

# ENERGY BUTLER

**INCL. SINGLE-PHASE INVERTER**  
3 - 6 kW optional



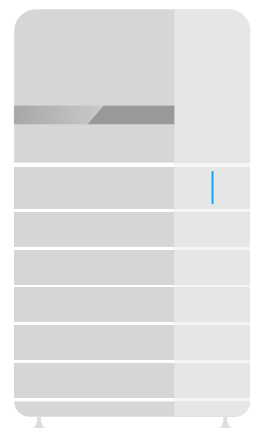
With the Energy-Butler, M-TEC offers the first energy storage system with integrated hybrid inverter in sizes of 3, 4.2 and 6 kW and stackable modules up to 19.2 kWh.

- **Plug-in and Play:**  
Single-phase inverter already integrated
- Up to 5 battery modules for max. 19.2 kWh (Lithium Iron Phosphate / LiFePO<sub>4</sub>)
- 10.000 charging cycles guaranteed within 10 years
- Perfect for off-grid installations such as alpine huts, forest huts, ...
- Simple and quick installation
- Emergency power and black start capable
- Island operation
- UPS capable (switching time less than 10ms)
- For power grids in countries like Italy, Portugal, Belgium, Denmark or in Africa



## One butler many services and benefits

- 📱 Simple configuration via app
- 📶 Information anytime and anywhere
- 📦 All in one, plug and play
- Ⓜ Battery-High Voltage
- 📊 Smart energy management included
- 🛡 LiFePO<sub>4</sub>, Superior Safety



\* M-TEC reserves the right to modify the technical datasheet and appearance of the product in the manual without prior advice to the users.

Single Phase AIO ESS System						
Number of Battery Modules		3	4	5		
Storage capacity		11.5 kWh 230V	15.3 kWh 307V	19,2 kWh 384V		
Dimensions (W x H x D mm)		698 x 1268 x 356	698 x 1405 x 356	698 x 1542 x 356		
Weight (kg)		168 kg	210 kg	252 kg		
DOD Recommended		90%				
PV Input		3.0 kW	4.2 kW	6.0 kW		
Max. usable DC Input Power [kW]		4.8	6.72	9.6		
Starting voltage [V]		80				
Max. DC Input voltage [V]		550				
Rated Input DC voltage [V]		360				
MPPT Voltage range [V]		100~550				
MPP Trackers		1	2	2		
String connections per MPPT		1	1/1	1/1		
Max. Input Current [A]		15	15/15	15/15		
Max. Short-circuit Current [A]		20	20/20	20/20		
Battery Side						
Battery Type		Lithium Battery (with BMS)				
Battery Voltage Range [Vdc]		85~465				
Max. Charging/Discharging Current [A]		30/30				
Protection		Grid Side (AC)	3.0 kW	4.2 kW	6.0 kW	
DC Reverse Polarity Protection	Integrated	Rated Output Power [kW]	3.0	4.2	6.0	
Battery Input Reverse Connection Protection	Integrated	Max.AC-output power [kVA]	3.3	4.6	6.6	
Insulation Resistance Protection	Integrated	Max. Input Apparent Power [kVA]*	6.0	8.4	12.0	
Over-temperature Protection	Integrated	Max. Charging Power of Battery [kVA]	3.0	4.2	6.0	
Residual Current Protection	Integrated	Nominal voltage [V]	L/N/PE: 230V			
AC Over voltage Protection	Integrated	Rated AC Frequency [Hz]	50/60			
Overload Protection	Integrated	Max. Output Current [A]	15.0	21.0	28.7	
AC Short-circuit Protection	Integrated	Power Factor	0.8 underexcited...0.8 overexcited			
		Max.Total Harmonic Distortion	<3% @Rated output power			
		DCI	<0.5%In			
General Data		Back-up Side	3.0 kW	4.2 kW	6.0 kW	
Over Voltage Category	PV:II ; Main:III	Rated Output Power [kW]	3.0	4.2	6.0	
Dimensions only inverter (W×H×D mm)	534×418×210	Max. Output Apparent Power [kVA]	3.3	4.6	6.6	
Weight only inverter (kg)	27.0	Max. Input Current [A]	15.0	21.0	28.7	
Protection Degree	IP65	UPS Switching Time	<10ms			
Standby Self-consumption(W)	<15	Rated Output Voltage [V]	L/N/PE: 230V			
Topology	Transformerless	Rated Output Frequency [Hz]	50/60	50/60	50/60	
Operating Temperature Range(°C)	-30~60	Peak Output Apparent Power [kVA]**	3.9, 60s	5.5, 60s	7.8, 60s	
Relative Humidity(%)	0~100 (not condensing)	Voltage Harmonic Distortion	<3%@Linear load			
Operating Altitude(m)	3000(>3000m Limitation)					
Cooling		Natural Convection	Efficiency	3.0 kW	4.2 kW	6.0 kW
Noise Level (dB)	<25	Max. efficiency	97.6%			
Display (dB)	OLED & LED	Europ. efficienc	97.0%			
Connections	CAN, RS485, WiFi/LAN(Optional)	Certifications	IEC/EN 62109, IEC/EN 61000, EN50549-1, TOR Generator Type A, VDE-AR-NI-4105			

\* 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.

\*\* The output power will exceed the rated value only when the power in the PV array is sufficient, and the duration of the overload is related to the overload power.

