

### **COMMERCIAL PV PLANT** SYSTEM SOLUTIONS





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2021 / 2022

#### ABOUT SUNGROW

Sungrow Power Supply Co., Ltd. ("Sungrow") is the world's most bankable inverter brand with over 182 GW installed worldwide as of June 2021. Founded in 1997 by University Professor Cao Renxian, Sungrow is a leader in the research and development of solar inverters with the largest dedicated R&D team in the industry and a broad product portfolio offering PV inverter solutions and energy storage systems for utility-scale, commercial & industrial, and residential applications, as well as internationally recognized floating PV plant solutions. With a strong 24-year track record in the PV space, Sungrow products power installations in over 150 countries.

As a leader of innovation in the solar industry, Sungrow possesses a dynamic technical R&D team which consists of over 2100 employees. The Company has also invested its own in-house testing center approved by SGS, CSA, and TÜV Rheinland. In 2019, Sungrow launched the world's largest inverter factory. The company's global annual production capacity reaches 90 GW, including 10 GW of India factory.

Offering a wide range of solutions and services, Sungrow is committed to providing clean power for all and is steadfast in its efforts to becoming the global leader of clean power conversion technology. Learn more about Sungrow by visiting www.sungrowpower.com.

#### The World's Most Bankable Inverter Brand

100% bankable for two consecutive years

Source: BloombergNEF







NO.1 Largest PV Inverter R&D Team



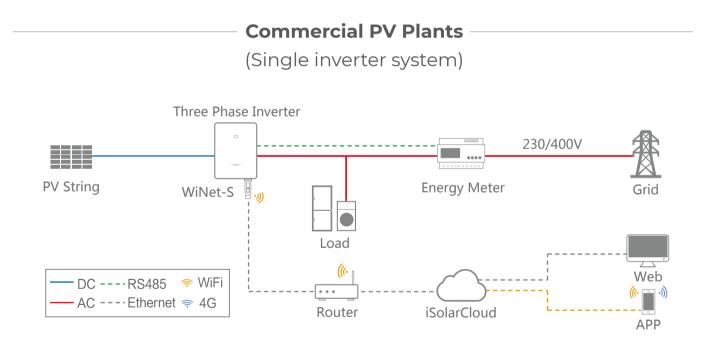








### **Commercial PV Plant System Solutions**



**Recommend Products** 









SG3.0~20RT

WiNet-S

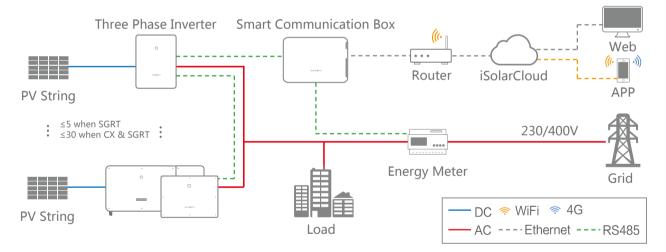
iSolarCloud

DTSD1352-C10(80)A



#### **Commercial PV Plants**

(Daisy Chain System)



The connected device number should be referred to user manual and the projects demand.

#### **Recommend Products**

\* Multi Inverters Solution with only SGCX should select EyeM4 when the inverters number not over 9.

\*\* Multi Inverters Solution with only SGRT should select COM100E when the inverters number not over 5.

\*\*\* Multi Inverters Solution with only SGCX should select COM100E when the inverters number between 10 and 30. The connected device number should be referred to user manual and the projects demand.



## SG110CX

#### Multi-MPPT String Inverter for 1000 Vdc System



#### HIGH YIELD

- 9 MPPTs with max. efficiency 98.7%
- · Compatible with bifacial module
- Built-in PID recovery function

#### SAVED INVESTMENT

- Compatible with Al and Cu AC cables
- DC 2 in 1 connection enabled
- Q at night function

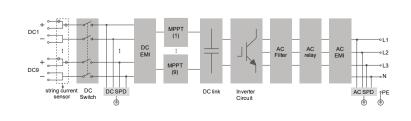
**CIRCUIT DIAGRAM** 

#### SMART O&M

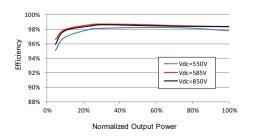
- Touch free commissioning and remote firmware upgrade
- Smart IV Curve diagnosis\*
- Fuse free design with smart string current monitoring

#### PROVEN SAFETY

- IP66 and C5 anti-corrosion
- Type II SPD for both DC and AC, DC Type I+II optinal
- · Compliant with global safety and grid code



#### **EFFICIENCY CURVE**



EUROPE

(19)



Type designation	SG110CX
nput (DC)	
Max. PV input voltage	1100 V **
Min. PV input voltage / Start-up input voltage	200 V / 250 V
Nominal PV input voltage	585 V
MPP voltage range	200 – 1000 V
No. of independent MPP inputs	9
No. of PV strings per MPPT	2
Max. PV input current	26 A * 9
Max. DC short-circuit current	40 A * 9
Dutput (AC)	
AC output power	110 kVA @ 45 ℃ / 100 kVA @ 50 ℃
Max. AC output current	158.8 A
Nominal AC voltage	3 / N / PE, 400 V
AC voltage range	320 - 460V
Nominal grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz
Harmonic (THD)	< 3 % (at nominal power)
Power factor at nominal power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / AC connection	3 / 3-PE
	57 5-PL
Max. efficiency	98.7 %
	98.7 %
European efficiency Protection and Function	98.5 %
	No.
DC reverse polarity protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
Ground fault monitoring	Yes
DC switch	Yes
AC switch	No
PV string monitoring	Yes
2 at night function	Yes
PID recovery function	Yes
Arc fault circuit interrupter (AFCI)	Optional
Surge protection	DC Type II (optional: Type I + II) / AC Type II
General Data	
Dimensions (W*H*D)	1051*660*362.5 mm
Weight	89 kg
Topology	Transformerless
Degree of protection	IP66
Night power consumption	< 2 W
Operating ambient temperature range	-30 to 60 ℃ (> 50 ℃ derating)
Allowable relative humidity range	0 – 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m (> 3000 m derating)
Display	LED, Bluetooth+APP
Communication	RS485 / Optional: WLAN, Ethernet
Sommanieation	MC4 (Max. 6 mm <sup>2</sup> )
DC connection type	
	OT / DT terminal (Max. 240 mm <sup>2</sup> )
DC connection type	OT / DT terminal (Max. 240 mm <sup>2</sup> )
DC connection type	· · · · · ·
DC connection type AC connection type	OT / DT terminal (Max. 240 mm²) IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, VDE-AR-N
DC connection type AC connection type	OT / DT terminal (Max. 240 mm²) IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, VDE-AR-N 4110:2018, VDE-AR-N 4120:2018, IEC 61000-6-3, EN 50549, AS/NZS

\*: Only compatible with Sungrow Logger, EyeM4 and iSolarCloud \*\*: The inverter enters the standby state when the input voltage ranges between 1,000V and 1,100V. If the maximum DC voltage in the system can exceed 1000V, the MC4 connectors included in the scope of delivery must not be used. In this case MC4 Evo2 connectors must be used.

# SG33/40/50CX

#### Multi-MPPT String Inverter for 1000 Vdc System



#### ) HIGH YIELD

- Up to 5 MPPTs with max. efficiency 98.7%
- Compatible with bifacial module
- Built-in PID recovery function

#### SAVED INVESTMENT

- Compatible with Al and Cu AC cables
- DC 2 in 1 connection enabled
- Cable free communication with optional WLAN

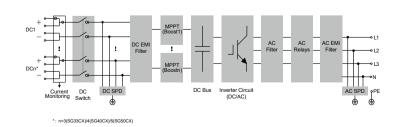
#### SMART O&M

- Touch free commissioning and remote firmware upgrade
- Smart IV Curve diagnosis \*
- Fuse free design with smart string current monitoring

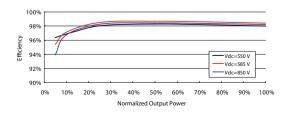


#### **PROVEN SAFETY**

- IP66 and C5 anti-corrosion
- Type II SPD for both DC and AC, DC Type I+II Opt
- Satisfied global safety and grid code



#### EFFICIENCY CURVE



**CIRCUIT DIAGRAM** 



Clean power for all

Type designation	SG33CX	SG40CX	SG50CX
	3033CA	3040CA	30300
Input (DC)		1100.1/**	
Max. PV input voltage		1100 V **	
Min. PV input voltage / Start-up input voltage		200 V / 250 V	
Nominal PV input voltage		585 V	
MPP voltage range	-	200 – 1000 V	-
No. of independent MPP inputs	3	4	5
No. of PV strings per MPPT		2	
Max. PV input current	3 * 26 A	4 * 26 A	5 * 26 A
Max. DC short-circuit current	3 * 40 A	4 * 40 A	5*40 A
Output (AC)			
AC output power	33 KVA @ 50 ℃, 415Vac /	40 kVA @ 45 ℃, 400Vac / 44 kVA @ 40 ℃, 400Vac 40 KVA @ 50 ℃, 415Vac / 44 KVA @ 45 ℃, 415Vac	50 kVA @45 ℃, 400Vac / 55kVA @ 40 ℃, 400Vac 50KVA @ 50 ℃, 415Vac / 55kVA @ 45 ℃,415Vac
Max. AC output current	55.2 A	66.9 A	83.6 A
Nominal AC voltage		3 / N / PE, 230 / 400 V	
AC voltage range		312 – 528 V	
Nominal grid frequency / Grid frequency range	50 H	lz / 45 – 55 Hz, 60 Hz / 55 – 6	5 Hz
Harmonic (THD)		< 3 % (at nominal power)	
DC current injection		< 0.5 % In	
Power factor at nominal power / Adjustable power factor	> (	).99 / 0.8 leading – 0.8 laggi	ng
Feed-in phases / AC connection		3/3	
Efficiency			
Max. efficiency / European efficiency	98.6 % / 98.3 %	98.6 % / 98.3 %	98.7 % / 98.4 %
Protection and Function			
DC reverse polarity protection		Yes	
AC short circuit protection		Yes	
Leakage current protection		Yes	
Grid monitoring		Yes	
Ground fault monitoring		Yes	
DC switch		Yes	
AC switch		No	
PV string monitoring		Yes	
Q at night function		Yes	
PID recovery function		Yes	
Arc fault circuit interrupter (AFCI)		Optional	
Overvoltage protection	DC Type	e II (optional: Type I + II) / AG	C Type II
General Data			
Dimensions (W*H*D)	702*595*310 mm	782*645*310 mm	782*645*310 mm
Weight	50 kg	58 kg	62 kg
Тороlоду		Transformerless	
Degree of protection		IP66	
Night power consumption		≤2 W	
Operating ambient temperature range	÷	30 to 60 ℃ (> 45 ℃ derating	3)
Allowable relative humidity range		0 - 100 %	
Cooling method		Smart forced air cooling	
Max. operating altitude	4	4000 m (> 3000 m derating	)
Display		LED, Bluetooth+APP	
Communication	RS4	485 / Optional: WLAN, Ether	rnet
DC connection type		MC4 (Max. 6 mm <sup>2</sup> )	
AC connection type	OT	or DT terminal (Max.70 mr	m²)
Compliance	IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, VDE-AR-N 4105:2018, VDE-AR-N 4110:2018, IEC 61000-6-3, EN 50549-1/2, AS/NZS 4777.2:2015, CEI 0-21 2019, CEI0-16 2019, VDE 0126-1-1/AI VFR 2019, UTE C15-712-1:2013, DEWA, UNE 206007-1/RD 1699, UNE 217001, Israel certificate, G99		
Grid Support	Q at night function,	LVRT, HVRT,active & reactiv power ramp rate control	e power control and

\*: Only compatible with Sungrow logger, EyeM4 and iSolarCloud \*\*: The inverter enters the standby state when the input voltage ranges between 1,000 V and 1,100 V. If the maximum DC voltage in the system can exceed 1000 V, the MC4 connectors included in the scope of delivery must not be used. In this case MC4 Evo2 connectors must be used.

# SG15/17/20RT

Multi-MPPT String Inverter for 1000 Vdc System



#### ) HIGH YIELD

**CIRCUIT DIAGRAM** 

- Lower startup & wider MPPT voltage
- Compatible with bifacial modules
- Built-in PID recovery function

#### SAFE AND DURABLE

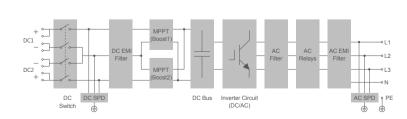
- Quick arc fault circuit interrupter
- Built-in Type II DC & AC SPD
- High anti-corrosion rating C5

#### SMART MANAGEMENT

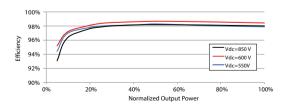
- Smart IV curve scanning
- 24 / 7 Live monitoring
- Remote firmware updates

(23) E

- EASY AND USER FRIENDLY
- 21 kg compact design
- Unique push-in connectors
- Fast and easy commissioning via App



#### EFFICIENCY CURVE





Type designation	SG15RT	SG17RT	SG20RT
Input (DC)			
Recommended max. PV input power	22.5 kWp	25.5 kWp	30 kWp
Max. PV input voltage	2210 1111 p	1100 V*	00 100 0
Min. PV input voltage / Start-up input voltage		180 V	
Nominal input voltage		600 V	
MPP voltage range		160 V – 1000 V	
No. of independent MPP inputs		2	
No. of PV strings per MPPT		2/2	
Max. PV input current		50 A (25 A / 25 A)	
1		30A (25 A / 25 A)	
Max. current for input connector Max. DC short-circuit current			
Output (AC)		64 A (32 A / 32 A)	
	15000 \\/	17000 \\/	20000 \\
Nominal AC power (@230 V, 50 Hz)	15000 W 16500 VA**	17000 W 18700 VA**	20000 W
Max. AC output power			22000 VA**
Max. AC output current	25 A	28.3 A	31.9 A
		3 / N / PE, 220 / 380 V	
Nominal AC voltage		3 / N / PE, 230 / 400 V	
		3 / N / PE, 240 / 415 V	
AC voltage range		180 V – 276 V / 311 V – 478 V	
Nominal grid frequency /		50 Hz / 45 – 55 Hz	
Grid frequency range		60 Hz / 55 – 65 Hz	
Harmonic(THD)		<3 % (at nominal power)	
Power factor at nominal power /	>	0.99 / 0.8 leading – 0.8 laggin	g
Adjustable power factor			
Feed-in phases / AC connection		3/3	
Efficiency			
Max. efficiency		98.50 %	
European efficiency		98.10 %	
Protection			
Grid monitoring		Yes	
DC reverse connection protection		Yes	
AC short-circuit protection		Yes	
Leakage current protection		Yes	
Surge Protection		DC Type II / AC Type II	
DC switch		Yes	
Arc fault circuit interrupter (AFCI)		Yes	
PID recovery function		Yes	
General Data			
Dimensions (W*H*D)		370*480*195 mm	
Mounting method		Wall-mounting bracket	
Weight		21 kg	
Тороlоду		Transformerless	
Degree of protection		IP65	
Operating ambient temperature range		-25 ℃ to 60 ℃	
Allowable relative humidity range		0% – 100%	
Cooling method		Smart forced air cooling	
Max. operating altitude		4000 m (> 2000 m derating)	
Noise (Typical)		45dB(A)	
Display		LED	
Communication	WI	_AN / Ethernet / RS485 / DI / [	00
DC connection type		MC4 (Max. 6 mm <sup>2</sup> )	
AC connection type		Plug and play	
Compliance	IEC / EN 61000-6-1/2/3/4. IE	C / EN62109-1/2, IEC 61727, IEC	: 62116, IEC 61683, EN50530.
		15, VDE-AR-N-4105, DIN VDE0	

\*: The inverter enters the standby state when the input voltage ranges between 1,000 V and 1,100 V. If the maximum DC voltage in the system can exceed 1000 V, the MC4 connectors included in the scope of delivery must not be used. In this case MC4 Evo2 connectors must be used.

\*\*: For Australia & Belgium& Germany, max. AC output power: SG15RT is 15000VA, SG17RT is 17000VA, SG20RT is 20000VA.

# SG5.0/6.0/7.0/8.0/10/12RT

Multi-MPPT String Inverter for 1000 Vdc System



#### HIGH YIELD

**CIRCUIT DIAGRAM** 

- Lower startup & wider MPPT voltage
- Compatible with bifacial modules
- Built-in PID recovery function

#### SAFE AND DURABLE

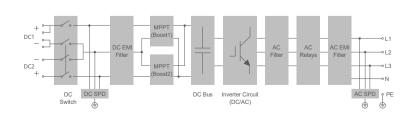
- Quick arc fault circuit interrupter
- Built-in Type II DC & AC SPD
- High anti-corrosion rating C5

#### SMART MANAGEMENT

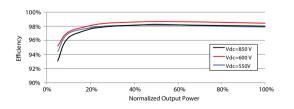
- Smart IV curve scanning
- 24 / 7 Live monitoring
- Remote firmware updates

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- EASY AND USER FRIENDLY
- 18 kg compact design
- Unique push-in connectors
- Fast and easy commissioning via App



#### EFFICIENCY CURVE



- 12 -



Type designation	SG5.0RT	SG6.0RT	SG7.0RT	SG8.0RT	SG10RT	SG12RT
Input (DC)						
Recommended max. PV input power	7.5 kWp	9.0 kWp	10.5 kWp	12 kWp	15 kWp	18 kWp
Max. PV input voltage			1100 V *			
Min. PV input voltage / Start-up input voltage			180 V			
Nominal input voltage			600 V			
MPP voltage range			160 V – 1000 V			
No. of independent MPP inputs			2			
No. of PV strings per MPPT	1/1	1/1	2/1	2/1	2/1	2/1
Max. PV input current		5 A / 12.5 A)	_, .		5 A / 12.5 A)	_, .
Max. DC short-circuit current		5 A / 16 A)			2 A / 16 A)	
Max. current for input connector	5277(10	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	30 A		,	
Output (AC)						
Nominal AC power (@230 V, 50 Hz)	5000 W	6000 W	7000 W***	8000 W	10000 W	12000 W
Max. AC output power	5500 VA**	6600 VA**	7700 VA***	8800 VA**	11000 VA**	13200 VA**
Max. AC output current	8.3 A	10 A	11.7 A	13.3 A	16.7 A	20 A
Mux. Ac output current	0.5 A		5 / N / PE, 220 / 38		10.7 A	20 A
Nominal AC voltage			/ N / PE, 230 / 40			
Norminal AC voltage			3 / N / PE, 230 / 40			
A Civialta da randa			V – 276 V / 311 V –			
AC voltage range		180				
Nominal grid frequency /			50 Hz / 45 – 55 H			
Grid frequency range		-	60 Hz / 55 – 65 H			
Harmonic (THD)		<3	% (at nominal po	wer)		
Power factor at nominal power /		>0.99 /	/ 0.8 leading – 0.8	lagging		
Adjustable power factor						
Feed-in phases / AC connection			3/3			
Efficiency						
Max. efficiency	98.40%	98.40%	98.40%	98.50%	98.50%	98.50%
European efficiency	97.40%	97.40%	97.70%	97.80%	97.90%	97.90%
Protection						
Grid monitoring			Yes			
DC reverse connection protection			Yes			
AC short-circuit protection			Yes			
Leakage current protection			Yes			
Surge Protection		D	C Type II / AC Typ	e II		
DC switch			Yes			
Arc fault circuit interrupter (AFCI)			Yes			
PID recovery function			Yes			
General Data						
Dimensions (W*H*D)			370*480*195 mn			
Mounting method		W	all-mounting bra	cket		
Weight			18 kg			
Тороlоду			Transformerless	5		
Degree of protection			IP65			
Operating ambient temperature range			-25 ℃ to 60 ℃			
Allowable relative humidity range			0% - 100%			
Cooling method			Natural cooling			
Max. operating altitude		4000	) m (> 2000 m de	rating)		
Noise(Typical)			35 dB (A)			
Display			LED			
Communication		WLAN /	Ethernet / RS485	5/DI/DO		
DC connection type			MC4 (Max. 6 mm			
AC connection type			Plug and play	,		
Compliance	IEC / EN 61000-	-6-1/2/3/4. IFC / FN	V62109-1/2, IEC 61	727. IEC 62116	EC 61683, EN50	530.
			DE-AR-N-4105, DIN			-,

\*: The inverter enters the standby state when the input voltage ranges between 1,000 V and 1,100 V. If the maximum DC voltage in the system can exceed 1000 V, the MC4 connectors included in the scope of delivery must not be used. In this case MC4 Evo2 connectors must be used. \*\*: For Australia & Belgium& Germany, max. AC output power: SG5.0RT is 5000 VA, SG6.0RT is 6000 VA, SG8.0RT is 8000 VA, SG10RT is 10000 VA, SG12RT is 12000 VA.

\*\*\*: Australia: 6999 W, 6999 VA; Belgium& Germany: 7000 W, 7000 VA.

# SG3.0RT/SG4.0RT

Multi-MPPT String Inverter for 1000 Vdc System



#### HIGH YIELD

**CIRCUIT DIAGRAM** 

- Lower startup & wider MPPT voltage
- Compatible with bifacial modules
- Built-in PID recovery function

#### SMART MANAGEMENT

- Smart IV curve scanning
- 24/7 live monitoring
- Remote firmware updates

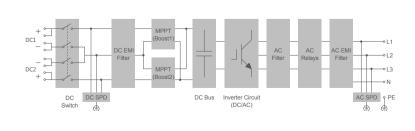
#### SAFE AND DURABLE

- Quick arc fault circuit interrupter
- Built-in Type II DC&AC SPD
- High anti-corrosion rating C5

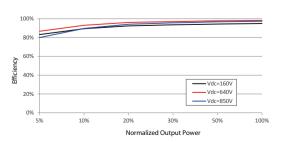


#### EASY AND USER FRIENDLY

- 18 kg compact design
- Unique push-in connectors
- Fast and easy commissioning via App



#### EFFICIENCY CURVE (SG4.0RT)



EUROPE



Type designation	SG3.0RT	SG4.0RT
Input (DC)		
Recommended max. PV input power	4.5 kWp	6.0 kWp
Max. PV input voltage	, 1100 V *	•
Min. PV input voltage / Start-up input voltage	180 V / 180 V	
Nominal input voltage	600 V	
MPP voltage range	160 V – 1000 V	
MPP voltage range for nominal power	160 V – 850 V	
No. of independent MPP inputs	2	
No. of PV strings per MPPT	1/1	
Max. PV input current	25 A (12.5 A / 12.5 A	()
Max. current for input connector	30 A	
Max. DC short-circuit current	32 A (16 A / 16 A)	
Output (AC)		
Nominal AC power (@230V, 50Hz)	3000 W	4000 W
Max. AC output power	3300 VA	4400 VA
Max. AC output current	5.1 A	6.8 A
	3 / N / PE, 220 / 380	$\vee$
Nominal AC voltage	3 / N / PE, 230 / 400	
	3 / N / PE, 240 / 415	S V
AC voltage range	180 V – 276 V / 311 V – 4	478 V
Nominal grid frequency /	50 Hz / 45 – 55 Hz	·
Grid frequency range	60 Hz / 55 – 65 Hz	<u>,</u>
Harmonic (THD)	<5 % (at nominal pov	wer)
Power factor at nominal power / Adjustable power factor	>0.99 / 0.8 leading – 0.8	lagging
Feed-in phases / AC connection	3/3	
Efficiency		
Max. efficiency	98.2 %	
European efficiency	96.5 %	97.0 %
Protection & Function		
Grid monitoring	Yes	
DC reverse connection protection		
De levelse confidection protection	Yes	
AC short-circuit protection	Yes Yes	
AC short-circuit protection	Yes	e II
AC short-circuit protection Leakage current protection	Yes Yes	e
AC short-circuit protection Leakage current protection Surge protection	Yes Yes DC Type II / AC Type	e
AC short-circuit protection Leakage current protection Surge protection DC switch	Yes Yes DC Type II / AC Type Yes	e
AC short-circuit protection Leakage current protection Surge protection DC switch Arc fault circuit interrupter (AFCI)	Yes Yes DC Type II / AC Type Yes Yes	e II
AC short-circuit protection Leakage current protection Surge protection DC switch Arc fault circuit interrupter (AFCI) PID recovery function	Yes Yes DC Type II / AC Type Yes Yes	
AC short-circuit protection Leakage current protection Surge protection DC switch Arc fault circuit interrupter (AFCI) PID recovery function General Data	Yes Yes DC Type II / AC Type Yes Yes Yes	
AC short-circuit protection Leakage current protection Surge protection DC switch Arc fault circuit interrupter (AFCI) PID recovery function General Data Dimensions (W*H*D)	Yes Yes DC Type II / AC Type Yes Yes Yes 370*480*195 mm	
AC short-circuit protection Leakage current protection Surge protection DC switch Arc fault circuit interrupter (AFCI) PID recovery function General Data Dimensions (W*H*D) Mounting method	Yes Yes DC Type II / AC Type Yes Yes Yes 370*480*195 mm Wall-mounting brace	
AC short-circuit protection Leakage current protection Surge protection DC switch Arc fault circuit interrupter (AFCI) PID recovery function General Data Dimensions (W*H*D) Mounting method Weight	Yes Yes DC Type II / AC Type Yes Yes 370*480*195 mm Wall-mounting brace 18 kg	
AC short-circuit protection Leakage current protection Surge protection DC switch Arc fault circuit interrupter (AFCI) PID recovery function General Data Dimensions (W*H*D) Mounting method Weight Topology	Yes Yes DC Type II / AC Type Yes Yes Yes 370*480*195 mm Wall-mounting brac 18 kg Transformerless	
AC short-circuit protection Leakage current protection Surge protection DC switch Arc fault circuit interrupter (AFCI) PID recovery function General Data Dimensions (W*H*D) Mounting method Weight Topology Degree of protection	Yes Yes DC Type II / AC Type Yes Yes Yes 370*480*195 mm Wall-mounting brac 18 kg Transformerless IP65	
AC short-circuit protection Leakage current protection Surge protection DC switch Arc fault circuit interrupter (AFCI) PID recovery function General Data Dimensions (W*H*D) Mounting method Weight Topology Degree of protection Operating ambient temperature range	Yes Yes DC Type II / AC Type Yes Yes Yes 370*480*195 mm Wall-mounting brac 18 kg Transformerless IP65 -25 °C to 60 °C	
AC short-circuit protection Leakage current protection Surge protection DC switch Arc fault circuit interrupter (AFCI) PID recovery function General Data Dimensions (W*H*D) Mounting method Weight Topology Degree of protection Operating ambient temperature range Allowable relative humidity range (non-condensing)	Yes Yes DC Type II / AC Type Yes Yes Yes 370*480*195 mm Wall-mounting brac 18 kg Transformerless IP65 -25 °C to 60 °C 0% – 100%	ket
AC short-circuit protection Leakage current protection Surge protection DC switch Arc fault circuit interrupter (AFCI) PID recovery function General Data Dimensions (W*H*D) Mounting method Weight Topology Degree of protection Operating ambient temperature range Allowable relative humidity range (non-condensing) Cooling method	Yes Yes DC Type II / AC Type Yes Yes Yes 370*480*195 mm Wall-mounting brac 18 kg Transformerless IP65 -25 °C to 60 °C 0% – 100% Natural cooling	ket
AC short-circuit protection Leakage current protection Surge protection DC switch Arc fault circuit interrupter (AFCI) PID recovery function General Data Dimensions (W*H*D) Mounting method Weight Topology Degree of protection Operating ambient temperature range Allowable relative humidity range (non-condensing) Cooling method Max. operating altitude	Yes Yes DC Type II / AC Type Yes Yes Yes 370*480*195 mm Wall-mounting brac 18 kg Transformerless IP65 -25 °C to 60 °C 0% – 100% Natural cooling 4000m (> 2000 m dera	ket
AC short-circuit protectionLeakage current protectionSurge protectionDC switchArc fault circuit interrupter (AFCI)PID recovery functionGeneral DataDimensions (W*H*D)Mounting methodWeightTopologyDegree of protectionOperating ambient temperature rangeAllowable relative humidity range (non-condensing)Cooling methodMax. operating altitudeNoise (Typical)	Yes Yes DC Type II / AC Type Yes Yes Yes 370*480*195 mm Wall-mounting brac 18 kg Transformerless IP65 -25 °C to 60 °C 0% – 100% Natural cooling 4000m (> 2000 m dera 35 dB (A)	ket ating)
AC short-circuit protectionLeakage current protectionSurge protectionDC switchArc fault circuit interrupter (AFCI)PID recovery functionGeneral DataDimensions (W*H*D)Mounting methodWeightTopologyDegree of protectionOperating ambient temperature rangeAllowable relative humidity range (non-condensing)Cooling methodMax. operating altitudeNoise (Typical)Display	Yes Yes DC Type II / AC Type Yes Yes Yes 370*480*195 mm Wall-mounting brac 18 kg Transformerless IP65 -25 °C to 60 °C 0% – 100% Natural cooling 4000m (> 2000 m dera 35 dB (A) LED	ket ating) / DI / DO
AC short-circuit protection Leakage current protection Surge protection DC switch Arc fault circuit interrupter (AFCI) PID recovery function General Data Dimensions (W*H*D) Mounting method Weight Topology Degree of protection Operating ambient temperature range Allowable relative humidity range (non-condensing) Cooling method Max. operating altitude Noise (Typical) Display Communication	Yes Yes DC Type II / AC Type Yes Yes Yes 370*480*195 mm Wall-mounting brac 18 kg Transformerless IP65 -25 °C to 60 °C 0% – 100% Natural cooling 4000m (> 2000 m dera 35 dB (A) LED WLAN / Ethernet / RS485	ket ating) / DI / DO
AC short-circuit protectionLeakage current protectionSurge protectionDC switchArc fault circuit interrupter (AFCI)PID recovery functionGeneral DataDimensions (W*H*D)Mounting methodWeightTopologyDegree of protectionOperating ambient temperature rangeAllowable relative humidity range (non-condensing)Cooling methodMax. operating altitudeNoise (Typical)DisplayCommunicationDC connection type	Yes Yes DC Type II / AC Type Yes Yes Yes 370*480*195 mm Wall-mounting brac 18 kg Transformerless IP65 -25 °C to 60 °C 0% – 100% Natural cooling 4000m (> 2000 m dera 35 dB (A) LED WLAN / Ethernet / RS485 MC4 (Max. 6 mm <sup>2</sup>	ket ating) / DI / DO )
AC short-circuit protectionLeakage current protectionSurge protectionDC switchArc fault circuit interrupter (AFCI)PID recovery functionGeneral DataDimensions (W*H*D)Mounting methodWeightTopologyDegree of protectionOperating ambient temperature rangeAllowable relative humidity range (non-condensing)Cooling methodMax. operating altitudeNoise (Typical)DisplayCommunicationDC connection typeAC connection type	Yes       Yes       DC Type II / AC Type       Yes       Yes       Yes       Yes       370*480*195 mm       Wall-mounting brace       18 kg       Transformerless       IP65       -25 °C to 60 °C       0% – 100%       Natural cooling       4000m (> 2000 m dera       35 dB (A)       LED       WLAN / Ethernet / RS485       MC4 (Max. 6 mm²       Plug and play	ket ating) / DI / DO ) //2, IEC 61727, IEC 62116,

\*: The inverter enters the standby state when the input voltage range is between 1,000V to 1,100V. If the maximum DC voltage in the system can exceed 1000 V, the MC4 connectors included in the scope of delivery must not be used. In this case MC4 Evo2 connectors must be used.

### **COM100**

Smart Communication Box





#### FLEXIBLE NETWORKING

- Support of RS485, Ethernet and WLAN communication
- Support of energy meter, meteo station, sensors and other equipment

#### (🐼) EASY OPERATION

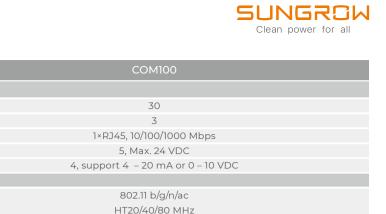
- Night light for maintenance
- · Robust enclosure, easy to install



#### CONVENIENT O&M

- Inverter batch parameter settings and firmware updates
- PV Plant maintenance via remote Web access for optimized OPEX
- · Active and reactive power control Local monitoring

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WLAN communication	HT20/40/80 MHz
	2.4GHz / 5GHz
Power supply	
AC input	100 Vac – 300 Vac, 50 / 60 Hz
Power consumption	Typ. 20 W, Max. 30 W
Night light for maintenance	<] W
Ambient conditions	
Operating Temperature	-30 °C to 60 °C
Storage Temperature	-40 °C to 80 °C
Relative air humidity	≤95 % (non-condensing)
Elevation	≤4000 m
Protection class	IP66
Mechanical parameters	
Dimensions (W * H * D)	460 * 315 * 126 mm
Weight	6 kg
Mounting type	Wall mounted, outdoor and indoor
Box material	PC
	AC cable: outdoor UV protection cable of 1 – 1.5 mm²,
	outside diameter 13 – 18mm
	RS485 cable: outdoor UV protection shielded
	twisted pair (STP) of 0.75 – 1.5 mm², outside diameter
Cable specification	6 – 18mm
	Ethernet: CAT5 cable, outdoor UV protection
	shielded, outside diameter 6 – 18mm
	AI, DI: outdoor UV protection cable of 1 – 1.5 mm²,
	outside diameter 4.5 – 6mm
Ordering information	
	The COM100E includes Logger1000B, AC adapter,
COM100E	SPD, Air switch, Night light

Communication Max. number of devices

Ethernet

Digital input

Analog input

RS485 interface

Wireless communication

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Support of WLAN wireless communication Apply to Global

### Logger1000

#### FLEXIBLE NETWORKING

- Support of RS485, Ethernet, WLAN communication
- Support of energy meter, meteo station, sensors and other equipment access

#### (X) ASSIST MAINTENANCE

- Support of inverter batch parameter setting and firmware updates
- Support of plant maintenance by remote Web access, optimized OPEX
- Active and reactive power control
- Support of local monitoring

#### ( EASY OPERATION

- Automatic Modbus address distribution
- Built-in Web server for monitoring and configuration, by PC or smartphone browser, no App required



CommunicationMax. number of devicest30Communication portsRS485 interface3Ethernet1×RJ45, 10/100/1000 MbpsDigital input5, Max. 24V DCAnalog input4, support 4 - 20 mA or 0 - 10 VDCWireless communication802.11 b/g/n/ac; HT20/40/80MHz; 2.4GHz/SGHzPower Supply0DC input24 VDC, 12 ADC output24 VDC, 0.5 APower consumption<10 WAmbient ConditionsOperating Temperature-30 °C to 60 °CStorage Temperature-40 °C to 80 °CStorage Temperatures4000 mProtection classIP20Mechanical parametersIP20Dienensions (W * H * D)200 mm *110 mm *60 mmWeinbt500 m	Type designation	Logger1000
Communication portsRS485 interface3Ethernet1×RJ45, 10/100/1000 MbpsDigital input5, Max. 24V DCAnalog input4, support 4 - 20 mA or 0 - 10 VDCWireless communication802.11 b/g/n/ac; HT20/40/80MHz; 2.4GHz/5GHzPower Supply0DC input24 VDC, 1.2 ADC output24 VDC, 0.5 APower consumption<10 W	Communication	
RS485 interface3Ethernet1×RJ45, 10/100/1000 MbpsDigital input5, Max. 24V DCAnalog input4, support 4 - 20 mA or 0 - 10 VDCWireless communication802.11 b/g/n/ac; HT20/40/80MHz; 2.4GHz/5GHzPower SupplyDC input24 VDC, 1.2 ADC output24 VDC, 0.5 APower consumption-10 WAmbient ConditionsOperating Temperature-30 °C to 60 °CStorage Temperature-40 °C to 80 °CRelative air humidityS95 % (non-condensing)Elevations4000 mProtection classIP20Mechanical parameters200 mm *110 mm *60 mm	Max. number of devicest	30
Ethernet     1×RJ45, 10/100/1000 Mbps       Digital input     5, Max. 24V DC       Analog input     4, support 4 – 20 mA or 0 – 10 VDC       Wireless communication     0       WLAN communicatio     802.11 b/g/n/ac; HT20/40/80MHz; 2.4GHz/5GHz       Power Supply     24 VDC, 1.2 A       DC output     24 VDC, 0.5 A       Power consumption     <10 W	Communication ports	
Digital input     5, Max. 24V DC       Analog input     4, support 4 - 20 mA or 0 - 10 VDC       Wireless communication     0       WLAN communicatio     802.11 b/g/n/ac; HT20/40/80MHz; 2.4GHz/5GHz       Power Supply     0       DC input     24 VDC, 1.2 A       DC output     24 VDC, 0.5 A       Power consumption     <10 W	RS485 interface	3
Analog input4, support 4 - 20 mA or 0 - 10 VDCWireless communication802.11 b/g/n/ac; HT20/40/80MHz; 2.4GHz/5GHzWLAN communicatio802.11 b/g/n/ac; HT20/40/80MHz; 2.4GHz/5GHzPower Supply24 VDC, 1.2 ADC input24 VDC, 0.5 APower consumption<10 WAmbient ConditionsOperating Temperature<00 °CStorage Temperature<00 °CRelative air humidity<95 % (non-condensing)Elevation<4000 mProtection classIP20Mechanical parameters<200 mm * 110 mm * 60 mm	Ethernet	1×RJ45, 10/100/1000 Mbps
Wireless communicationWLAN communicatio802.11 b/g/n/ac; HT20/40/80MHz; 2.4GHz/5GHzPower SupplyDC input24 VDC, 1.2 ADC output24 VDC, 0.5 APower consumption<10 W	Digital input	5, Max. 24V DC
WLAN communicatio802.11 b/g/n/ac; HT20/40/80MHz; 2.4GHz/5GHzPower SupplyDC input24 VDC, 1.2 ADC output24 VDC, 0.5 APower consumption<10 W	Analog input	4, support 4 – 20 mA or 0 – 10 VDC
Power SupplyDC input24 VDC, 1.2 ADC output24 VDC, 0.5 APower consumption<10 W	Wireless communication	
DC input24 VDC, 1.2 ADC output24 VDC, 0.5 APower consumption<10 W	WLAN communicatio	802.11 b/g/n/ac; HT20/40/80MHz; 2.4GHz/5GHz
DC output24 VDC, 0.5 APower consumption<10 WAmbient ConditionsOperating Temperature-30 °C to 60 °CStorage Temperature-40 °C to 80 °CRelative air humidity≤95 % (non-condensing)Elevation≤4000 mProtection classIP20Mechanical parameters200 mm *110 mm *60 mm	Power Supply	
Power consumption<10 WAmbient ConditionsOperating Temperature-30 °C to 60 °CStorage Temperature-40 °C to 80 °CRelative air humidity≤95 % (non-condensing)Elevation≤4000 mProtection classIP20Mechanical parameters200 mm *110 mm *60 mm	DC input	24 VDC, 1.2 A
Ambient ConditionsOperating Temperature-30 °C to 60 °CStorage Temperature-40 °C to 80 °CRelative air humidity≤95 % (non-condensing)ElevationProtection classProtection classMechanical parametersDimensions (W * H * D)200 mm * 110 mm * 60 mm	DC output	24 VDC, 0.5 A
Operating Temperature   -30 °C to 60 °C     Storage Temperature   -40 °C to 80 °C     Relative air humidity   ≤95 % (non-condensing)     Elevation   ≤4000 m     Protection class   IP20     Mechanical parameters   200 mm * 110 mm * 60 mm	Power consumption	<10 W
Storage Temperature   -40 °C to 80 °C     Relative air humidity   ≤95 % (non-condensing)     Elevation   ≤4000 m     Protection class   IP20     Mechanical parameters   200 mm * 110 mm * 60 mm	Ambient Conditions	
Relative air humidity ≤95 % (non-condensing)   Elevation ≤4000 m   Protection class IP20   Mechanical parameters 200 mm * 110 mm * 60 mm	Operating Temperature	-30 °C to 60 °C
Elevation ≤4000 m   Protection class IP20   Mechanical parameters 200 mm *110 mm *60 mm	Storage Temperature	-40 °C to 80 °C
Protection class IP20   Mechanical parameters 200 mm * 110 mm * 60 mm	Relative air humidity	≤95 % (non-condensing)
Mechanical parameters   Dimensions (W * H * D)   200 mm * 110 mm * 60 mm	Elevation	≤4000 m
Dimensions (W * H * D) 200 mm * 110 mm * 60 mm	Protection class	IP20
	Mechanical parameters	
Weight 500 g	Dimensions (W * H * D)	200 mm * 110 mm * 60 mm
Sou à	Weight	500 g
Mounting type Top-hat rail mounting / wall mounting	Mounting type	Top-hat rail mounting / wall mounting
Ordering information	Ordering information	
Logger1000B Support of Ethernet and WLAN communication	Logger1000B	Support of Ethernet and WLAN communication

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### WiNet-S

LAN Communication Module





#### SMART AND FLEXIBLE

- WLAN or Ethernet, flexible compatibility of plant networking, one-click access to iSolarCloud
- Automatic network configuration with DHCP, transmission without configuration
- Free WLAN configuration, easy and time saving

#### SIMPLE AND EFFICIENT

- Plug and play, quick installation
- Data interval in seconds, quick glance for what you want
- Support of Smart IV Curve Diagnosis[1]
- Support of local and remote parameter setting and firmware updates

#### SAFE AND RELIABLE

- Password and encrypted transmission for data protection
- IP66, wide temperature range

Type designation	WiNet-S
Communication	
Max. number of devices	1
LED display	LED * 3
Communication Mode	
Internet communication	Channel * 1, 10/100Mbps self-adaption, Communcation distance ≤100m
WLAN commnunicatoin	802.11 b/g IEEE802.11n HT20@2.4GHz IEEE802.11n HT40@2.4GHz 2.4 GHz
Power Supply	
DC input	5 VDC, 2.1 A
Power consumption	≤5 W
Ambient conditions	
Operating Temperature	-30 °C to 60 °C
Relative air humidity	≤95 % (non-condensing)
Elevation	≤4000 m
Protection class	IP66
Mechanical parameters	
Dimensions (W * H * D)	48 mm * 132 mm * 36 mm
Mounting type	Plug and play

### EyeM4

Wireless Communication Module for Multiple Inverters



#### SMART AND FLEXIBLE

- One-click access to iSolarCloud
- One module can manage up to 10 inverters for
- remote maintenance and control
- Plug and play, easy installation



#### CONVENIENT O&M

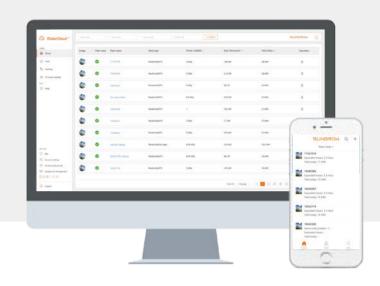
- Built-in Web server for monitoring and configuration, by PC or smartphone browser no App required
- Support of plant maintenance by remote Web access, optimized OPEX
- Support of local and remote parameter setting and firmware updates

Type designation	EyeM4
Communication	
Max. number of devices	10
LED display	LED × 3
Wireless communication	
4G communication	LTE(FDD): B1, B3, B5, B8 LTE(TDD): B38, B39, B40, B41 TD-SCDMA: B34, B39 CDMA: BC0 GSM: 900MHz/1800MHz
WLAN commnunicatoin	WCDMA: B1, B8 802.11 b/g/n/ac HT20/40/80 MHz 2.4 GHz / 5 GHz
Power supply	
DC input	5 VDC, 0.8 A
Power consumption	<4 W
Ambient conditions	
Operating Temperature	-30 °C – 60 °C
Relative air humidity	≤95 % (non-condensing)
Elevation	≤4000 m
Protection class	IP66
Mechanical parameters	
Dimensions (W * H * D)	48 mm * 130 mm * 36 mm
Mounting type	Plug and Play
Ordering information	
EyeM4A	Supports 4G and WLAN communication
EyeM4C	Supports WLAN communication

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## iSolarCloud

Remote Monitoring and O&M Platform



#### FLEXIBLE AND FRIENDLY

- Centralized power plant management, optimized OPEX
- Simple network infrastructure, fastplatform deployment
- Flexible data access, Web portal and App

#### SAFE AND RELIABLE

- Hierarchical access management
- Cyber security and redundant data storage overthe lifecycle of plants, certified data security
- Full log for trace and audit



#### SIMPLE AND EFFICIENT

- Full plant supervision via muti-dimensional analysis, automated reports
- Accurate positioning of faults, quick trouble shooting, realtime push of information, reducing time to resolve faults
- Parameter setting, firmware updates, smart IV curve diagnosis
- Support of plant maintenance by remote Web access of local data logger / SCADA

Type designation	iSolarCloud
Monitoring Device	
Device type	Inverter, combiner box, meteo station, energy meter, transformer and other plant devices
Monitoring Capacity	More than 100 GW (scalable)
Data Collection	
Time interval	5minutes or less
General Data	
Language	Chinese, English, German, French, Spaish, Portuguese, Italian, Dutch, Polish, Japanese, Korean, Vietnamese, Traditional Chinese
Data storage time	> 25 years
Storage capability	> 100PB
System reliability	99.99%
Minimum Web requirements	
Browser	IE 11, Chrome 65, Safari 11, Firefox 60
Resolution	1366 * 768, 1920 * 1080 recommended
Minimum Operating Environment for App	
Dimensions (W * H * D)	1920 * 1080, 2001 * 1125, 1280 * 720
Mounting type	Android 5.0, iOS 10.0

### DTD1352-C/10 (80)A

Three-phase Smart Energy Meter



Type designation	DTD1352-C/10 (80)A
Electrical Parameter	
Nominal voltage	230 Vac / 400 Vac
Input voltage range	57.7 Vac – 268 Vac
Power consumption	<2W (10 VA)
Max. operating current	80 A
Grid frequency	50 Hz / 60 Hz
Measurement accuracy	Class 0.5 (Active)
Interface and communication	RS485
Environmental Condition	
Ingress protection rating	IP20
Operating ambient temperature	-25 to 55 °C
Relative humidity	0 – 95 %
Mechanical Data	
Dimensions (W * H * D)	126 * 91 * 74 mm
Weight	0.35 kg
Installation	35 mm DIN-rail



### DTSD1352-C/1 (6)A\*

#### Three-phase Smart Energy Meter



Type designation	DTSD1352-C/1 (6)A
Electrical Parameter	
Nominal voltage	230 Vac / 400 Vac
Input voltage range	57.7 / 100 Vac - 268 / 464 Vac
Power consumption	<2W (10 VA)
Max. operating current	3×1 (6) A (via CTs)
Grid frequency	50 Hz / 60 Hz
Measurement accuracy	Class 0.5 (Active)
Interface and communication	RS485
Environmental Condition	
Ingress protection rating	IP20
Operating ambient temperature	-25 to 55 °C
Relative humidity	0 – 95 %
Mechanical Data	
Dimensions (W * H * D)	126 * 91 * 74 mm
Weight	0.35 kg
Installation	35 mm DIN-rail

\* DTSD1352-C/1 (6)A needs to be used with CT externally.

### **Global Reference**

Over 63 GW of String Inverters Installed Globally



550 kW Rooftop PV Plant Germany







4 MW PV Plant Ninh Thuan province, Vietnam 😪



2.25 MW PV Plant USA 🕚



1 MW PV Plant Vietnam 😒



1.4 MW PV Plant Vietnam 🚼



660kW PV Plant India 💿





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