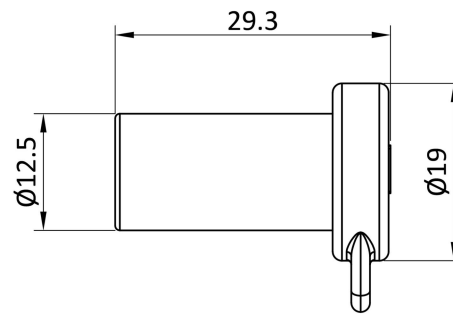
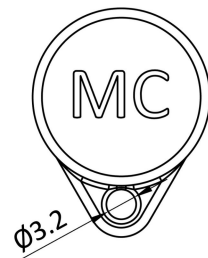
Notes:
1. Type: PV-SVK4;
2. Degree of protection: IP67;

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


2060402006_DC Female Connector Cap (MC4)

**RoHS
REACH**

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



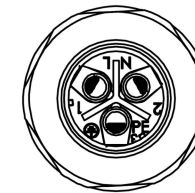
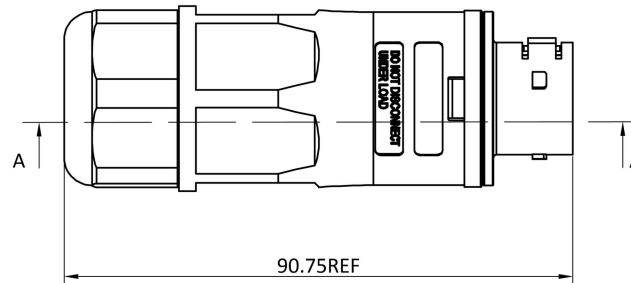
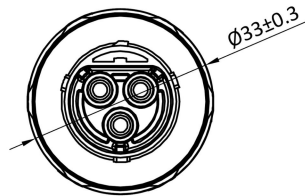
Notes:
 1. Type: PV-BVK4;
 2. Degree of protection: IP67;

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

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

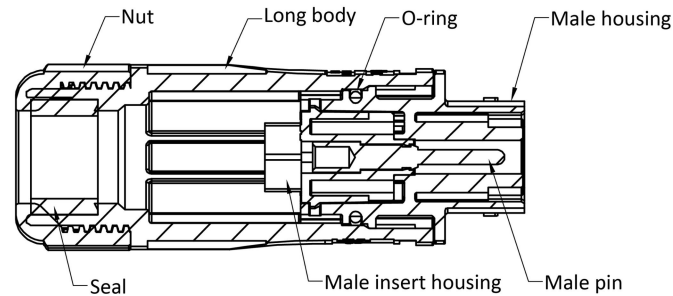


CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Add seal; update Cable O.D; update current; update name	1.0	YFT 2022-8-9



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: $\leq 5\text{m}\Omega$;
5. Insulation Resistance: $\geq 500\text{M}\Omega$;

Mechanical:

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

Environmental:

1. Waterproof Rate: IP68 1m24H;
2. Application Temperature: $-40^\circ\text{C} \sim +105^\circ\text{C}$;
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:

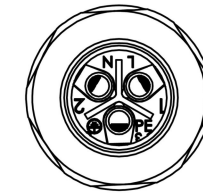
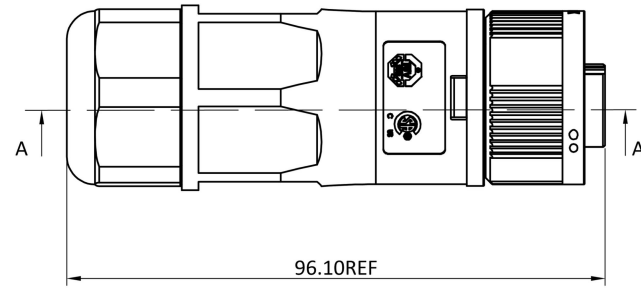
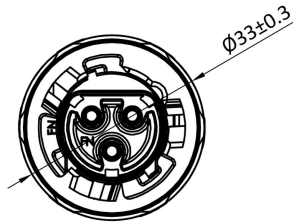
1. Type : EN034-2103-101;

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

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

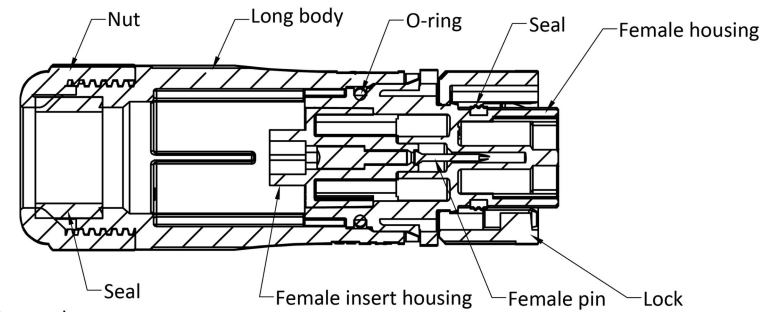
**RoHS
REACH**

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: $\leq 5\text{m}\Omega$;
5. Insulation Resistance: $\geq 500\text{M}\Omega$;

Mechanical:

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

Environmental:

1. Waterproof Rate: IP68 1m24H;
2. Application Temperature: $-40^\circ\text{C} \sim +105^\circ\text{C}$;
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:

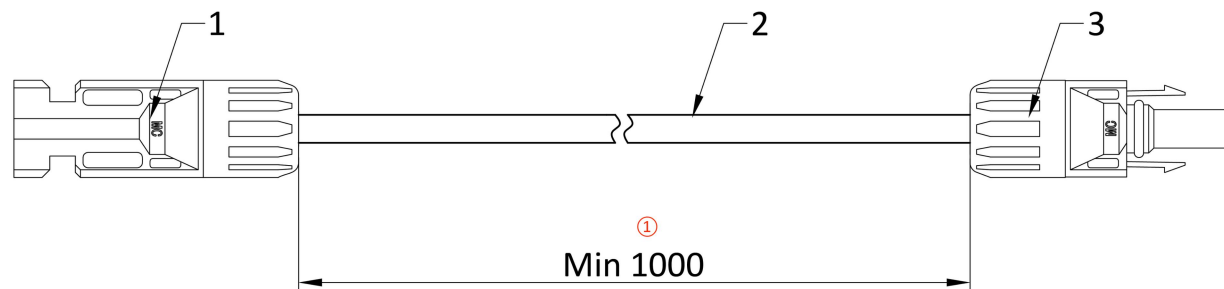
1. Type: EN034-2203-101;

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

2310310274_1m DC Extension Cable (MC4)




CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Update cable type; Update dimensions	0.1	YFT 2022-9-14



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

Notes:

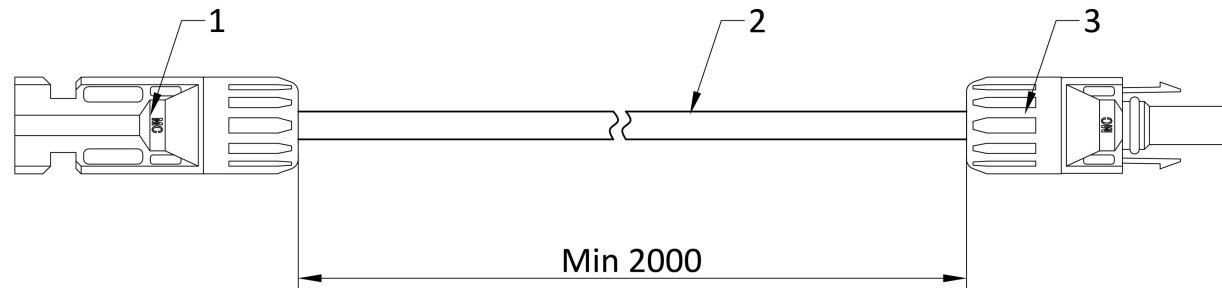
1. The DC cable and connector connect firmly, can sustain 100N-60s tension
2. The pin concentric with plastic parts, ensure that there is no contradict phenomenon when male connector inserts into female connector

NO.	NAME	TYPE	MAT.	QTY.	DESCRIPTION	REMARK
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL				
> 0-100	±5	> 2500-3500	±45	 NAME 1m 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. 0.1

2310360214_2m DC Extension Cable (MC4)




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



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

Notes:

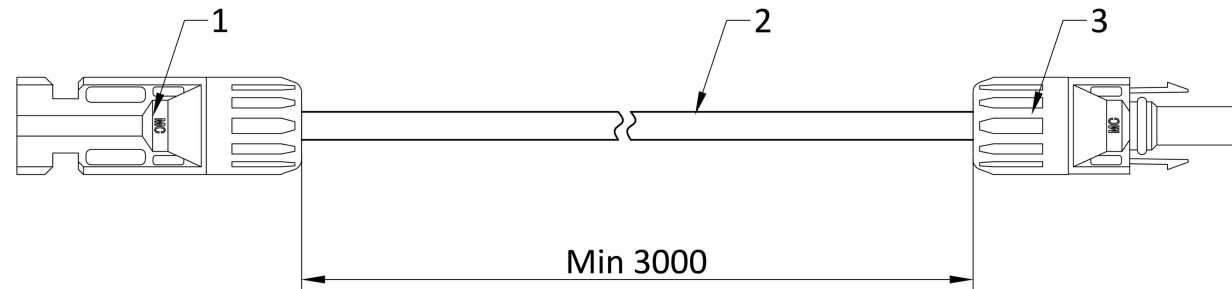
1. The DC cable and connector connect firmly, can sustain 100N-60s tension
2. The pin concentric with plastic parts, ensure that there is no contradict phenomenon when male connector inserts into female connector

NO.	NAME	TYPE	MAT.	QTY.	DESCRIPTION	REMARK
TOLERANCES UNLESS OTHERWISE SPECIFIED						
>0-100	±5	>2500-3500	±45	MATERIAL		
>100-500	±10	>3500-4500	±50	APsystems ALTERNATIVE POWER		
>500-900	±15	>4500-5500	±65	NAME		
>900-1300	±25	>5500-6500	±80	2m DC Extension Cable (MC4)		
>1300-1800	±30	>6500-8000	±90	DRAWING NO.		
>1800-2500	±35	>8000-10000	±100			
DWN.		UNIT	mm			
CHK.		SHEET	--	OF	--	REV. 0.2

2310360224_3m DC Extension Cable (MC4)



CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Add alternative cable	0.1	YFT 2022-9-14



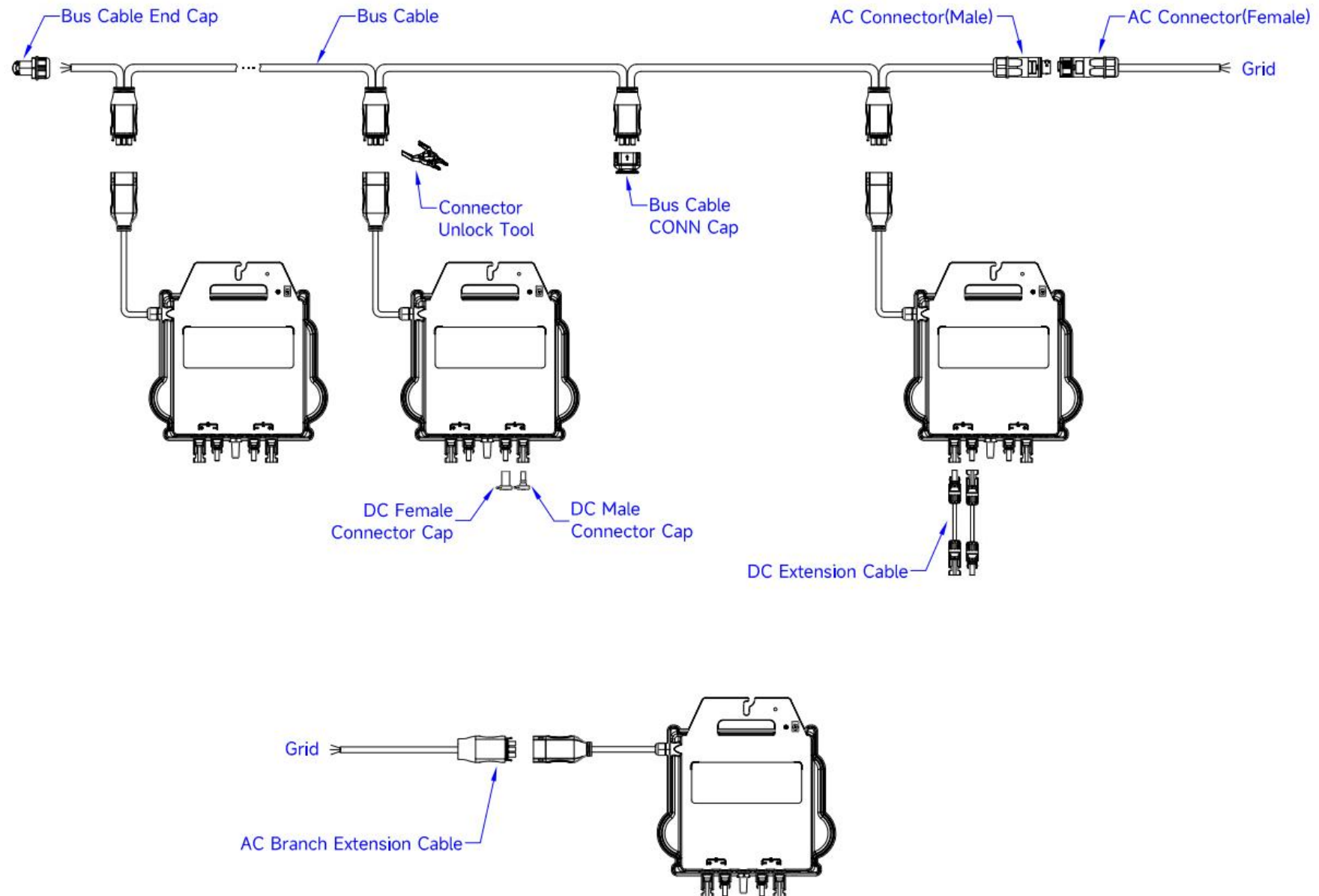
3	DC Connector (female)	MC4 PV-KBT4/6II		1	Female, STAUBLI	
① 2	DC Cable	FLEX-SOL-EVO-DX 4.0		1	4.0mm ² , TUV/UL certification	
		62930 IEC 131/PV		1	4.0mm ² /12AWG, TUV/UL certification	Alternative
1	DC Connector (male)	MC4 PV-KST4/6II		1	Male, STAUBLI	

- 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

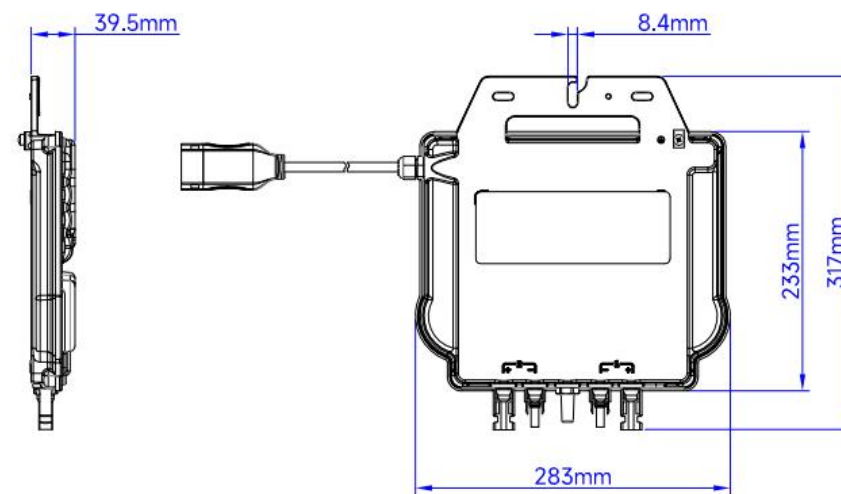
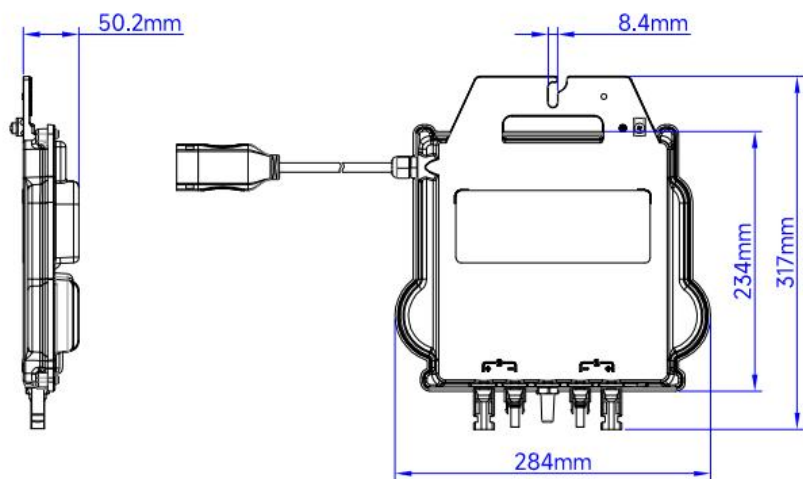
NO.	NAME	TYPE	MAT.	QTY.	DESCRIPTION	REMARK
TOLERANCES UNLESS OTHERWISE SPECIFIED		MATERIAL				
>0-100	±5	>2500-3500	±45	 NAME 3m DC Extension Cable (MC4)		
>100-500	±10	>3500-4500	±50			
>500-900	±15	>4500-5500	±65			
>900-1300	±25	>5500-6500	±80			
>1300-1800	±30	>6500-8000	±90			
>1800-2500	±35	>8000-10000	±100			
DWN.		UNIT	mm		DRAWING NO.	
CHK.		SHEET	OF	REV.	0.1	

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 CONN Cap (Optional)	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: 121018 -L-EU: 125018 -SH-EU: 128018 -H-EU: 138018	2322601403_Single Phase Bus Cable (4mm ² ,H07, 2.4m) 2322304903_Single Phase Bus Cable (2.5mm 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)	2355000003_ Y3-DC Connector 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)

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	Connector Unlock Tool	DC Male Connector Cap
 <p data-bbox="197 544 271 568">Pic. A</p>	 <p data-bbox="546 544 620 568">Pic. B</p>	 <p data-bbox="891 544 965 568">Pic. C</p>	 <p data-bbox="1240 544 1314 568">Pic. D</p>	 <p data-bbox="1585 544 1659 568">Pic. E</p>	 <p data-bbox="1935 544 2009 568">Pic. F</p>
DC Female Connector Cap	AC Connector (Male)	AC Connector (Female)	DC Extension Cable		
 <p data-bbox="197 963 271 987">Pic. G</p>	 <p data-bbox="546 963 620 987">Pic. H</p>	 <p data-bbox="891 963 965 987">Pic. I</p>	 <p data-bbox="1240 963 1314 987">Pic. J</p>		

5. Accessories information

2310370236_4m DC Extension Cable (MC4)

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Add alternative cable	0.1	YFT 2022-9-14

Notes:

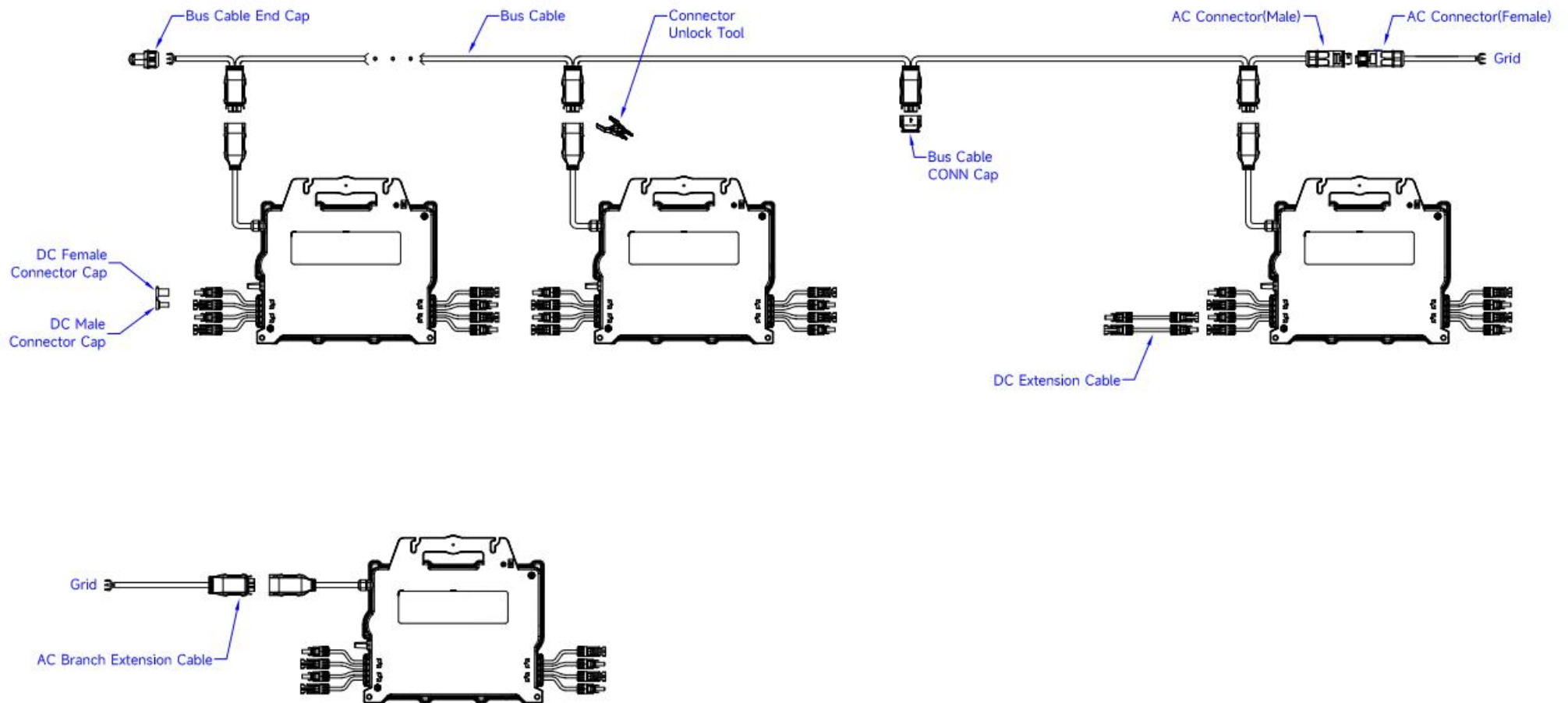
- The DC cable and connector connect firmly, can sustain 100N-60s tension
- The pin concentric with plastic parts, ensure that there is no contradict phenomenon when male connector inserts into female connector

3	DC Connector (female)	MC4 PV-KBT4/6II		1	Female, STAUBLI	
①	DC Cable	FLEX-SOL-EVO-DX 4.0		1	4.0mm ² , TUV/UL certification	
		62930 IEC 131/PV		1	4.0mm ² /12AWG, TUV/UL certification	Alternative
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		DRAWING NO.		
CHK.	SHEET	OF	REV.	0.1		

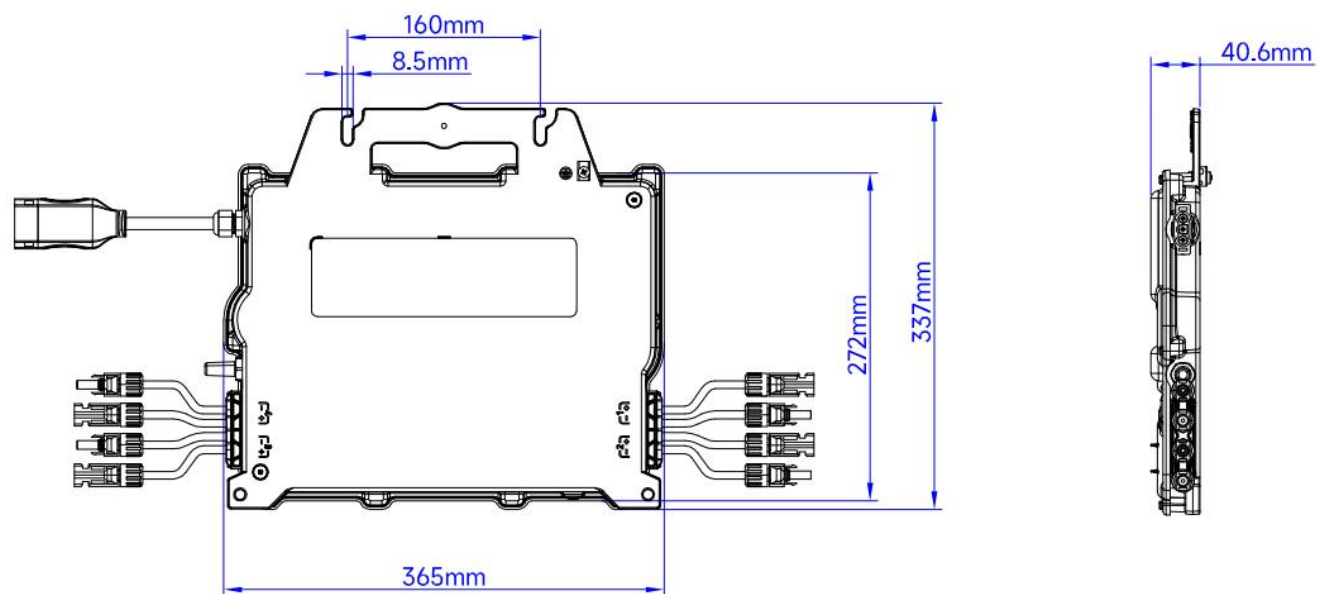
NAME
4m DC Extension Cable (MC4)

QS2 Accessories

1. Wiring Diagram



2. QS2 Dimensions



3. Accessories Summary

Region	Accessories									
	Bus Cable (Mandatory)	AC Branch Extension Cable (Optional)	Bus Cable End Cap (Mandatory)	Bus Cable CONN Cap (Optional)	Y3-DC 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: 139211	2322304903_Single Phase Bus Cable (2.5mm ² , H07,2m) 2322601403_Single Phase Bus Cable (4mm ² , H07,2.4m) (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)	2355000003_ Y3-DC Connector 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)

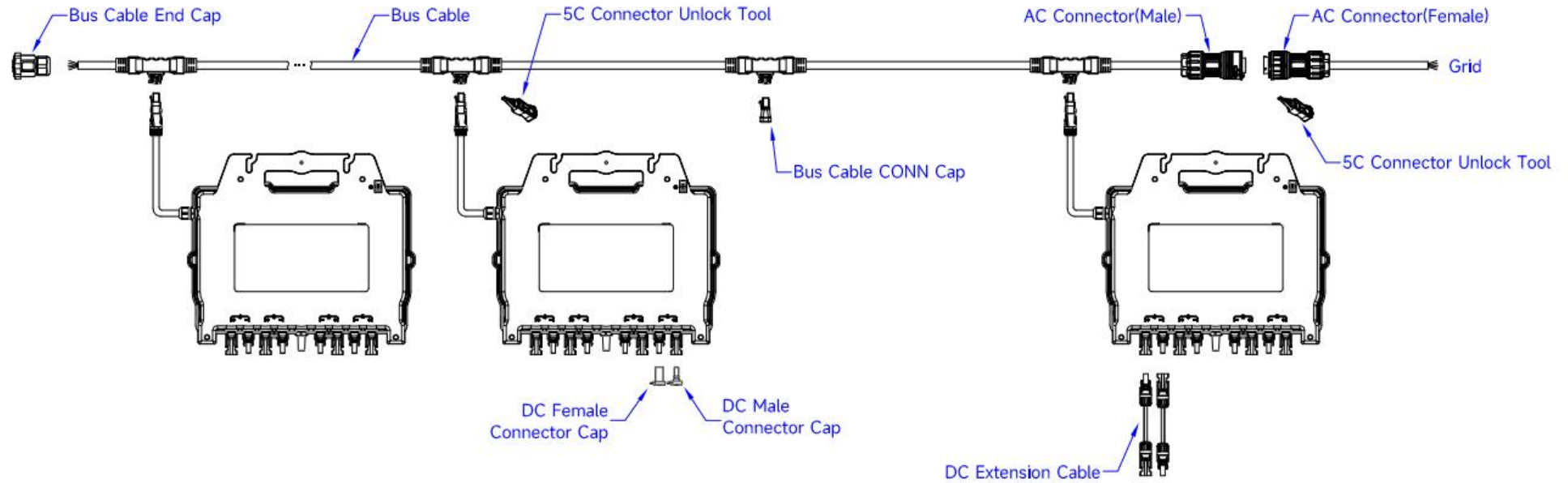
Notes: The cables in this table are recommended by APsystems, and the O.D. and length of the cable can be customized according to customer needs.

4. Physical Picture

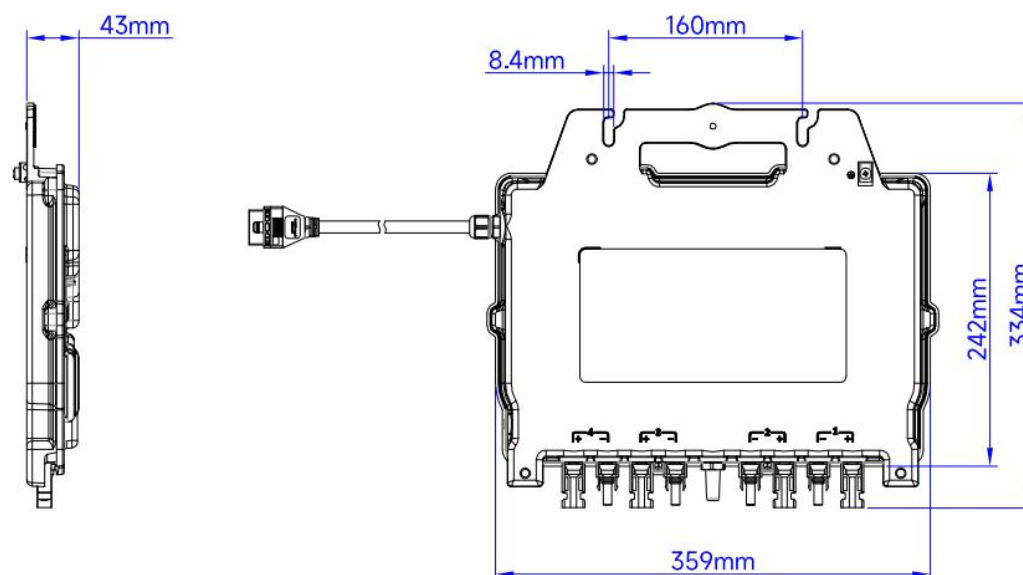
Bus Cable	AC Branch Extension Cable	Bus Cable End Cap	Bus Cable CONN Cap	Connector Unlock Tool	DC Male Connector Cap
 <p data-bbox="199 635 271 655">Pic. A</p>	 <p data-bbox="546 635 618 655">Pic. B</p>	 <p data-bbox="898 635 969 655">Pic. C</p>	 <p data-bbox="1240 635 1312 655">Pic. D</p>	 <p data-bbox="1592 635 1664 655">Pic. E</p>	 <p data-bbox="1944 635 2016 655">Pic. F</p>
DC Female Connector Cap	AC Connector (Male)	AC Connector (Female)	DC Extension Cable		
 <p data-bbox="199 1054 271 1075">Pic. G</p>	 <p data-bbox="546 1054 618 1075">Pic. H</p>	 <p data-bbox="898 1054 969 1075">Pic. I</p>	 <p data-bbox="1240 1054 1312 1075">Pic. J</p>		

QT2 Accessories

1. Wiring Diagram



2. QT2 Dimensions












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)	2062050012_5C Bus Cable End Cap (Two seals) (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)
	2322900902_3-phase 5C Bus Cable (2.5mm ² ,H07,4.6m)								2310360214_2m DC Extension Cable (MC4)
	2322609122_3-phase 5C Bus Cable (4mm ² ,H07,2.4m)								2310360224_3m DC Extension Cable (MC4)
	2322909102_3-phase 5C Bus Cable (4mm ² ,H07,4.6m) (See Pic. A)								2310370236_4m DC Extension Cable (MC4) (See Pic. I)

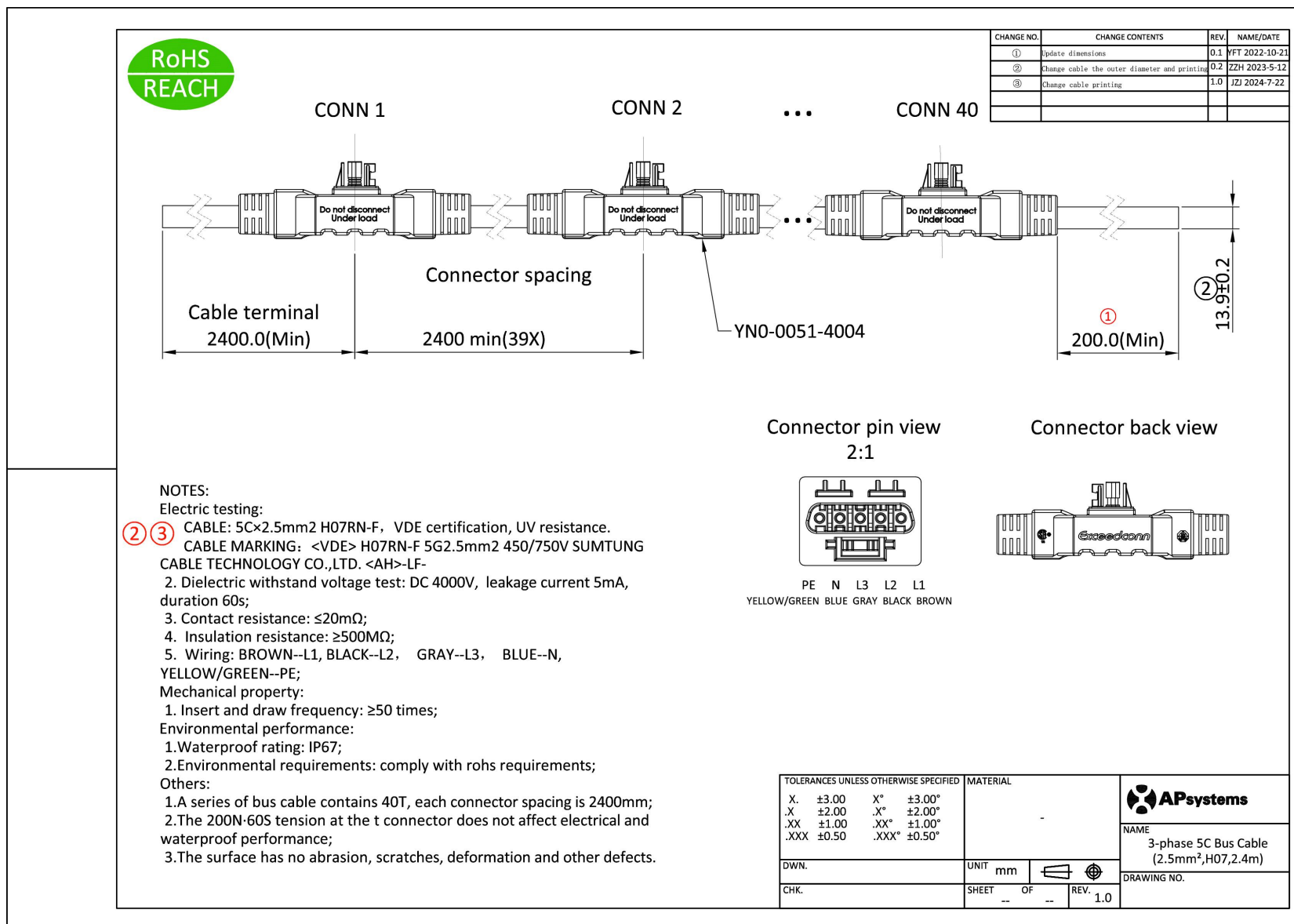
Notes: The cables in this table are recommended by APsystems, and the O.D. and length of the cable can be customized according to customer needs.

4. Physical Picture

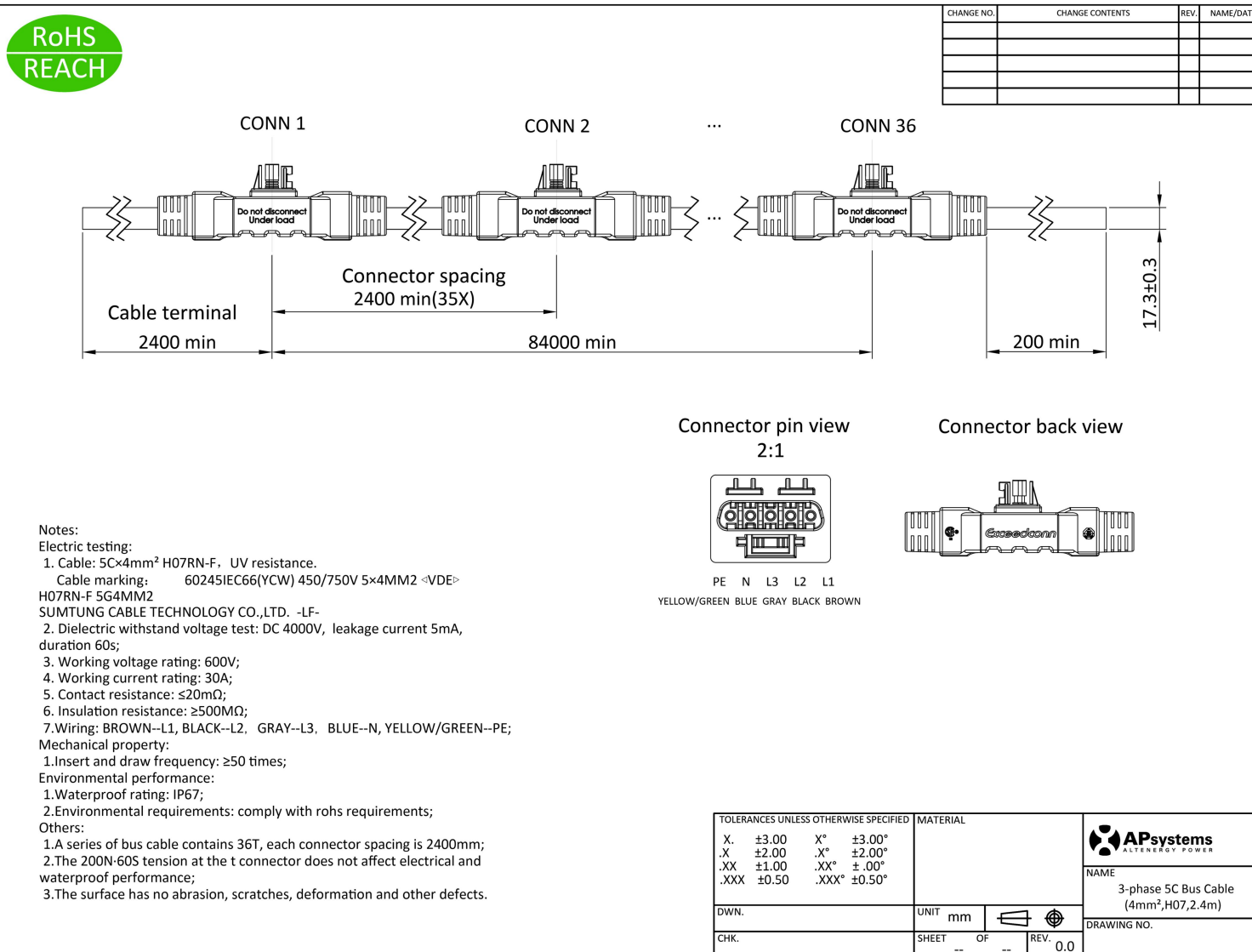
Bus Cable	Bus Cable End Cap	Bus Cable CONN Cap	5C Connector Unlock Tool	DC Male Connector Cap	DC Female Connector Cap
					
Pic. A	Pic. B	Pic. C	Pic. D	Pic. E	Pic. F
AC Connector (Male)	AC Connector (Female)	DC Extension Cable			
					
Pic. G	Pic. H	Pic. I			

5. Accessories information

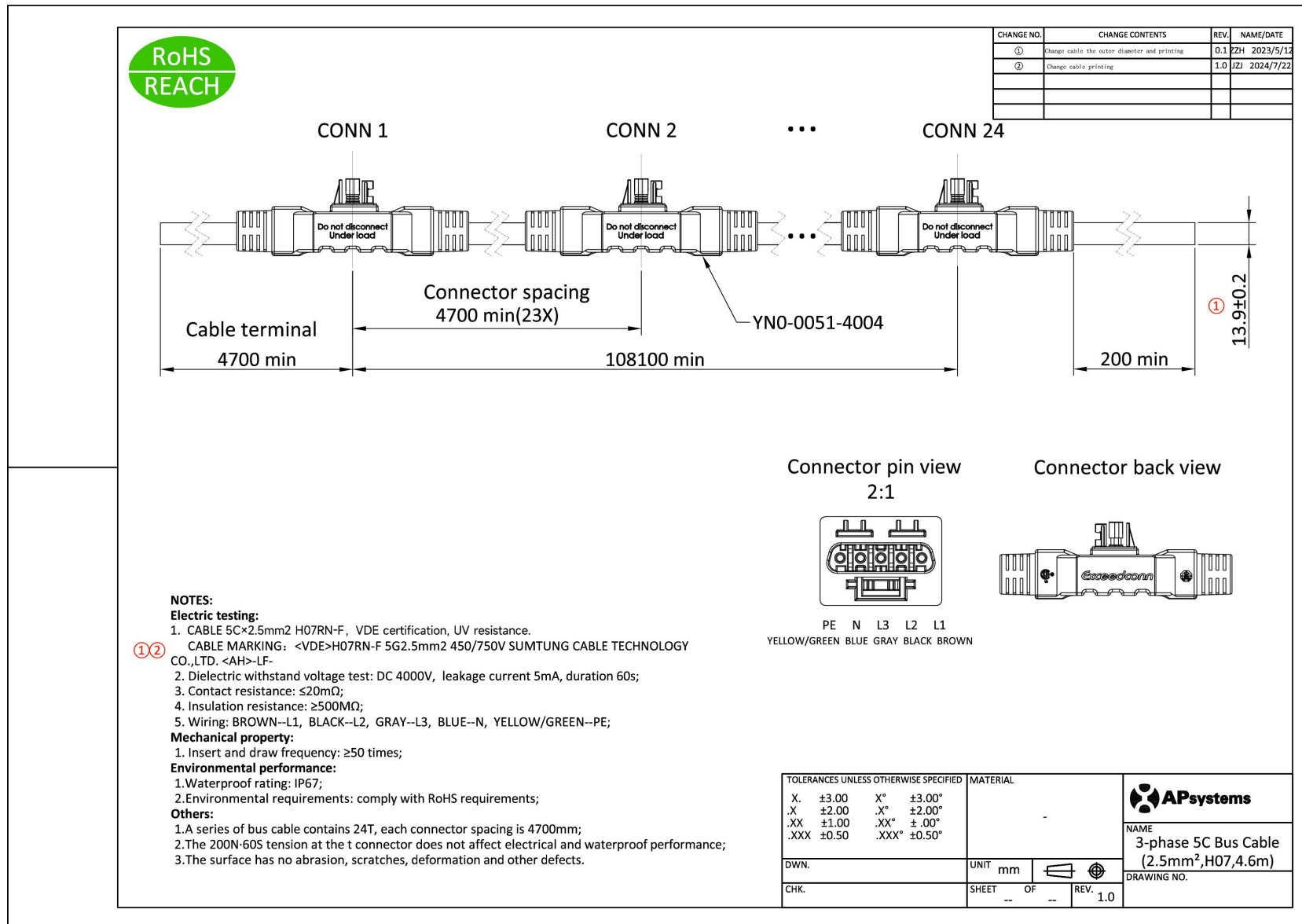
2322604802_3-phase 5C Bus Cable (2.5mm²,H07,2.4m)



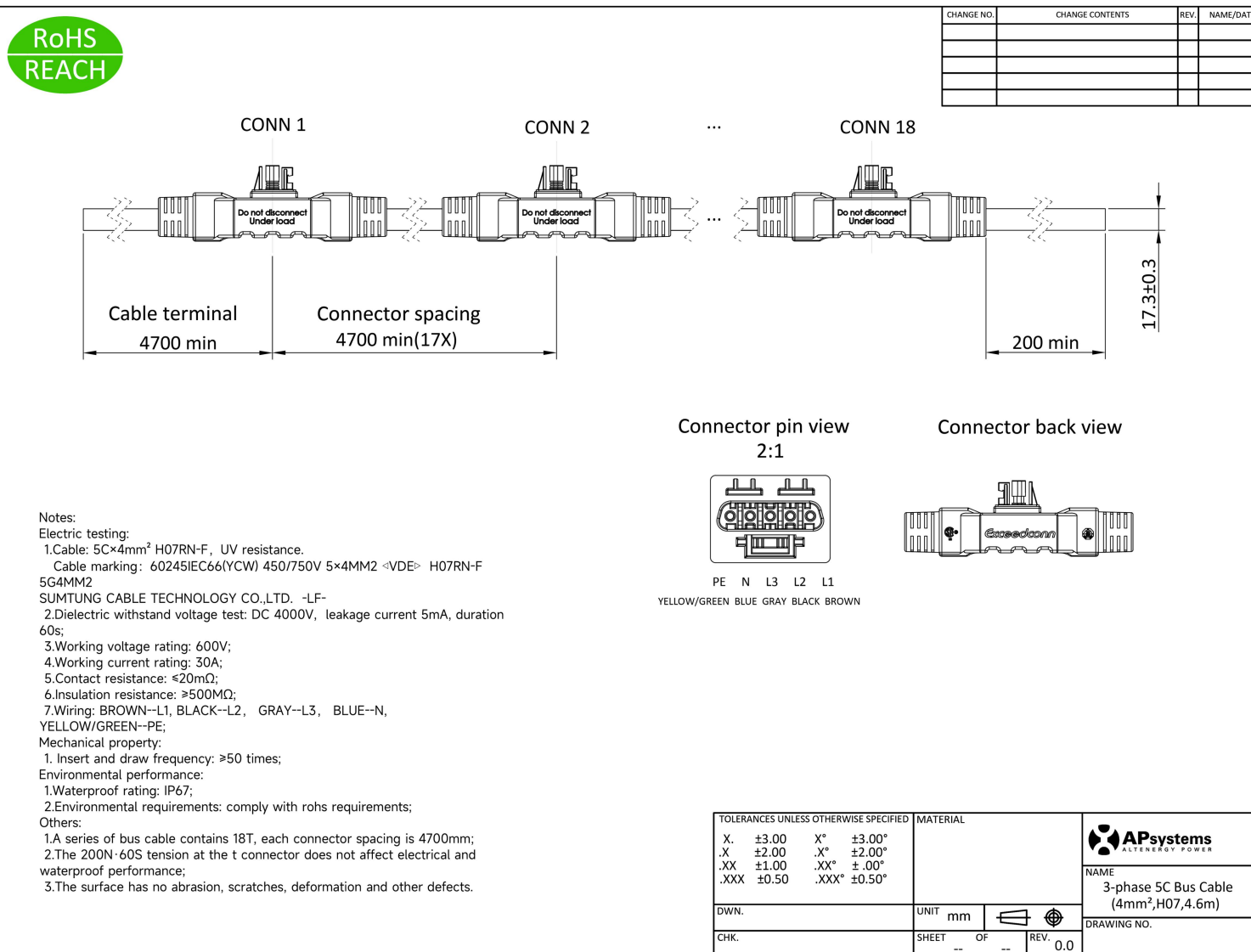
2322609122_3-phase 5C Bus Cable (4mm²,H07,2.4m)



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



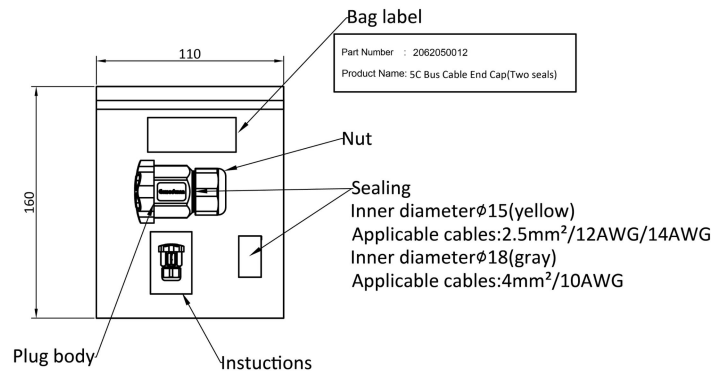
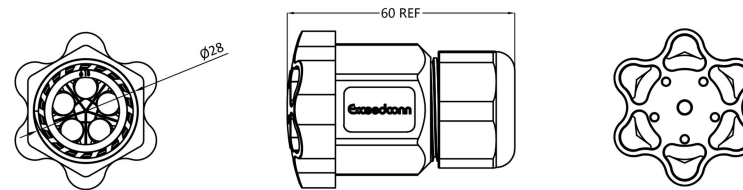
2322909102_3-phase 5C Bus Cable (4mm²,H07,4.6m)



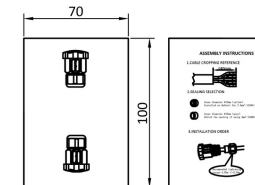
2062050012_5C Bus Cable End Cap(Two seals)



CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



Instructions



Notes:

Mechanical:



1. Cable and Connector Retention Force: $\geq 120N$;
2. Applicable cables: 2.5mm², 4mm², 10AWG, 12AWG, 14AWG
3. Sealing Inner diameter: $\varnothing 15/18mm$;

Environmental:

1. Waterproof Rate: IP68 1m 1H;
2. Application Temperature: -40°C ~ +85°C;

Others:

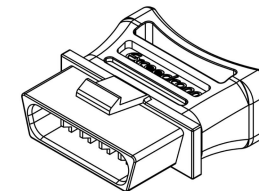
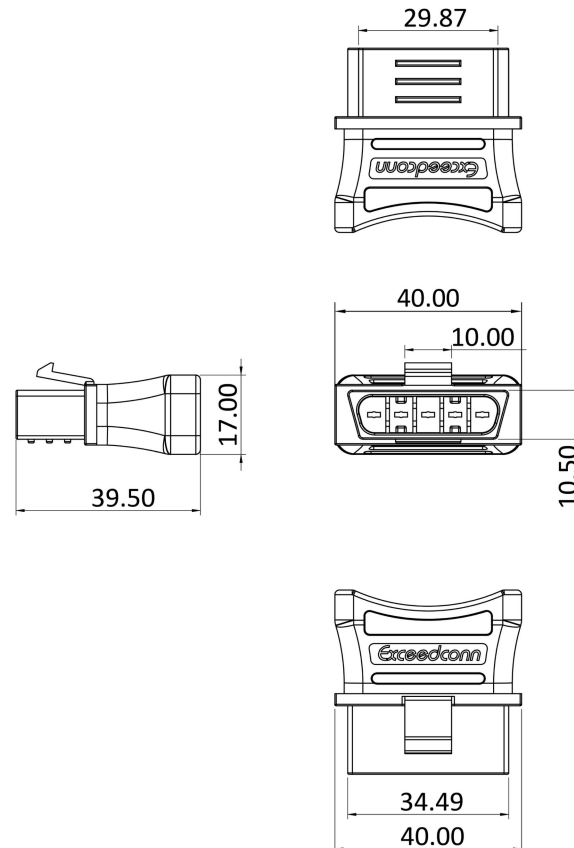
1. Type No: EN050-1423-00

TOLERANCES UNLESS OTHERWISE SPECIFIED				MATERIAL		 APsystems ALTERNATIVE POWER
X.	±3.00	X°	±3.00°			
.X	±2.00	.X°	±2.00°			5C Bus Cable End Cap(Two seals)
.XX	±1.00	.XX°	±1.00°			DRAWING NO.
.XXX	±0.50	.XXX°	±0.50°			




2061252032_5-wire Bus Cable T-CONN Cap



CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



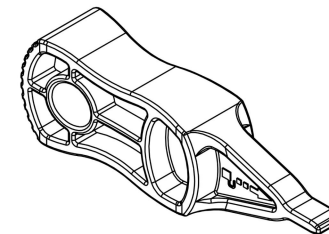
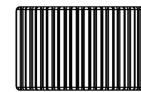
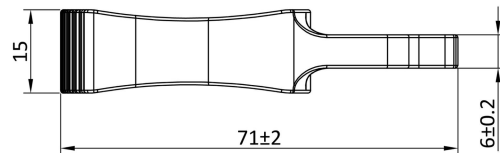
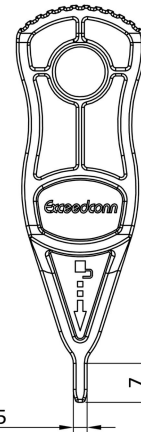
- Notes:
1. Type: MIH-1-01;
 2. Waterproof Rate: IP67;
 3. Mating Cycle: ≥ 50 ;
 4. Part Retention Force: 100N;

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




235300002_5C Connector unlock tool



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



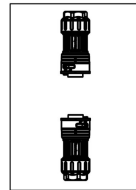
Technical Data:
 1. Material: PBT
 2. Color: Black

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

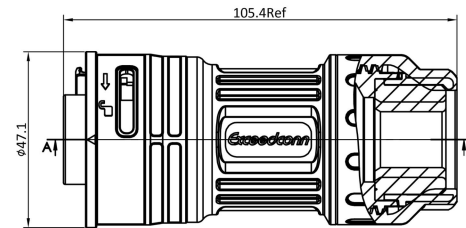
2301511002_AC Connector(5C,40A,male)



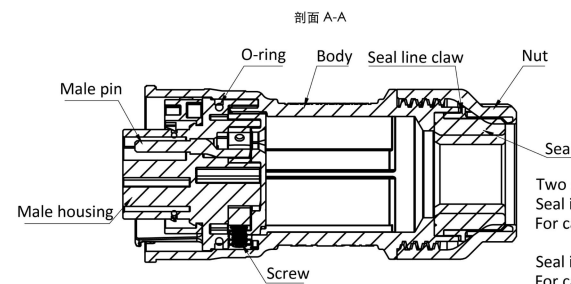
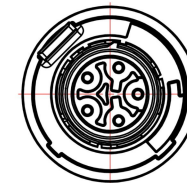
Instruction



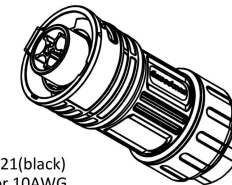
Wrench



CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



Two seals
 Seal inner diameter $\phi 21$ (black)
 For cable size:4mm² or 10AWG
 Seal inner diameter $\phi 16$ (grey)
 For cable size:2.5mm²,12AWG 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.Applicable cables: 2.5mm²,4mm²,10AWG,12AWG,14AWG

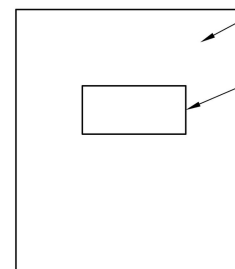
Environmental performance:

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

Others:

- 1.Type No:EN200-2105-101-02

Packing



PE Bag

Bag label

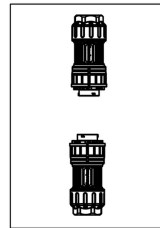
Part Number : 2301511002
 Product Name: AC Connector (5C,40A,male)

TOLERANCES UNLESS OTHERWISE SPECIFIED				MATERIAL		
.X.	± 1.00	X	$\pm 3.00^\circ$			
.X	± 0.50	.X	$\pm 2.00^\circ$			AC Connector (5C,40A,male)
.XX	± 0.20	.XX	$\pm 1.00^\circ$			DRAWING NO.
.XXX	± 0.10	.XXX	$\pm 0.50^\circ$			
DWN.			UNIT	mm		
CHK.			SHEET	--	OF	REV. 0.2

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



Instruction



Wrench



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. Applicable cables: 2.5mm², 4mm², 10AWG, 12AWG, 14AWG.

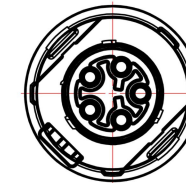
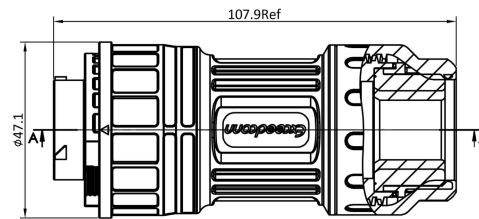
Environmental performance:

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

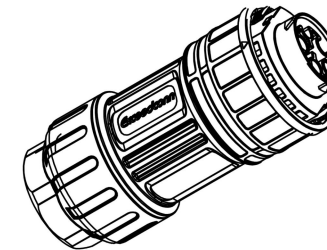
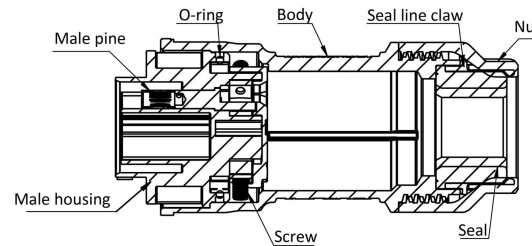
Others:

1. Type No: EN200-2205-101

CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE

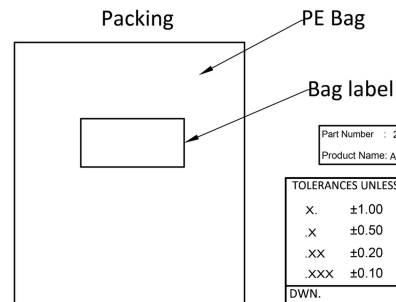


Section A-A



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, 12AWG or 14AWG

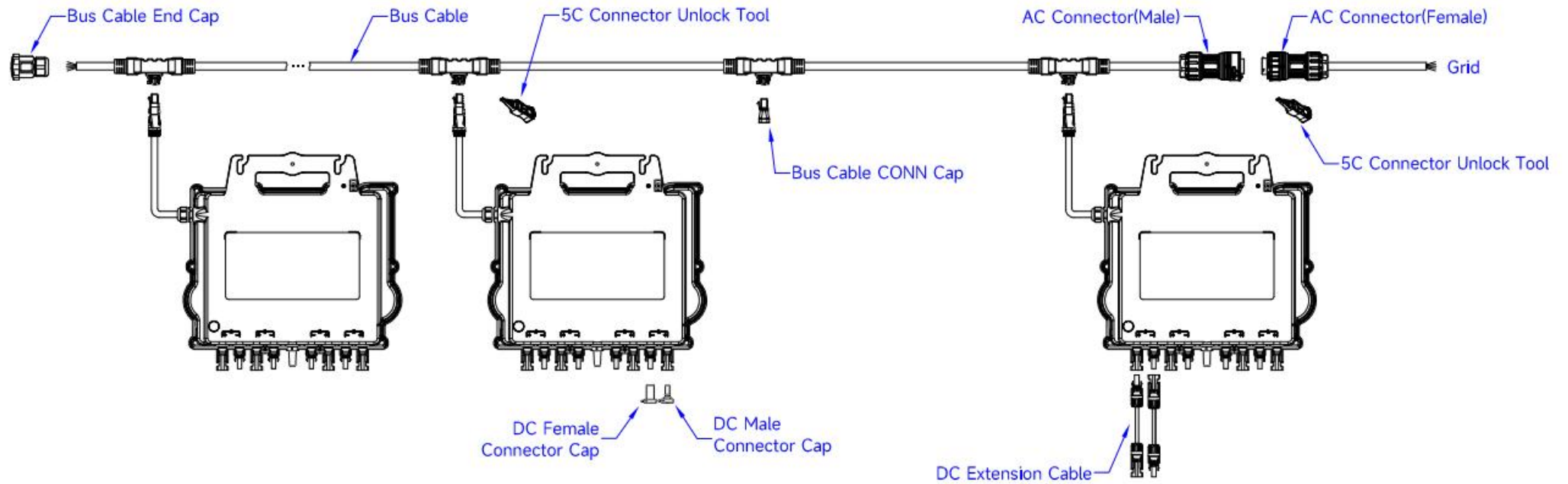


Part Number : 2301512002
Product Name: AC Connector (5C,40A,female)

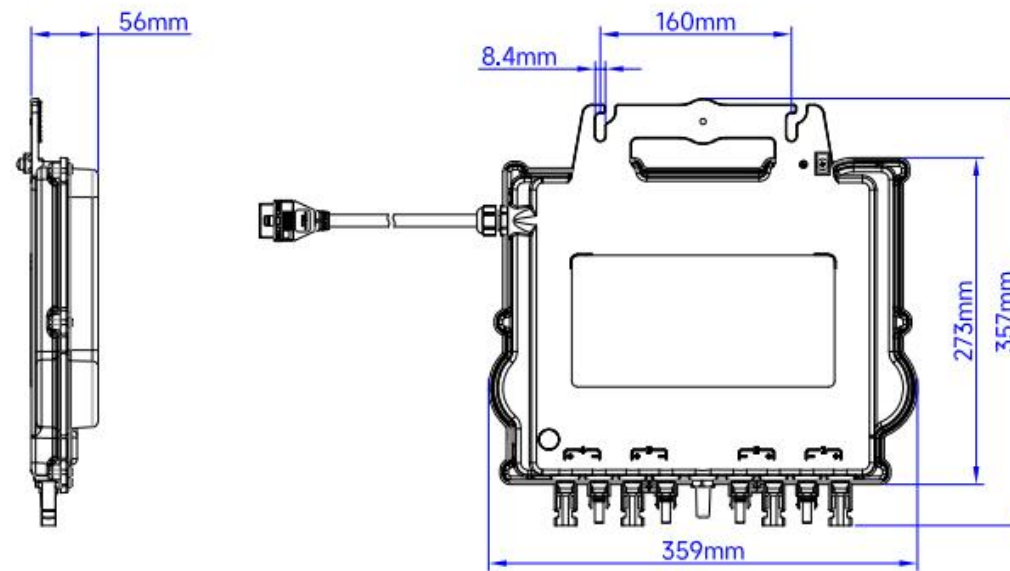
TOLERANCES UNLESS OTHERWISE SPECIFIED				MATERIAL		
X.	± 1.00	X	$\pm 3.00^\circ$	-		
.X	± 0.50	.X	$\pm 2.00^\circ$			AC Connector (5C,40A,female)
.XX	± 0.20	.XX	$\pm 1.00^\circ$			DRAWING NO.
.XXX	± 0.10	.XXX	$\pm 0.50^\circ$			-
DWN.	UNIT	mm				
CHK.	SHEET	OF	REV.			

QT2D Accessories

1. Wiring Diagram



2. QT2D Dimensions






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)	2062050012_5C Bus Cable End Cap (Two seals) (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) 2310370246_6m DC Extension Cable (MC4) (See Pic. 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.

4. Physical Picture

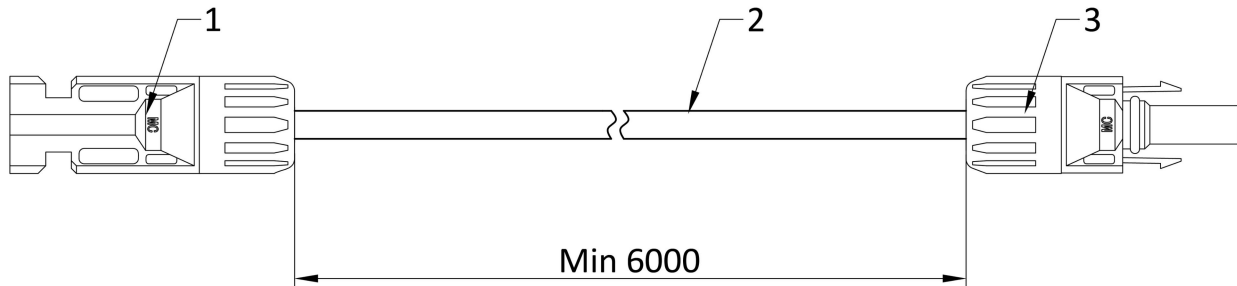
Bus Cable	Bus Cable End Cap	Bus Cable CONN Cap	5C Connector Unlock Tool	DC Male Connector Cap	DC Female Connector Cap
 <p data-bbox="212 821 291 853">Pic. A</p>	 <p data-bbox="571 821 649 853">Pic. B</p>	 <p data-bbox="918 821 996 853">Pic. C</p>	 <p data-bbox="1276 821 1355 853">Pic. D</p>	 <p data-bbox="1635 821 1713 853">Pic. E</p>	 <p data-bbox="1982 821 2060 853">Pic. F</p>
AC Connector (Male)	AC Connector (Female)	DC Extension Cable			
 <p data-bbox="212 1252 291 1284">Pic. G</p>	 <p data-bbox="571 1252 649 1284">Pic. H</p>	 <p data-bbox="918 1252 996 1284">Pic. I</p>			

5. Accessories information

2310370246_6m DC Extension Cable (MC4)



CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE
①	Add alternative cable	0.1	YFT 2022-9-14



Min 6000

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

3	DC Connector (female)	MC4 PV-KBT4/6II	1	Female, STAUBLI	
①	DC Cable	FLEX-SOL-EVO-DX 4.0	1	4.0mm ² , TUV/UL certification	
		62930 IEC 131/PV	1	4.0mm ² /12AWG, TUV/UL certification	Alternative
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. 0.1



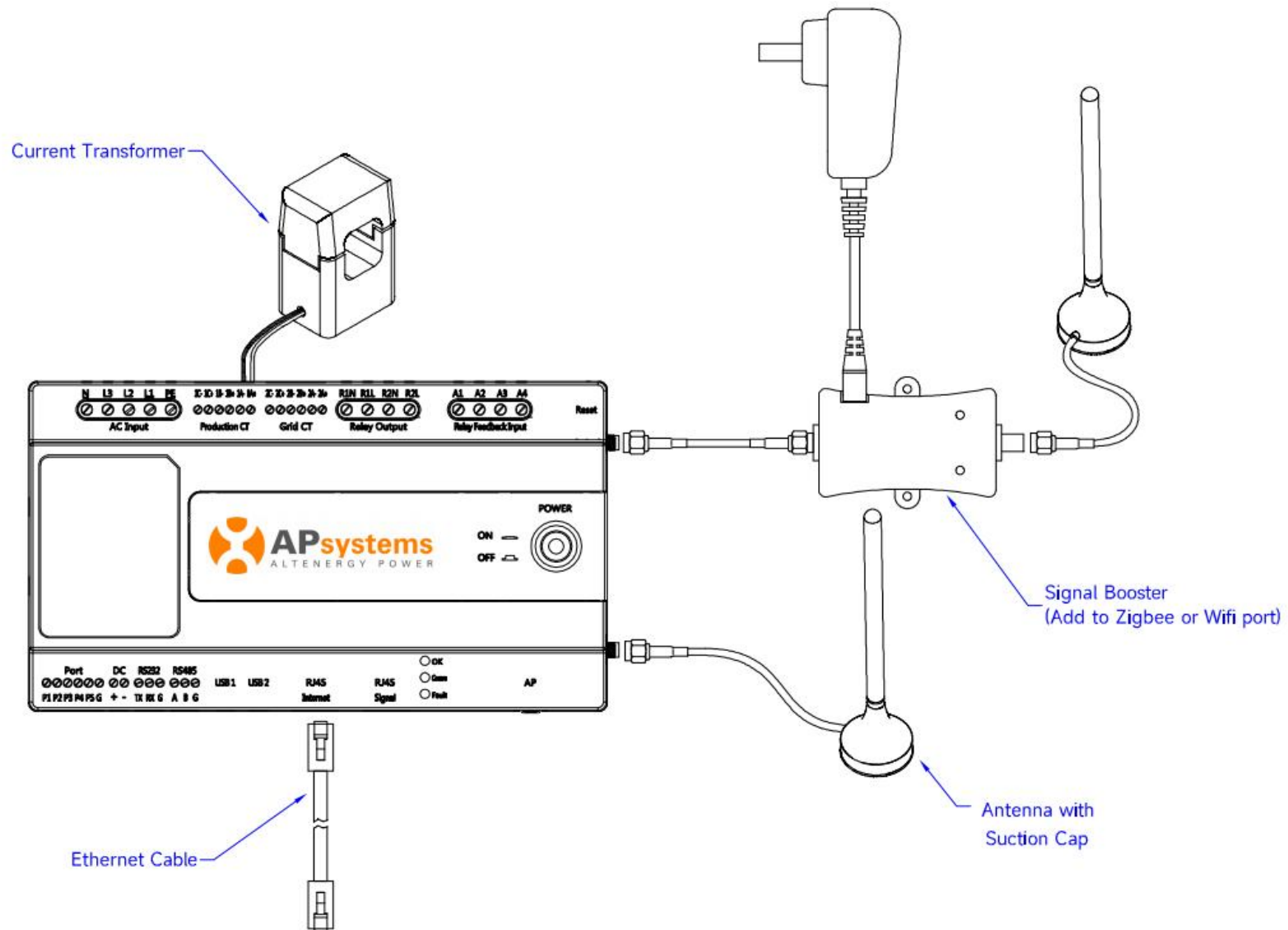
APsystems
ALTERNATIVE POWER

NAME
6m DC Extension Cable (MC4)

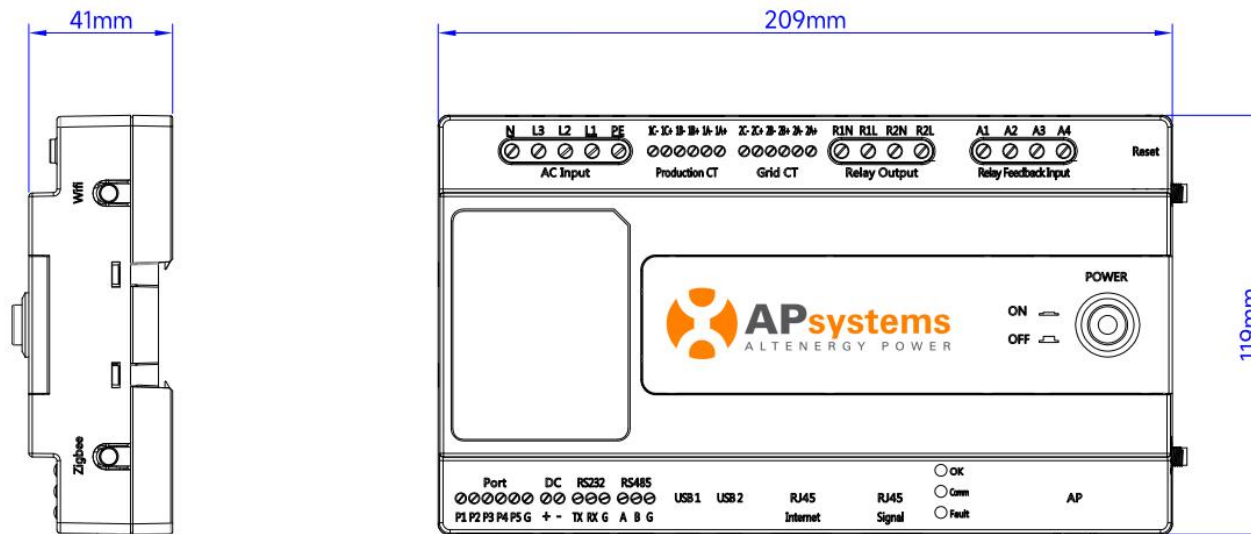
DRAWING NO.

ECU-C Accessories

1. Wiring Diagram






2. ECU-C Dimensions



3. Accessories Summary

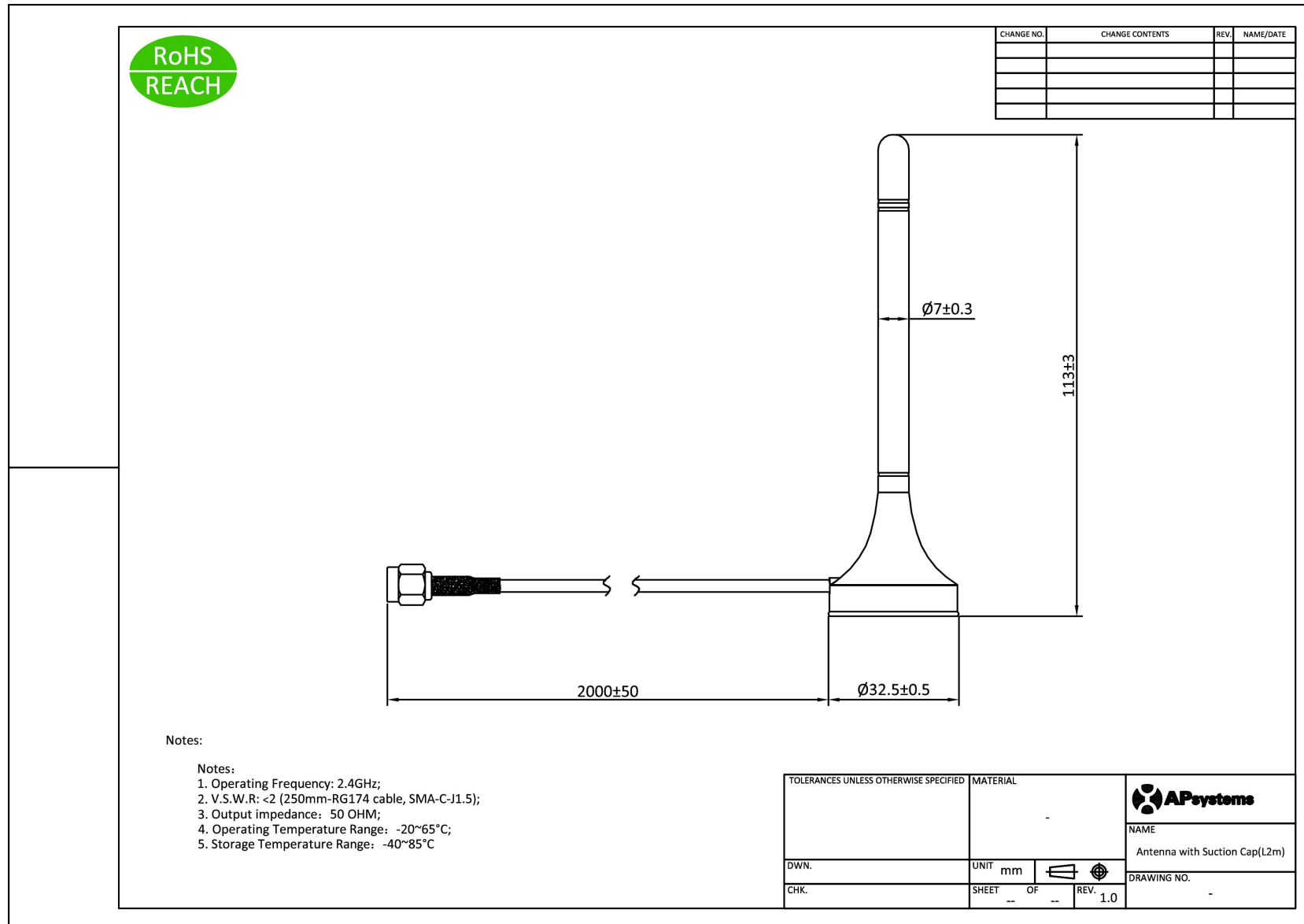
Region	Accessories			
	Antenna with Suction Cap (Supply)	Ethernet Cable (Supply)	Current Transformer (Optional)	Signal Booster (Optional)
Europe -EU: 205018	Antenna with Suction Cap(L2m) (See Pic. A)	Ethernet cable (See Pic. B)	18083020112_Current Transformer (80A/26.6mA) (See Pic. C) 18083020012_Current Transformer (200A/66.6mA) (See Pic. D)	2376010003_Signal Booster (European Standard) (See Pic. E)

4. Physical Picture

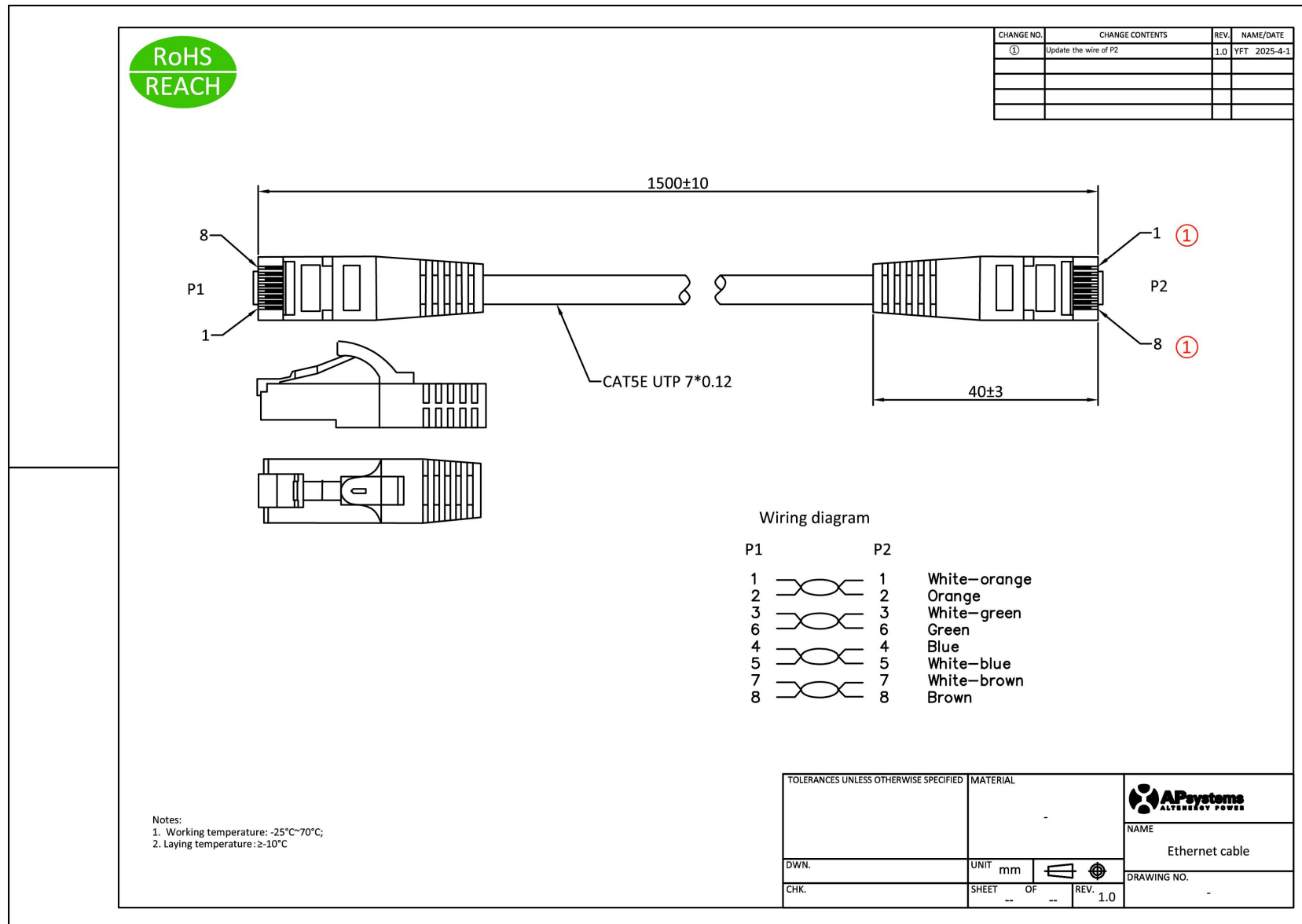
Antenna with Suction Cap	Ethernet Cable	Current Transformer		Signal Booster
 <p data-bbox="286 847 353 871">Pic. A</p>	 <p data-bbox="696 847 763 871">Pic. B</p>	 <p data-bbox="1099 847 1167 871">Pic. C</p>	 <p data-bbox="1496 847 1563 871">Pic. D</p>	 <p data-bbox="1906 847 1973 871">Pic. E</p>

5. Accessories information

Antenna with Suction Cap(L2m)



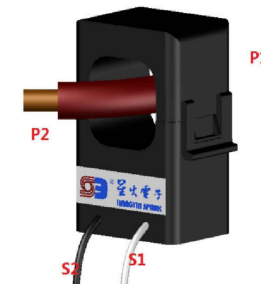
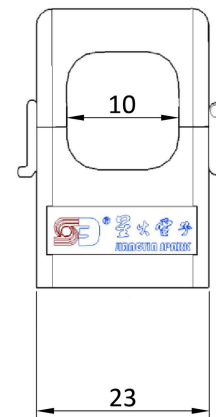
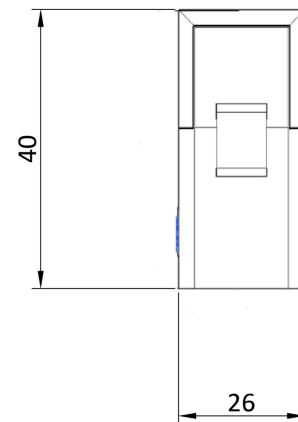
Ethernet cable



18083020112_Current Transformer (80A/26.6mA)




CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE

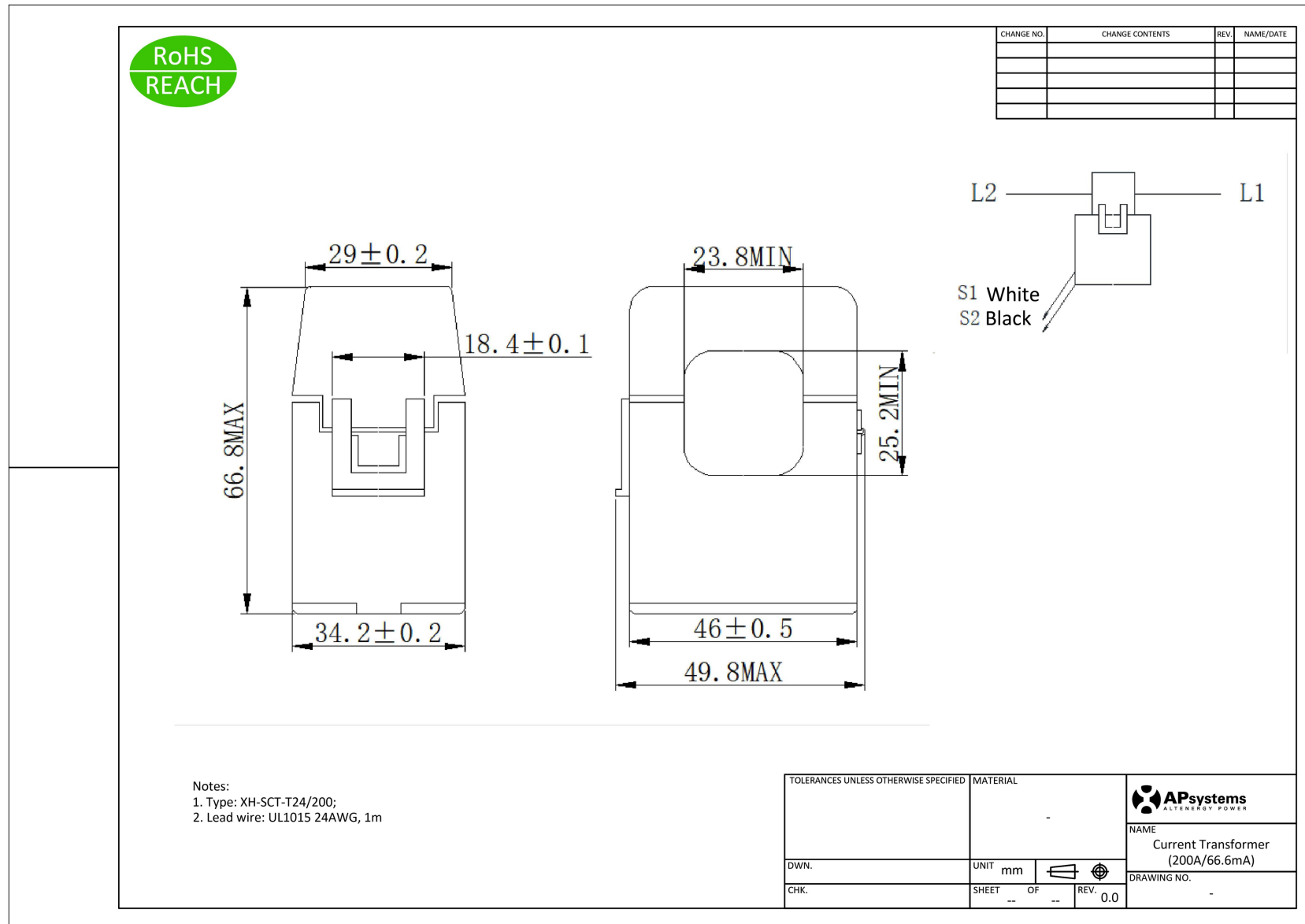


SCT-T10		
Input current(A)	Turn ratio(T)	output voltage(mV)
5-80	1000-3000 Recommended value 3000	333-5000 Recommended value 333

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

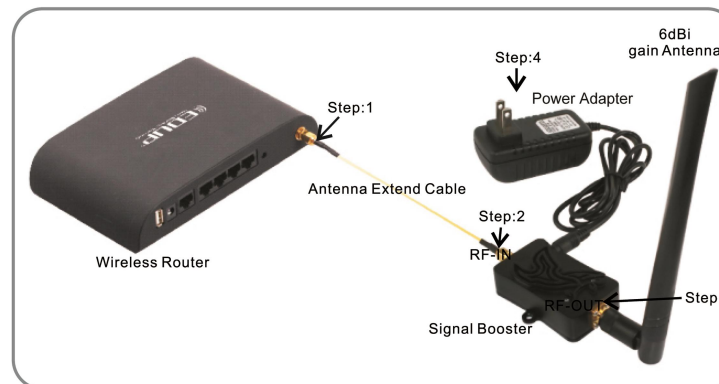
TOLERANCES UNLESS OTHERWISE SPECIFIED	MATERIAL	 NAME Current Transformer (80A/26.6mA)
DWN.	UNIT mm	
CHK.	SHEET -- OF -- REV. 0.0	-

18083020012_Current Transformer (200A/66.6mA)



Wifi booster instruction Manual

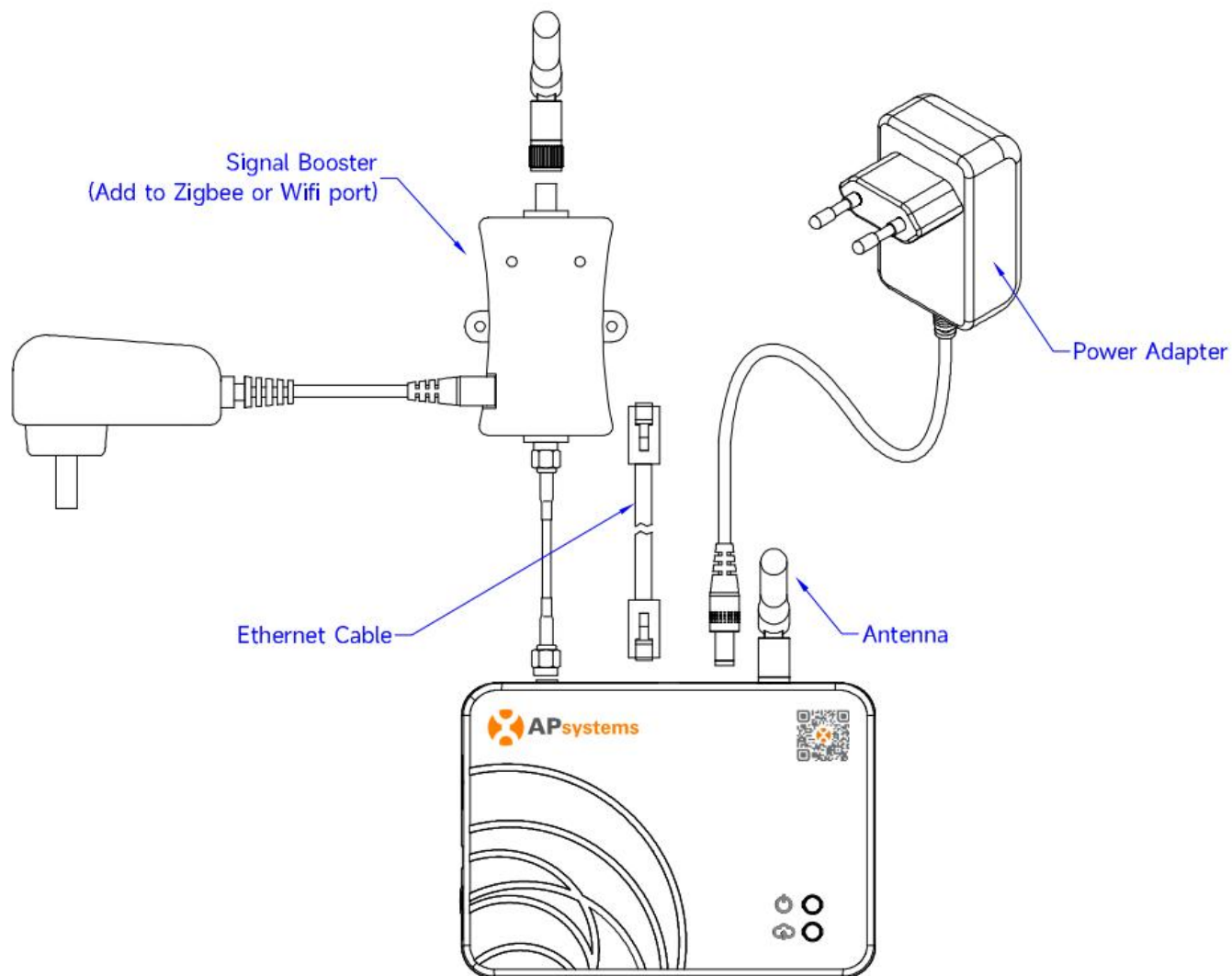
- 1.Support Standards:IEEE 802.11b/g/n
- 2.Frequency:2400~2500MHz
- 3.Working Pattern:TDD
- 4.RF Output Power:36dBm[4W]
- 5.Input Trigger Power:Min:3dBm Max:20dBm
- 6.Transmit Gain:13 dB±1
- 7.Receiver Gain:10 dB±1
- 8.TX/RX Switch Time Delay: < 1us
- 9.Noise Figure: < 2.5dB(typical)
- 10.Operating Temp:-40°C~+70°C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



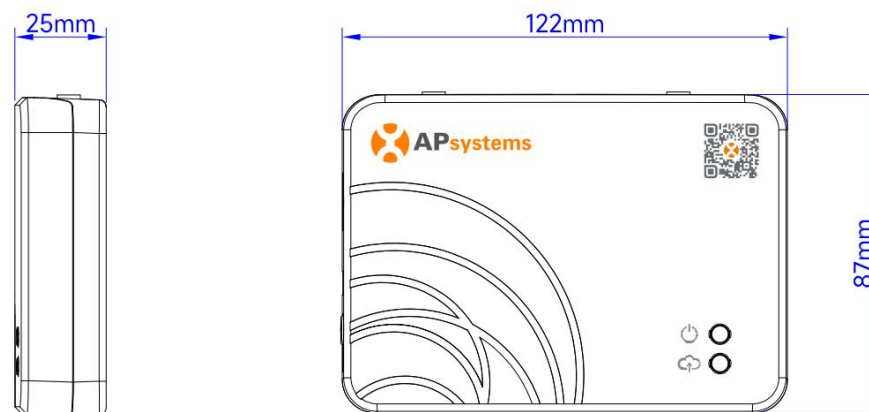
- Step1:Remove the Antenna from the wireless Router (Access Point)
- Step2:Use cable to connect the Booster and AP
- Step3:Connect the Antenna to the other end of Booster
- Step4:Plug in the Power Adapter

ECU-R Accessories

1. Wiring Diagram







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

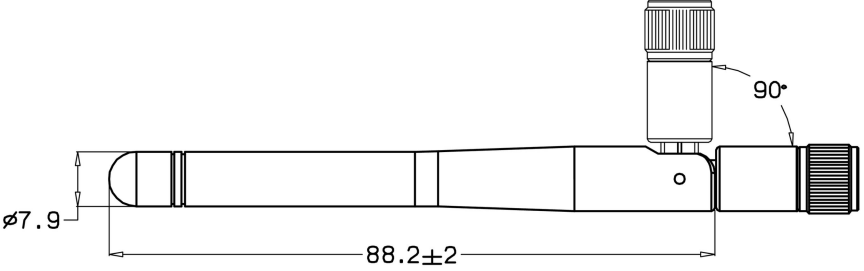
Antenna	Ethernet Cable	Power Adapter	Signal Booster
 <p data-bbox="427 746 495 770">Pic. A</p>	 <p data-bbox="869 746 936 770">Pic. B</p>	 <p data-bbox="1305 746 1373 770">Pic. C</p>	 <p data-bbox="1742 746 1809 770">Pic. D</p>

5. Accessories information

Antenna

RoHS
REACH

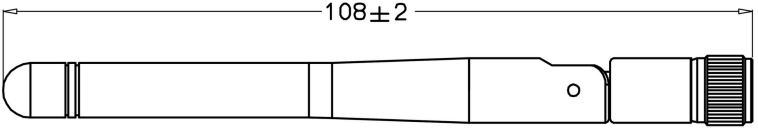
CHANGE NO.	CHANGE CONTENTS	REV.	NAME/DATE



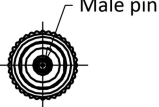
$\varnothing 7.9$

88.2 ± 2


90°



108 ± 2



Male pin





$\varnothing 10$

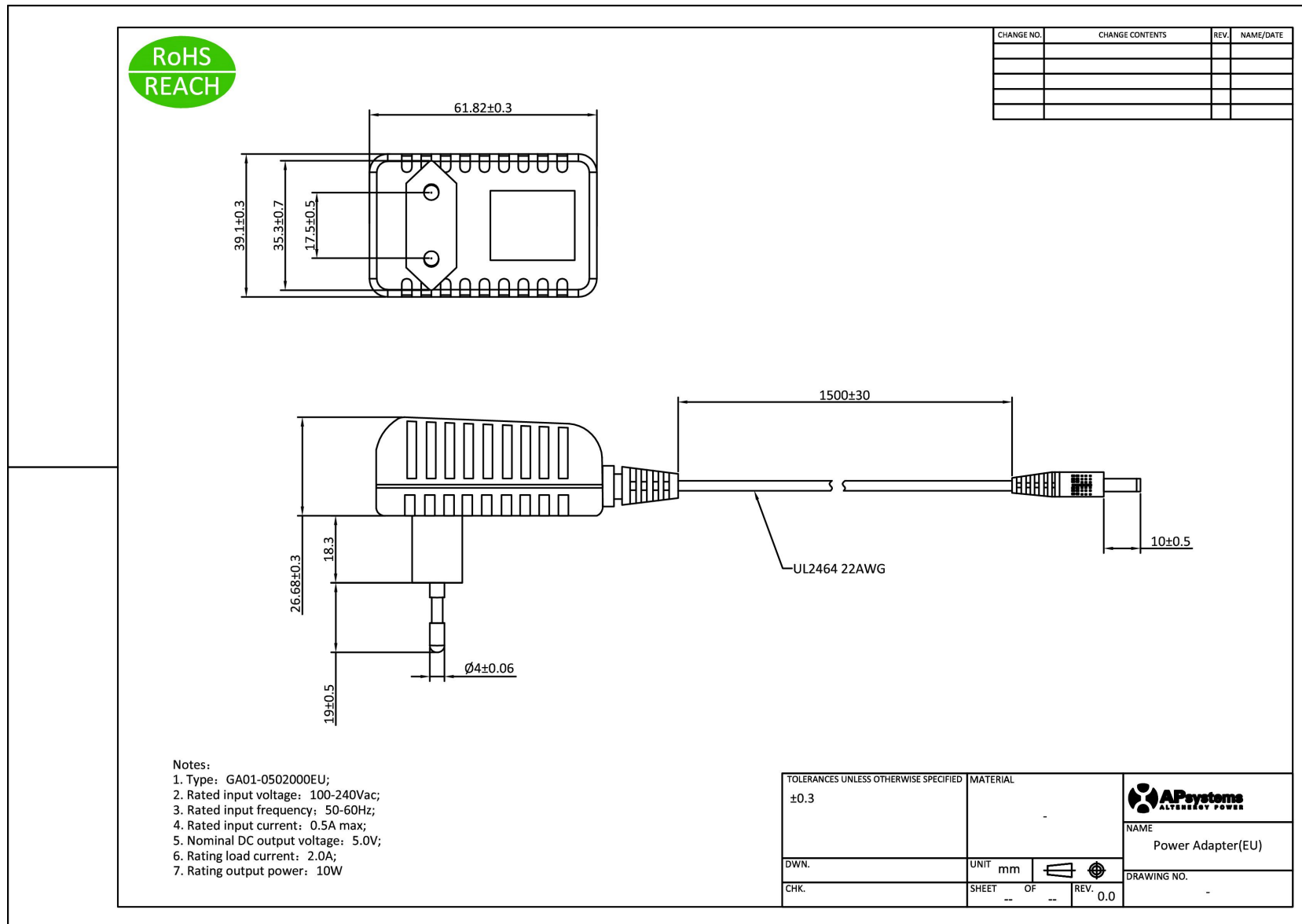
Electrical parameters:

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:	
1~10	±0.3	x°	±1°
10~30	±0.8	x.x°	±0.5°
30~100	±1		
100~300	±2		

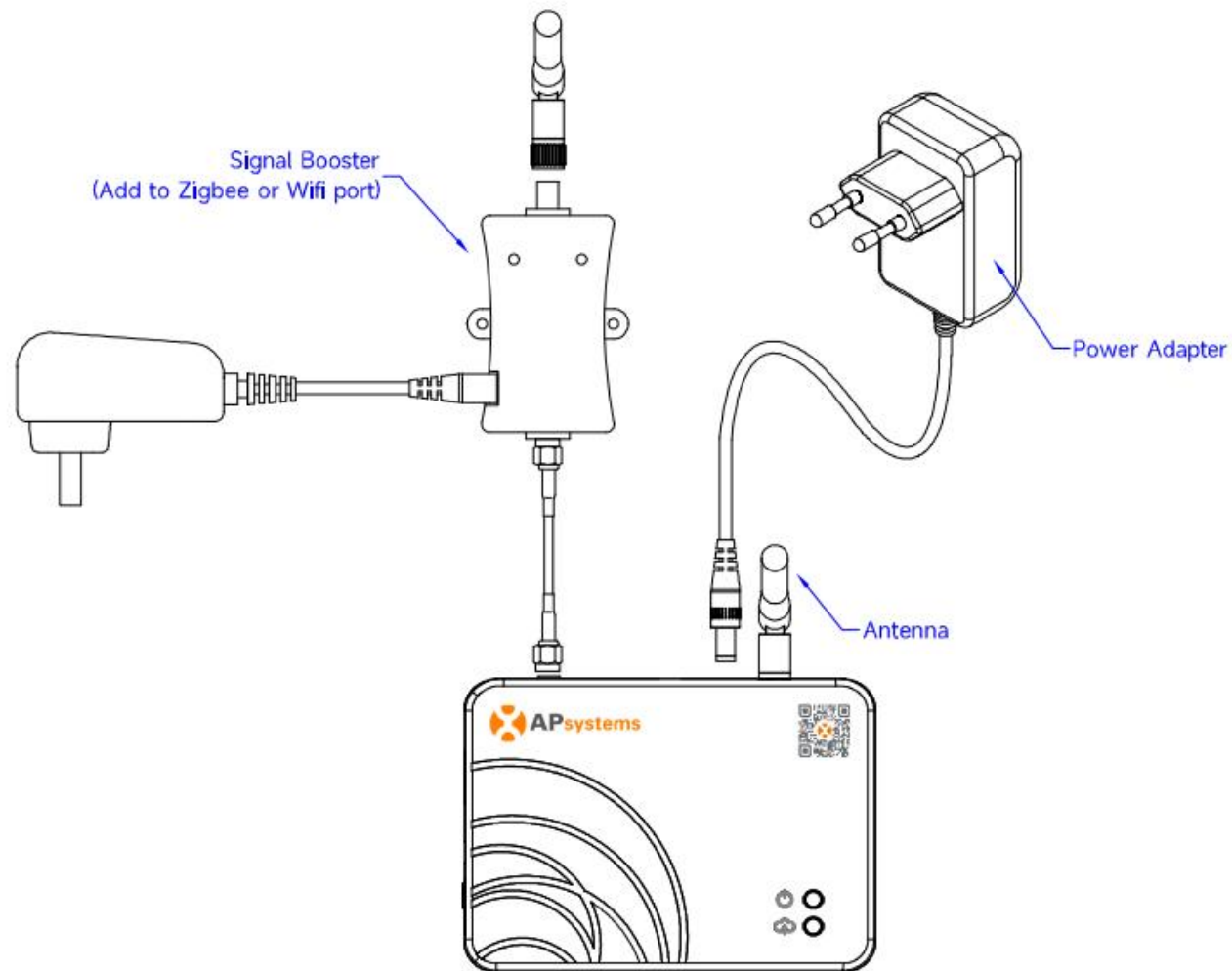
DWN.	UNIT	mm		 NAME Antenna
CHK.	SHEET	OF	REV.	DRAWING NO.
	--	--	0.0	-

Power Adapter (EU)

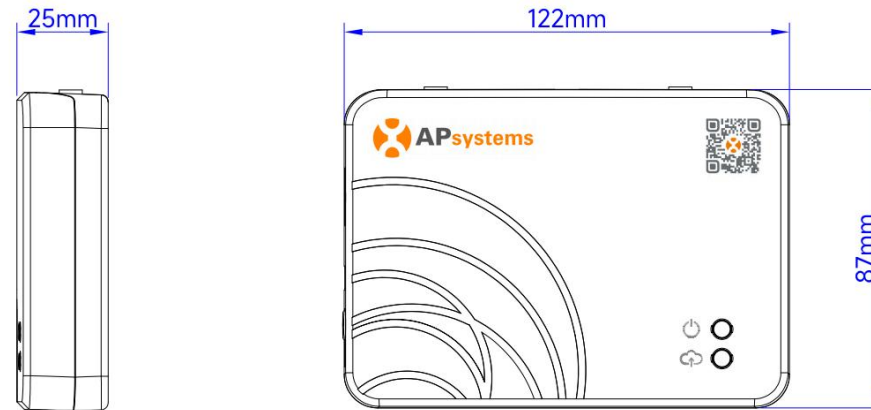


ECU-B Accessories

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="555 746 629 774">Pic. A</p>	 <p data-bbox="1086 746 1160 774">Pic. B</p>	 <p data-bbox="1615 746 1688 774">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
REV1.5	Update all drawings,Add DS3 bus cable(2.5mm ² ,H07,4m)	2023-07-10
REV1.6	Update the DS3/DS3D bus cable and 5C AC Connector drawings;change the 5C Bus Cable End Cap; update address information	2024-07-31
REV1.7	Add QS2 accessories; Change 3C connector unlock tool; Update QT2 dimensions; Update ethernet cable drawing	2025-05-06