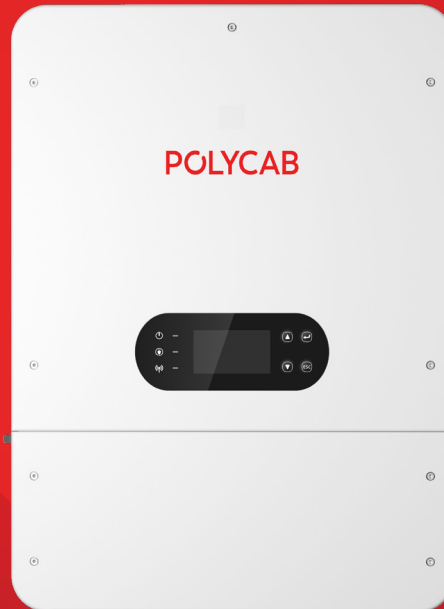




Next Gen Hybrid Inverter for Commercial & Residential Projects

Three Phase – Two / Three / Four MPPT

Models: PHIT-5K-ETLV | 8K-ETLV | 10K-ETLV | 15K-ETLV | 20K-ETLV

The Polycab LV Series inverter (5 – 20 kW) is designed for both residential and commercial PV installations. It seamlessly integrates with low-voltage (48V) batteries, making it a flexible and dependable option for users looking for robust energy storage solutions.

Leading Features

Flexible & Adaptable Applications

Unbalanced Output up to 150%
Compatible with both Lithium/Lead-acid batteries

Superb Safety & Reliability

AI-driven AFCI Optional*⁴
Type II SPD on both DC & AC sides
IP66 Ingress Protection

High Performance

20A per String & 200% PV Oversizing*
Dual independent battery inputs with 416A

Smart Control & Monitoring

Smart Load Control
Seamless Switching to Backup <4ms

THREE PHASE & 2/3/4 MPPT HYBRID INVERTER

PHIT-5K-ETLV | 8K-ETLV | 10K-ETLV | 15K-ETLV | 20K-ETLV

TECHNICAL SPECIFICATIONS					
Models	PHIT-5K-ETLV	PHIT-8K-ETLV	PHIT-10K-ETLV	PHIT-15K-ETLV	PHIT-20K-ETLV
Rating	5kW	8kW	10kW	15kW	20kW
BATTERY SIDE					
Battery Type ¹⁾	LFP (LiFePO4) / Lead-acid				
Nominal Battery Voltage (V)	48				
Battery Voltage Range (V)	40 ~ 60				
Start-up Voltage (V)	30				
Number of Battery Inputs	1	1	1	2	2
Max. Continuous Charging Current (A)	125	175	220	165 / 165	208 / 208
Max. Continuous Discharging Current (A)	125	175	220	165 / 165	208 / 208
Max. Charging Power (kW)	5	8	10	15	20
Max. Discharging Power (kW)	5.5	8.8	11.0	16.5	22.0
PV SIDE					
Max. Input Power (kW)	10	16	20	30	40
Max. Input Voltage (V) ²⁾	1000				
MPPT Operating Voltage Range (V) ³⁾	150 ~ 850				
Start-up Voltage (V)	180				
Nominal Input Voltage (V)	620				
Max. MPPT Current (A)	20 / 20		20 / 20 / 20	20 / 20 / 20 / 20	
Max. MPPT Short Circuit Current (A)	26 / 26		26 / 26 / 26	26 / 26 / 26 / 26	
Number of MPPTs	2		3	4	
Number of Strings per MPPT	1 / 1		1 / 1 / 1	1 / 1 / 1 / 1	
AC SIDE (ON-GRID)					
Nominal Power (kW)	5	8	10	15	20
Max. Power (kW)	5.5	8.8	11.0	16.5	22.0
Nominal Apparent Power Output to Grid (kVA)	5	8	10	15	20
Max. Apparent Power to Utility Grid (kVA)	5.5	8.8	11.0	16.5	22.0
Nominal Apparent Power from Grid (kVA)	5	8	10	15	20
Max. Apparent Power from Grid (kVA)	48.3	48.3	48.3	48.3	48.3
Nominal Voltage (V)	400 / 380, 3L / N / PE				
Voltage Range (V) ⁴⁾	170 ~ 290				
Nominal Frequency (Hz)	50 / 60				
Frequency Range (Hz) ⁵⁾	45 ~ 65				
Max. Current to Grid (A)	7.9@230V 8.3@220V	12.8@230V 13.4@220V	15.9@230V 16.7@220V	23.9@230V 25@220V	31.9@230V 33.3@220V
Max. Current from Grid (A)	70				
Nominal Current from Grid (A)	7.5@220V 7.2@230V	12.1@220V 11.6@230V	15.2@220V 14.5@230V	22.7@220V 21.7@230V	30.3@220V 29@230V
Nominal Current to Grid (A)	7.5@220V 7.2@230V	12.1@220V 11.6@230V	15.2@220V 14.5@230V	22.7@220V 21.7@230V	30.3@220V 29@230V
Power Factor	~1 (Adjustable from 0.8 leading~0.8 lagging)				
THDI	<3%				
BACK-UP SIDE					
Nominal Output Apparent Power (kVA)	5	8	10	15	20
Max. Output Apparent Power (kVA)	5.5 (10.0, 10s)	8.8 (16.0, 10s)	11.0 (20.0, 10s)	16.5 (30.0, 10s)	22.0 (40.0, 10s)

THREE PHASE & 2/3/4 MPPT HYBRID INVERTER

PHIT-5K-ETLV | 8K-ETLV | 10K-ETLV | 15K-ETLV | 20K-ETLV

TECHNICAL SPECIFICATIONS					
MODELS	PHIT-5K-ETLV	PHIT-8K-ETLV	PHIT-10K-ETLV	PHIT-15K-ETLV	PHIT-20K-ETLV
Max. Output Apparent Power with Grid (kVA)	48.3				
Max. Output Current (Bypass)	70				
Nominal Output Voltage (V)	400 / 380, 3L / N / PE				
Nominal Output Frequency (Hz)	50 / 60				
GENERATOR SIDE					
Nominal Apparent Power (kVA)	20				
Max. Apparent Power (kVA)	20				
Nominal Voltage (V)	400 / 380				
Nominal Frequency (Hz)	50 / 60				
Frequency Range (Hz)	45 ~ 55 / 55 ~ 65				
Max. Current (A)	30.3				
EFFICIENCY					
Max. Efficiency	97.8%	97.8%	97.8%	97.9%	97.8%
European Efficiency	97.0%	97.1%	97.3%	97.3%	97.4%
Max. Battery to AC Efficiency	95.5%				
MPPT Efficiency	99.9%				
PROTECTION					
PV String Current Monitoring	Integrated				
PV Insulation Resistance Detection	Integrated				
Residual Current Monitoring	Integrated				
PV Reverse Polarity Protection	Integrated				
Battery Reverse Polarity Protection	Optional				
Anti-islanding Protection	Integrated				
AC Overcurrent Protection	Integrated				
AC Short Circuit Protection	Integrated				
AC Overvoltage Protection	Integrated				
DC Switch	Integrated				
DC Surge Protection	Type II				
AC Surge Protection	Type II				
AFCI ^{*4}	Optional				
Rapid Shutdown	Optional				
Remote Shutdown	Integrated				
GENERAL DATA					
Operating Temperature Range (°C)	-35 ~ +60				
Relative Humidity	0 ~ 95%				
Max. Operating Altitude (m)	4000				
Cooling Method	Smart Fan Cooling				
User Interface	LCD				
Communication with BMS	CAN				
Communication	WIFI + LAN + Bluetooth, 4G, RS485, CAN				
Communication Protocols	Modbus RTU (RS485), Modbus TCP / IP (Ethernet), Sunspec Modbus RTU				
Weight (Kg)	42.2		45.3	49.7	51.2
Dimension (W × H × D mm)	756 × 551 × 258				
Noise Emission (dB)	<45				

THREE PHASE & 2/3/4 MPPT HYBRID INVERTER

PHIT-5K-ETLV | 8K-ETLV | 10K-ETLV | 15K-ETLV | 20K-ETLV

TECHNICAL SPECIFICATIONS					
MODELS	PHIT-5K-ETLV	PHIT-8K-ETLV	PHIT-10K-ETLV	PHIT-15K-ETLV	PHIT-20K-ETLV
Power Self-consumption at Night (kW)	<15				
Ingress Protection Rating	IP66				
Anti-Corrosion Class	C4				
Mounting Method	Wall Mounted				
CERTIFICATION					
IEC Standard(s)	IEC 62109, IEC 50530, IEC 62891, IEC 61727, IEC 62116, IEC 60068, IEC 61683, IEC 61000				
WARRANTY*					
Polycab Inverter + Polycab Battery - Combo (Years)	8				
Polycab Inverter + 3rd Party Battery (Years)	5				

⑩ The range of output voltage and frequency may vary depending upon different grid codes as per the government regulations.

*Conditions Apply based on PV Module Rating.

*1: The Li-Ion battery usually contains two mainstream type: LFP and Ternary Lithium battery.

*2: When the input voltage is greater than 980V, the inverter will enter standby mode, and when the voltage returns to below 950V the inverter will return to normal operation.

*3: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.

*4: Optional functions or devices are to be purchased separately.

Specifications are subject to change without advance notice.

