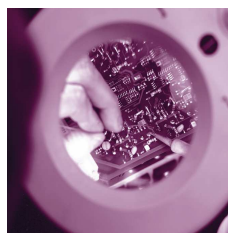
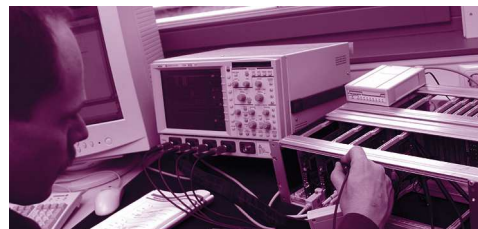


Specifications SHERLOG



System concept	A modular, high-accuracy digital fault recorder (DFR) with an integral power quality analyser designed to comprehensively monitor power equipment such as lines and busbars and associated protection devices and switchgear equipment. SHERLOG systems are fully constructed using 32/128 bit DSP technology. All measurement and monitoring functions are freely configurable via the software.	
Analog inputs	Frequency range Resolution Error Measuring ranges Protection	DC to 6 kHz, linear frequency response 16 bit 0.1% User-definable measuring ranges from 100 mVAC to 400 VAC Current measurement via external shunts or current clamps Galvanic isolation via opto-couplers (LOC), phase-to-phase and phase-to-earth > 2.5 kV
Binary inputs	Activation range Protection	24 to 300 VDC single range Transient protection, polarity protection and galvanic isolation via opto-couplers
Binary outputs	Sw. capacity Protection	220 VDC, 2 A, 60 W, resistive load Potential-free and galvanically isolated output relays
Triggers		All definable analog and binary triggers can be activated at the same time and for all channels.
	Analog signals	Programmable thresholds for over- and under-triggers and d/dt triggers for voltage, current, phase angle, frequency, THD, harmonics, power factor, zero/pos/neg sequence, impedance, P_{ST} , P_{LT} and other power quality values.
	Binary signals	Rising or falling edge
Recording time	Static recording time	User-definable recording time for pre-fault, fault and post-fault time
	Dynamic recording time	User-definable recording time for pre-fault, min. fault, max. fault and post-fault time Within the configured limits, the length of the fault record is dependent on the real fault duration. The pre- and post-fault times have a fixed length.
	Storage capacity for fault records	The maximum recording time depends on the selected sampling rate. E.g. 400 records of 2 seconds with 2000 Hz
	Storage capacity for RMS, trend and PQM recordings	Up to 6 months, depending on memory space and the recording parameters selected.
Sampling rate	Two independent sampling rates from 100 Hz to 30 kHz	
Analysis	Automatic fault location, COMTRADE data import and export, multiple channel and record superimposition, comprehensive mathematical functions for the creation of virtual channels, analysis up to the 40 th harmonic, flicker calculation according to EN 60868, power quality analysis according to EN 50160 and IEC 61000-4-30	

Complete system

Operation, system control, data storage and evaluation using a standard, external Windows PC.

User interface NRGCenter software package for operation under Windows® 2000/XP

Power supply Rated voltage 85 to 265 VAC, 47 to 63 Hz, 90 to 350 VDC
UPS option for approx. 20 minutes
DC Power supplies for 19...36VDC or 60VDC are available as an option

Connections All connections for analog and binary signals are located on the rear panel.
Communication ports are located on the front and rear panel.

Interfaces 2 x RS232, 1 x USB connection
Optional: IR, fibre-optic, RS485, Ethernet, internal modem

Internal clock accuracy 15 ppm

Time synchronisation DCF, GPS, external pulse

Data memory 16 MB SDRAM, 32 MB Flash RAM per 8 analog channels (SHERLOG CRT & CX)
16 MB SDRAM, 32 MB Flash RAM in total (SHERLOG C8, P8, C16, P16)

Keyboard Membrane keypad on the front panel

Display Alphanumeric LC-Display with 4 x 20 characters

Status indication 8 status LEDs on the front panel

Environment

Operating temperature	0 to 50°C
Storage temperature	-20 to 60°C
Relative humidity	5 to 90%, non-condensing
Protection	IP20
Safety standard	EN 61010-1 300 V~CAT II
EMC emissions	EN 50081-2 industrial
Susceptibility	EN 50082-2 industrial
Certification	Optional DKD calibration certificate

Product specifications

	SHERLOG P8	SHERLOG P16	SHERLOG C8	SHERLOG C16	SHERLOG CRT	SHERLOG Cx
Analog inputs						
Total number per 3HU	8	16	8	16	16	up to 32
Current measurement	Internal CT's	Internal CT's	Internal CT's	Internal CT's	Internal Shunts or CT's	External Shunts or CT's
Binary inputs						
Total number per 3 HU	12 ²⁾	20 ²⁾	12 ²⁾	20 ²⁾	16 or 32 +4 ²⁾	up to 128 (192) ¹⁾ +4 ²⁾
Binary outputs						
Total number per 3 HU	4	4	4	4	4	up to 36
Internal UPS						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Display						
Alphanumeric LC-Display	4x20 characters	4x20 characters	4x20 characters	4x20 characters	4x20 characters	4x20 characters
Status display	8 LEDs	8 LEDs	8 LEDs	8 LEDs	8 LEDs	8 LEDs
Keyboard						
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Max. sampling rates						
	12.8 kHz	12.8 kHz	12.8 kHz	12.8 kHz	37.5 kHz	37.5 kHz
Power Quality Analysis						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Housing						
	½ 19", 3 HU portable	½ 19", 3 HU portable	½ 19", 3 HU drawer	½ 19", 3 HU drawer	19", 3 HU drawer	19", 3 HU drawer
Weight	2.0 kg	2.2 kg	2.0 kg	2.2 kg	3.0 kg	3.0 kg

■ Standard □ Optional

¹⁾ With galvanic isolation in groups of 8

²⁾ With galvanic isolation in groups of 4