

# Single Phase String Inverter

SUN- 1.5 / 2.2 / 2.7 / 3 / 3.3 / 3.6 / 4 K-G03



1 MPP tracker, Max. efficiency up to 97.5%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)



Low start-up voltage of 80V

**Deye**

Stock Code: 605117.SH

Model	SUN-1.5K-G03	SUN-2.2K-G03	SUN-2.7K-G03	SUN-3K-G03	SUN-3.3K-G03	SUN-3.6K-G03	SUN-4K-G03
<b>Input Side</b>							
Max. DC Input Power (kW)	2	2.9	3.5	3.9	4.3	4.7	5.2
Max. DC Input Voltage (V)				500	550		
Start-up DC Input Voltage (V)				80			
MPPT Operating Range (V)				70~450	70~500		
Max. DC Input Current (A)				13			
Max. Short Circuit Current (A)				19.5			
No.of MPP Trackers				1			
No.of Strings per MPP Tracker				1			
<b>Output Side</b>							
Rated Output Power (kW)	1.5	2.2	2.7	3	3.3	3.6	4
Max. Active Power (kW)	1.65	2.42	2.97	3.3	3.63	3.96	4.4
Nominal Output Voltage / Range (V)	L/N/PE 220/230V (Optional)						
Rated Grid Frequency (Hz)	50 / 60 (Optional)						
Operating Phase	Single phase						
Rated AC Grid Output Current (A)	6.5	9.6	11.7	13	14.3	15.7	17.4
Max. AC Output Current (A)	7.2	10.5	12.9	14.3	15.8	17.2	19.1
Output Power Factor	0.8 leading to 0.8 lagging						
Grid Current THD	<3%						
DC Injection Current (mA)	<0.5%						
Grid Frequency Range	47~52 or 57~62 (Optional)						
<b>Efficiency</b>							
Max. Efficiency	97.3%	97.3%	97.3%	97.5%	97.5%	97.5%	97.5%
Euro Efficiency	97.1%	97.1%	97.1%	97.3%	97.3%	97.3%	97.3%
MPPT Efficiency	>99%						
<b>Protection</b>							
DC Reverse-Polarity Protection	Yes						
AC Short Circuit Protection	Yes						
AC Output Overcurrent Protection	Yes						
Output Overvoltage Protection	Yes						
Insulation Resistance Protection	Yes						
Ground Fault Monitoring	Yes						
Anti-islanding Protection	Yes						
Temperature Protection	Yes						
Integrated DC Switch	Yes						
Remote software upload	Yes						
Remote change of operating parameters	Yes						
Surge protection	DC Type II / AC Type II						
<b>General Data</b>							
Size (mm)	280W×272.5H×184D						
Weight (kg)	4.8						
Topology	Transformerless						
Internal Consumption	<1W (Night)						
Running Temperature	-25~65°C, >45°C derating						
Ingress Protection	IP65						
Noise Emission (Typical)	≤35 dB						
Cooling Concept	Natural cooling						
Max. Operating Altitude Without Derating	2000m						
Warranty	8 years						
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150						
Operating Surroundings Humidity	0-100%						
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2						
<b>Features</b>							
DC Connection	MC-4 mateable						
AC Connection	IP65 rated plug						
Display	LCD1602						
Interface	RS485/RS232/Wifi/LAN						

# Single Phase String Inverter

SUN- 3.6 / 4 / 4.2 / 5 / 5.2 / 6 / 6.2 K-G03



2 MPP trackers, Max. efficiency up to 97.5%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)



Low start-up voltage of 80V

**Deye**

Stock Code: 605117.SH

Model	SUN-3.6K-G03	SUN-4K-G03	SUN-4.2K-G03	SUN-5K-G03	SUN-5.2K-G03	SUN-6K-G03	SUN-6.2K-G03
<b>Input Side</b>							
Max. DC Input Power (kW)	4.7	5.2	5.5	6.5	6.8	7.8	8.1
Max. DC Input Voltage (V)	500						
Start-up DC Input Voltage (V)	80						
MPPT Operating Range (V)	70~450						
Max. DC Input Current (A)	13+13						
Max. Short Circuit Current (A)	19.5+19.5						
No.of MPP Trackers	2						
No.of Strings per MPP Tracker	1						
<b>Output Side</b>							
Rated Output Power (kW)	3.6	4	4.2	5	5.2	6	6.2
Max. Active Power (kW)	3.96	4.4	4.6	5.5	5.7	6.6	6.8
Nominal Output Voltage / Range (V)	L/N/PE 220V/230V (Optional)						
Rated Grid Frequency (Hz)	50 / 60 (Optional)						
Operating Phase	Single phase						
Rated AC Grid Output Current (A)	15.7	17.4	18.3	21.7	22.6	26.1	27
Max. AC Output Current (A)	17.2	19.1	20.1	23.9	24.9	28.7	29.7
Output Power Factor	0.8 leading to 0.8 lagging						
Grid Current THD	<3%						
DC Injection Current (mA)	<0.5%						
Grid Frequency Range	47~52 or 57~62 (Optional)						
<b>Efficiency</b>							
Max. Efficiency	97.3%	97.5%	97.5%	97.5%	97.5%	97.5%	97.5%
Euro Efficiency	97.1%	97.3%	97.3%	97.3%	97.3%	97.3%	97.3%
MPPT Efficiency	>99%						
<b>Protection</b>							
DC Reverse-Polarity Protection	Yes						
AC Short Circuit Protection	Yes						
AC Output Overcurrent Protection	Yes						
Output Overvoltage Protection	Yes						
Insulation Resistance Protection	Yes						
Ground Fault Monitoring	Yes						
Anti-islanding Protection	Yes						
Temperature Protection	Yes						
Integrated DC Switch	Optional						
Remote software upload	Yes						
Remote change of operating parameters	Yes						
Surge protection	DC Type II / AC Type II						
<b>General Data</b>							
Size (mm)	330W×323H×190D						
Weight (kg)	7.5						
Topology	Transformerless						
Internal Consumption	<1W (Night)						
Running Temperature	-25~65 , >45 derating						
Ingress Protection	IP65						
Noise Emission (Typical)	<35 dB						
Cooling Concept	Natural cooling						
Max. Operating Altitude Without Derating	2000m						
Warranty	8 years						
Grid Connection Standard	VDE4105 IEC61727/62116 VDE0126 AS4777.2 CEI 0 21, EN50549-1, G98 G99 C10-11, UNE217002, NBR16149/NBR16150						
Operating Surroundings Humidity	0-100%						
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2						
<b>Features</b>							
DC Connection	MC-4 mateable						
AC Connection	IP65 rated plug						
Display	LCD1602						
Interface	RS485/RS232/Wifi/LAN						

# Three Phase String Inverter

SUN-4 / 5 / 6 / 7 / 8 / 9 / 10 / 12 K-G03



2 MPP trackers, Max. efficiency up to 98.3%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)

**Deye**

Stock Code: 605117.SH

Model	SUN-4K-G03	SUN-5K-G03	SUN-6K-G03	SUN-7K-G03	SUN-8K-G03	SUN-10K-G03	SUN-12K-G03
<b>Input Side</b>							
Max. DC Input Power (kW)	5.2	6.5	7.8	9.1	10.4	13	15.6
Max. DC Input Voltage (V)	1000						
Start-up DC Input Voltage (V)	140						250
MPPT Operating Range (V)	120~850						200~850
Max. DC Input Current (A)	13+13						
Max. Short Circuit Current (A)	19.5+19.5						
No.of MPP Trackers	2						
No.of Strings per MPP Tracker	1						
<b>Output Side</b>							
Rated Output Power (kW)	4	5	6	7	8	10	12
Max. Active Power (kW)	4.4	5.5	6.6	7.7	8.8	11	13.2
Nominal Output Voltage / Range (V)	3L/N/PE 220/380V, 230/400V						
Rated Grid Frequency (Hz)	50 / 60 (Optional)						
Operating Phase	Three phase						
Rated AC Grid Output Current (A)	6.1/5.8	7.6/7.2	9.1/8.7	10.6/10.1	12.1/11.6	15.2/14.5	18.2/17.4
Max. AC Output Current (A)	6.7/6.4	8.3/8	10/9.6	11.7/11.1	13.3/12.8	16.7/15.9	20/19.1
Output Power Factor	0.8 leading to 0.8 lagging						
Grid Current THD	<3%						
DC Injection Current (mA)	<0.5%						
Grid Frequency Range	47~52 or 57~62 (Optional)						
<b>Efficiency</b>							
Max. Efficiency	98.3%						
Euro Efficiency	97.5%						
MPPT Efficiency	>99%						
<b>Protection</b>							
DC Reverse-Polarity Protection	Yes						
AC Short Circuit Protection	Yes						
AC Output Overcurrent Protection	Yes						
Output Overvoltage Protection	Yes						
Insulation Resistance Protection	Yes						
Ground Fault Monitoring	Yes						
Anti-islanding Protection	Yes						
Temperature Protection	Yes						
Integrated DC Switch	Yes						
Remote software upload	Yes						
Remote change of operating parameters	Yes						
Surge protection	DC Type II / AC Type II						
<b>General Data</b>							
Size (mm)	330W×457H×185D						330×457×205
Weight (kg)	10						11
Topology	Transformerless						
Internal Consumption	<1W (Night)						
Running Temperature	-25~65°C, >45°C derating						
Ingress Protection	IP65						
Noise Emission (Typical)	≤30 dB						
Cooling Concept	Natural cooling						
Max. Operating Altitude Without Derating	2000m						
Warranty	8 years						
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150						
Operating Surroundings Humidity	0-100%						
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2						
<b>Features</b>							
DC Connection	MC-4 mateable						
AC Connection	IP65 rated plug						
Display	LCD1602						
Interface	RS485/RS232/Wifi/LAN						

# Three Phase String Inverter

SUN- 15 K-G03



2 MPP trackers, Max. efficiency up to 98.5%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)

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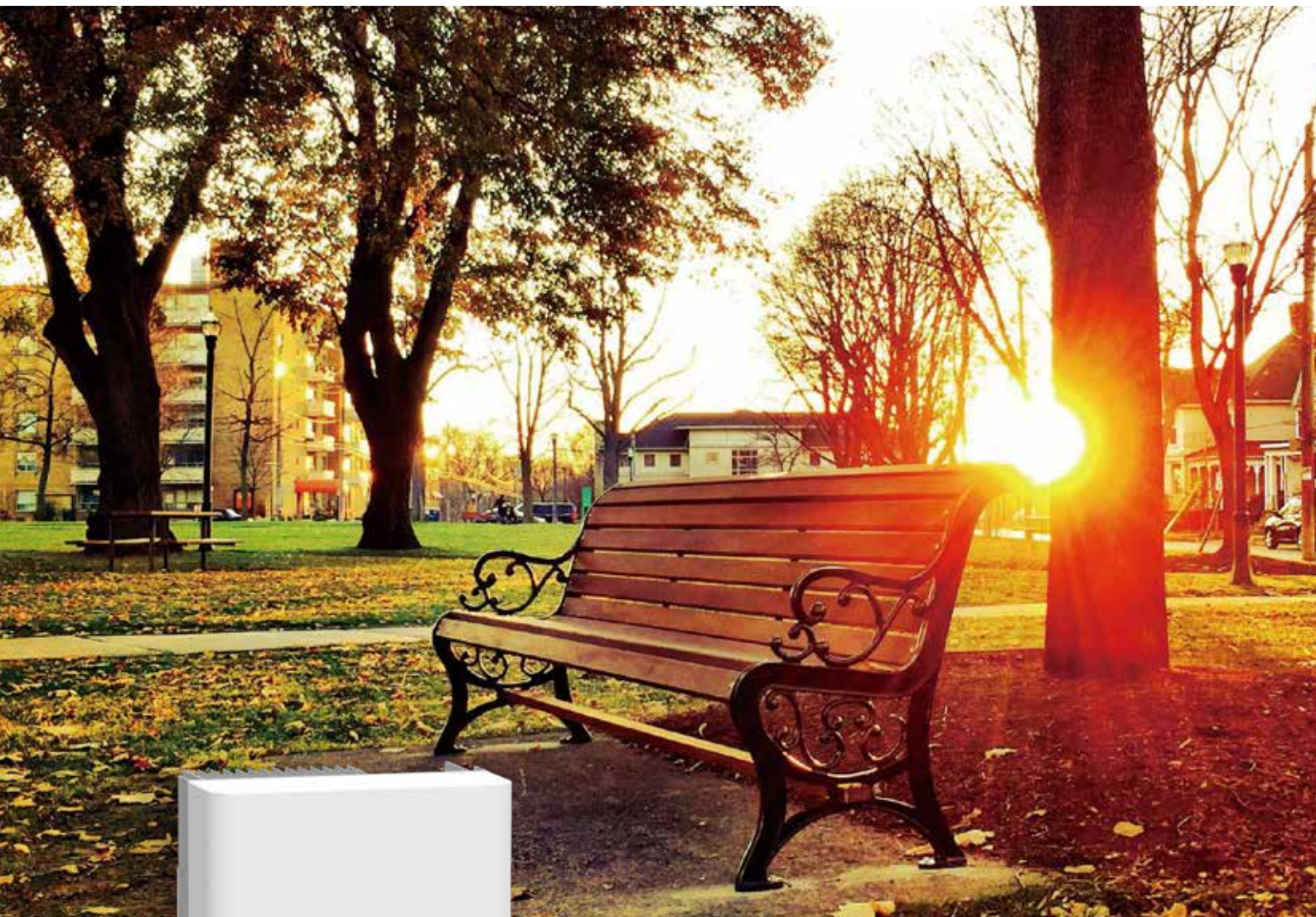
Stock Code: 605117.SH

Model	SUN-15K-G03
<b>Input Side</b>	
Max. DC Input Power (kW)	19.5
Max. DC Input Voltage (V)	1000
Start-up DC Input Voltage (V)	250
MPPT Operating Range (V)	200~850
Max. DC Input Current (A)	13+26
Max. Short Circuit Current (A)	19.5+39
Number of MPPT / Strings per MPPT	2/1+2
<b>Output Side</b>	
Rated Output Power (kW)	15
Max. Active Power (kW)	16.5
Nominal Output Voltage / Range (V)	3L/N/PE 380V/323V-418V, 400V/340V-440V
Rated Grid Frequency (Hz)	50 / 60 (Optional)
Operating Phase	Three phase
Rated AC Grid Output Current (A)	21.7
Max. AC Output Current (A)	23.9
Output Power Factor	0.8 leading to 0.8 lagging
Grid Current THD	<3%
DC Injection Current (mA)	<0.5%
Grid Frequency Range	47~52 or 57~62 (Optional)
<b>Efficiency</b>	
Max. Efficiency	98.5%
Euro Efficiency	97.5%
MPPT Efficiency	>99%
<b>Protection</b>	
DC Reverse-Polarity Protection	Yes
AC Short Circuit Protection	Yes
AC Output Overcurrent Protection	Yes
Output Overvoltage Protection	Yes
Insulation Resistance Protection	Yes
Ground Fault Monitoring	Yes
Anti-islanding Protection	Yes
Temperature Protection	Yes
Integrated DC Switch	Yes
Remote software upload	Yes
Remote change of operating parameters	Yes
Surge protection	DC Type II / AC Type II
<b>General Data</b>	
Size (mm)	333W×472H×202D
Weight (kg)	15
Topology	Transformerless
Internal Consumption	<1W (Night)
Running Temperature	-25~65°C, >45°C derating
Ingress Protection	IP65
Noise Emission (Typical)	<40 dB
Cooling Concept	Smart cooling
Max. Operating Altitude Without Derating	2000m
Warranty	8 years
Grid Connection Standard	CEI 0-21, VDE-AR-N 4105, NRS 097, IEC 62116, IEC 61727, G99, G98, VDE 0126-1-1, RD 1699, C10-11
Operating Surroundings Humidity	0-100%
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2
<b>Features</b>	
DC Connection	MC-4 mateable
AC Connection	IP65 rated plug
Display	LCD1602
Interface	RS485/RS232/Wifi/LAN



# Three Phase String Inverter

SUN-18/20/25K-G05



2 MPP trackers, Max. efficiency up to 98.6%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)

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Stock Code: 605117.SH

Model	SUN-18K-G05	SUN-20K-G05	SUN-25K-G05
<b>Input Side</b>			
Max. DC Input Power (kW)	23.4	26	32.5
Max. DC Input Voltage (V)	1000		
Start-up DC Input Voltage (V)	250		
MPPT Operating Range (V)	200~850		
Max. DC Input Current (A)	26+26		
Max. Short Circuit Current (A)	39+39		
No.of MPP Trackers	2		
No.of Strings per MPP Tracker	2		
<b>Output Side</b>			
Rated Output Power (kW)	18	20	25
Max. Active Power (kW)	19.8	22	27.5
Nominal Output Voltage / Range (V)	3L/N/PE 220/380V, 230/400V		
Rated Grid Frequency (Hz)	50 / 60 (Optional)		
Operating Phase	Three phase		
Rated AC Grid Output Current (A)	27.3/26.1	30.3/29	37.9/36.2
Max. AC Output Current (A)	30/28.7	33.3/31.9	41.7/39.8
Output Power Factor	0.8 leading to 0.8 lagging		
Grid Current THD	<3%		
DC Injection Current (mA)	<0.5%		
Grid Frequency Range	47~52 or 57~62 (Optional)		
<b>Efficiency</b>			
Max. Efficiency	98.6%		
Euro Efficiency	97.8%		
MPPT Efficiency	>99%		
<b>Protection</b>			
DC Reverse-Polarity Protection	Yes		
AC Short Circuit Protection	Yes		
AC Output Overcurrent Protection	Yes		
Output Overvoltage Protection	Yes		
Insulation Resistance Protection	Yes		
Ground Fault Monitoring	Yes		
Anti-islanding Protection	Yes		
Temperature Protection	Yes		
Integrated DC Switch	Yes		
Remote software upload	Yes		
Remote change of operating parameters	Yes		
Surge protection	DC Type II / AC Type II		
<b>General Data</b>			
Size (mm)	362W×527H×220D		
Weight (kg)	20		
Topology	Transformerless		
Internal Consumption	<1W (Night)		
Running Temperature	-25~65°C, >45°C derating		
Ingress Protection	IP65		
Noise Emission (Typical)	<40 dB		
Cooling Concept	Smart cooling		
Max. Operating Altitude Without Derating	2000m		
Warranty	5 years		
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150		
Operating Surroundings Humidity	0-100%		
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2		
<b>Features</b>			
DC Connection	MC-4 mateable		
AC Connection	IP65 rated plug		
Display	LCD1602		
Interface	RS485/RS232/Wifi/LAN		

# Three Phase String Inverter

SUN- 30 / 33 / 35 K-G03



2 MPP trackers, Max. efficiency up to 98.6%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)

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Stock Code: 605117.SH

# Three Phase String Inverter

SUN- 40 / 45 / 50 / 60 K-G03



Max. 4 MPP trackers, Max. efficiency up to 98.7%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)

**Deye**

Stock Code: 605117.SH

Model	SUN-30K-G03	SUN-33K-G03	SUN-35K-G03
<b>Input Side</b>			
Max. DC Input Power (kW)	39	42.9	45.5
Max. DC Input Voltage (V)	1000		
Start-up DC Input Voltage (V)	250		
MPPT Operating Range (V)	200~850		
Max. DC Input Current (A)	40+40		
Max. Short Circuit Current (A)	60+60		
Number of MPPT / Strings per MPPT	2/3		
<b>Output Side</b>			
Rated Output Power (kW)	30	33	35
Max. Active Power (kW)	33	36.3	38.5
Nominal Output Voltage / Range (V)	3L/N/PE 380V/323V-418V, 400V/340V-440V		
Rated Grid Frequency (Hz)	50 / 60 (Optional)		
Operating Phase	Three phase		
Rated AC Grid Output Current (A)	43.5	47.8	50.7
Max. AC Output Current (A)	47.9	52.6	55.8
Output Power Factor	0.8 leading to 0.8 lagging		
Grid Current THD	<3%		
DC Injection Current (mA)	<0.5%		
Grid Frequency Range	47~52 or 57~62 (Optional)		
<b>Efficiency</b>			
Max. Efficiency	98.6%		
Euro Efficiency	97.8%		
MPPT Efficiency	>99%		
<b>Protection</b>			
DC Reverse-Polarity Protection	Yes		
AC Short Circuit Protection	Yes		
AC Output Overcurrent Protection	Yes		
Output Overvoltage Protection	Yes		
Insulation Resistance Protection	Yes		
Ground Fault Monitoring	Yes		
Anti-islanding Protection	Yes		
Temperature Protection	Yes		
Integrated DC Switch	Yes		
Remote software upload	Yes		
Remote change of operating parameters	Yes		
Surge protection	DC Type II / AC Type II		
<b>General Data</b>			
Size (mm)	362Wx577Hx215D		
Weight (kg)	25.5		
Topology	Transformerless		
Internal Consumption	<1W (Night)		
Running Temperature	-25~65°C, >45°C derating		
Ingress Protection	IP65		
Noise Emission (Typical)	<45 dB		
Cooling Concept	Smart cooling		
Max. Operating Altitude Without Derating	2000m		
Warranty	8 years		
Grid Connection Standard	CEI 0-21, VDE-AR-N 4105, NRS 097, IEC 62116, IEC 61727, G99, G98, VDE 0126-1-1, RD 1699, C10-11		
Operating Surroundings Humidity	0-100%		
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2		
<b>Features</b>			
DC Connection	MC-4 mateable		
AC Connection	IP65 rated plug		
Display	LCD1602		
Interface	RS485/RS232/Wifi/LAN		

# Three Phase String Inverter

SUN- 70 / 80 / 90 / 100 / 110 K-G03



Max. 6 MPP trackers, Max. efficiency up to 98.7%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)



Type II DC/AC SPD

**Deye**

Stock Code: 605117.SH

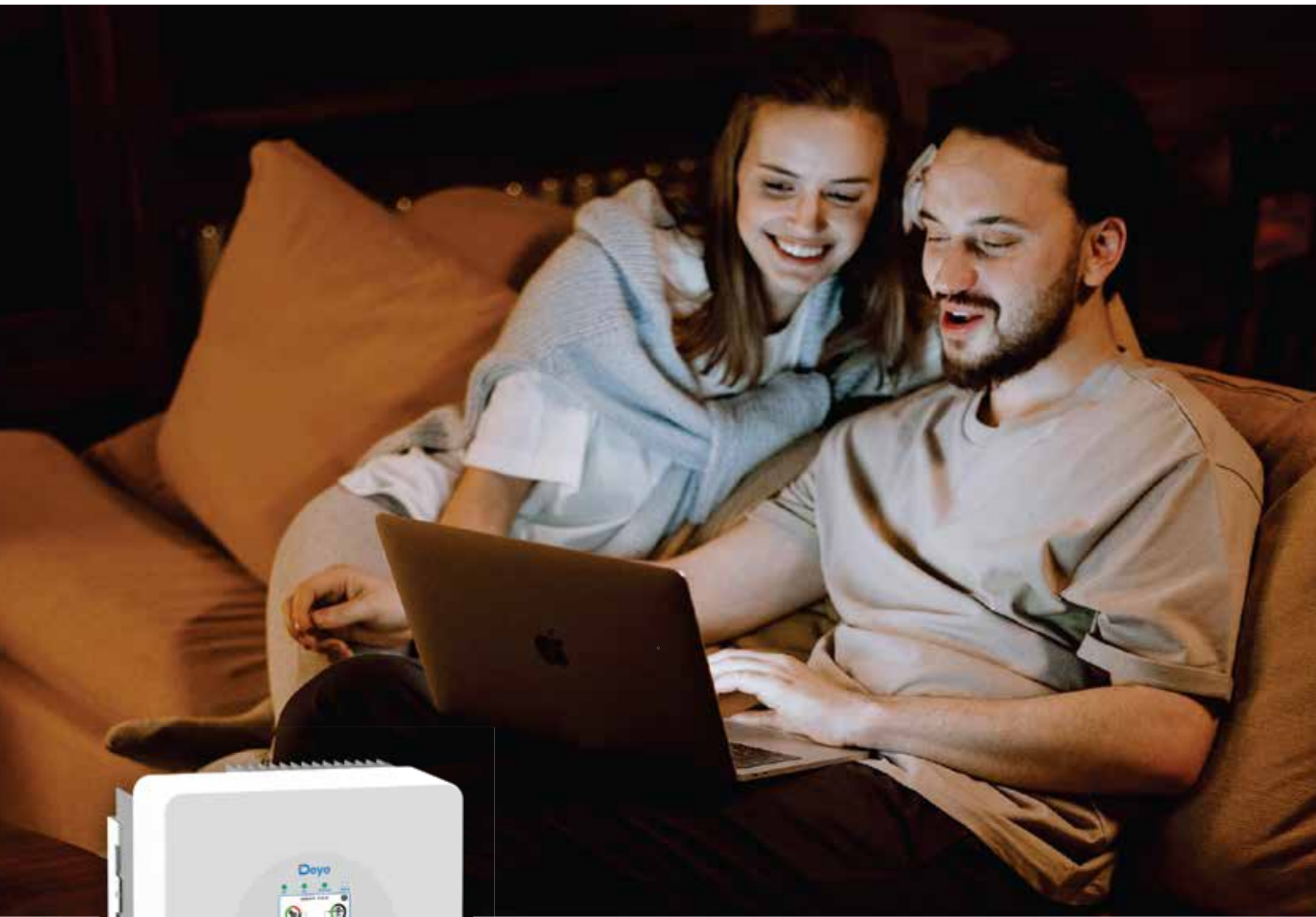
Model	SUN-40K-G03	SUN-45K-G03	SUN-50K-G03	SUN-60K-G03
<b>Input Side</b>				
Max. DC Input Power (kW)	52	58.5	65	78
Max. DC Input Voltage (V)	1000			
Start-up DC Input Voltage (V)	250			
MPPT Operating Range (V)	200~850			
Max. DC Input Current (A)	40+40+40		40+40+40+40	
Max. Short Circuit Current (A)	60+60+60		60+60+60+60	
Number of MPPT / Strings per MPPT	3/3		4/3	
<b>Output Side</b>				
Rated Output Power (kW)	40	45	50	60
Max. Active Power (kW)	44	49.5	55	66
Nominal Output Voltage / Range (V)	3L/N/PE 380V/323V-418V, 400V/340V-440V			
Rated Grid Frequency (Hz)	50 / 60 (Optional)			
Operating Phase	Three phase			
Rated AC Grid Output Current (A)	58	65.2	72.4	87
Max. AC Output Current (A)	63.8	71.7	79.7	95.7
Output Power Factor	0.8 leading to 0.8 lagging			
Grid Current THD	<3%			
DC Injection Current (mA)	<0.5%			
Grid Frequency Range	47~52 or 57~62 (Optional)			
<b>Efficiency</b>				
Max. Efficiency	98.7%			
Euro Efficiency	98%			
MPPT Efficiency	>99%			
<b>Protection</b>				
DC Reverse-Polarity Protection	Yes			
AC Short Circuit Protection	Yes			
AC Output Overcurrent Protection	Yes			
Output Overvoltage Protection	Yes			
Insulation Resistance Protection	Yes			
Ground Fault Monitoring	Yes			
Anti-islanding Protection	Yes			
Temperature Protection	Yes			
Integrated DC Switch	Yes			
Remote software upload	Yes			
Remote change of operating parameters	Yes			
Surge protection	DC Type II / AC Type II			
<b>General Data</b>				
Size (mm)	647.5W×537H×303.5D			
Weight (kg)	44.5			
Topology	Transformerless			
Internal Consumption	<1W (Night)			
Running Temperature	-25~65°C, >45°C derating			
Ingress Protection	IP65			
Noise Emission (Typical)	<45 dB			
Cooling Concept	Smart cooling			
Max. Operating Altitude Without Derating	2000m			
Warranty	8 years			
Grid Connection Standard	CEI 0-21, VDE-AR-N 4105, NRS 097, IEC 62116, IEC 61727, G99, G98, VDE 0126-1-1, RD 1699, C10-11			
Operating Surroundings Humidity	0-100%			
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2			
<b>Features</b>				
DC Connection	MC-4 mateable			
AC Connection	IP65 rated plug			
Display	LCD 240 × 160			
Interface	RS485/RS232/Wifi/LAN			

Model	SUN-70K-G03	SUN-80K-G03	SUN-90K-G03	SUN-100K-G03	SUN-110K-G03
<b>Input Side</b>					
Max. DC Input Power (kW)	91	104	135	150	150
Max. DC Input Voltage (V)	1000				
Start-up DC Input Voltage (V)	250				
MPPT Operating Range (V)	200~850				
Max. DC Input Current (A)	40+40+40+40		40+40+40+40+40+40		
Max. Short Circuit Current (A)	60+60+60+60		60+60+60+60+60+60		
Number of MPPT / Strings per MPPT	4/4		6/4		
<b>Output Side</b>					
Rated Output Power (kW)	70	80	90	100	110
Max. Active Power (kW)	77	88	99	110	121
Nominal Output Voltage / Range (V)	3L/N/PE 380V/323V-418V, 400V/340V-440V				
Rated Grid Frequency (Hz)	50 / 60 (Optional)				
Operating Phase	Three phase				
Rated AC Grid Output Current (A)	101.5	115.9	130.4	144.9	159.4
Max. AC Output Current (A)	111.6	127.5	143.5	159.4	175.4
Output Power Factor	0.8 leading to 0.8 lagging				
Grid Current THD	<3%				
DC Injection Current (mA)	<0.5%				
Grid Frequency Range	47~52 or 57~62 (Optional)				
<b>Efficiency</b>					
Max. Efficiency	98.7%				
Euro Efficiency	98.3%				
MPPT Efficiency	>99%				
<b>Protection</b>					
DC Reverse-Polarity Protection	Yes				
AC Short Circuit Protection	Yes				
AC Output Overcurrent Protection	Yes				
Output Overvoltage Protection	Yes				
Insulation Resistance Protection	Yes				
Ground Fault Monitoring	Yes				
Anti-islanding Protection	Yes				
Temperature Protection	Yes				
Integrated DC Switch	Yes				
Remote software upload	Yes				
Remote change of operating parameters	Yes				
Surge protection	DC Type II / AC Type II				
<b>General Data</b>					
Size (mm)	838W×568H×323D				
Weight (kg)	73.7				
Topology	Transformerless				
Internal Consumption	<1W (Night)				
Running Temperature	-25~65°C, >45°C derating				
Ingress Protection	IP65				
Noise Emission (Typical)	<55 dB				
Cooling Concept	Smart cooling				
Max. Operating Altitude Without Derating	2000m				
Warranty	8 years				
Grid Connection Standard	CEI 0-21, VDE-AR-N 4105, NRS 097, IEC 62116, IEC 61727, G99, G98, VDE 0126-1-1, RD 1699, C10-11				
Operating Surroundings Humidity	0-100%				
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				
<b>Features</b>					
DC Connection	MC-4 mateable				
AC Connection	IP65 rated plug				
Display	LCD 240 × 160				
Interface	RS485/RS232/Wifi/LAN				



# Hybrid Inverter

SUN- 3 / 3.6 / 5 / 6 K-SG04LP1-EU



Colorful touch LCD, IP65 protection degree

6

6 time periods for battery charging/discharging

120

Max. charging/discharging current of 135A

16

Frequency droop control, Max.16pcs parallel



DC couple and AC couple to retrofit existing solar system



Support storing energy from diesel generator

**Deye**

*Clean Power For You*

Model	SUN-3K-SG04LP1-24-EU	SUN-3K-SG04LP1-EU	SUN-3.6K-SG04LP1-EU	SUN-5K-SG04LP1-EU	SUN-6K-SG04LP1-EU
<b>Battery Input Data</b>					
Battery Type	Lead-acid or Lithium-ion				
Battery Voltage Range (V)	20~30	40~60			
Max. Charging Current (A)	140	70	90	120	135
Max. Discharging Current (A)	140	70	90	120	135
Charging Curve	3 Stages / Equalization				
External Temperature Sensor	Yes				
Charging Strategy for Li-Ion Battery	Self-adaption to BMS				
<b>PV String Input Data</b>					
Max. DC Input Power (W)	3900		4680	6500	7800
Rated PV Input Voltage (V)	370				
Max. PV Input Voltage (V)	500				
Min. PV Input Voltage (V)	125				
Start-up Voltage (V)	125				
MPPT Range (V)	150-425				
Full Load DC Voltage Range (V)	250-425				
PV Input Current (A)	13			13+13	
Max. PV ISC (A)	17			17+17	
Number of MPPT / Strings per MPPT	1/1			2/1+1	
<b>AC Output Data</b>					
Rated AC Output and UPS Power (W)	3000		3600	5000	6000
Max. AC Output Power (W)	3300		3960	5500	6600
Peak Power (off grid)	2 times of rated power, 10 S				
AC Output Rated Current (A)	13.6/13		16.4/15.7	22.7/21.7	21.3/26.1
Max. AC Current (A)	15/14.3		18/17.2	25/23.9	30/28.7
Max. Continuous AC Passthrough (A)	35				40
Power Factor	0.8 leading to 0.8 lagging				
Output Frequency and Voltage	50/60Hz; 220/230Vac (single phase)				
Grid Type	Single Phase				
Current Harmonic Distortion	THD<3% (Linear load<1.5%)				
<b>Efficiency</b>					
Max. Efficiency	97.60%				
Euro Efficiency	96.50%				
MPPT Efficiency	99.90%				
<b>Protection</b>					
PV Input Lightning Protection	Integrated				
Anti-islanding Protection	Integrated				
PV String Input Reverse Polarity Protection	Integrated				
Insulation Resistor Detection	Integrated				
Residual Current Monitoring Unit	Integrated				
Output Over Current Protection	Integrated				
Output Shorted Protection	Integrated				
Output Over Voltage Protection	Integrated				
Surge protection	DC Type II / AC Type II				
<b>Certifications and Standards</b>					
Grid Connection Standard	EN50549-1, VDE0126, IEC61727, VDEN4105, G99, CEI0-21, NRS097, NBR16149/16150, RD1699				
Safety EMC / Standard	IEC62109-1/-2				
<b>General Data</b>					
Operating Temperature Range (°C)	-25~60°C, >45°C Derating				
Cooling	Natural cooling				
Noise (dB)	<30 dB				
Communication with BMS	RS485; CAN				
Weight (kg)	14				
Size (mm)	365.5Wx470.5Hx261D				
Protection Degree	IP65				
Installation Style	Wall-mounted				
Warranty	5 years				



# Three Phase Hybrid Inverter

## SUN- 6 / 8 / 10 / 12 K-SG04LP3-EU/AU



**Deye**

*Clean Power For You*

- 100%** 100% unbalanced output, each phase  
Max. output up to **50%** rated power
- 48** 48V low voltage battery, transformer isolation design
- 6** 6 time periods for battery charging/discharging
- 240** Max. charging/discharging current of 240A
- 16** Frequency droop control, Max.16pcs parallel
-  DC couple and AC couple to retrofit existing solar system
-  Support storing energy from diesel generator

Model	SUN-6K-SG04LP3 -EU/AU	SUN-8K-SG04LP3 -EU/AU	SUN-10K-SG04LP3 -EU/AU	SUN-12K-SG04LP3 -EU/AU
<b>Battery Input Data</b>				
Battery Type	Lead-acid or Li-Ion			
Battery Voltage Range (V)	40~60			
Max. Charging Current (A)	150	190	210	240
Max. Discharging Current (A)	150	190	210	240
Charging Curve	3 Stages / Equalization			
External Temperature Sensor	Yes			
Charging Strategy for Li-Ion Battery	Self-adaption to BMS			
<b>PV String Input Data</b>				
Max. DC Input Power (W)	7800	10400	13000	15600
PV Input Voltage (V)	550 (150~800)			
MPPT Range (V)	200-650			
Start-up Voltage (V)	160			
PV Input Current (A)	13+13	13+13	26+13	26+13
Max. PV ISC (A)	17+17	17+17	34+17	34+17
No.of MPPT Trackers	2			
No.of Strings Per MPPT Tracker	1+1	1+1	2+1	2+1
<b>AC Output Data</b>				
Rated AC Output and UPS Power (W)	6000	8000	10000	12000
Max. AC Output Power (W)	6600	8800	11000	13200
Peak Power (off grid)	2 times of rated power, 10 S			
AC Output Rated Current (A)	9	12	15	18
Max. AC Current (A)	13.5	18	23	27
Max. Continuous AC Passthrough (A)	50			
Output Frequency and Voltage	50/60Hz; 230/400Vac (Three phase)			
Grid Type	Three Phase			
Current Harmonic Distortion	THD<3% (Linear load<1.5%)			
<b>Efficiency</b>				
Max. Efficiency	97.60%			
Euro Efficiency	97.00%			
MPPT Efficiency	99.90%			
<b>Protection</b>				
PV Input Lightning Protection	Integrated			
Anti-islanding Protection	Integrated			
PV String Input Reverse Polarity Protection	Integrated			
Insulation Resistor Detection	Integrated			
Residual Current Monitoring Unit	Integrated			
Output Over Current Protection	Integrated			
Output Shorted Protection	Integrated			
Output Over Voltage Protection	Integrated			
Surge protection	DC Type II / AC Type II			
<b>Certifications and Standards</b>				
Grid Regulation	IEC61727, IEC62116, IEC60068, IEC61683, NRS 097-2-1			
Safety EMC / Standard	IEC62109-1/-2, IEC61000-6-1, IEC61000-6-3, IEC61000-3-11, IEC61000-3-12			
<b>General Data</b>				
Operating Temperature Range (°C)	-25~60°C, >45°C Derating			
Cooling	Smart cooling			
Noise (dB)	<45 dB			
Communication with BMS	RS485; CAN			
Weight (kg)	34.5			
Size (mm)	422W×658H×281D			
Protection Degree	IP65			
Installation Style	Wall-mounted			
Warranty	5 years			

# Three Phase Hybrid Inverter

SUN- 25 / 30 / 40 / 50 K-SG01HP3-EU-BM2/3/4



100

100% unbalanced output, each phase; Max. output up to **50%** rated power



DC couple and AC couple to retrofit existing solar system

10

Max. 10pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel

100

Max. charging/discharging current of 100A

H

High voltage battery, higher efficiency

6

6 time periods for battery charging/discharging



Support storing energy from diesel generator

**Deye**

Stock Code: 605117.SH

[www.deyeinverter.com](http://www.deyeinverter.com) | 07

Model	SUN-25K-SG01HP3 -EU-BM2	SUN-30K-SG01HP3 -EU-BM3	SUN-40K-SG01HP3 -EU-BM4	SUN-50K-SG01HP3 -EU-BM4
<b>Battery Input Data</b>				
Battery Type	Li-Ion			
Battery Voltage Range (V)	160~800			
Max. Charging Current (A)	50+50			
Max. Discharging Current (A)	50+50			
Number of battery input	2			
Charging Strategy for Li-Ion Battery	Self-adaption to BMS			
<b>PV String Input Data</b>				
Max. DC Input Power (W)	32500	39000	52000	65000
Max. DC Input Voltage (V)	1000			
Start-up Voltage (V)	180			
MPPT Range (V)	150-850			
Full Load DC Voltage Range (V)	450-850	360-850	360-850	450-850
Rated DC Input Voltage (V)	600			
PV Input Current (A)	36+36	36+36+36	36+36+36+36	
Max. PV I <sub>sc</sub> (A)	55+55	55+55+55	55+55+55+55	
No. of MPP Trackers	2	3	4	
No. of Strings per MPP Tracker	2			
<b>AC Output Data</b>				
Rated AC Output and UPS Power (W)	25000	30000	40000	50000
Max. AC Output Power (W)	27500	33000	44000	55000
AC Output Rated Current (A)	37.9/36.3	45.5/43.5	60.7/58	75.8/72.5
Max. AC Output Rated Current (A)	41.7/39.9	50/47.9	66.7/63.8	83.4/79.8
Max. Three-phase Unbalanced Output Current	50	60	70	83.3
Max. Continuous AC Passthrough (A)	150			
Peak Power (off grid)	1.5 time of rated power, 10 S			
Generator input/Smart load /AC couple current (A)	37.9 / 150 / 37.9	45.5 / 150 / 45.5	60.7 / 150 / 60.7	75.8 / 150 / 75.8
Power Factor	0.8 leading to 0.8 lagging			
Output Frequency and Voltage	50/60Hz; 3L/N/PE 220/380, 230/400Vac			
Grid Type	Three Phase			
DC injection current (mA)	<0.5%I <sub>n</sub>			
<b>Efficiency</b>				
Max. Efficiency	97.60%			
Euro Efficiency	97.00%			
MPPT Efficiency	99.90%			
<b>Protection</b>				
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection, Surge protection			
Output Over Voltage Protection	DC Type II/AC Type III			
<b>Certifications and Standards</b>				
Grid Regulation	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150			
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2			
<b>General Data</b>				
Operating Temperature Range (°C)	-40~60°C, >45°C derating			
Cooling	Smart cooling			
Noise (dB)	<45 dB			
Communication with BMS	RS485; CAN			
Weight (kg)	75			
Size (mm)	527W×894H×294D			
Protection Degree	IP65			
Installation Style	Wall-mounted			
Warranty	5 years			

# SE-G5.1 Pro



#### ◆ Safer

Cobalt Free Lithium Iron Phosphate (LFP) Battery: Safety and long Lifespan, high efficiency and high-Power density. Intelligent BMS, providing complete protection.

#### ◆ Reliable

Support high discharge power. IP20, natural cooling, wide temperature range: -20°C to 55°C.

#### ◆ Flexible

Modular design, easy to expand, Max. 64 units in parallel, Max. capacity of 327kWh. Suited to residential and commercial applications for increasing the self-consumption ratio.

#### ◆ Convenient

Battery module auto networking, Automatic IP addressing, Easy maintenance, remotely monitoring and upgrade, Support USB drive upgrade the firmware.

#### ◆ Eco-Friendly

Use environmental protection materials, the whole module non-toxic, pollution-free.



Stock Code: 605117.SH

Model		SE-G5.1 Pro
<b>Main Parameter</b>		
Battery Chemistry	LiFePO4	
Capacity (Ah)	100	
Scalability	Max. 64 pcs pack (327kWh) in parallel (Max. 32 pcs no external setup)	
Nominal Voltage (V)	51.2	
Operating Voltage(V)	43.2~57.6	
Energy (kWh)	5.12	
Usable Energy (kWh) <sup>[1]</sup>	4.61	
Charge/Discharge Current (A)	Recommend <sup>[2]</sup>	50
	Max. <sup>[2]</sup>	100
	Peak(2mins,25°C)	150
<b>Other Parameter</b>		
Recommend Depth of Discharge	90%	
Dimension (W/H/D, mm)	445*133*430	
Weight Approximate(kg)	44	
Master LED Indicator	5LED(SOC:20%~SOC100%),3LED (working, alarming, protecting)	
IP Rating of Enclosure	IP20	
Operating Temperature	Charge:0~55°C / Discharge:-20°C~55°C	
Storage Temperature	0°C~35°C	
Humidity	5%~95%	
Altitude	≤2000m	
Cycle Life	≥6000(25°C±2°C,0.5C/0.5C,70%EOL)	
Installation	19-inch standard cabinet, cabinet depth ≥600mm / with rack	
Communication Port	CAN2.0, RS485	
Warranty Period <sup>[3]</sup>	10 years	
Energy Throughput <sup>[3]</sup>	16MWh@70%EOL	
Certification	UN38.3, UL1973, IEC62619, CE, CEI 0-21	

[1] DC Usable Energy, test conditions: 90% DOD, 0.5C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.

[2] The current is affected by temperature and SOC.

[3] The warranty is due whichever reached first of warranty period or life cycle power.

### Introduction

This series lithium iron phosphate battery is one of new energystorage products developed and produced by Deye , it can be used to support reliable power forvarious types of equipment and systems.

This series is especially suitable for application scene of high power,limited installation space, restricted load-bearing and long cycle life.

This series has built-in BMS battery management system, which can manage and monitor cells information including voltage, current and temperature. What's more, BMS can balance cells charging and discharging to extend cycle life. Multiple batteries can connect in parallel to expand capacity and power in parallel for larger capacity and longer power supporting duration requirements.



# RW-M6.1



- ◆ **Safer**

Cobalt Free Lithium Iron Phosphate (LFP) Battery, safety and long lifespan, high efficiency and high-power density. Intelligent BMS, providing complete protection.

- ◆ **Reliable**

Support high discharge power. IP65, natural cooling, wide temperature range: -20°C to 55°C.

- ◆ **Flexible**

Modular design, easy to expand, Max. 32 units in parallel, Max. capacity of 196kWh. Suited to residential and commercial applications for increasing the self-consumption ratio.

- ◆ **Convenient**

Battery module auto networking, Automatic IP addressing, easy maintenance, remotely monitoring and upgrade, support USB drive upgrade the firmware.

- ◆ **Eco-Friendly**

Use environmental protection materials, the whole module non-toxic, pollution-free.

- ◆ **Wall-Mounted**

Flat design, wall-mounted, saving installation space.

Model		RW-M6.1
<b>Main Parameter</b>		
Battery Chemistry	LiFePO4	
Capacity (Ah)	120	
Scalability	Max.32 pcs in Parallel(196kWh)	
Nominal Voltage (V)	51.2	
Operating Voltage(V)	43.2~57.6	
Energy (kWh)	6.14	
Usable Energy (kWh) <sup>[1]</sup>	5.53	
Charge/Discharge Current (A)	Recommend <sup>[2]</sup>	60
	Max. <sup>[2]</sup>	100
	Peak(2mins,25°C)	150
<b>Other Parameter</b>		
Recommend Depth of Discharge	90%	
Dimension (W/H/D, mm)	460*720*143(Depth of 160mm With Hanging Board)	
Weight Approximate(kg)	55	
Master LED Indicator	5LED(SOC:20%~SOC100%),3LED (working, alarming, protecting)	
IP Rating of Enclosure	IP65	
Operating Temperature	Charge:0~55°C / Discharge:-20°C~55°C	
Storage Temperature	0°C~35°C	
Humidity	5%~95%	
Altitude	≤2000m	
Cycle Life	≥6000(25°C±2°C,0.5C/0.5C,70%EOL)	
Installation	Wall-Mounted, Floor-Mounted	
Communication Port	CAN2.0, RS485	
Warranty Period <sup>[3]</sup>	10 years	
Energy Throughput <sup>[3]</sup>	20MWh@70%EOL	
Certification	UN38.3, UL1973, FCC, IEC62619, CE, CEI 0-21	

[1] DC Usable Energy, test conditions: 90% DOD, 0.5C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.

[2] The current is affected by temperature and SOC.

[3] The warranty is due whichever reached first of warranty period or life cycle power.

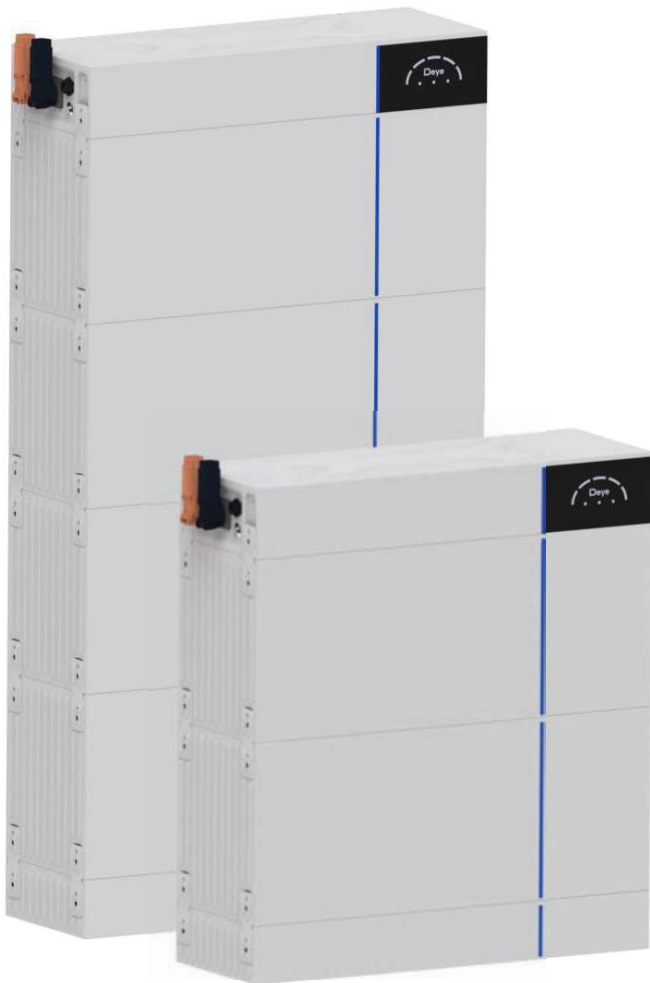
**Introduction**

This series lithium iron phosphate battery is one of new energystorage products developed and produced by Deye , it can be used to support reliable power forvarious types of equipment and systems.

This series is especially suitable for application scene of high power,limited installation space, restricted load- bearing and long cycle life.

This series has built-in BMS battery management system, which can manage and monitor cells information including voltage, current and temperature. What's more, BMS can balance cells charging and discharging to extend cycle life. Multiple batteries can connect in parallel to expand capacity and power in parallel for larger capacity and longer power supporting duration requirements.

# A1-W5.1



- ◆ **Safer**

Cobalt Free Lithium Iron Phosphate (LFP) Battery, safety and long lifespan, high efficiency and high-power density. Intelligent BMS, providing complete protection.

- ◆ **Reliable**

Support high discharge power. IP65, natural cooling, wide temperature range: -20°C to 55°C.

- ◆ **Flexible**

Modular design, easy to expand, Max. 6 clusters in parallel(36 pcs), Max. capacity of 184kWh. Suited to residential and commercial applications for increasing the self-consumption ratio.

- ◆ **Convenient**

Battery module auto networking, automatic IP addressing, easy maintenance, remotely monitoring and upgrade, support USB drive upgrade the firmware.

- ◆ **Eco-Friendly**

Use environmental protection materials, the whole module non-toxic, pollution-free.

- ◆ **Quick Installation**

Flat and stackable design, floor-mounted or wall-mounted, no wiring and extra fixing screws, rapid and easy installation.



Stock Code: 605117.SH

Model		AI-W5.1				
<b>Main Parameter</b>						
Battery Chemistry		LiFePO4				
Battery Module Energy (kWh)		5.12				
Battery Module Voltage (V)		51.2				
Battery Module Capacity (Ah)		100				
Scalability		2	3	4	5	6
Nominal Voltage (V)		51.2				
Operating Voltage(V)		43.2~57.6				
Energy (kWh)		10.24	15.36	20.48	25.6	30.72
Usable Energy (kWh) <sup>[1]</sup>		9.2	13.8	18.4	23.0	27.6
Charge/Discharge Current (A)	Recommend <sup>[2]</sup>	100	150	200	250	250
	Max. <sup>[2]</sup>	180	210	240	300	300
	Peak(30s,25°C)	270	315	360	360	360
<b>Other Parameter</b>						
Recommend Depth of Discharge		90%				
Dimension (W/D/H, mm, ref)		720*255*770	720*255*1055	720*255*1340	720*255*1625	720*255*1910
Weight Approximate (kg)		117	163	209	255	301
Master LED Indicator		5LED(SOC:20%~100%), 3LED (working, alarming, protecting)				
IP Rating of Enclosure		IP65				
Operating Temperature		Charge: 0~55°C/ Discharge: -20°C~55°C				
Storage Temperature		0 ~ 35°C				
Humidity		5%~95%				
Altitude		≤2000m				
Cycle Life <sup>[3]</sup>		≥6000(25°C±2°C,0.5C/0.5C,70%EOL)				
Installation		Floor-Mounted, Wall-Mounted				
Communication Port		CAN2.0, RS485				
Warranty Period <sup>[3]</sup>		10 years				
Energy Throughput <sup>[3]</sup>		16MWh(Battery Module @70%EOL)				
Certification		IEC62619, CE,VDE2510-10, CEI 0-21, UL1973, UL9540A, FCC, UN38.3				

[1] DC Usable Energy, test conditions: 90% DOD, 0.5C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.

[2] The current is affected by temperature and SOC.

[3] The warranty is due whichever reached first of warranty period or energy throughput.

**Introduction**

This series lithium iron phosphate battery is one of new energy storage products developed and produced by Deye , it can be used to support reliable power forvarious types of equipment and systems.

This series is especially suitable for application scene of high power,limited installation space, restricted load-bearing and long cycle life.

This series has built-in BMS battery management system, which can manage and monitor cells information including voltage, current and temperature. What’s more, BMS can balance cells charging and discharging to extend cycle life.

Multiple batteries can connect in parallel to expand capacity and power in parallel for larger capacity and longer power supporting duration requirements.

# BOS-G



#### ◆ Convenient

Quick installation standard of 19-inch embedded designed module is comfortable for installation and maintenance.

#### ◆ Safe and reliable

Cathode material is made from LiFePO<sub>4</sub> with safety performance and long cycle life, The module has less self-discharge, up to 6 months without charging it on shelf, no memory effect, excellent performance of shallow charge and discharge.

#### ◆ Intelligent BMS

It has protection functions including over-discharge, over-charge, over-current and over-high or low temperature. The system can automatically manage charge and discharge state and balance current and voltage of each cell.

#### ◆ Eco-friendly

The whole module is non-toxic, non-polluting and environmentally friendly.

#### ◆ Flexible configuration

Multiple battery modules can be in parallel for expanding capacity and power. Support USB upgrade, wifi upgrade(optional), remote up grade(Compatible with Deye inverter).

#### ◆ Wide temperature

Working temperature range is from -20°C to 55°C, with excellent discharge performance and cycle life.





Stock Code: 605117.SH

Model		B0S-G		
Main Parameter				
Cell Chemistry	LiFePO4			
Module Energy(kWh)	5.12			
Module Nominal Voltage (V)	51.2			
Module Capacity(Ah)	100			
Battery Module Qty in series. (Optional)	4 (Min)	8 (Standard US Cluster)	12 (Standard EU Cluster)	
System Nominal Voltage (V)	204.8	409.6	614.4	
System Operating Voltage (V)	180~230	359~460	538~691	
System Energy (kWh)	20.48	40.96	61.44	
System Usable Energy(kWh)	18.5	36.86	55.29	
Charge/Discharge Current (A)	Recommend	50		
	Max	100		
	Peak (2 mins, 25°C)	125		
Working Temperature(°C)	Charge: 0~50/Discharge: -20~55			
Status Indicator	Yellow: Battery High Voltage Power On Red: Battery System Alarm			
Communication Port	CAN2.0/RS485			
Humidity	5~85%RH			
Altitude	≤2000m			
IP Rating of Enclosure	IP20			
Dimension (W/D/H,mm)	580*590*1615		580*590*2200	
Weight Approximate(kg)	258	434	628	
Installation Location	Rack Mounting			
Storage Temperature(°C)	0~35			
Recommend Depth of Discharge	90%			
Cycle Life	25±2°C, 0.5C/0.5C, EOL70%≥6000			
Warranty	10years			
Certification	CE/IEC62619/UL1973/UL9540A/UN38.3			

- 1 DC Usable Energy, test conditions: 90% DOD, 0.5C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.
- 2 The current is affected by temperature and SOC.
- 3 The warranty is due whichever reached first of warranty period or life cycle power.

Model	Description
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HVB750V/100A-EU  Operating Voltage Nomina Charge/Discharge Current Max.Charge/Discharge Current DC Input Rating Operating Temperature Range Ingress Protection Dimension (W/D/H) Weight Approximate	120 ~ 750Vdc 100A 125A 12±2%V/4.15A -20~55°C IP20 440*565*150mm 15.5kg	
HVB750V/100A-US  Operating Voltage Nominal Charge/Discharge Current Max.Charge/Discharge Current DC Input Rating Operating Temperature Range Ingress Protection Dimension (W/D/H) Weight Approximate	120 ~ 750Vdc 100A 125A 12±2%V/4.15A -20~55°C IP20 440*565*150mm 17kg	

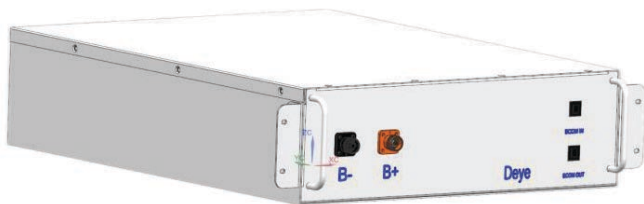
High voltage box Standard configuration:

- ① 120 ohm terminal resistance
- ② 140mm communication cable
- ③ 220mm power cable
- ④ 1.5m power cable (US Version)  
2.1m power cable (EU Version)



BOS-GM5.1	5.12 kwh battery module	
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Battery Type Nominal Voltage Nominal Capacity Nominal Energy Nominal Charge/Discharge Current Max.Charge/Discharge Current Charge Temperature Discharge Temperature Storage Temperature Ingress Protection Dimension (W/D/H) Weight Approximate	LiFePO4(LFP) 51.2Vdc 100Ah 5.12kWh 100A 125A 0~50°C -20°C ~ 55°C 0°C ~ 35°C IP20 440*570*133mm 44kg	
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Battery module Standard configuration:

- ① 110mm communication cable
- ② 200mm power cable



EPCable5.0(Optional)	Standard 5-meter power cable connected to the positive pole of the external PCS	
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1000V/4AWG cable



ENCable5.0(Optional)	Standard 5-meter power cable connected to the negative pole of the external PCS	
----------------------	---	--

1000V/4AWG cable



Model	Description
EPWR Cable5.0(Optional)	Standard 5-meter cable connected to external 12VDC power supply



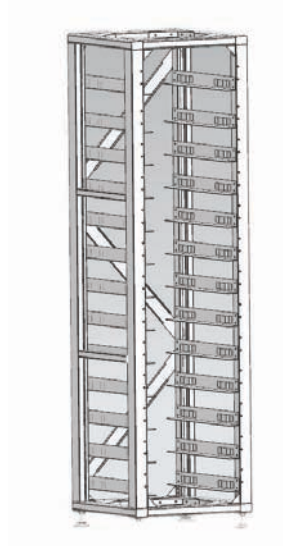
ECOM Cable5.0(Optional)	Standard 5-meter communication cable connected to the external device
-------------------------	---



3U-HRACK(Optional)	Standard 19inch rack, caninstall 12 pcs batteries and 1 pcs High Voltage Battery cluster control box
--------------------	--

Dimension (W/D/H)  
Weight Approximate

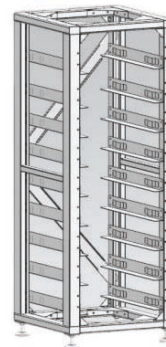
580\*590\*2200mm  
85kg



3U-LRACK(Optional)	Standard 19inch rack, caninstall 8 pcs batteries and 1 pcs High Voltage Battery cluster control box
--------------------	---

Dimension (W/D/H)  
Weight Approximate

580\*590\*1615mm  
65kg





# GB-L



- ◆ **Structural safety**

Meet high seismic grade zone 4.

- ◆ **High-voltage stack**

Modules are connected in series without cable connection, and high-voltage platform improves system efficiency.

- ◆ **Thermal management**

Temperature detection of key parts, cell, power plug-in, etc.

- ◆ **Wide temperature operation**

The heating function is optional to meet the application scenarios with low temperature and no sense.

- ◆ **Environmental friendliness**





IP protection grade 65, anti-corrosion grade  $\geq$ C2, environmental protection battery.

- ◆ **Intelligent and visual**

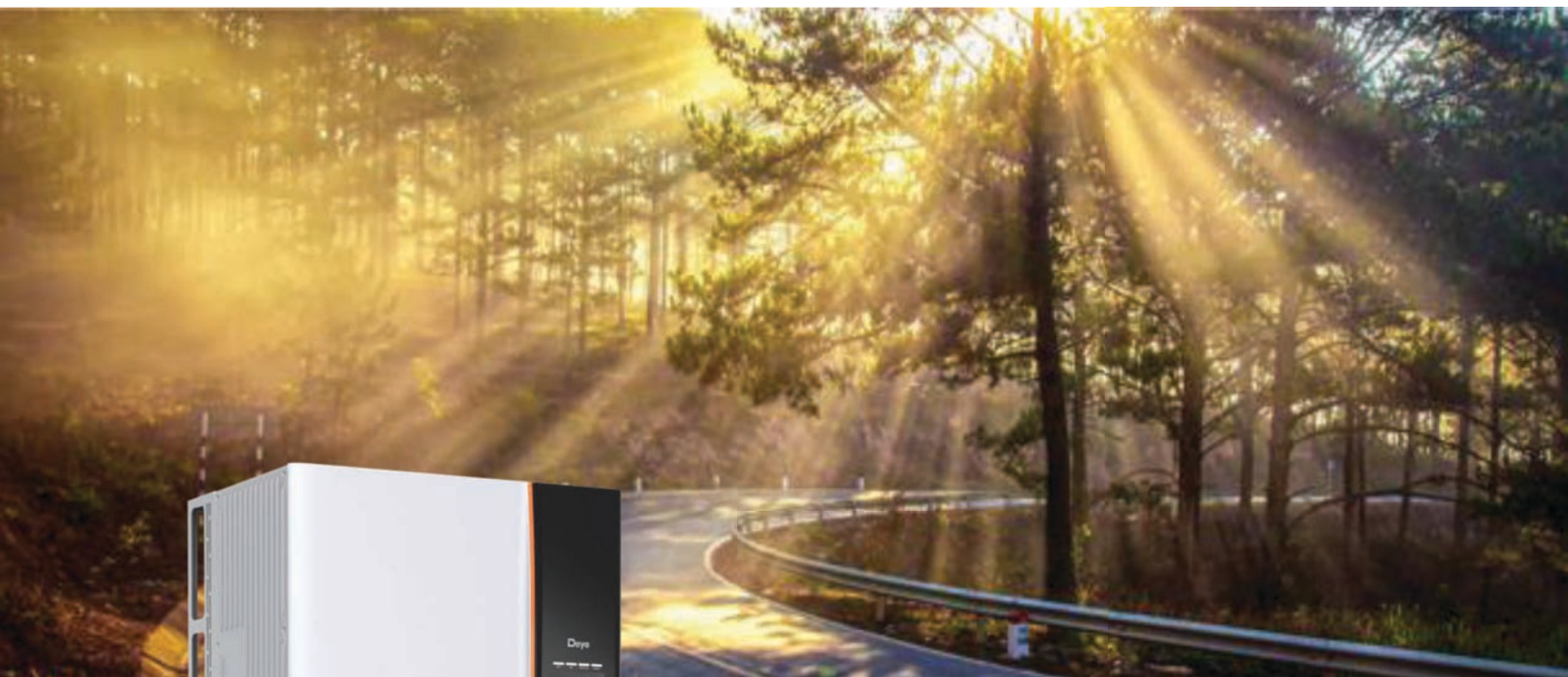
Support remote upgrade, real-time battery warning information push, LCD data display.

Model		GB-L				
<b>Main Parameter</b>						
Cell Chemistry	LiFePO4					
Module Energy(kWh)	4.09					
Module Nominal Voltage (V)	102.4					
Module Capacity(Ah)	40					
Battery Module Qty InSeries (Optional)	2	3	4	5	6	
System Nominal Voltage (V)	204.8	307.2	409.6	512	614.4	
System Operating Voltage (V)	179.2~691.2					
System Energy (kWh)	8.18	12.27	16.36	20.45	24.56	
System Usable Energy (kWh)	7.36	11.04	14.72	18.40	22.10	
Charge/Discharge Current (A)	Recommend	20				
	Max	40				
	Peak (2 mins,25°C)	50				
Working Temperature(°C)	Charge/Discharge:-20~55					
LCD Display	SOC%,Power,Total Voltage					
Communication Port	CAN2.0,RS485					
Humidity	5%~90%					
Altitude	≤2000m					
IP Rating of Enclosure	IP65					
Storage Temperature(°C)	0~35					
Dimension (W/D/H,mm)	540*385*640	540*385*860	540*385*1080	540*385*1300	540*385*1520	
Weight(kg)	76	108	140	172	204	
Installation Location	Floor Mount					
Recommend Depth of Discharge	90%					
Cycle Life	25±2°C,0.5C/0.5C,EOL70%≥6000					
Warranty	10years					
Certification	CE/IEC62619/VDE2510-50/UL1973/UL9540A/UN38.3					

- 1 DC Usable Energy, test conditions: 90% DOD, 0.5C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.
- 2 The current is affected by temperature and SOC.
- 3 The warranty is due whichever reached first of warranty period or life cycle power.

Model	Description	
GB-LBS	High voltage battery cluster control box	
Operating Voltage Nominal Charge/Discharge Current Max. Charge/Discharge Current Operating Temperature Range Ingress Protection Dimension (W/D/H) Weight Approximate	120 ~ 750Vdc 40A 50A -40~85°C IP65 540*385*110mm 7kg	
GB-LM4.0	4.09 kWh battery module	
Battery Type Nominal Voltage Nominal Capacity Nominal Energy Nominal Charge/Discharge Current Max. Charge/Discharge Current Charge Temperature Discharge Temperature Storage Temperature Ingress Protection Dimension (W/D/H) Weight Approximate	LiFePO4(LFP) 102.4Vdc 40Ah 4.09kWh 40A 50A 0~50°C -20°C ~ 55°C 0°C ~ 35°C IP65 540*385*220mm 32kg	
GB-LBase	Battery module base	
Dimension (W/D/H) Weight Approximate	540*385*90mm 5kg	
ECOM Cable5.0(Optional)	Standard 5-meter communication cable connected to the external device	
EPCable5.0(Optional)	Standard 5-meter power cable connected to the positive pole of the external PCS	
1000V/4AWG cable		
ENCable5.0(Optional)	Standard 5-meter power cable connected to the negative pole of the external PCS	
1000V/4AWG cable		

# GB-SCL-EU



◆ **ALL IN ONE PLUS**

Optical storage and charging integrated solution, one-stop service

◆ **Maximum output**

100% unbalanced output, each phase; Max. output up to 50% rated power

◆ **Maximum connection**

Max. 10pcs parallel for on-grid and off-grid operation

◆ **More support**

Support storing energy from diesel generator

◆ **High-voltage stack**

Modules are connected in series without cable connection, and high-voltage platform improves system efficiency

◆ **Thermal management**

Temperature detection of key parts, cell, power plug-in, etc.

◆ **Wide temperature operation**

The heating function is optional to meet the application scenarios with low temperature and no sense



Stock Code: 605117.SH

Model	GB-S6K-EU	GB-S8K-EU	GB-S10K-EU	GB-S12K-EU	GB-S15K-EU	GB-S20K-EU
Battery Type	Li-Ion					
Battery Voltage Range (V)	150~700					
Max. Charging Current(A)	37					
Max. Discharging Current(A)	37					
Number of battery input	1					
Charging Strategy for Li-Ion Battery	Self-adaption to BMS					
<b>PV String Input Data</b>						
Max. DC Input Power (W)	7800	10400	13000	15600	19500	26000
Max. DC Input Voltage (V)	1000					
Start-up Voltage(V)	150					
MPPT Range (V)	150-850					
Full Load DC Voltage Range (V)	195-850	260-850	325-850	340-850	423-850	500-850
Rated DC Input Voltage (V)	600					
PV Input Current (A)	20+20			26+20		26+26
Max. PV I <sub>sc</sub> (A)	23+23			32+23		32+32
No.of MPP Trackers	2					
No of Strings per MPP Tracker	1			2+1		2
<b>AC Output Data</b>						
Rated AC Output and UPS Power (W)	6000	8000	10000	12000	15000	20000
Max. AC Output Power (W)	6600	8800	11000	13200	16500	22000
AC Output Rated Current (A)	9.1	12.2	15.2	18.2	22.8	30.3
Max. ACCurrent (A)	13	18	22	25	30	35
Max. Continuous AC Pass through (A)	80					
Peak Power (off grid)	1.5 time of rated power, 10S					
Generator input/Smart load /AC couple current (A)	9.1 / 80 / 9.1	12.2 / 80 / 12.2	15.2 / 80 / 15.2	18.2 / 80 / 18.2	22.8 / 80 / 22.8	30.3 / 80 / 30.3
Power Factor	0.8 leading to 0.8 lagging					
Output Frequency and Voltage	50/60Hz; 3L/N/PE 220/380, 230/400Vac					
Grid Type	Three Phase					
DC injection current (mA)	<0.5%1n					
<b>Efficiency</b>						
Max. Efficiency	97.60%					
Euro Efficiency	97.00%					
MPPT Efficiency	99.90%					
<b>Protection</b>						
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection, Surge protection					
Output Over Voltage Protection	DC Type II/AC Type III					
<b>Certifications and Standards</b>						
Grid Regulation	CEI 0-21, VDE-AR-N 4105, NRS 097, IEC 62116, IEC 61727, G99, G98, VDE 0126-1-1, RD 1699, C10-11					
Safety EMC /Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2					
<b>Genera Data</b>						
Operating Temperature Range (°C)	-40~60°C, >45°C derating					
Cooling	Smart cooling					
Communication with BMS	RS485; CAN					
Warranty	5 years					

Model		GB-C20K-EU
<b>Charger Module Data</b>		
Rate Power (kw)	20	
Output Voltage Range (V)	50~750	
Output Current Range (A)	0~50	
Communication Port	CAN2.0	
Charging standard	CCS2 Type	
Standards/regulations	IEC61851-1	
Operating Temperature Range (°C)	40~60	
Cooling	Smart cooling	
Warranty	5 years	
Certification	EN61851-1/EN61851-23	

Model		GB-L			
<b>Batter System Data</b>					
Cell Chemistry	LiFePO4				
Module Energy (kWh)	4.09				
Module Nominal Voltage (V)	102.4				
Module Capacity (Ah)	40				
Battery Module Qty in series.(Optional)	3	4	5	6	
System Nominal Voltage (V)	307.2	409.6	512	614	
System Operating Voltage (V)	268.8~691.2				
System Energy (kWh)	12.27	16.36	20.45	24.57	
System Usable Energy (kWh)	11.04	14.72	18.40	22.11	
Charge/Discharge Current (A)	Recommend	20			
	Max	40			
	peak (2mins,25°C)	50			
Working Temperature(°C)	Charge/Discharge:-20~55				
Communication Port	CAN2.0/RS485				
Thermal Management	Natural Cooling/Smart Heating				
Recommend Depth of Discharge	90%				
Cycle Life	25±2°C,0.5C/0.5C,70%EOL≥6000				
Warranty	10 years				
Certification	CE/IEC 62619/VDE 2510-50/UN38.3				
<b>Other Data</b>					
Humidity	5~85%RH				
Altitude (m)	≤2000				
IP Rating of Enclosure	IP65				
Noise (dB)	<45				
Storage Temperature(°C)	0~35				
Dimension (W/D/H,mm)	540*385*1420	540*385*1530	540*385*1640	540*385*2080	
Weight Approximate (kg)	173	205	237	269	
Installation Location	Floor Mount				

- 1 DC Usable Energy, test conditions: 90% DOD, 0.5C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.
- 2 The current is affected by temperature and SOC.
- 3 The warranty is due whichever reached first of warranty period or life cycle power.

Model	Description	
GB-S6K/8K/10K/12K/15K/20K-EU	Hybrid inverter	
Dimension (W/D/H) Weight Approximate	540*385*450mm 45kg	
GB-C20K-EU	20KW Charge module	
Dimension (W/D/H) Weight Approximate	540*385*110mm 20kg	
GB-LB	High voltage battery cluster control box	
Operating Voltage Nominal Charge/Discharge Current Max.Charge/Discharge Current Operating Temperature Range Ingress Protection Dimension (W/D/H) Weight Approximate	120 ~ 750Vdc 40A 50A -40~85°C IP65 540*385*110mm 7kg	
GB-LM4.0	4.09 kWh battery module	
Battery Type Nominal Voltage Nominal Capacity Nominal Energy Nominal Charge/DischargeCurrent Max.Charge/Discharge Current Charge Temperature Discharge Temperature Storage Temperature Ingress Protection Dimension (W/D/H) Weight Approximate	LiFePO4(LFP) 102.4Vdc 40Ah 4.09kWh 40A 50A 0~50°C -20°C ~ 55°C 0°C ~ 35°C IP65 540*385*220mm 32kg	
GB-LBase	Battery module base	
Dimension (W/D/H) Weight Approximate	540*385*90mm 5kg	

Model	Description
EVC50-EU	Standard 4-meter charge power cable & CC2 DC connector cable



ECOM Cable5.0(Optional)	Standard 5-meter communication cable connected to the external device
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- ▶ **48KW**
- ▶ **Lebanon**
- ▶ **SUN-12K-SG**



- ▶ **72KW**
- ▶ **Lebanon**
- ▶ **SUN-12K-SG**

# Project cases



- ▶ **24KW**
- ▶ **Philippines**
- ▶ **SUN-8K-SG**



- ▶ **48KW**
- ▶ **Lebanon**
- ▶ **SUN-12K-SG**

# SDM630 MCT V2 Series

Three Phase Multifunction Energy Meter



## DIN RAIL SMART METER FOR SINGLE AND THREE PHASE ELECTRICAL SYSTEMS

User Manual v4.7

### 1. Introduction

This document provides operating, maintenance and installation instructions. This unit measures and displays the characteristics of single phase two wires(1p2w), three phase three wires(3p3w) and three phase four wires(3p4w) networks. The measuring parameters include voltage(V), frequency(Hz), current(A), power(kW/Kva/Kvar), import, export and total Energy(kWh/kVarh). The unit can also measure Maximum demand current and power. This is measured over preset periods of up to 60 minutes.

This unit is a 1A or 5A current transformer operated and can be configured to work with a wide range of CTs. Built-in pulse and Modbus or M-Bus outputs. Configuration is password protected.

This unit can be powered from a separate auxiliary (AC or DC) supply. Alternatively it can be powered from the monitored supply by linking the voltage reference and neutral reference in to terminals 5 and 6 (Please refer to wiring diagram).

#### 1.1 Unit Characteristics

The Unit can measure and display:

- Voltage and THD% (total harmonic distortion) of all phases
- Line frequency
- Currents, current demand and current THD% of all phases
- Power, maximum power demand and power factor
- Active energy imported and exported
- Reactive energy imported and exported

This series includes 4 models:

SDM630MCT V2	SDM630MCT-Mbus V2	SDM630MCT-2T V2	SDM630MCT-2T-Mbus
Multi-parameter measurement	Multi-parameter measurement	Multi-parameter measurement	Multi-parameter measurement
Single Tariff 1A/5A CT operated	Single Tariff 1A/5A CT operated	Double Tariff 1A/5A CT operated	Double Tariff 1A/5A CT operated
RS485 Port Modbus RTU	M-Bus Communication	RS485 Port Modbus RTU	M-Bus Communication
Bi-directional energy	Bi-directional energy	Bi-directional energy	Bi-directional energy

#### 1.2 Current Transformer Primary Current

SDM630MCT V2 Series is CT operated, you will need to set the correct ratio.

As an example: If using 100/5A CT, you will need to insure CT2 (Secondary) is set to 5 and CT rate is 0020. You divide the primary by the secondary to get the CT rate to be entered (100/5=20).

#### 1.3 RS485 Modbus RTU / M-Bus

SDM630MCT V2 and SDM630MCT-2T V2 both meter have a RS485 port with Modbus RTU protocol. SDM630MCT-MbusV2 and SDM630MCT-2T-Mbus has a M-Bus port complying with EN13757-3.

RS485 or M-Bus provide a means of remotely monitoring and controlling the unit. Set-up screens are provided for setting up the communication port.

#### 1.4 Pulse output

Two pulse outputs that pulse measured active and reactive energy. The Pulse 2 constant for active energy is 3200imp/kWh. (Terminals 11 & 12) The pulse width for Pulse 1 can be set from the set-up menu (Terminals 9 & 10).

## 2. Start Up Screens

	The first screen lights up all display segments and can be used as a display check.
	Software version information
	The interface performs a self-test and indicates the result if the test passes.

\*After a short delay, the screen will display active energy measurements.

## 3. Measurements

The buttons operate as follows:

	Selects the Voltage and Current display screens. In Set-up Mode, this is the "Left" or "Back" button.
	Select the Frequency and Power factor display screens. In Set-up Mode, this is the "Up" button.
	Select the Power display screens. In Set-up Mode, this is the "Down" button.
	Select the Energy display screens. In Set-up mode, this is the "Enter" or "Right" button.

### 3.1 Voltage and Current

Each successive press of the button selects a new parameter:

	Phase to neutral voltages.
	Current on each phase.
	Phase to neutral voltage THD%.
	Current THD% for each phase.

### 3.2 Frequency and Power Factor and Demand

Each successive press of the button selects a new range:

	Frequency and Power Factor (total).
	Power Factor of each phase.
	Maximum Power Demand.
	Maximum Current Demand.

### 3.3 Power

Each successive press of the button selects a new range:

	Instantaneous Active Power in kW.
	Instantaneous Reactive Power in kVar.
	Instantaneous Volt-Amps in kVA.
	Total kW, kVarh, kVA.

### 3.4 Energy Measurements

Each successive press of the button selects a new range:

	Import active energy in kWh.
	Export active energy in kWh.
	Import reactive energy in kVarh.
	Export reactive energy in kVarh.
	Total active energy in kWh.
	Total reactive energy in kVarh.

	T1 active energy in kWh *For SDM630MCT-2T and SDM630MCT-2T-Mbus only
	T2 active energy in kWh *For SDM630MCT-2T and SDM630MCT-2T-Mbus only
	T1 reactive energy in kVarh *For SDM630MCT-2T and SDM630MCT-2T-Mbus only
	T2 reactive energy in kVarh *For SDM630MCT-2T and SDM630MCT-2T-Mbus only

## 4. Set Up

To enter set-up mode, press the button for 3 seconds, until the password screen appears.

	Setting up is password-protected so you must enter the correct password (default '1000') before processing.
	If an incorrect password is entered, the display will show: PASS Err

To exit setting-up mode, press repeatedly until the measurement screen is restored.

### 4.1 Set-up Entry Methods

Some menu items, such as password and CT, require a four-digit number entry while others, such as supply system, require selection from a number of menu options.

#### 4.1.1 Menu Option Selection

1. Use the and buttons to scroll through the different options of the set up menu.
2. Press to confirm your selection
3. If an item flashes, then it can be adjusted by the and buttons.
4. Having selected an option from the current layer, press to confirm your selection. The SET indicator will appear.
5. Having completed a parameter setting, press to return to a higher menu level. The SET indicator will be removed and you will be able to use the and buttons for further menu selection.
6. On completion of all setting-up, press repeatedly until the measurement screen is restored.

#### 4.1.2 Number Entry Procedure

When Setting up the unit, some screens require the entering of a number. In particular, on entry to the setting up section, a password must be entered. Digits are set individually, from left to right. The procedure is as follows:

1. The current digit to be set flashes and is set using the and buttons.
2. Press to confirm each digit setting. The SET indicator appears after the last digit has been set.
3. After setting the last digit, press to exit the number setting routine. The SET indicator will be removed.

### 4.2 Change Password

	Use the  and  buttons to choose the change password option.
	Press the  to enter the change password routine. The new password screen will appear with the first digit flashing.
	Use  and  to set the first digit and press  to confirm your selection. The next digit will flash.
	Repeat the procedure for the remaining three digits.
	After setting the last digit, SET will show.

Press to exit the number setting routine and return to the Set-up menu. SET will be removed.

### 4.3 DIT Demand Integration Time

This sets the period in minutes over which the current and power readings are integrated for maximum demand measurement. The options are: off, 5, 10, 15, 30, 60 minutes.

	From the set-up menu, use  and  buttons to select the DIT option. The screen will show the currently selected integration time.
	Press  to enter the selection routine. The current time interval will flash.
	Use  and  buttons to select the time required.
	Press  to confirm the selection. SET indicator will appear.

Press to exit the DIT selection routine and return to the menu.

### Warnings

Important Safety Information is contained in the Maintenance section. Familiarize yourself with this information before attempting installation or other procedures. Symbols used in this document:

- Risk of Danger: These instructions contain important safety information. Read them before starting installation or servicing of the equipment.
- Caution: Risk of Electric Shock

## 4.4 Supply System

The unit has a default setting of 3Phase 4wire (3P4). Use this section to set the type of electrical system.

	From the set-up menu, use  and  buttons to select the system option. The screen will show the currently selected power supply.
	Press  to enter the selection routine. The current selection will flash.
	Use  and  buttons to select the required system option: 1P2(W), 3P3(W), 3P4(W).
	Press  to confirm the selection. SET indicator will appear.

Press to exit the system selection routine and return to the menu. SET will disappear and you will be returned to the main set-up Menu.

## 4.5 CT

The CT option sets the secondary current (CT2 1A or 5A) of the current transformer (CT) that wires to the meter.

	From the set-up menu, use  and  buttons to select the CT option.
	Secondary CT setting Press  to enter the CT secondary current selection routine.:5A/1A
	Set CT Ratio value Press  to enter the CT Ratio setting screen. The range is from 0001 to 2000.

For example, if using a 100/5A current transformer you will enter 0020, as you need to divide the primary by the secondary to get the ratio (CT rate).

\* Please note for the MID approved version device, you will only have one opportunity to set the ratio.

## 4.6 PT

The PT option sets the secondary voltage (PT2 100 to 500V) of the voltage transformer (PT) that may be connected to the meter.

	Use  and  buttons to select the PT option. The screen will show the voltage PT secondary voltage value. The default value is 400V.
	Secondary PT setting Press  to enter the PT secondary voltage selection routine. The range is from 100 to 500V.
	Set PT ratios value Press  to enter the PT ratio screen. The range is from 0001 to 9999.

For example, if set the ratio to be 100, it means the primary voltage equals secondary voltage x100.

## 4.7 Pulse Output

This option allows you to configure the pulse output. The output can be set to provide a pulse for a defined amount of energy active or reactive. Use this section to set up the relay pulse output—Units: kWh, kVAh

	From the set-up menu, use <b>HOI/PFNZ</b> and <b>P</b> buttons to select the Pulse output option.
	Press <b>E</b> to enter the selection routine. The unit symbol will flash.
	Use <b>HOI/PFNZ</b> and <b>P</b> buttons to choose kWh or kVAh.

On completion of the entry procedure, press **E** to confirm the setting and press **V/A ESC** to return to the main set-up menu.

### 4.7.1 Pulse rate

Use this to set the energy represented by each pulse. Rate can be set to 1 pulse per 0.01kWh/0.1kWh/1kWh/10kWh/100kWh.

	(It shows 1 impulse = 10kWh/kVAh)
	From the set-up menu, use <b>HOI/PFNZ</b> and <b>P</b> buttons to select the Pulse Rate option.
	Press <b>E</b> to enter the selection routine. The current setting will flash. 0.01/0.1/1/10/100kWh/kVAh per pulse.

Use **HOI/PFNZ** and **P** buttons to choose pulse rate.

On completion of the entry procedure, press **E** to confirm the setting and press **V/A ESC** to return to the main set-up menu.

### 4.7.2 Pulse Duration

The energy monitored can be active or reactive and the pulse width can be selected as 200, 100 or 60ms.

	(It shows pulse width of 200ms)
	From the set-up menu, use <b>HOI/PFNZ</b> and <b>P</b> buttons to select the Pulse width option.
	Press <b>E</b> to enter the selection routine. The current setting will flash.

Use **HOI/PFNZ** and **P** buttons to choose pulse width.

On completion of the entry procedure press **E** to confirm the setting and press **V/A ESC** to return to the main set-up menu.

## 4.8 Communication

There is a RS485 port can be used for communication using Modbus RTU protocol. For Modbus RTU, parameters are selected from Front panel.

### 4.8.1 RS485 Address

	(The range is from 001 to 247)
	From the set-up menu, use <b>HOI/PFNZ</b> and <b>P</b> buttons to select the address ID.
	Press <b>E</b> button to enter the selection routine. The current setting will be flashing.
	Use <b>HOI/PFNZ</b> and <b>P</b> buttons to choose Modbus address (001 to 247).

On completion of the entry procedure, press **E** button to confirm the setting and press **V/A ESC** button to return the main set-up menu.

### 4.8.2 M-Bus Address

	Primary address: 001 to 250 Use <b>HOI/PFNZ</b> and <b>P</b> buttons to select the address value.
	Press <b>E</b> to enter the selection routine. The current setting will flash.
	Secondary address: 00 00 00 01 to 99 99 99 99

On completion of the entry procedure, press **E** to confirm the setting and press **V/A ESC** to return to the main set-up menu.

### 4.8.3 Baud Rate

	From the set-up menu, use <b>HOI/PFNZ</b> and <b>P</b> buttons to select the Baud Rate option.
	Press <b>E</b> to enter the selection routine. The current setting will flash.
	Use <b>HOI/PFNZ</b> and <b>P</b> buttons to choose Baud rate 2.4k, 4.8k, 9.6k, 19.2k, 38.4k

On completion of the entry procedure, press **E** to confirm the setting and press **V/A ESC** to return to the main set-up menu.

### 4.8.4 Parity

	From the set-up menu, use <b>HOI/PFNZ</b> and <b>P</b> buttons to select the parity option.
	Press <b>E</b> to enter the selection routine. The current setting will flash.
	Use <b>HOI/PFNZ</b> and <b>P</b> buttons to choose parity (EVEN / ODD / NONE (default)).

On completion of the entry procedure, press **E** to confirm the setting and press **V/A ESC** to return to the main set-up menu.

### 4.8.5 Stop bits

	From the set-up menu, use <b>HOI/PFNZ</b> and <b>P</b> buttons to select the stop bit option.
	Press <b>E</b> to enter the selection routine. The current setting will flash.
	Use <b>HOI/PFNZ</b> and <b>P</b> buttons to choose stop bit (2 or 1) Note: Default is 1, and only when the parity is NONE that the stop bit can be changed to 2.

On completion of the entry procedure, press **E** to confirm the setting and press **V/A ESC** to return to the main set-up menu.

## 4.9 Backlit set-up

The meter provides a function to set the blue backlit lasting time( 0/5/10/30/60/120 minutes).

Option 0 means the backlit always on here.

	Default:60 If it's setted as 5,the backlit will be off in 5minutes.
	Use <b>HOI/PFNZ</b> and <b>P</b> buttons to choose the time

Press **E** to confirm the setting and press **V/A ESC** to return to the main set-up menu.

### 4.10 CLR

The meter provides a function to reset the maximum demand value of current and power.

	From the set-up menu, use <b>HOI/PFNZ</b> and <b>P</b> buttons to select the reset option.
--	--

	Press <b>E</b> to enter the selection routine. The dlt will flash.
--	--

Press **E** to confirm the setting and press **V/A ESC** to return to the main set-up menu.

## 5. Specifications

### 5.1 Measured Parameters

The unit can monitor and display the following parameters of a single phase two wire(1p2w), three phase three wire(3p3w) or three phase four wire(3p4w) system.

#### 5.1.1 Voltage and Current

- Phase to neutral voltages 100 to 289V a.c. (not for 3p3w supplies).
- Voltages between phases 173 to 500V a.c. (3p supplies only).
- Percentage total voltage harmonic distortion (THD%) for each phase to N (not for 3p3w supplies).
- Percentage voltage THD% between phases (three phase supplies only).
- Current THD% for each phase

#### 5.1.2 Power factor and Frequency and Max. Demand

- Frequency in Hz
- Instantaneous power:
- Power 0 to 3600 MW
- Reactive power 0 to 3600 MVAR
- Volt-amps 0 to 3600 MVA
- Maximum demanded power since last Demand reset
- Power factor
- Maximum neutral demand current, since the last Demand reset (for three phase supplies only)

### 5.1.3 Energy Measurements

- Import/Export active energy 0 to 9999999.9 kWh
- Import/Export reactive energy 0 to 9999999.9 kVAh
- Total active energy 0 to 9999999.9 kWh
- Total reactive energy 0 to 9999999.9 kVAh

### 5.2 Measured Inputs

Voltage inputs through 4-way fixed connector with 2.5mm<sup>2</sup> stranded wire capacity. single phase two wire(1p2w), three phase three wire(3p3w) or three phase four wire(3p4w) unbalanced. Line frequency measured from L1 voltage or L3 voltage.

Three current inputs (six physical terminals) with 2.5mm<sup>2</sup> stranded wire capacity for connection of external CTs. Nominal rated input current 5A or 1A a.c. Rms.

### 5.3 Accuracy

- Voltage 0.5% of range maximum
- Current 0.5% of nominal
- Frequency 0.2% of mid-frequency
- Power factor 1% of unity (0.01)
- Active power (W) ±1% of range maximum
- Reactive power (VAR) ±1% of range maximum
- Apparent power (VA) ±1% of range maximum
- Active energy (Wh) Class 1 IEC 62053-21
- Reactive energy (VAh) ±1% of range maximum
- Total harmonic distortion 1% up to 31st harmonic
- Response time to step input 1s, typical, to >99% of final reading, at 50 Hz.

### 5.4 Auxiliary Supply

Two-way fixed connector with 2.5mm<sup>2</sup> stranded wire capacity. 85 to 275V a.c. 50/60Hz ±10% or 120V to 380V d.c. ±20%. Consumption < 10W.

### 5.5 Interfaces for External Monitoring

Three interfaces are provided:

- RS485/Mbus communication channel that can be programmed via protocol remotely.
- Relay output indicating real-time measured energy (configurable)
- Pulse output(Pulse 2) 3200imp/kWh (not configurable)

The Modbus configuration (baud rate etc.) and the pulse relay output assignments (kWh/kVAh, import/export etc.) are configured through the set-up screens.

#### 5.5.1 Pulse Output

The pulse output can be set to generate pulses to represent kWh or kVAh.

Rate can be set to generate 1 pulse per:

- 0.01 = 10 Wh/VAh
- 0.1 = 100 Wh/VAh
- 1 = 1 kWh/kVAh
- 10 = 10 kWh/kVAh
- 100 = 100 kWh/kVAh
- 1000 = 1000 kWh/kVAh

Pulse width 200/100/60 ms  
Relay Rating 240V ac 50mA

#### 5.5.2 RS485 Output for Modbus RTU

For Modbus RTU, the following RS485 communication parameters can be configured from the set-up menu:

- Baud rate 2400, 4800, 9600, 19200, 38400
- Parity none (default) / odd / even
- Stop bits 1 or 2
- RS485 network address nnn – 3-digit number, 1 to 247

Modbus<sup>™</sup> Word order Hi/Lo byte order is set automatically to normal or reverse. It cannot be configured from the set-up menu.

## 5.6 Reference Conditions of Influence Quantities

Influence Quantities are variables that affect measurement errors to a minor degree. Accuracy is verified under nominal value (within the specified tolerance) of these conditions.

- Ambient temperature 23°C ±1°C
- Input frequency 50 or 60Hz ±2%
- Input waveform Sinusoidal (distortion factor < 0.005)
- Auxiliary supply voltage Nominal ±1%
- Auxiliary supply frequency Nominal ±1%
- Auxiliary supply waveform (if AC) Sinusoidal (distortion factor < 0.05)
- Magnetic field of external origin Terrestrial flux

## 5.7 Environment

- Operating temperature -25°C to +55°C\*
- Storage temperature -40°C to +70°C\*
- Relative humidity 0 to 95%, non-condensing
- Altitude Up to 3000m
- Warm-up time 1 minute
- Vibration 10Hz to 50Hz, IEC 60068-2-6, 2g
- Shock 30g in 3 planes

\* Maximum operating and storage temperatures are in the context of typical daily and seasonal variation.

## 5.8 Mechanics

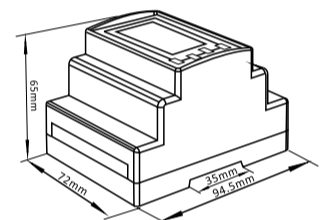
- DIN rail dimensions 72 x 94.5 mm (WxH) per DIN 43880
- Mounting DIN rail (DIN 43880)
- Sealing Ip51 (indoor)
- Material Self-extinguishing UL94 V-0

## 5.9 Declaration of Conformity(for the MID approved version meter only)

We Zhejiang Eastron Electronic Co.,Ltd.

Declare under our sole responsibility as the manufacturer that the poly phase multifunction electrical energy meter "SDM630MCT V2 Serie" correspond to the production model described in the EU -type examination certificate and to the requirements of the Directive 2014/32/EU EU type examination certificate number 0120/SGS0142. Identification number of the NB0120.

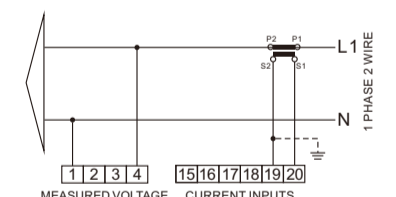
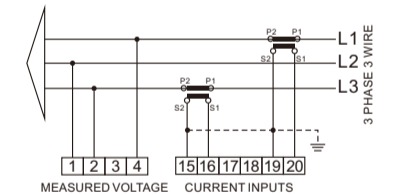
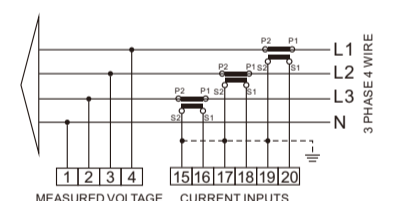
## 6. Dimensions



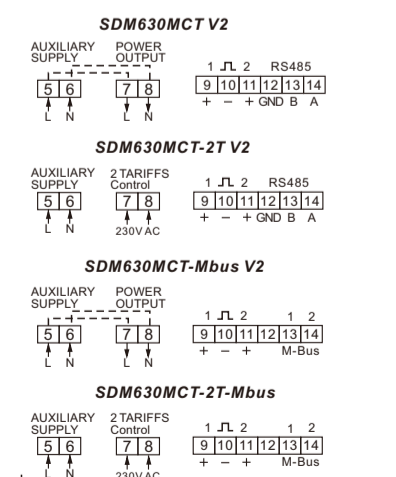
## 7. Installation

The wiring diagram of SDM630MCT V2 series has little difference from different models, please make sure the wiring is correct before turning on power of the meter.

### Current and Voltage inputs



### Definitions of other terminals



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