



## NCC light Vibration Network Controller

The NCC light interconnects up to 8 MR2002-CE Vibration Recorders in a star topology network to form a multichannel recording system. Data acquisition and recording is performed by the MRs. The MRs act as autonomous units. Their activities are co-ordinated by the NCC light.

The interconnection between the remote MR recorders with MS sensors and the NCC is of digital type, the data transmission is handled by a reliable protocol. The interconnection uses inexpensive cable and is hardly affected by EMI/RFI (electro magnetic interference/radio frequency interference).

- monitors continuously the operating status of each MR in the network (trigger condition, alarm condition, state-of-health) and the quality of the interconnection lines
- performs the common trigger (simultaneous recording on all channels)
- has an alarm voting logic for two independent alarm criteria
- acts as a software switch and provides a single point access for data retrieval and parameter setting to all MRs in the network.
- broadcasts the time information to all connected MRs (relative time synchronization in the network)
- may be equipped with a GSM device for remote communication
- may send an e-mail or text-message (SMS) in case of an alarm or a malfunction of any of the devices in the network (Red Alert Option)

# Technical Specification NCC light

## Microprocessor/Firmware

Architecture	A multitasking operating system ensures that vital tasks are treated with high priority
Communication	The NCC collects information from the MRs by a polling procedure. The MR is always passive, i.e. it only replies to the inquiries of the NCC. This ensures a highly reliable communication between NCC and MR as any malfunction of the MR or the interconnection line is detected immediately.
Common trigger	trigger voting logic (up to 32 AND combinations) – any of the combinations leads all the MRs in the network to start recording.
Common alarm	alarm voting logic (up to 2 x 32 AND combinations) for two alarm levels (OBE/SSE) High/low alarm
Time base	internal 20 ppm clock with battery-backup

## Power Supply

Supply voltage	110 VAC or 230 VAC with internal Lead-acid gel battery, 9 Ah
Power consumption	Microprocessor: 150 mA @ 12 V Communication unit: 50 mA @ 12 V (per MR)

## I/O

Interfaces	RS-232 for PC/Communication devices Up to 115200 baud, full handshake LEMO receptacle (same as MR2002-CE)
Interconnection to MR	current-loop 4 - 20 mA Tx/Rx (up to 1 km) Communication speed up to 57600 baud, individually settable LEMO receptacle
Relays	3 low voltage Relays (rating max. 60 VDC) for status output Configuration of activation, polarity and holding time via software LEMO 2E receptacle
Hardware trigger	External trigger push button

## Display

LCD	Status information, Peak values of last event, State-of-Health information
LED	Power, Run, Communication, Error/Warning

## Physical Characteristics

Housing	Aluminum 210 x 200 x 170 mm (LxWxH) with handles
Weight	approximately 9 kg
Protection degree	IP 65 (splash-proof)
Environmental humidity	(according to IEC 68-2-1 and IEC 68-2-2) 95% RH
temperature	0° to 50° C
Shock	survival 30 g (11 ms half sine, IEC 68-2-7)
Vibration	survival 1 g (sweep 5-35 Hz, 1 octave/minute, IEC 68-2-6)