

EPPE RX

SPECIFICATIONS



General description

EPPE RX is a high-accuracy power quality analyser which comprehensively monitors network parameters for compliance with valid quality standards. With the built-in transient and RMS fault recorders the causes of system disturbances and perturbations can be localised quickly and reliably.

The 32 GB internal data memory also allows complex measurements over long periods of time. The powerful processors can provide a sampling rate of 200 kHz per channel.

All functions and recording parameters are freely configurable in the software.

Multi-processor system	Digital signal processor (DSP), 32 bit for processing signals and processes in real time Communication processor, 32 bit for mass data storage, simultaneous data communication using different interfaces and protocols, web server functionality and stand-alone operation
User controls and displays	4 status LEDs
Number of measurement inputs	8 analog inputs 4 binary inputs
Data memory	Measurement data memory, 32 GB
Quality system	Developed and manufactured to DIN ISO 9001
Calibration	Software-controlled calibration Recommended calibration cycle: check every 5 years
Operating software	EPPE-/SHERLOG- operating software for Windows 10/11 and Windows Server 2012 R2

Function overview

Recording functions	Power quality analyser, class A Continuous data recording PQ event recording Transient fault recorder, sampling rate from 100 Hz...30 kHz RMS fault recorder, sampling rate from 1 Hz...120 Hz Energy meter
Standards for measurement and analysis	IEC 61000-4-30 class A IEC 61000-4-7 harmonics and interharmonics IEC 61000-4-15 flicker EN 50160, IEEE 519, IEEE 1159

Analog inputs	General information	Resolution	16 bit
		Sampling frequency	200 kHz per channel
		Accuracy	0.05% of range
		Protection	Galvanic isolation PH-PE > 2.5 kV
	Voltage inputs	Number	4
		Measuring range	600 VAC/±848 VDC
		Impedance	6.0 MΩ
		Frequency range	DC...10 kHz
	Current inputs	Number	4
		Type	Ring type current transformer
		Measuring range	10 AAC, optional 100 AAC
		Impedance	≤0.1 mΩ
		Overload	100 AAC for 1 s
Frequency range		10 Hz...10 kHz	
Binary inputs	Number	4 inputs, connected to common potential	
	Activation range	24...300°VDC (activation range is configurable)	
	Resolution	0.1 ms	
	Protection	Transient protection Polarity protection Galvanic isolation up to 2.5 kV	
Binary outputs	Mechanical relays	Number	2 x Changeover contact
		Switching capacity	220 VAC, 8 AAC; max. 60 W for 500 ms
		Max. continuous current:	2 AAC
Time synchronisation	General	Internal real-time clock	Accuracy 2.5 ppm without external time synchronisation
		NTP/SNTP	Synchronisation over Ethernet network
		Interlink interface	Master-slave time synchronisation between several EPPE RX devices
	Connection for external time sources	GPS interface	Connection for optional GPS receiver module for DIN-rail mounting
		Telegram input	Telegram input (RS232 / 12 VDC) for connection to external clock systems Supported telegrams: NMEA RMC (GPS), DCF77, IRIG-B
		Pulse input for seconds or minutes pulses	Impulse input (12 VDC), min. pulse width 5 ms

Interfaces	Data communication	2 x 10/100 Mbit Ethernet (RJ 45) 1 x USB-B 1 x RS232 1x RS485	
	Interlink interface	Electric 2-wire interface for networking a number of EPPE RX devices Enables cross-triggering and master-slave time synchronisation over distances of up to 500 m	
	Protocols	Standard: TCP/IP, Modbus TCP, GSM, GPRS Optional: IEC 61850, IEC 60870-5-103	
Power supply	Operating voltage	Nominal range: 100...250 VDC and 90...250 VAC; 47...63 Hz Working range: +6% / -15% of the nominal range	
	Power consumption	Max. 20 VA	
Complete system	Mechanical properties	Weight	1.5 kg
		Housing	Powder-coated aluminum housing for top-hat rail mounting
		Protection class	IP 40 to EN 60529
		Dimensions	220 mm x 110 mm x 80 mm
	Environment	Storage temperature	-30...70 °C
		Operating temperature	-5...50 °C, minimum switch-on temperature 0 °C
		Relative humidity	5...95%, non-condensing
	Generic standards	Safety	EN 61010-1_2011
		Interference emission	EN 61000-6-4 (ersetzt EN 50081-2)
		Susceptibility	EN 61000-6-2 (replaces EN 50082-2)
Measurement category		600 V CAT III; 300 V CAT IV	