LE80 Radio Multipurpose Receiver

- **Large number of transmitters can be assigned**
- **Status indication with 2 tricolour LED indicators and 2 individual 'NO/NC' relays**
- **Easy Transmitter programming with one button**
- **Easy Wireless mode setup programming**
- **Multiple connectivity choices**
- **Nine different operating modes**
- **LED indicates mode status after power on**
- **Predefined voltages for four predefined criteria inModes 1, 2 and 8 on custom output**
- **Transmitter battery level indication by LED relay output**
- **Bidirectional radio**
- **Wireless programming and firmware update**
- **Easy to use in wired Nurse Call installations**
- **Easy to couple a secured dementia passage to a wired installation**
- **Easy to couple a door block or door open (unblock) system**
- **Power supply or powered externally by 6-30 VDC**

With its multi-purpose operating modes, the LE80 Radio Receiver can be used in combination with wired or wireless Nurse Call systems. It is designed to receive radio signals from different TeleAlarm radio transmitters at the frequency of 868.8MHz. When receiving radio signals from either programmed or non-programmed wireless transmitters, the LE80 Radio Receiver switches its two relay outputs and activates its two LED indicators, according to the different functional modes described below.
The LE80 can be powered by 6-30VDC or by the optional power supply unit.

Functions

The LE80 Radio Receiver can be set to one of nine different
operating modes in which the device behaves according to different transmitter inputs. Operating mode setup can only be done using the PR80 programming unit. Transmitters can be programmed with or without the PR80.

Mode 1: Normal (default mode)
Up to twenty wireless transmitters can be programmed. Calls are indicated by LED 2 and Relay 1. A low battery signal is indicated by LED 2 and Relay 2. Additionally, the custom output (see pinout) provides predefined voltages for four different predefined calls.

Mode 2: LED 2 deactivated at low battery indication
Function is the same as in Mode 1, except the low battery signal is indicated only by Relay 2. Additionally, the custom output (see pinout) provides predefined voltages for four different predefined calls.

Mode 3: Dementia
S87L and B80A wireless transmitters can be detected. Relay 1 can be used to lock a monitored door. Relay 2 can be used to trigger an existing Nurse Call system, or an input for other monitoring devices.

Mode 4: Dementia with Accompany
The LE80 Radio Receiver can be connected to a wired Nurse Call system, in which the 'Accompany' function can be implemented. Here the LE80 Radio Receiver will wait 10 seconds after receiving a signal from an S87L transmitter. If it detects a B80A transmitter in this time window, then no alarm is generated. If not, then Relay 1 is activated for 2 seconds.

Mode 5: Remote control
Up to 20 wireless transmitters can be programmed. Per sequence, only the same transmitter can switch Relay 1 on and off.

Mode 6: Open receiver
No wireless transmitter needs to be programmed. Any transmitter within reception range of the LE80 Radio Receiver will activate the device.

Mode 7: Open receiver with a door location beacon number
Same functions as in Mode 6, but with door position transmission. Any transmitter within reception range of the LE80 Radio Receiver will activate the device, but only if the LE80 receives a signal (with the exception of a dementia) which contains the door beacon number.

Mode 8: Unique N86 behaviour
Behaviour is similar to normal Mode 1, with certain differences according to the transmitter or call type that is activated.
Triggering an alarm on a programmed N86 transmitter will activate the Relay 1 for max. 20 min. The 20 min. cycle can be interrupted by the acknowledgement function of the same N86.

Mode 9: Dual channel receiver
All TeleAlarm Nurse Call alarm transmitters can be programmed. Calls are indicated by Relay 1 or Relay 2, according to the slot where the wireless transmitters are programmed. A low battery signal is indicated by LED 2.

Scope of delivery

Quantity	Component
1	LE80 Radio Receiver
1	Leaflet with instructions
Option	
1	Power supply unit

Installation/Configuration Notes

The following wireless transmitters are compatible with the LE80 Radio Receiver:

- S87 Transmitter
- S87L Transmitter with Locating function
- S85 Pendant Transmitter
- UPCBA80 Universal PCBA
- RAC80 Wireless Contact
- N86 Wall Transmitter (Mode 8)
- Wireless Smoke Detector and other TA 868.8MHz peripherals

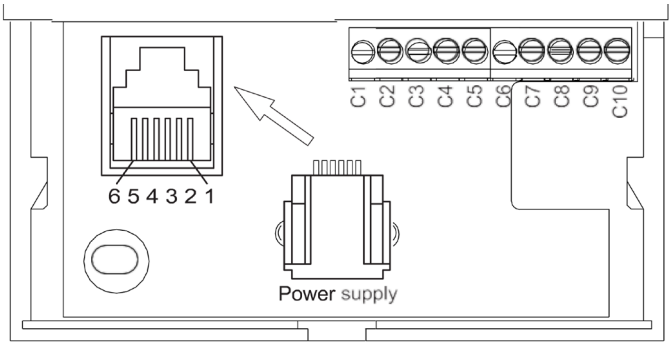
Technical specifications

Dimensions (H × B × D)	133 × 82 × 26mm
Weight	110g
Frequency	868.8MHz bidirectional
Protection class	IP 21
External power supply	6-30 VDC or power supply unit
Power consumption	Transmission: max. 60mA Reception: max. 30mA
Receiver category	Complies with Cat 1.5 as specified in EN 300220-1 V3.1.1
Operating temperature	-10°C to 55°C
Storage temperature	-20°C to 80°C
Frequency stability (-10°C to +55 °C)	< 2,5 kHz
Modulation	FSK
Antenna	Integrated printed
Radiated power	Typ. 2mW
Housing	ASA white
Environmental class	I
Maximum range in free field	Up to 300m

Certifications and Approvals

RED 2014/53/EU
EMC 2014/30/EU
LVD 2014/35/EU
RoHS 2011/65/EU
WEEE 2012/19/EU
EN 62368-1 (2014 + AC :2015)
EN 62479 (2010)
EN 50130-4 (2011-06 + A1 :2014)
EN 300 220-2 V3.1.1 (2017-02)
EN 301 489-1 V2.2.2 (Final draft: 2019)
EN 301 489-3 V2.1.1 (2019)
EN 50581 (2012-09)
VDE 0834-1 (2016-06)
VDE 0834-2 (2017)

Pinout



The power supply RJ12 connector is provided to plug in the optional external power supply unit. It could al so be used for alternative connectivity, as in the following table.

Pen	Function
C1 / PS1	Input analogue external power supply: 6-30 VDC, 100 mA min to source
C2 / PS6	GND (external power supply)
C3	GND (custom output reference)
C4	Custom output (modes 1, 2 and 8), one second pulse, max. 20mA
C5 / PS5	Relay 1 output NO (open in standby)
C6 / PS2	Relay 1 output C (common)
C7	Relay 1 output NC (closed in standby)
C8	Relay 2 output NO (open in standby)
C9	Relay 2 output C (common)
C10	Relay 2 output NC (closed in standby)
PS3	Serial port (UART RX, 3V, 242kb/s)
PS4	Serial port (UART RX, 3V, 242kb/s)

Relay contacts support 0.3A @30 VDC or 30 VAC (RMS). Only either the NO or the NC output can be used at a time. IEC 60601 standard must be respected in electrical medical equipment systems.

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