



# INTEGM SERIES

The Power Master Hybrid Inverter Single-phase 3-8kW Three-phase 4-12kW Three-phase 10-20kW Three-phase 25-50kW

# **About Solinteg**

Solinteg stands at the forefront of energy innovation, transforming how the world harnesses solar power. Our hybrid inverters and photovoltaic storage solutions are central to this mission, merging efficiency with sustainable technology. Designed to revolutionize energy management, these products epitomize our commitment to a smarter, cleaner energy future. Our global reach extends beyond markets, driving eco-friendly change in homes, businesses, and industries worldwide. Solinteg is more than a brand; it's a promise of a sustainable, intelligent energy era.



#### **Powering Innovation: The Solinteg MORE Platform**

The Solinteg MORE platform represents an advanced inverter development platform, embodying a unified concept of modularized hardware and firmware design. This methodology facilitates rapid product development and iteration, maintaining high consistency in performance. Inverters developed through this platform are characterized by four key features: Modular, Optional, Reliable, and Extensible. Through leveraging these principles, the Solinteg MORE platform stands at the forefront of innovative inverter technology, enhancing adaptability and efficiency across various applications.

#### Modular

Optional

Common building block (CBB) design for both hardware and structure

Modular design of firmware allows easy functional configurations

#### Reliable

Stable performance by shared knowledge and validation techniques

#### Extensible

Offers flexibility and feasibility for functional expansions





The Power Master Hybrid Inverter

# MORE Product Portfolio

SOLINTEG

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SOLINTEG



Integ O The Power Operator On-grid Inverter

#### Integ R The Power Reader EMS Device

Integ E The Power Extender PowerPlus Device



#### **Experience the Integ M Hybrid Inverter**

**Comprehensive Power Coverage for Every Distributed Solar Storage Need** 



#### Integ M 3-8kW

Single-phase Hybrid Inverter

MHS-3K-30 MHS-3.6K-30 MHS-4.2K-30 MHS-5K-30 MHS-6K-30 MHS-8K-30



Location: Schwabmünchen, Germany Completed: Jul, 2023 PV System: 8.7kW Storage Capacity: 10kWh



#### Integ M 4-12kW

Three-phase Hybrid Inverter

MHT-4K-25 MHT-5K-25 MHT-6K-25 MHT-8K-25 MHT-10K-25 MHT-12K-25



Location: Ukraine Completed: Feb, 2023 PV System: 10kW Storage Capacity: 10kWh



#### Integ M 10-20kW

Three-phase Hybrid Inverter

MHT-10K-40 MHT-12K-40 MHT-15K-40 MHT-<u>20K-40</u>



Location: Brno, Czech Completed: Apr, 2023 PV System: 120kW Storage Capacity: 60kWh



#### Integ M 25-50kW

Three-phase Hybrid Inverter

MHT-25K-100 MHT-36K-100 MHT-50K-100 MHT-30K-100 MHT-40K-100



Location: Worminghaus in Husum, Northern Germany Completed: Nov, 2023 PV System: 66kW Storage Capacity: 104kWh







**Battery Ready Scenario** 

AC Retrofit Scenario

#### **Embrace the Future with Solinteg ParkOne Solution**

Decentralized Power, Centralized Intelligence for Commercial and Industrial Solar Storage





# 15A

PV Input Current

**80V** Start-up Voltage **30A** Max. Charge/Discharge



## **Integ M Series**

The Power Master

# 3-8kW Hybrid Inverter

MHS-3/3.6/4.2/5/6/8K-30 Single Phase | HV Battery



Maximized Energy Harvesting

Engineered for

Versatility

#### 160% DC oversizing boosts solar capture Starts at 80V for more generation time Continuous 110% AC overloading sustains power

- Smooth transition to backup power ensures continuity during power outages
- Wide 85-450V range fits diverse batteries IP65 protects both indoors and outdoors
- Silent 25dB operation for comfort



Simplified Interaction

Remote upgrades maintain system health Solinteg I-light for quick status checks OLED and App for easy control



Intelligent Energy Dynamics

Five work modes for diverse use

- Six charge/discharge intervals optimize control
- Centralized smart management for efficiency

#### Integ M 3-8kW

Model		MHS-3K-30	MHS-3.6K-30	MHS-4.2K-30	MHS-5K-30	MHS-6K-30	MHS-8K-30	
PV Input								
Recommended Max. input power	[kW]	4.80	5.76	6.72	8.00	9.60	12.80	
Start-up voltage	[V]	80	80	80	80	80	80	
Max. DC input voltage*	[V]	600*	600*	600*	600*	600*	600*	
Rated DC input voltage	[V]	360	360	360	360	360	360	
MPPT voltage range*	[V]	100-550*	100-550*	100-550*	100-550*	100-550*	100-550*	
No. of MPP trackers		1	1	2	2	2	2	
No. of DC inputs per MPPT		1	1	1/1	1/1	1/1	1/1	
Max input current	[4]	15	15	15/15	15/15	15/15	15/15	
Max.short-circuit current	[A]	20	20	20/20	20/20	20/20	20/20	
Battery Side	24	20	20	20/20	20,20	20,20	20,20	
Battery type				Lithium Batte	rv (with BMS)			
Battery voltage range	[V]			85-	450			
Maximum charging/discharge curren	nt [A]			30/	30			
Grid Side								
Rated output power	[kW]	3.00	3.60	4.20	5.003)	6.00	8.00	
Max. output apparent power	[kVA]	3.30	3.961)	4.60	5.504)	6.60	8.00	
Max. input apparent power**	[kVA]	6.00	7.20	8.40	10.00	10.00	12.00	
Max. charging power of battery	[kW]	3.00	3.60	4.20	5.00	6.00	8.00	
Rated AC voltage				L/N/PE; 220	)/230/240V			
Rated AC frequency	[Hz]	50/60	50/60	50/60	50/60	50/60	50/60	
Max. output current	[A]	15.00	18.00 <sup>2)</sup>	21.00	25.005)	28.70	36.30	
Power factor				0.8 leading	0.8 lagging			
Max. total harmonic distortion			<3% @Rated output power					
DCI		<0.5%In	<0.5%In	<0.5%In	<0.5%In	<0.5%In	<0.5%In	
Back-up Side								
Rated output power	[kW]	3.00	3.60	4.20	5.00	6.00	8.00	
Max. output apparent power	[kVA]	3.30	3.96	4.60	5.50	6.60	8.00	
Max. output current	[A]	15.00	18.00	21.00	25.00	28.70	36.30	
On/Off-grid switching time		<10ms	<10ms	<10ms	<10ms	<10ms	<10ms	
Rated output voltage		L/N/PE; 220/230/240V						
Rated output frequency	[Hz]	50/60	50/60	50/60	50/60	50/60	50/60	
Voltage harmonic distortion		<3% @Linear load						
Efficiency								
Max. efficiency	-	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	
European efficiency	_	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	
Protection				1.1				
DC reverse polarity protection	etection	Integrated						
Battery input reverse connection pr	otection	Integrated						
Surge protection	-							
Over-temperature protection		Integrated						
Posidual current protection								
Islanding protection								
AC over-voltage protection	-	Integrated						
Overload protection								
AC short-circuit protection								
General Data				integr				
Over voltage category				PV: II N	1ain: III			
Dimensions	[W×H×D mm]			534×41	8×210			
Weight	[KG]	27.0						
Protection degree				IPa	65			
Standby self-consumption	[W]			<1	5			
Topology				Transfor	merless			
Operating Temperature Range	[°C]			-30	~60			
Relative Humidity	[%]			0~1	00			
Operating Altitude	[m]			3000 (>3000	m derating)			
Cooling		Natural Convection						
Noise Level	[dB]	<25						
Display		OLED & LED						
Communication		CAN, RS485, WiFi/LAN (Optional)						

\* PV Max. Input voltage is 550V without battery, or 500V with battery, otherwise inverter will be waiting;
 \*\* Max apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery;

1) G98: 3.68kVA; 2) G98: 16.00A; 3) AS 4777.2: 5.0kW, VDE-AR-N 4105: 4.6kW; 4) AS 4777.2: 5.0kVA, VDE-AR-N 4105: 4.60kVA, C10/11: 5.0kVA; 5) AS 4777.2: 21.7A, VDE-AR-N 4105: 21.0A, C10/11: 21.7A;



#### 110% 15A PV Input Current Unbalanced Output Max. Charge/Discharge

VIZ PEGP

**25A** 



# **Integ M Series**

The Power Master

# 4-12kW **Hybrid Inverter**

MHT-4/5/6/8/10/12K-25 Three Phase | HV Battery | 2 MPPTs



Maximized Energy · Harvesting

Engineered for

Versatility

- 150% DC oversizing boosts solar capture 110% unbalanced output enhances selfconsumption Continuous 110% AC overloading sustains power Smooth transition to backup power ensures continuity during power outages
- Wide 135-750V range fits diverse batteries 120% max backup @60s handles overloads
  - IP65 protects both indoors and outdoors
  - Silent 25dB operation for comfort



Simplified Interaction





Intelligent Energy Dynamics

Five work modes for diverse use

- Six charge/discharge intervals optimize control
- Centralized smart management for efficiency

#### Integ M 4-12kW

Model		MHT-4K-25	MHT-5K-25	MHT-6K-25	MHT-8K-25	MHT-10K-25	MHT-12K-25		
PV Input									
Recommended Max. input power	[kW]	6.0	7.5	9.0	12.0	15.0	18.0		
Start-up voltage	[V]	135	135	135	135	135	135		
Max. DC input voltage*	[V]	1000*	1000*	1000*	1000*	1000*	1000*		
Rated DC input voltage	[V]	620	620	620	620	620	620		
MPPT voltage range*	[V]	120-950*	120-950*	120-950*	200-950*	200-950*	200-950*		
No. of MPP trackers		2	2	2	2	2	2		
No. of DC inputs per MPPT		1/1	1/1	1/1	1/1	1/1	1/1		
Max input current	[۵]	15/15	15/15	15/15	15/15	15/15	15/15		
Max_short-circuit current	[A]	20/20	20/20	20/20	20/20	20/20	20/20		
Battery Side	0.0	20/20 20/20 20/20 20/20 20/20 20/20							
Battery type				Lithium Batte	ery (with BMS)				
Battery voltage range	[\/]			135-	-750				
Maximum charging/discharge curr	rent [A]			25	/25				
Grid Side	one pig			20	20				
Rated output power	[kW]	4.0	5.0	6.0	8.0	10.0	12.0		
Max output apparent power	[kVA]	4.4	5.5	6.6	8.8	11 01)	13.2		
Max input apparent power**	[kVA]	8.0	10.0	12.0	16.0	16.5	16.5		
Max charging power of battery	[k\\/]	4.0	5.0	60	8.0	10.0	12.0		
Rated AC voltage	[[(11]	ч.0	5.0	3L/NI/PE: 220/380\/:	230///00\/:2//0///15\	/	12.0		
Rated AC frequency	[H-]	50/60	50/60	50/60	50/60	50/60	50/60		
Max output current	[112]	67	0,00	10.0	12.2	1652)	20.0		
Power factor	[7]	0.7	0.5	0.8 loading	0.8 lagging	10.5 /	20.0		
Max total harmonic distortion			U.8 leadingU.8 lagging						
		<0.5%lp	<0.5%lp	<0.5% @Rated		<0.5%lp	<0.5%lp		
Rock up Sido		<0.576IT	<0.578iT1	<0.576111	<0.57811	<0.578111	-0.576111		
Pated output power	[/\\\]	4.0	5.0	60	8.0	10.0	12.0		
Max output apparent power		4.0	5.0	6.6	8.8	11.0	12.0		
Max. output apparent power		4.4	0.0	10.0	12.2	14.5	20.0		
On/Off-grid switching time	[7]	<10mc	<10ms	<10mc	<10mc	<10ms	<10mc		
Pated output voltage		<ul> <li>&lt; 10ms</li> </ul>							
Rated output voltage	[⊔-]	50/60	50/60	5L/IN/PE, ZZU/30UV,	230/400V,240/415 50/60	50/60	50/60		
Valtage harmonia distortion	נחצן	50/00	50700		50/00	50/00	50/00		
Efficiency			<3% @Linear load						
Max officiency	_	09.1%	09.1%	09.1%	09.2%	09.2%	09.2%		
Furancen officiency		07.2%	07.2%	07.2%	07.6%	07.6%	07./9/		
Protection	_	77.376	77.576	77.576	77.476	77.470	77.470		
DC reverse polarity protection				Integ	rated				
Battery input reverse connection	Integrated								
Insulation resistance protection	Integrated								
Surge protection		Integrated							
Over-temperature protection		Integrated							
Residual current protection		Integrated							
Islanding protection		Integrated							
AC over-voltage protection				Integ	rated				
Overload protection		Integrated							
AC short-circuit protection				Integ	rated				
General Data				integ	lated				
Over voltage category				PV·II N	Main: III				
Dimensions	[W×H×D mm]	53 <u>4x</u> <u>4</u> 18x210							
Weight	[KG]	254 N							
Protection degree	2			IP	65				
Standby self-consumption	[W]			<	15				
Topology		SID							
Operating Temperature Range	[°C]								
Relative Humidity	[%]			0~	100				
Operating Altitude	[m]			3000 (>3000	)m derating)				
Cooling				Natural C	onvection				
Noise Level	[dB]	<25							
Display	[00]								
Communication		CAN RS485 WiFi/LAN (Ontional)							
Communication		CAN, K5485, WIFI/LAN (Uptional)							

\* PV Max. Input voltage is 950V without battery, or 850V with battery, otherwise inverter will be waiting;
 \*\* Max apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery;

1) G98: 10.5kVA; 2) G98: 16.00A

#### Commercial

# **30A**

110%

10-20kW

**40**A PV Input Current Unbalanced Output Max. Charge/Discharge

# SCLINTEG ----

#### MHT-10/12/15/20K-40 Three Phase | HV Battery | 2 MPPTs

**Hybrid Inverter** 



Maximized Energy · Harvesting

Engineered for

#### 110% unbalanced output enhances selfconsumption

- 40A charging/discharging for efficient energy transfer
- Continuous 110% AC overloading sustains power
- Smooth transition to backup power ensures continuity during power outages
- Wide 135-750V range fits diverse batteries
- 120% max backup @60s handles overloads
- IP65 protects both indoors and outdoors



Simplified Interaction

Versatility

- Remote upgrades maintain system health Solinteg I-light for quick status checks
- OLED and App for easy control



Intelligent Energy · Dynamics

Five work modes for diverse use

- Six charge/discharge intervals optimize control
- Centralized smart management for efficiency

The Power Master

**Integ M Series** 

#### Integ M 10-20kW

Model		MHT-10K-40	MHT-12K-40	MHT-15K-40	MHT-20K-40		
PV Input							
Recommended Max. input power	[kW]	15.0	18.0	22.5	30.0		
Start-up voltage	[V]	135	135	135	135		
Max. DC input voltage*	[V]	1000*	1000*	1000*	1000*		
Rated DC input voltage	[V]	620	620	620	620		
MPPT voltage range*	[V]	200-950*	200-950*	200-950*	200-950*		
No. of MPP trackers		2	2	2	2		
No. of DC inputs per MPPT		2/2	2/2	2/2	2/2		
Max. input current	[A]	30/30	30/30	30/30	30/30		
Max. short-circuit current	[A]	40/40	40/40	40/40	40/40		
Battery Side							
Battery type		Lithium Battery (with BMS)					
Battery voltage range	[V]		135-	-750			
Maximum charging/discharge curr	ent [A]		40/	/40			
Grid Side							
Rated output power	[kW]	10.0	12.0	15.0	20.0		
Max. output apparent power	[kVA]	11.01)	13.2	16.5 <sup>3)</sup>	22.0		
Max. input apparent power**	[kVA]	20.0	24.0	30.0	30.0		
Max. charging power of battery	[kW]	10.0	12.0	15.0	20.0		
Rated AC voltage			3L/N/PE; 220/380V;	230/400V;240/415V			
Rated AC frequency	[Hz]	50/60	50/60	50/60	50/60		
Max. output current	[A]	16.5 <sup>2)</sup>	20.0	25.04)	33.5		
Power factor			0.8 leading .	0.8 lagging			
Max. total harmonic distortion		<3% @Rated output power					
DCI		<0.5%In	<0.5%In	<0.5%In	<0.5%In		
Back-up Side							
Rated output power	[kW]	10.0	12.0	15.0	20.0		
Max. output apparent power	[kVA]	11.0	13.2	16.5	22.0		
Max. output current	[A]	16.5	20.0	25.0	33.5		
On/Off-grid switching time		<10ms	<10ms	<10ms	<10ms		
Rated output voltage		3L/N/PE; 220/380V;230/400V;240/415V					
Rated output frequency	[Hz]	50/60	50/60	50/60	50/60		
Voltage harmonic distortion		<3% @Linear load					
Efficiency							
Max. efficiency		98.4%	98.4%	98.4%	98.4%		
European efficiency		97.5%	97.5%	97.5%	97.5%		
Protection							
DC reverse polarity protection Integrated							
Battery input reverse connection protection		Integrated					
Insulation resistance protection							
Surge protection		Integrated					
Over-temperature protection		Integrated					
Residual current protection		Integrated					
AC surger state at a strate stick		Integrated					
AC over-voltage protection		Integrated					
Overload protection		Integrated					
AC short-circuit protection			Integ	rated			
Over voltage category	_		D\/:    N	Apin: III			
Dimonsions			FV.II 1 524×41	*IdIII. III 19×210			
Weight							
Protection degree	[((0)]	2X.U (1U-12KVW) / 31.U (15-2UKVW)					
Standby self-consumption	[\\\]	IP05 <15					
Topology	[///]	<15 Transformation					
Operating Temperature Panga	ျော	Iransformerless					
Polativo Humidity		-30~60					
	[70]		~U~ 2000 (~ 2000	)m derating)			
	[111]		3000 (>3000	t fan			
Noise Level		Smart fan					
Display	[UD]						
Communication							
communication			CAIN, KO400, WIF				

\* PV Max. Input voltage is 950V without battery, or 850V with battery, otherwise inverter will be waiting;
 \*\* Max apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery;

1) G98: 10.5kVA; 2) G98: 16.00A; 3) AS 4777.2: 15.0kVA; 4) AS 4777.2: 21.7A

Commercial





## **Integ M Series**

The Power Master

# 25-50kW **Hybrid Inverter**

MHT-25/30/36/40/50K-100 Three Phase | HV Battery | 4 MPPTs



Maximized Energy · Harvesting

Engineered for

Versatility

- 100% unbalanced output enhances selfconsumption
- 100A charging/discharging for efficient energy transfer
- Continuous 110% AC overloading sustains power
- Starts at 135V for more generation time Smooth transition to backup power ensures
- continuity during power outages
- 120% max backup @60s handles overloads
- IP65 protects both indoors and outdoors Parallel up to 10 devices for scalable
  - system expansion



Simplified Interaction

Remote upgrades maintain system health Solinteg I-light for quick status checks OLED and App for easy control

Intelligent Energy ·

Dynamics

Five work modes for diverse use

- Six charge/discharge intervals optimize control
- Centralized smart management for efficiency
- Supports diesel generators for diverse energy sourcing

#### Integ M 25-50kW

Model		MHT-25K-100	MHT-30K-100	MHT-36K-100	MHT-40K-100	MHT-50K-100	
PV Input							
Recommended Max. input power	[kW]	37.5	45.0	54.0	60.0	75.0	
Start-up voltage	[V]	135	135	135	135	135	
Max. DC input voltage*	[V]	1000*	1000*	1000*	1000*	1000*	
Rated DC input voltage	[V]	620	620	620	620	620	
MPPT voltage range*	[V]	200-850*	200-850*	200-850*	200-850*	200-850*	
No. of MPP trackers		4	4	4	4	4	
No. of DC inputs per MPPT		2	2	2	2	2	
Max input current	٢۵٦	20×4	2 30×4	20×4	30×/	30×4	
Max. short-sircuit surront	[/]	40×4	60×4	60×4	60×4	40×4	
Rottony Sido	[A]	40^4	40^4	40^4	40^4	40^4	
Battory type	_			ithium Batton (with BMS	.)		
Battery voltage range	[\/]			135_750	''		
Maximum charging (discharge curre	_ Lv] nt [۸]			100/100			
Crid Side				100/100			
Batad autput power	[144/]	25.0	20.0	24.0	60.0	50.0	
Rated output power		23.0	30.0	30.0	40.0	50.0	
Max. output apparent power		27.5	33.017	39.0	44.0	55.0	
Max. Input apparent power	[KVA]	30.0	36.0	43.5	48.0	60.0	
Max. charging power of battery	[kW]	25.0	30.0	36.0	40.0	50.0	
Rated AC voltage			3L/N/P	PE; 220/380V;230/400V;24	.0/415V		
Rated AC frequency	[Hz]	50/60	50/60	50/60	50/60	50/60	
Max. output current	[A]	42.0	50.0 <sup>2</sup> )	60.0	66.0	83.0	
Power factor				0.8 leading 0.8 lagging			
Max. total harmonic distortion			~	<3% @Rated output powe	r		
DCI		<0.5%In	<0.5%In	<0.5%ln	<0.5%In	<0.5%In	
Back-up Side							
Rated output power	[kW]	25.0	30.0	36.0	40.0	50.0	
Max. output apparent power	[kVA]	27.5	33.0	39.6	44.0	55.0	
Max. output current	[A]	42.0	50.0	60.0	66.0	83.0	
On/Off-grid switching time		<20ms	<20ms	<20ms	<20ms	<20ms	
Rated output voltage			3L/N/P	PE; 220/380V;230/400V;24	0/415V		
Rated output frequency	[Hz]	50/60	50/60	50/60	50/60	50/60	
Voltage harmonic distortion				<3% @Linear load			
Generator Side							
Max. intput apparent power**	[kVA]	30.0	36.0	43.5	48.0	60.0	
Max. charging power of battery	[kW]	25.0	30.0	36.0	40.0	50.0	
Rated AC voltage			3L/N/P	PE; 220/380V;230/400V;24	0/415V		
Rated AC frequency	[Hz]	50/60	50/60	50/60	50/60	50/60	
Max. input current	[A]	43.5	52.2	63.0	69.6	87.0	
Efficiency							
Max. efficiency		98.8%	98.8%	98.8%	98.8%	98.8%	
European efficiency		98.3%	98.3%	98.3%	98.3%	98.3%	
Protection							
DC reverse polarity protection				Integrated			
Battery input reverse connection pr	otection			Integrated			
Insulation resistance protection				Integrated			
Surge protection				Integrated			
Over-temperature protection				Integrated			
Residual current protection				Integrated			
Islanding protection				Integrated			
AC over-voltage protection				Integrated			
Overload protection				Integrated			
AC short-circuit protection				Integrated			
General Data				integrated			
Over voltage category				PV <sup>.</sup> II. Main <sup>.</sup> III			
Dimensions	[W×H×D mm]			800×620×300			
Weight	[KG]			72.0			
Protection degree	[10]			IP65			
Standby self-consumption	[w]			<15			
Topology	[**]			Transformerless			
Operating Temperature Pange	[°c]			-30~60			
Pelative Humidity	[0]			0~100			
Operating Altitude	[/o]			3000 (>3000 dorating)			
Cooling	[111]	Suuum derating)					
Noise Level		ک۵۱۱۵۱۱ حمد					
Display	[ub]						
Communication			C A A	ULEU & LEU	vool)		
Communication			CAN	N, RO400, WIFI/LAN (Uptic	nial)		

\* PV Max. Input voltage is 850V, otherwise inverter will be waiting; \*\* Max apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery;

#### INTEGRATE SOLAR INTELLIGENTLY



www.solinteg.com