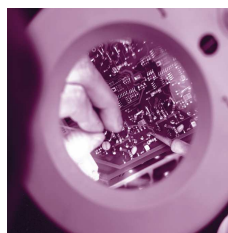
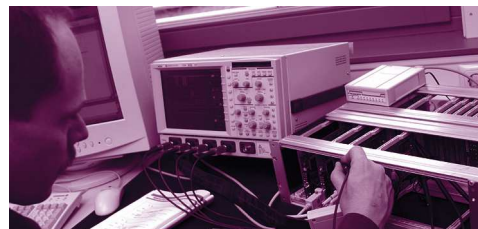


Specifications SHERLOG



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, 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-, under- and rate-of-change 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 continuous, trend and PQ recordings	Up to 6 months, depending on memory space and the recording parameters selected.
Sampling rate	Two fast sampling rates (100 Hz to 30 kHz) can be adjusted in steps of 1Hz and can be used simultaneously One slow sampling rate (1Hz to 120Hz)	
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 50 th harmonic, flicker calculation according to EN 60868, class A 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 to 36 VDC or 60 VDC 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: RS485, fibre-optic RS232, electrical and fibre-optic Ethernet (qualified for IEC61850 networks), internal or external 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	8 or 16	up to 32
Current measurement	Internal CTs	Internal CTs	Internal CTs	Internal CTs	Internal shunts or CTs	External shunts or CTs
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