Product data sheet

Product: NM08

Description:

The emergency light modules NM08 operate up to 5 pieces of 1 W LEDs (350 mA). The electronics evaluates errors such as lamp failure, battery voltage error, charging error and temperature error during operation or tests and displays them using a two-colour LED. The entire electronics is housed in a module housing with protection against contact. The module is suitable for installing in a housing, where protection against contact is not ensured in accordance with VDE due to open electronics. The modern circuit design ensures maximum energy efficiency with least heat generation.

Derivatives:

NM08-S	Standard electronics with manual testing facility.
NM08-SUE	Self-monitoring electronics with automatic weekly testing.
NM08-MLK	Self-monitoring electronics with automatic weekly testing and potential-free error message contact (two-way contact).
NM08-E	Self-monitoring electronics with EmLOC bus connection for central testing and configuration.
NM08-BMA	NM08-E with special programming for flashing access block lamps in fire alarm systems.

Functions:

Function	NM08-S	NM08-SUE	NM08-MLK	NM08-E	NM08-BMA
Integrated power supply unit for DS	X	X	X	X	X
Automatic charging current regulation for battery	X	X	X	X	X
1 W to 5 W LED power (max. 5 x 1 W LED in series)	X	X	X	X	X
Manual test button for 30 seconds test	X	X	X	X	
Display of mains operation, emergency, checking and test mode as well as group e	X	X	X	X	X
Error display of battery voltage error	X	X	X	X	X
Error display of battery charging error	X	X	X	X	X
Error display of temperature error	X	X	X	X	X
Error display of lamp failure	X	X	X	X	X
Output short-circuit-proof and current-regulated	X	X	X	X	X
Automatic detection of number of connected power-LEDs	X	X	X	X	X
Switched steady light possible using external switches	X	X	X	X	X
Self-monitoring with automatic weekly testing		X	X	X	X
EmLOC bus connection				X	X
Steady light programming / switching using a bus host				X	X
Separate group addresses for steady light switching using a bus host				X	X
Theatre mode (dimmable steady light)				X	X
Flashing mode for error search				X	X
Customised LED brightness adjustable for DS and BS.	X	X	X	X	X
Emergency light blocking via central unit during free times				X	X

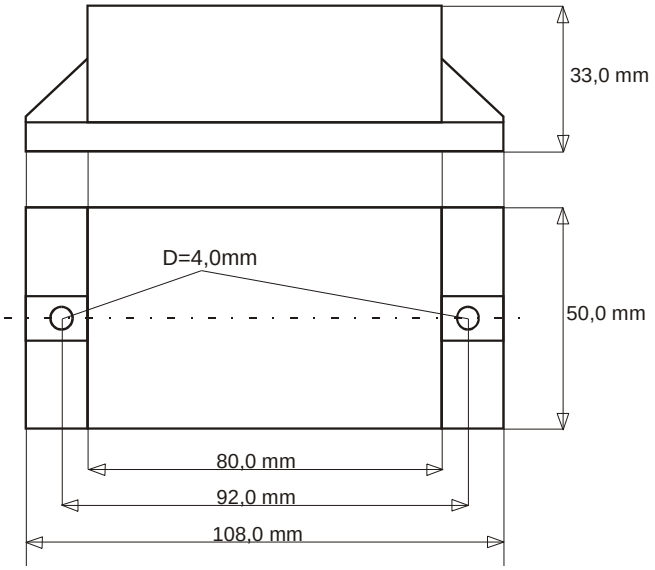
Technical data:

Supply voltage	230 V / 50-60 Hz
Connected wattage	Max. 5 W (5 x LED 1 W), min. 1 W (1 x LED 1 W). The number of connected LEDs is automatically ascertained during commissioning and verified during each start-up.
Battery voltage, recommended capacity at full load (equals approximately 1.4 A).	NC battery 3.6 V 1 h = 1.5 Ah / 3 h = 4.0 Ah
Battery charging	Quick charging (350 mA) with conversion into intermittent trickle charging.
Operating temperature when tu = 20°C	Approximately 36°C
Operating temperature range (ta)	-20°C to +40°C
Maximum permissible operating temperature (tc)	+70°C
Consumption in standby mode (LED off, battery charged).	approximately 3.6 W

Charge tables:

Number of LED	Battery current (approximately)
1 power-LED	280 mA
2 power LEDs	570 mA
3 power LEDs	850 mA
4 power LEDs	1130 mA
5 power LEDs	1400 mA
The necessary battery capacity can be calculated from the current drain stated. A reserve should be included due to age related capacity loss.	

Dimensions:



Accessories:

- LED / test button combination LED-4 (duo-LED) with connecting cable and plug.
- LED / test button combination of membrane keys 20 x 20 mm
- P-LED-1W-EP, single LED on mounting plate. 50 mm x 17 mm, hole spacing 40 mm, hole diameter 3 mm.
- P-LED-3W-LL8, LED tube 3 W (9 LEDs) in LL8 tube. 283 mm x 15 mm. Tubular light emitting diode lamp with dimensions of fluorescent lamps as per IEC60081 and bases as per IEC 60061-1.
- P-LED-3W-LL6, LED tube 3W (9 LEDs) in LL6 tube. 212 mm x 15 mm. Tubular light emitting diode lamp with dimensions of fluorescent lamps as per IEC60081 and bases as per IEC 60061-1.
- LED strips 204 x 11.5 mm with 9 SMD-LEDs (total 3 W)
- LED strips 280 x 11.5 mm with 9 SMD-LEDs (total 3 W)
- LED disc of 50 mm diameter with 3 x 1 W power LED
- Switch and signal unit SE08 for NM08-BMA

Error displays:

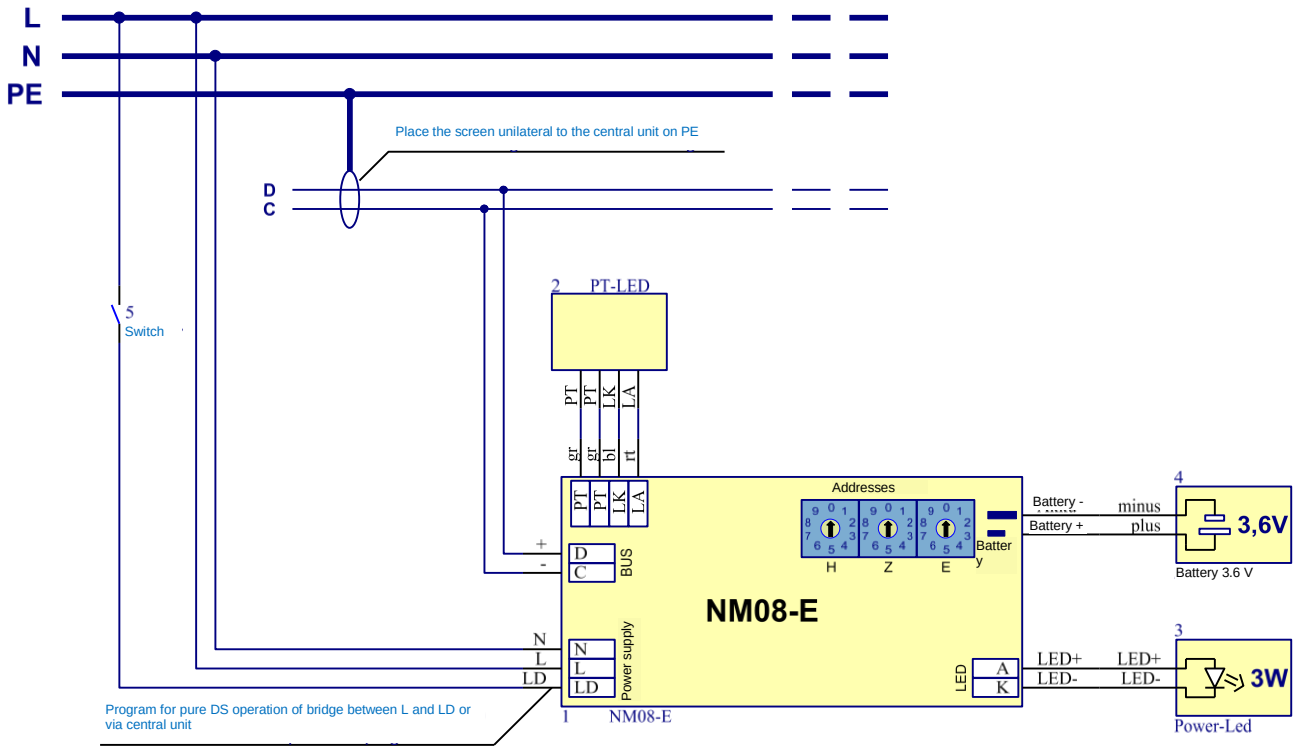
Display	Definition	Duration
LED turns green	no error, mains operation	
LED flashes green	Light is in test mode (30 seconds) or operation endurance test.	test runs for as long as the check
LED turns red	Light is in emergency mode (mains failure)	till the main supply is restored
LED flashes red (1x / second)	Light is signalling battery failure. Battery voltage too low or too high.	till error is rectified
LED flashes red (2x / second)	Light is signalling battery charging failure.	till error is rectified
LED flashes red (3x / second)	Light is signalling temperature error. Internal temperature of lights > 80°C	till error is rectified

LED flashes red (4x / second)	Light is signalling lamp failure (no indicator lamp connected or short-circuit)	Till error is rectified

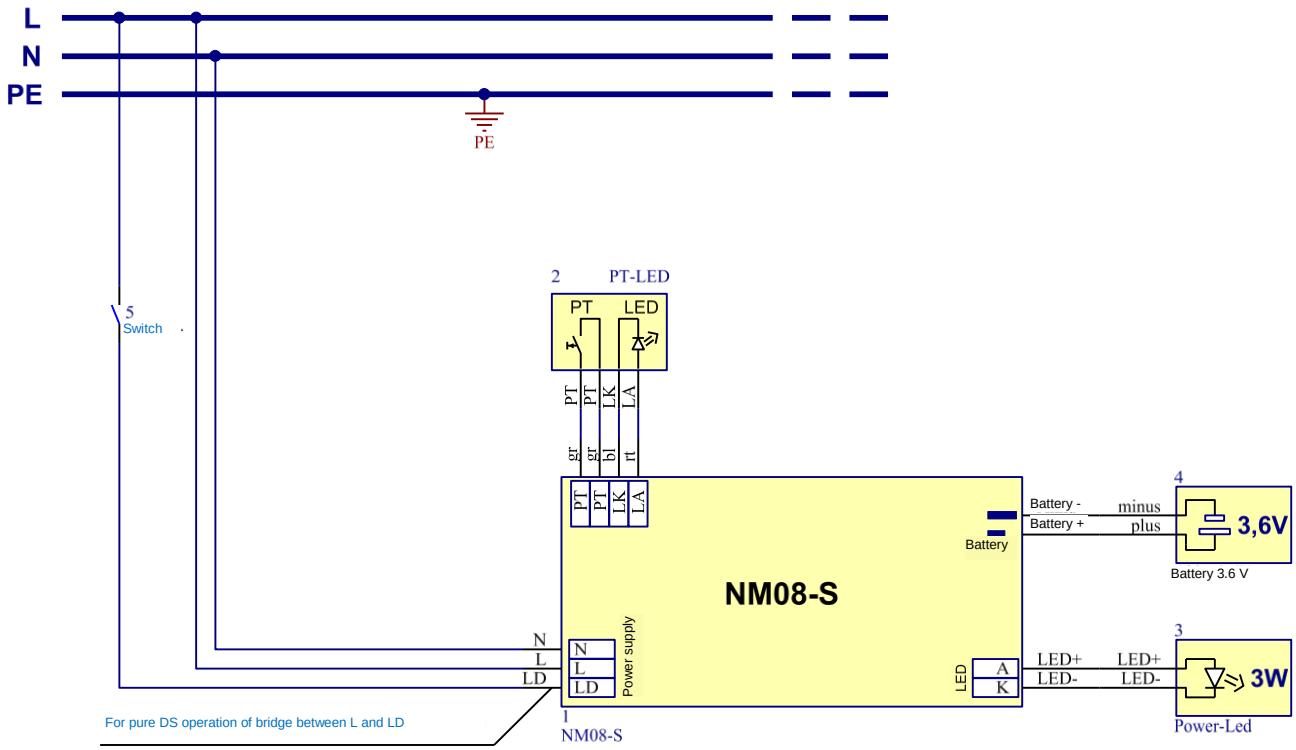
Order numbers:

Name	Description	Order number
NM08-S	Emergency light module without accessories:	109-1207-0060
NM08-SUE	Emergency light module without accessories:	109-1207-0030
NM08-MLK	Emergency light module without accessories:	109-1207-0091
NM08-E	Emergency light module without accessories:	109-1207-0050
NM08-BMA	Emergency light module without accessories:	109-1207-0080
SE-08	Switch unit for BMA mode	109-3004-8000
PT-LED-4/2x2	Test button / function check combination (integrated)	109-1036-0100
P-LED-1W-EPO	Single power LED on epoxy resin plate 1 W (50 x 17 mm)	109-1206-5000
SMD-LED-strips-8LL	LED strips with 9 LEDs (280 x 11.5 mm), 3 W, 350 mA, 297 Lumen	109-1206-5800
SMD-LED-strips-6LL	LED strips with 9 LEDs (204 x 11.5 mm), 3 W, 350 mA, 297 Lumen	109-1206-5600
SMD-LED-tube-8LL	LED tube with 9 LEDs (similar to 8W-LL), 3 W, 350 mA, 297 Lumen	109-1206-5810
SMD-LED-tube-6LL	LED tube with 9 LEDs (similar to 6W-LL), 3 W, 350 mA, 297 Lumen	109-1206-5610
P-LED-3W-round-50mm	Power LED disc with 3x 1W-LED, diameter 50 mm	109-1206-8000

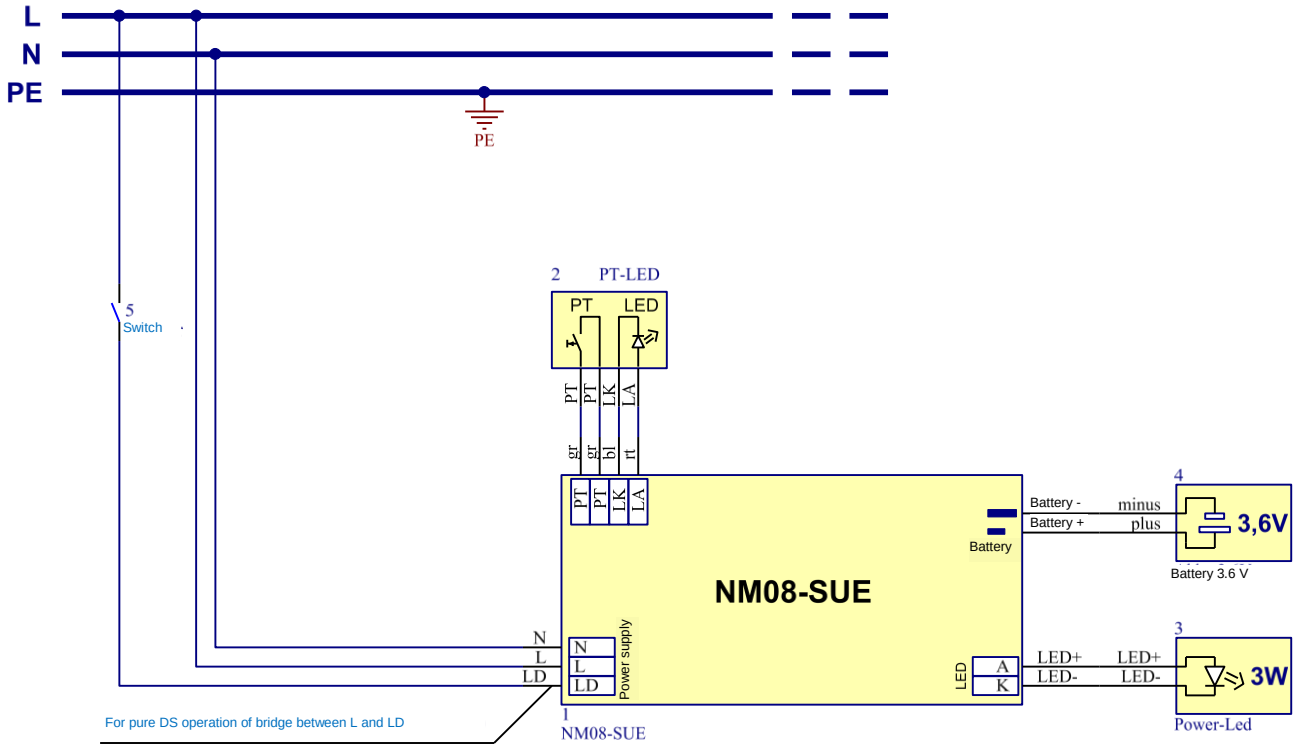
Circuit diagram of NM08-E:



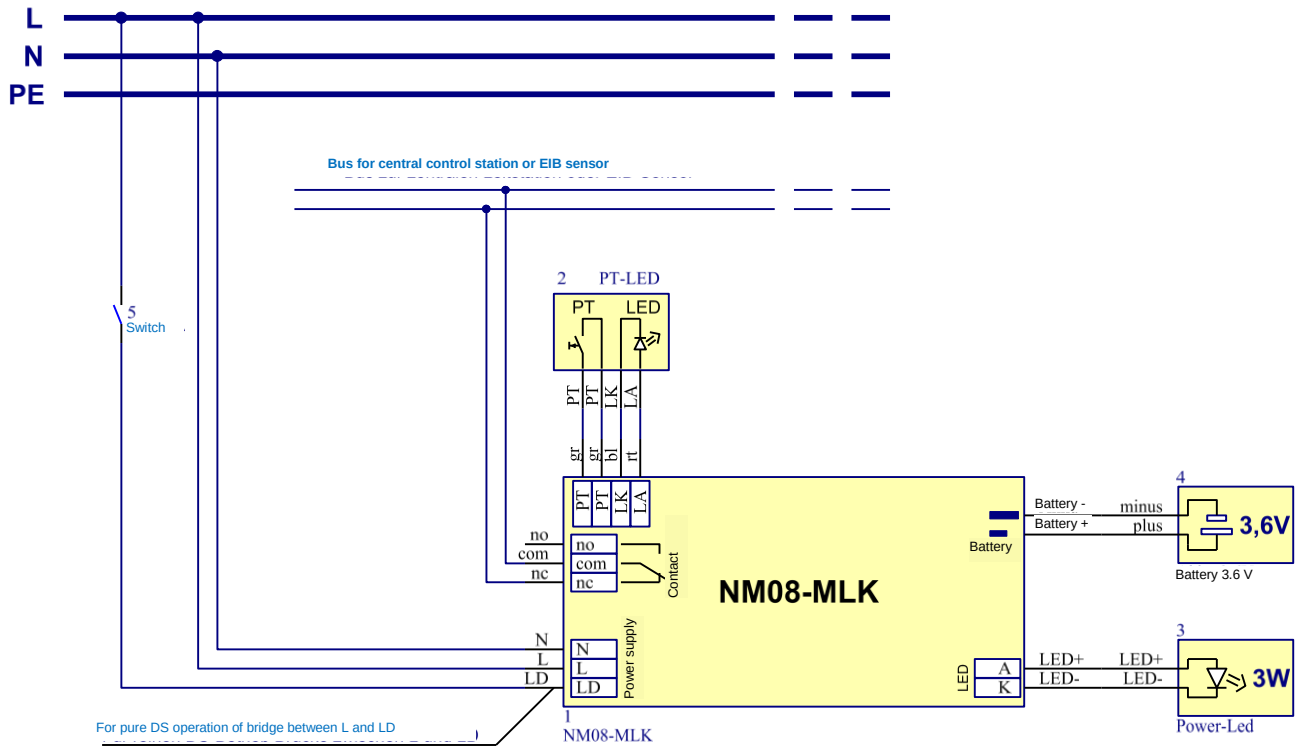
Circuit diagram of NM08-S:



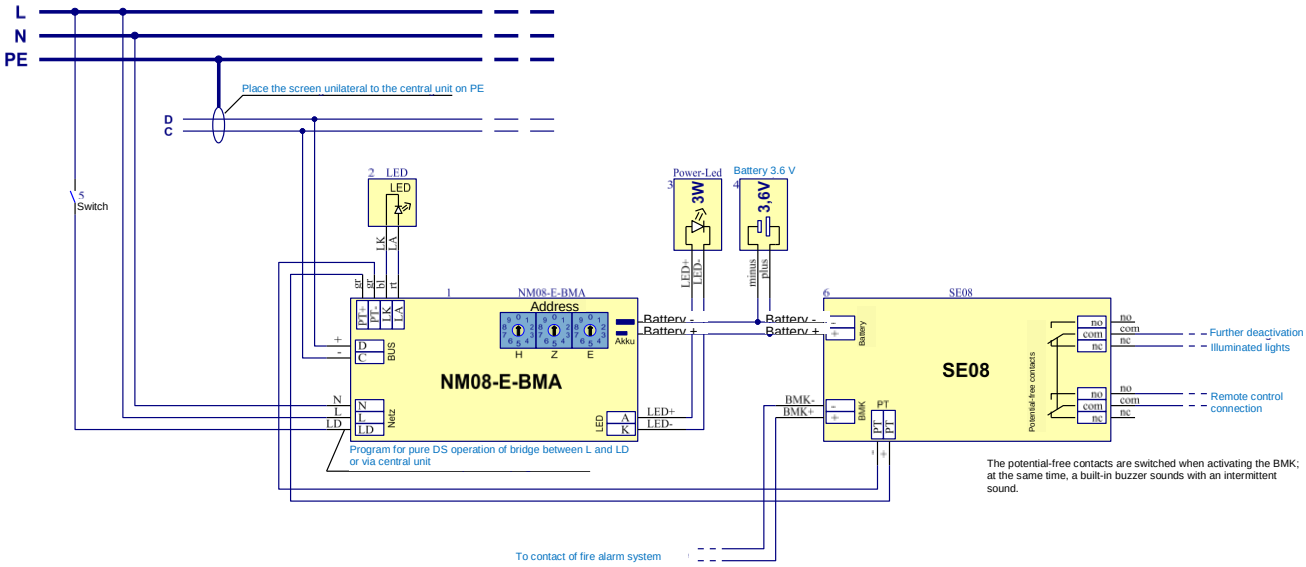
Circuit diagram of NM08-SUE:



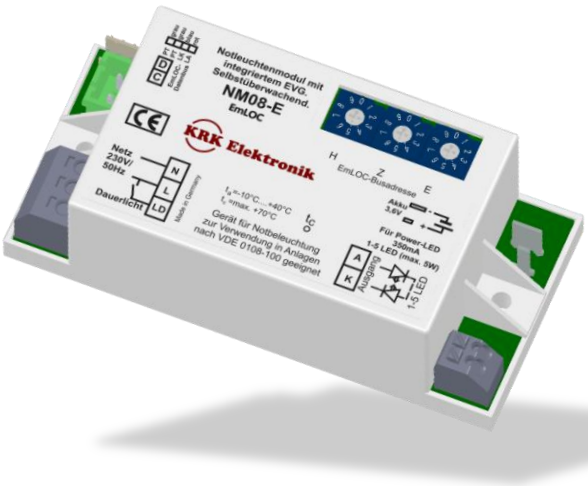
Circuit diagram of NM08-MLK:



Circuit diagram of NM08-E-BMA:



NM08-E



NM08-MLK

NM08-S

NM08-SUE