

EnergyManager 2.0

Technical Datasheet

TELECOM SOLUTIONS

With the Energy Manager 2.0 you buy a 5 year track record of proven technologies for Energy Management and Site Monitoring.

The Energy Manager is built in a modular system architecture to enable a wide range of applications. We provide solutions to the most pressing problems of the telecommunication industry: Genset Efficiency, site-monitoring, fuel theft detection, battery management, solar-hybrid, hydrogen-fuel-cell-hybrid, and many other applications. All solutions are seamlessly scalable.

Retrofit through open-platform technology

- » For green field and existing telco sites
- » Makes use of existing site equipment
- » Integrates & centralizes existing alarm systems
- » Works with any genset, any battery, any rectifier, any solar charger, any fuel tank

Robust & Reliable

- » Designed and manufactured in Germany
- » We go beyond industrial grade: Medical-grade mother board
- » Hardware and software watch-dogs
- » Works fully autonomous in case of connectivity failure
- » Solid state: No moving parts
- » Embedded Linux
- » Fail-safe mechanisms

High accuracy through proprietary software algorithms

- » High precision data measurements
- » Data consistency checks
- » Data-cleansing processes
- » Software routines to avoid false alarms
- » Continuous connectivity checks and external controllers (e.g. genset- and rectifier)

Reliable data transmission

- » High transmission up-time:
 - Dual SIM
 - Higher service reliability
- » No loss of data: Lifetime log
- » Automatic re-establishing of communication

Easy service, maintenance, and repair

- » Remote software upgrades
- » Remote trouble shooting
- » Remote configuration
- » Detachable wiring board

Easy installation

- » One-step system configuration via USB-stick
- » System guided installation (Installation Wizards)
- » Inverse polarity protection for power supply and all signal inputs
- » Short circuit protection for all inputs/outputs
- » Dedicated I/O plugs



Energy Manager 2.0

Specifications	
Physical Dimensions	
Energy Manager	Height 1 HU, 19" Rackmountable H44 x D 150 x W 444 mm
Weight	~ 2 kg
Electrical	
Supply Voltage	20 to 60 VDC galvanic isolation
Power Consumption	EM: < 10 W Max. power for sensors: 20W Total consumption: EM with typical sensor set-up: <22W
Environmental	
Operational Temperature	0 to 55° C
Relative Humidity	10 to 95% (non-condensing)
Storage Conditions	-20 to +85°C, 0 to 95% relative humidity
Connection Ports: Energy Manager and I/O Extension	
Alarm Outputs / Dry Contacts	8 dry contacts (change over) Max. 1A/60V/30W 5pin: GND, +24VDC, COM, NC, NO
Analog Input	9x configurable: 0-20mA (100Ω impedance) or 0-10VDC (150kΩ impedance) 3 pins: GND, +24VDC, signal
	5x 0-60VDC (38,6kΩ imp.)
	5x Pt 1000 (-20 to +80°C)
Digital Input	8 ports Low level: 0-2V, high level: 5-30V 3 pin: GND, +24VDC, signal
Open Collector Pulse Width Modulation Control Signal	2 ports, 0-100% Galvanic Isolation Max: 60V, 4mA

Communication Interfaces	
Dual SIM (2G Modem)	2G (GPRS/EDGE) Quad band: (850/900/1800/1900MHz)
Dual SIM (2G+3G Modem, optional)	3G (UMTS/WCDMA): Dual band (900/2100MHz) 2G (GPRS/EDGE): Dual band (900/1800MHz)
Ethernet	Front side: RJ 45 10/100 BaseT
CAN - Bus	Back side (Galvanic Isolation): 1 x CAN
Serial	Front side: 1 x RS232, 1xRS485 Back side (Galvanic Isolation): 1xRS232, 1x RS485
USB	Front side: 2x USB 2.0
Control Panel	5 way keypad & graphic LCD- display configuration and monitoring
LED	Status / Error indication
Data Logging	
Customizable Data Logging	Lifetime log (10 years) for sensor data, events and alarms
Memory for Log- files	Front side: 1x SD-Card
Options	Outdoor enclosure I/O Extension

Order Number	Description
PK00-3009	Energy_Manager 2.0 with 2G Modem
PK00-3010	Energy_Manager 2.0 with 3G Modem
PK00-3017	Energy_Manager 2.0 with 3G Modem US
PK00-3008	Energy Manager 2.0 without Modem



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