ACE Sparkline

GSM/GPRS

The ACE Sparkline III GSM/GPRS is characterised by simplified installation and easy set-up. The use of screwless cage clamp terminals speeds up the installation process while the numeric display supports with status information.

PERFORMANCE CHARACTERISTICS

- Voltage range: 85 to 264 VAC
- Temperature range: -20°C to +55°C
- Digital display for error code and field strength display
- Optional integrated or external antenna
- Spring-type terminals and RJ45
- CL, RS485 and 3 RS232 interfaces (can be selected remotely)
- Auxiliary voltage output 3-24V with short-circuit detection
- History recorder
- High-level reliability

The ACE Sparkline III GSM/GPRS is the latest addition to the successful ACE Sparkline product range.

The use of transparent communication is open for serial communication protocols via TCP/IP based GPRS networks. Thus, easy access to IP communication with the usual simple handling and well-known high-level reliability is possible.

Future-proof Technology

- The use of GPRS technology ensures optimised operating costs as well as reduced dial-up times.
- A TCP list mode, which works with fixed IP addresses and does not require mediation server and can be used in VPN networks, as well as an IP-T mode in accordance with E-DIN 43463-4 (IP-Telemetry) are available.
- The ACE Sparkline III GSM/GPRS modem can be used in classic GSM operating mode or in mixed mode. At the same time, the device itself can be reached at any time with an active GPRS connection for a GSM call (CSD-Call). This is particularly interesting for servicing and allows a high degree of flexibility and investment security.

High-level of reliability

Four security timers, in GPRS operating mode, ensure permanent roaming and prevent, if needed, unacceptably high volumes due to network breakdowns, loss of field stress, etc. A large history memory contributes to the transparency of this process.

Simple Installation

Particular attention was paid to ensuring that the design of the ACE Sparkline allowes simple installation and operation. The use of spring-type terminals ensures that no screws are needed for clamps allowing quick assembly. The LED display guarantees easy analysis of field stresses at various operating states to ascertain possible sources of error.

Robust Construction

The ACE Sparkline III GSM/GPRS boasts an extended operating temperature range and voltage range.

Interoperable

As with all products in the ACE Sparkline family, a Sparklog database can be added at any time to facilitate the recording of electricity, gas, water and heat meters with impulse generators or M-BUS interface.

TECHNICAL DATA

ACE Sparkline III GSM/GPRS

Configuration/ Housing	Standard housing for three-point assembly or terminal cover assembly, sealable frame grounds according to DIN 43861-2, protection class IP51 according to EN 60529
Terminal clamps	Spring-type terminals for the wire cross section to 2.5mm² GSM antenna via standard FME bushing m³/h
Electricity supply	Multi voltage power supply unit: AC 100 to 240 V -15%/ +10%; DC 140 to 240 V -15%/ +10%
Power input	Normal operating about 3.5W. Connection with GPRS 5W
Meter Connection	Interfaces: RS-232/RS485/ CL (TTY 20 mA) 2 wire, active (300 Baud to 19200 Baud)
Data format meter	10 Bit and 11 Bit; 7o1, 7e1, 8n1, 8o1, 8e1
Operating modes	Transparent mode and EN62056-21 Mode C and Mode E
Voltage output	DC 3-24 V/20mA (data ± 20%); short-circuit proof
I/O	Optionally as output OpenCollector max. 24V/ 50mA (as opposed to GND) or as report entry (contact with host for automatic SMS-dispatch)
Service button	Service button under the terminal cover with four functions
Display (HMI)	7-segment display for field stress and status information, as well as 4 LEDs for further states
Security	2 passwords each for data connection and parameter setting/update
Reliability	24h timer (reset), watchdog, interference filter
Other functions	Parameter setting and firmware update local and remote dynamic selection of the meter interface even during a connection log book function >17000 entries
GSM/GPRS functionality	Quad band 850/900/1800/1900 MHz - Class 1 (1W) at 1800 and 1900 MHz - Class 4 (2W) at 850 and 900 MHz - GSM-CSD data transfer up to 14400 Bits possible - GSM-CSD transfer security by Radio Link Protocol (RLP) - GSM-CSD data transfer protocols: V.22 to, V.32, V.34, V.110 - GPRS Multislot class 12; Coding scheme 1 - 4; Mobile station class B - GPRS PBCCH Support - Software interface: extended AT-commando set - Automated answering service - Automatic login in the GSM network - CSD access during GPRS connections (parameters can be set)
Certification	EN 301 489-1, EN 301 489-7, EN 301 511
IPT-Telemetry	Optional support of the E-DIN 43863-4 IP-Telemetry (IPT)
TCP/IP	Listen support of static IP addresses; tunnels of serial data via TCP/IP
Compliance	Field bound and wire bound interference emission according to EN 60715 (2002-09), DIN EN 55022: 2001-11 class B Safety according to EN 60950; CE compliance
Interference immunity	- Discharge of static electricity: EN 61000-4-2 - severity degree 3 - HF-irradiation: EN 61000-4-3. - severity degree 3 and DIN V ENV 50204 - Interference immunity against transient electric disturbances: EN 61000-4-4. - severity degree 4 - Disturbance voltage (Surge): EN 61000-4 5 - Installation class 4 - Conducted disturbances: EN 61000-4-6 - severity degree 3 - Power failure: EN 61000-4-11

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