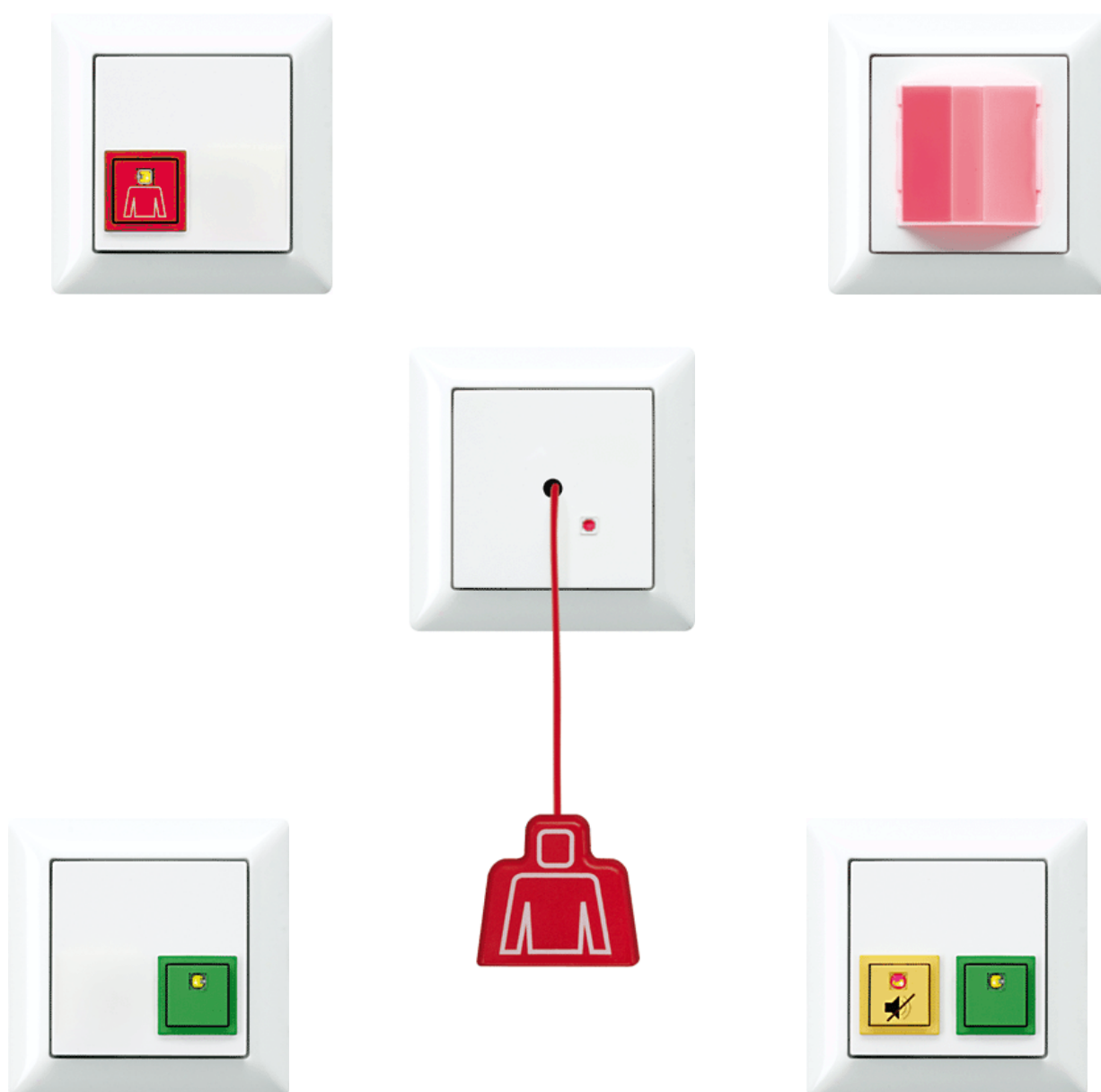


# Manual

# JUNG

**Emergency system set  
NRS .. 0834 ..**

**Emergency system set with UPS  
NRS .. 0834-2 ..**



## Short description

In accordance with DIN VDE 0834, the emergency system set is meant to be used in bathrooms for people with disabilities. The DIN VDE 0834 must be considered during installation and operation of the emergency system.

The set is comprised of:

- |                         |                   |
|-------------------------|-------------------|
| • Emergency signal      | NRS .. 0834 RM .. |
| • Pull cord push-button | NRS .. 0834 ZT .. |
| • Reset button          | NRS .. 0834 AT .. |
| • Power supply          | NRS .. 0834 NT .. |

Only included in the emergency system set with UPS (NRS .. 0834-2 ..):

- |              |                    |
|--------------|--------------------|
| • UPS module | NRS .. 0834 USV .. |
|--------------|--------------------|

Available separately:

- |  |                    |
|--|--------------------|
| • Service unit                                 | NRS .. 0834 DZE .. |
| • Call button                                  | NRS .. 0834 RT ..  |
| • Service terminal                             | NRS DZT 20 WW      |
| • Surface-mounted housing for service terminal | NRS DZT AP WW      |
| • Deflexion pulley set                         | NRS ULR 0834       |

Spare parts:

- |                              |              |
|------------------------------|--------------|
| • Accumulator for UPS module | NRS AKKU 130 |
| • Pull cord                  | ZS-34 KO5S   |

## Functional description

When an emergency call is triggered with the pull cord, the red light on the push-button confirms the successful call. The emergency call is indicated visually and acoustically by the emergency signal. In stand-by mode, a light makes it easier to find the pull cord push-button.

For other use cases, the visual and acoustic call can be transformed into a continuous signal, for example, using a jumper. It is also possible to disable the acoustic call. The unmonitored call can be sent from the emergency signal via a floating contact.

Pressing the reset button stops the emergency call.

If there is no superordinate emergency power supply, the UPS module must be used. The UPS module ensures that the emergency call is triggered even in the event of power failure. The accumulator included is easy to replace and available as a spare part. This emergency power supply is monitored, every disruption is reported.

In battery mode, a short acoustic signal is sent to the emergency signal every 12 seconds. Two short acoustic signals every 12 seconds are sent to the emergency signal to indicate an accumulator disturbance.

The optional service unit serves to monitor call forwarding. The service unit would not only indicate the emergency call acoustically but also visually. The call can be muted for 20 seconds or the additional call in the office disabled in absence.

The optional call button also includes lights to be found more easily and to confirm a successful emergency call.

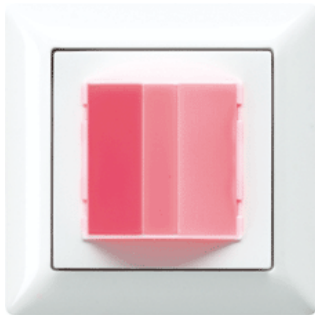
The service terminal shows unmonitored calls of several emergency calls centrally. It reports the emergency calls acoustically and visually as plain text. Just as for the service unit, call forwarding can be disabled on the service terminal in absence or interrupted for 20 seconds. Surface-mounted housing is optionally available.

In accordance with the Dutch standard NEN 1814, the length of the pull cord of the push-button can be extended to 20 m using the deflexion pulley set. In Germany, this extension is not obligatory but could be deemed necessary in certain cases. When the pull cord is installed using the deflexion pulley set, even a person lying in the floor can send an emergency call pulling at any point of the cord.

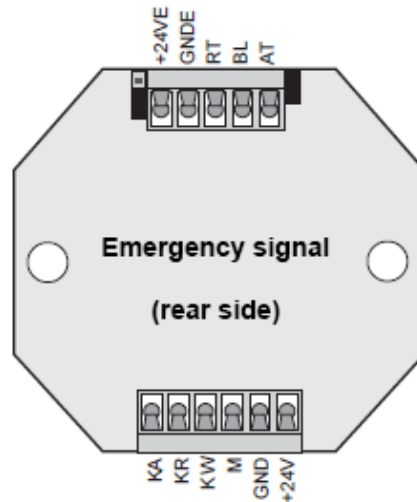
The emergency call system is ready for operation as soon as power is supplied. The UPS module is only able to fully switch to emergency power supply if it was connected to supply voltage for several hours. It could be up to 6 hours, depending on how long the accumulator has been charged.

## Device overview

### Emergency signal NRS .. 0834 RM ..



Visual and acoustic call identification, floating contact



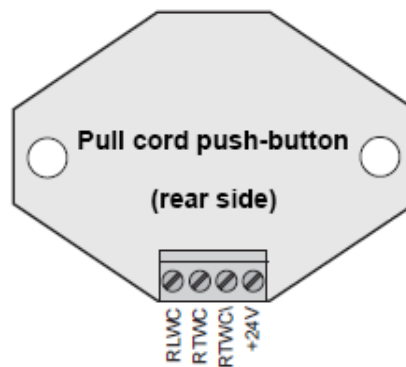
+24VE	+24V external
GNDE	GND external
RT	Call button
BL	Status light confirming successful call
AT	Reset button
KA	Make contact
KR	Break contact
KW	Contact input
M	Service unit terminal
GND	Power supply –
+24V	Power supply +

The external connections are intended for downstream components (pull cord push-buttons, reset buttons, ...).

### Pull cord push-button NRS .. 0834 ZT ..

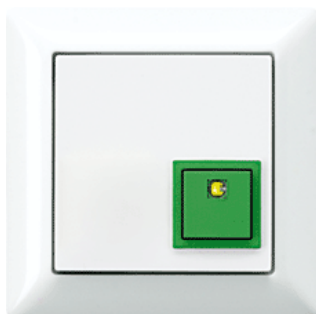


Pull cord push-button with status lights

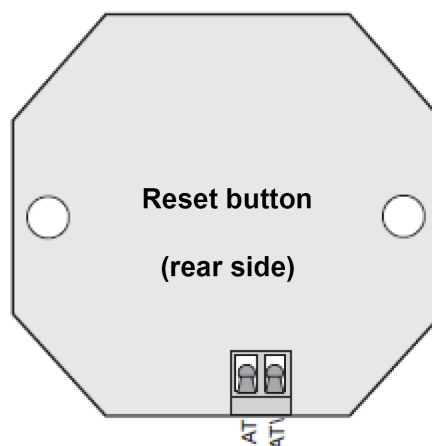


RLWC	Call light WC call
RTWC	Pull cord push button WC call (IN)
RTWC\	Pull cord push button WC call (OUT)
+24V	Power supply +

**Reset button**  
NRS .. 0834 AT ..



Reset button for call silencing



AT  
AT\

Reset button (IN)  
Reset button (OUT)

**Power supply**  
NRS .. 0834 NT ..



With blank cover for flush-mounted installation

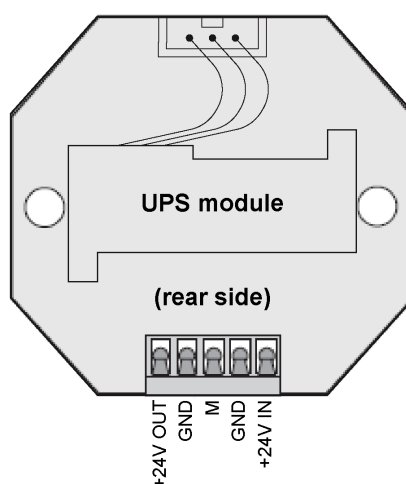
**Only included in the emergency system set with UPS:**

#### UPS module

NRS .. 0834 USV ..



Optional UPS module for independent emergency power supply. The plug connector is to be connected after commissioning. Full capacity is reached when charged for several hours. Operation and disturbance of the accumulator are monitored and reported.

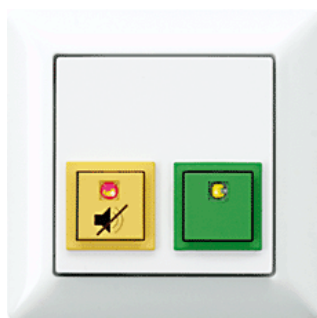


+24V OUT	+24V external + (OUT)
GND	GND external – (OUT)
M	Emergency signal terminal
GND	Power supply – (IN)
+24V IN	Power supply + (IN)

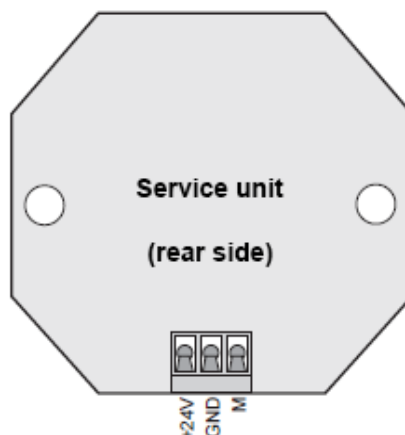
**The set does not include:**

#### Service unit

NRS .. 0834 DZE ..



Optional operation and control unit with acoustic and visual call, call suppression and call interruption 20 seconds.



+24V	Power supply +
GND	Power supply –
M	Connection (to emergency signal)

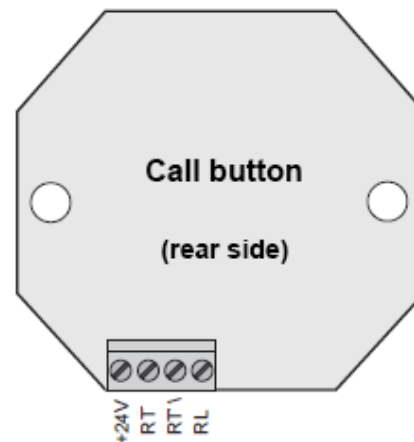
**The set does not include:**

### Call button

NRS .. 0834 RT ..



Optional call button with status lights



+24V

RT

RT\

RL

Power supply +

Pull cord push button WC call (IN)

Pull cord push button WC call (OUT)

Call light WC call

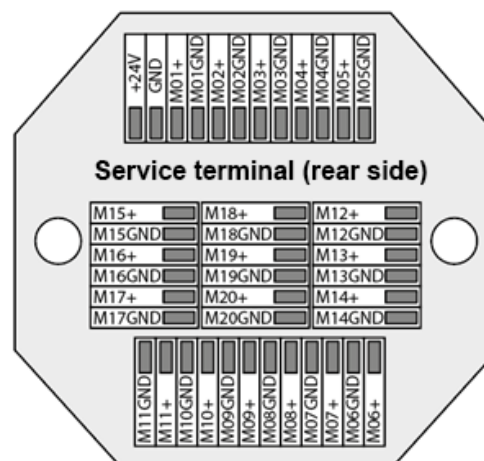
**The set does not include:**

### Service terminal

NRS DZT 20 WW



Optional module for unmonitored forwarding of up to 20 calls. Separate terminals for 20 circuits for closed and open circuit mode. An additional power supply NRS .. NT 834 .. is required. A computer and the operating system Windows is required for configuration.



+24V

GND

M .. +

M .. GND

Power supply +

Power supply -

Reporting circuit +

Reporting circuit -

**The set does not include:**

**Surface-mounted housing for service terminal**  
NRS DZT AP WW

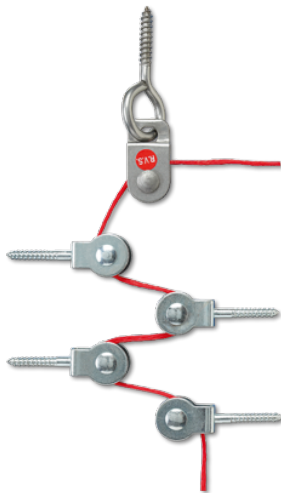
Measurements: 100 x 145 x 25 mm  
(W x H x D)



**The set does not include:**

**Deflexion pulley set**  
NRS ULR 0834

Deflexion pulley set, 20 meters of cord length.  
Even a person lying on the floor is able to reach the pull cord push-button using the deflexion pulley set. In accordance with the Dutch standard NEN 1814.





**Spare part:**

**Accumulator for UPS module**  
NRS AKKU 130

Replacement accumulator for the UPS module



**Spare part:**

**Pull cord**  
ZS-34 KO5S

Pull cord for pull inserts



## Application

- Emergency system for bathrooms for people with disabilities, in accordance with DIN VDE 0834
- Acoustic and visual reporting of the call
- Permanent or intermittent sound
- Call triggered via floating contact
- Pull cord push-button with status light
- Reset button
- Power supply
- Only included in the emergency system set with UPS (NRS .. 0834-2 ..):  
UPS module for bridging power failures
- Optional service unit with acoustic and visual call, call suppression and call interruption 20 seconds.
- Optional call button with status light

## Safety instructions

**!** Mounting, installation and commissioning is only permitted for electricians!

When working on systems supplied with AC 230 V, the safety requirements in accordance with DIN VDE 0100 must be observed.

When installing the emergency system the general safety regulations for telecommunication systems must be observed according to DIN VDE 0800:

- separate cable routing for mains voltage and extra-low voltage
- minimum distance of 10 cm when cables are routed jointly
- use of separators between high and extra low voltage power lines in cable duct used jointly
- use of standard telecom cables, e.g. J-Y (St) Y 2x2x0.6
- only when power is off may all connection cables may be connected or disconnected

**!** Measures for protection against lightning might be required.

## Battery safety instructions

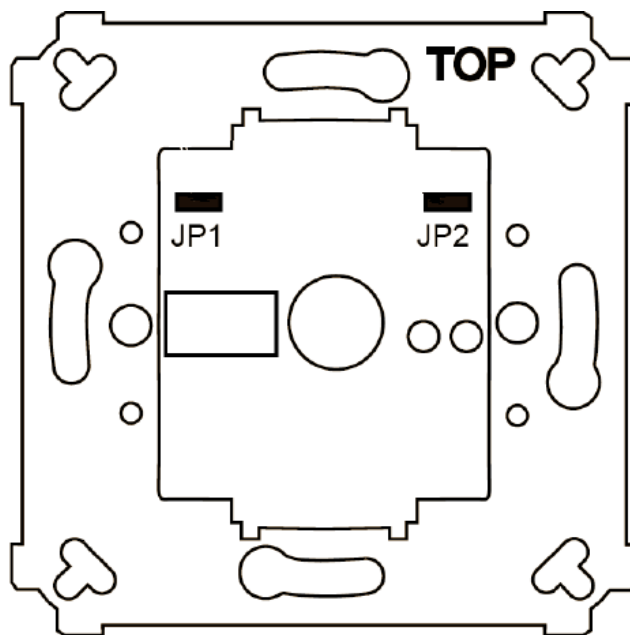


**WARNING!** Improper handling of batteries can result in explosion, fire or chemical burn due to leakage.

- Do not heat or throw batteries into fire.
- Do not reverse polarity, short-circuit or recharge batteries.
- Do not deform or disassemble batteries.
- Replace batteries only with an identical or equivalent type.
- Remove empty batteries immediately and dispose of in an environmentally friendly manner.

## Settings

### *Settings on the emergency signal*



#### **Jumper 1 (JP1)**

closed = activated buzzer of the emergency signal

open = deactivated buzzer  
(factory settings)

#### **Jumper 2 (JP2)**

closed = signal light and buzzer (also service unit) with permanent sound  
(factory settings)

open = signal light and buzzer intermittent  
(also service unit)

## Installation

### **Details**

- in flush-mounted box
- Installation note UPS module: installation into deep flush box

### **Installation height in accordance with DIN VDE 0834**

(call systems in hospitals, nursing homes and similar facilities)

- |                                   |  |
|-----------------------------------|--|
| • Pull cord push-button           | min. installation height: at least 20 cm above the shower head |
| • Operating devices               | 0.7 to 1.5 m above the floor                                   |
| • Operating devices with text     | 1.5 to 1.7 m above the floor                                   |
| • Devices with installation units | 1.6 to 1.8 m above the floor                                   |
| • Signal lights and text displays | 1.5 to 2.2 m above the floor                                   |

DIN 18024-2 “Accessibility” also prescribes to install operational elements for wheelchair users at a height of 0.85 m.

Installation and connection of calling systems is only permitted for trained electricians.

### **Installation**

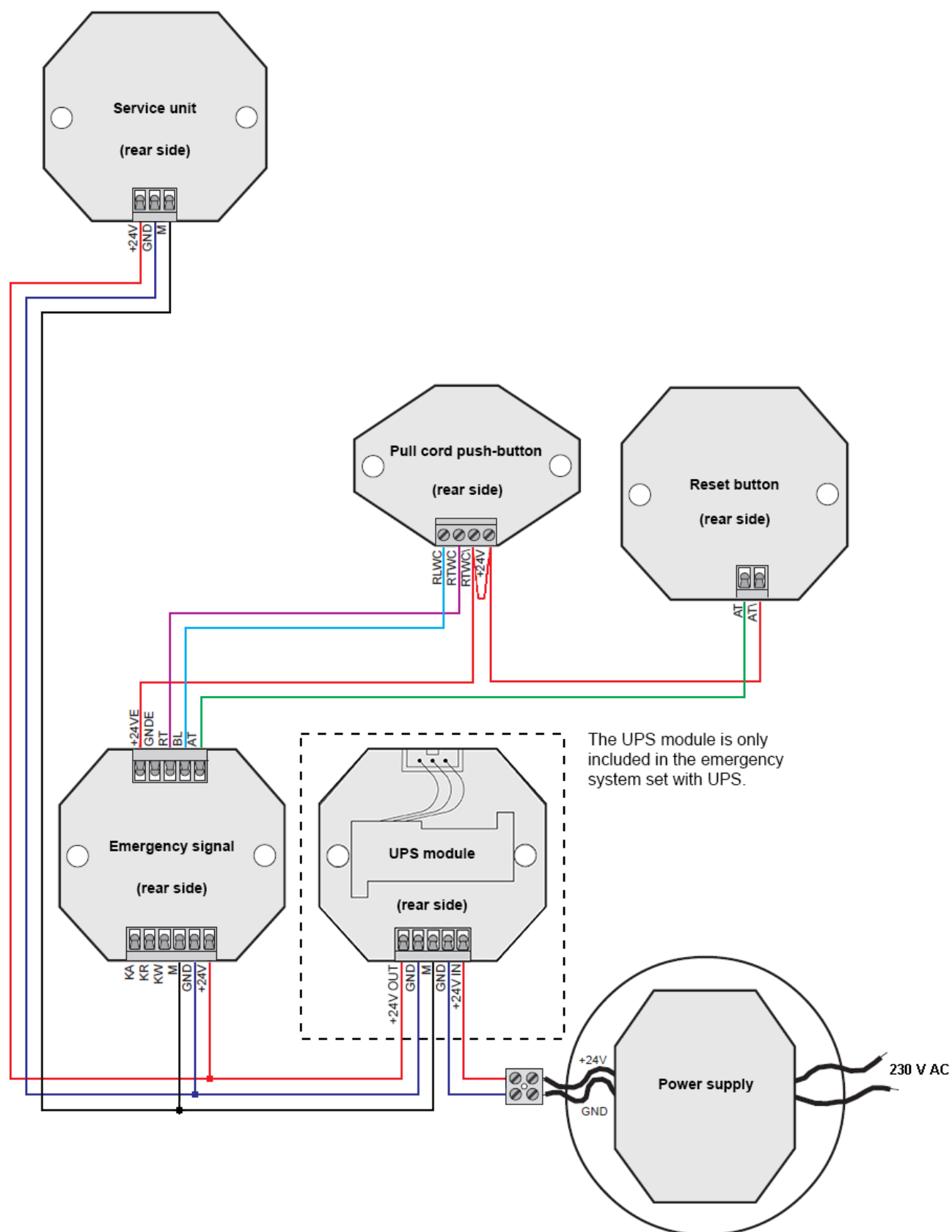
Installation above the supporting frame without claws

According to DIN VDE 0834 wearing components, i.e. batteries and accumulators, must be replaced once a year.

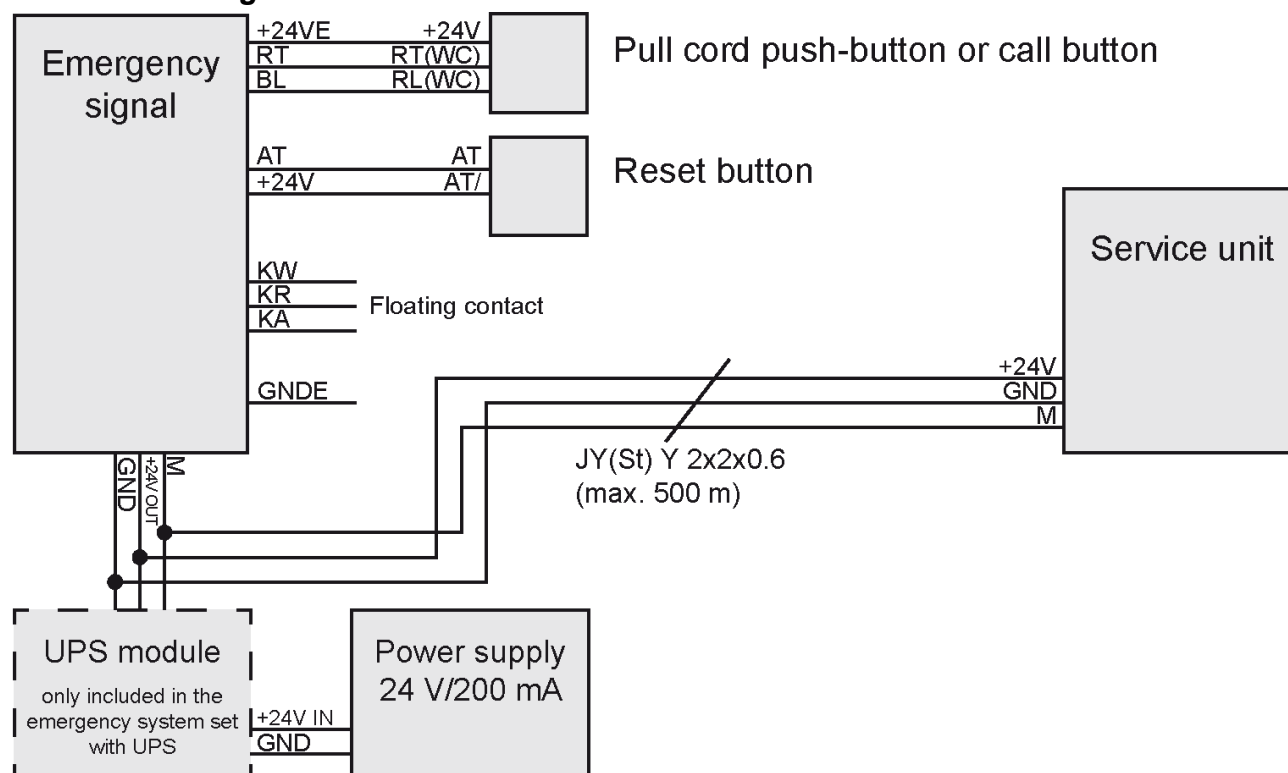
Disconnect plug connector before changing the accumulator or decommissioning the emergency system. This will prevent the accumulator from discharging and short-circuits during the decommissioning of the accumulator.

## Installation

### Wiring of standard system



## Connection diagram



## Technical data

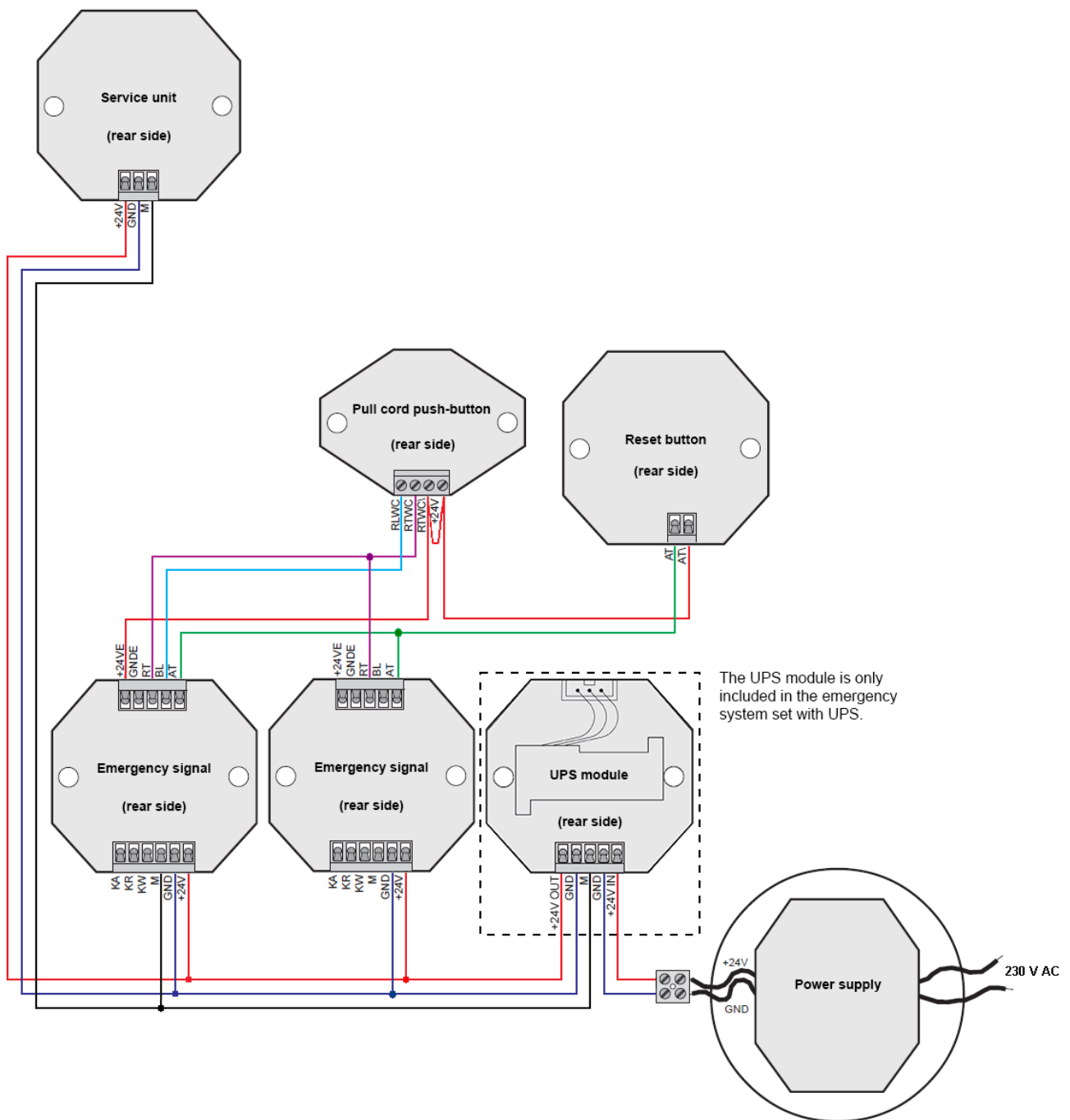
### General

Input voltage:	AC 230 V
Ambient temperature:	+5 ... +40 °C
Wire:	telecom cable J-Y(St) Y 2x2x0.6
Distance emergency signal and service unit:	max. 500 m
Connection diameter:	single wire, 0.3 ... 1.4 mm
Power supply:	24 V / 250 mA, installation in flush-mounted box 58 mm Ø, cover
Emergency signal:	installation in flush-mounted box 58 mm Ø, cover floating relay contact, 2-way, 24 V / 2 A
Pull cord push-button, reset button, service unit, call button, UPS module (only included in emergency system set with UPS: NRS .. 0834-2 ..):	installation in flush-mounted box 58 mm Ø, cover

### UPS module

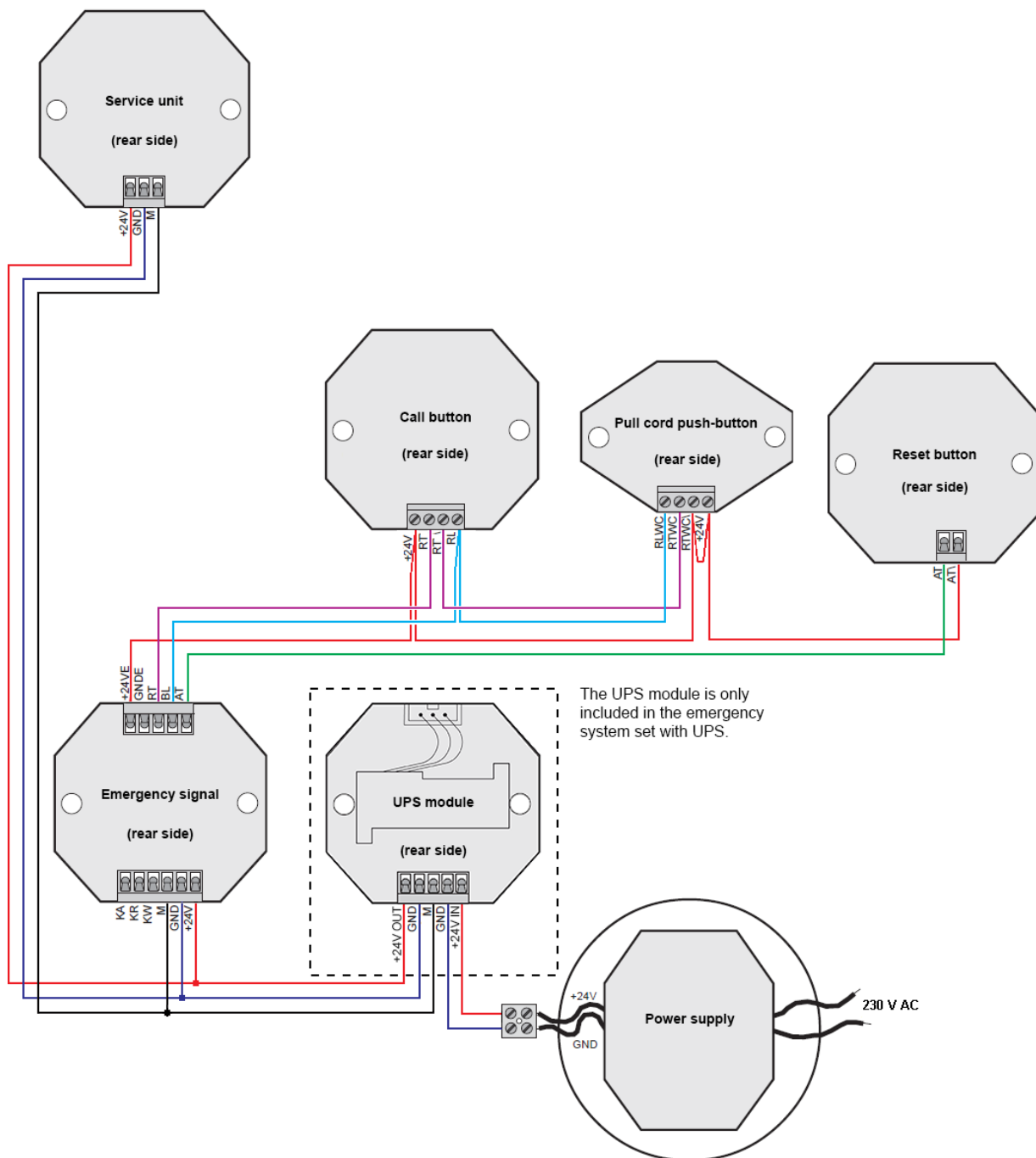
Maximum load, mains-operated:	250 mA
Battery-operated	
Output voltage:	DC 22.8 V, ± 10 %
Rated load for 1 hour:	130 mA
Maximum load for 15 minutes:	300 mA

## Example wiring plan: Emergency system set with additional emergency signal



RT, AT, 24 V and GND are connected in parallel. Typical use case for bathrooms which are accessible from the corridor but with some distance to the main entrance. One emergency signal reports from above the bathroom door, another from the main corridor.

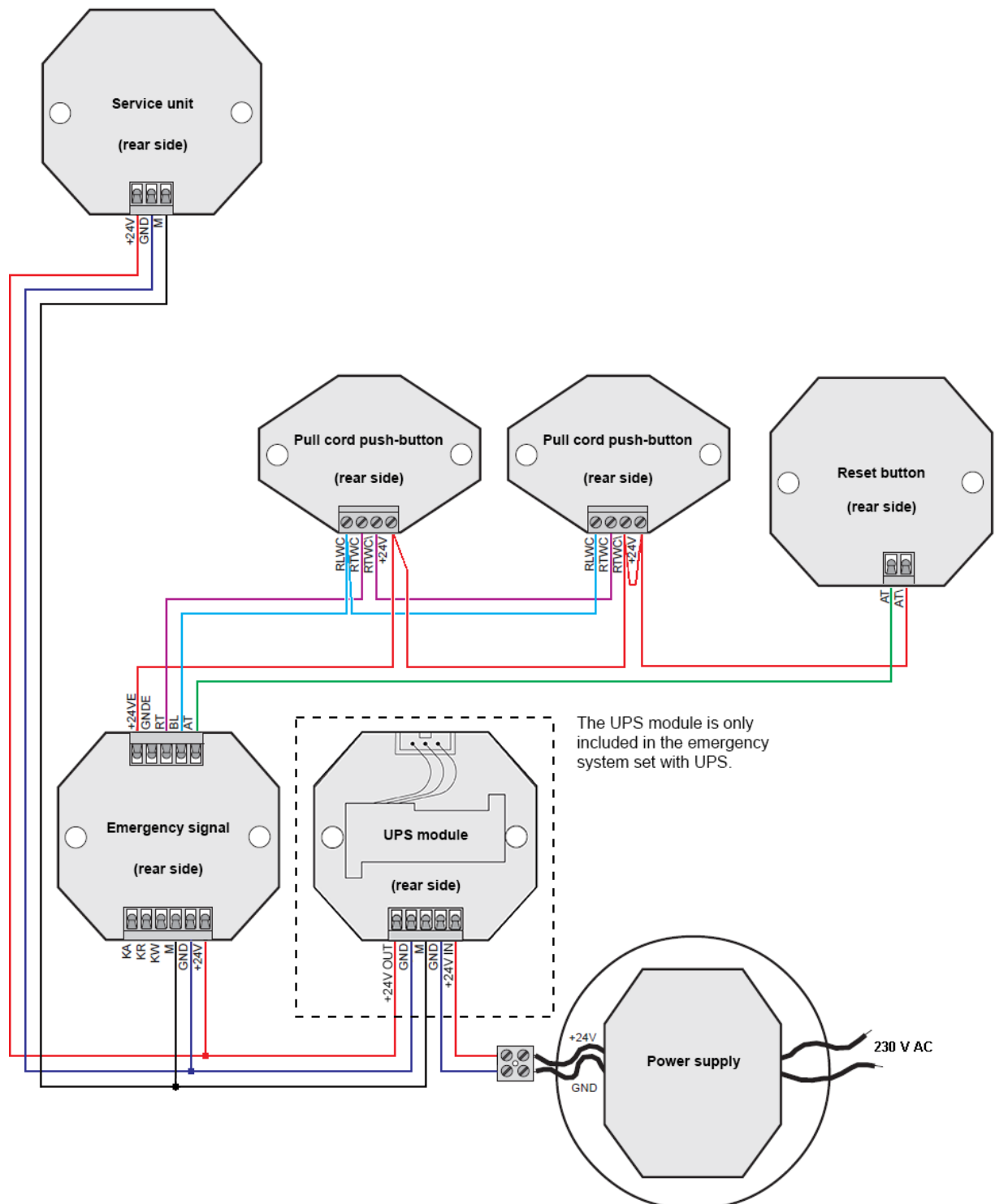
## Example wiring plan: Emergency system set with additional call button



The additional call button is monitored. Here, the built-in status light gives feedback. For the function of the status light to be in accordance with the norms, there must not be more than 3 call or pull cord push-button.

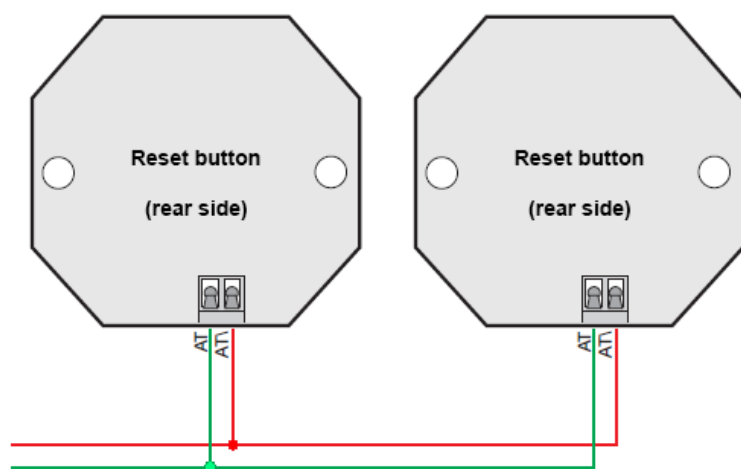


**Example wiring plan:  
Emergency system set with additional pull cord push-button**



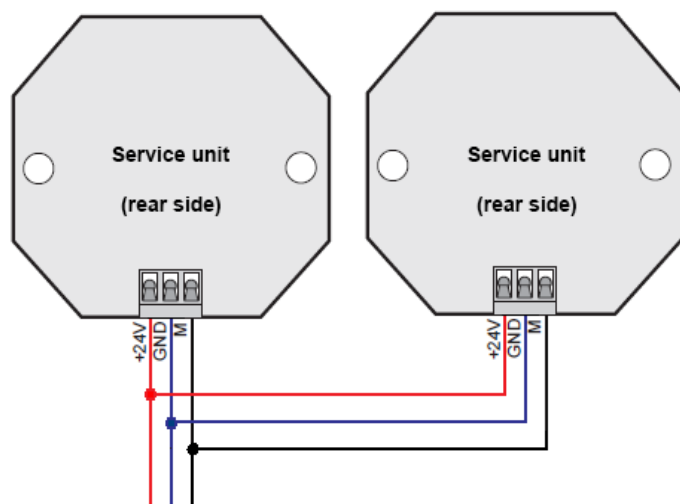
An additional pull cord push-buttons are available for the emergency system set. For the function of the status light to be in accordance with the norms, there must not be more than 3 call or pull cord push-button.

**Example wiring plan:  
Emergency system set with additional reset button**



Reset button are connected in parallel.

**Example wiring plan:  
Emergency system set with additional service unit**



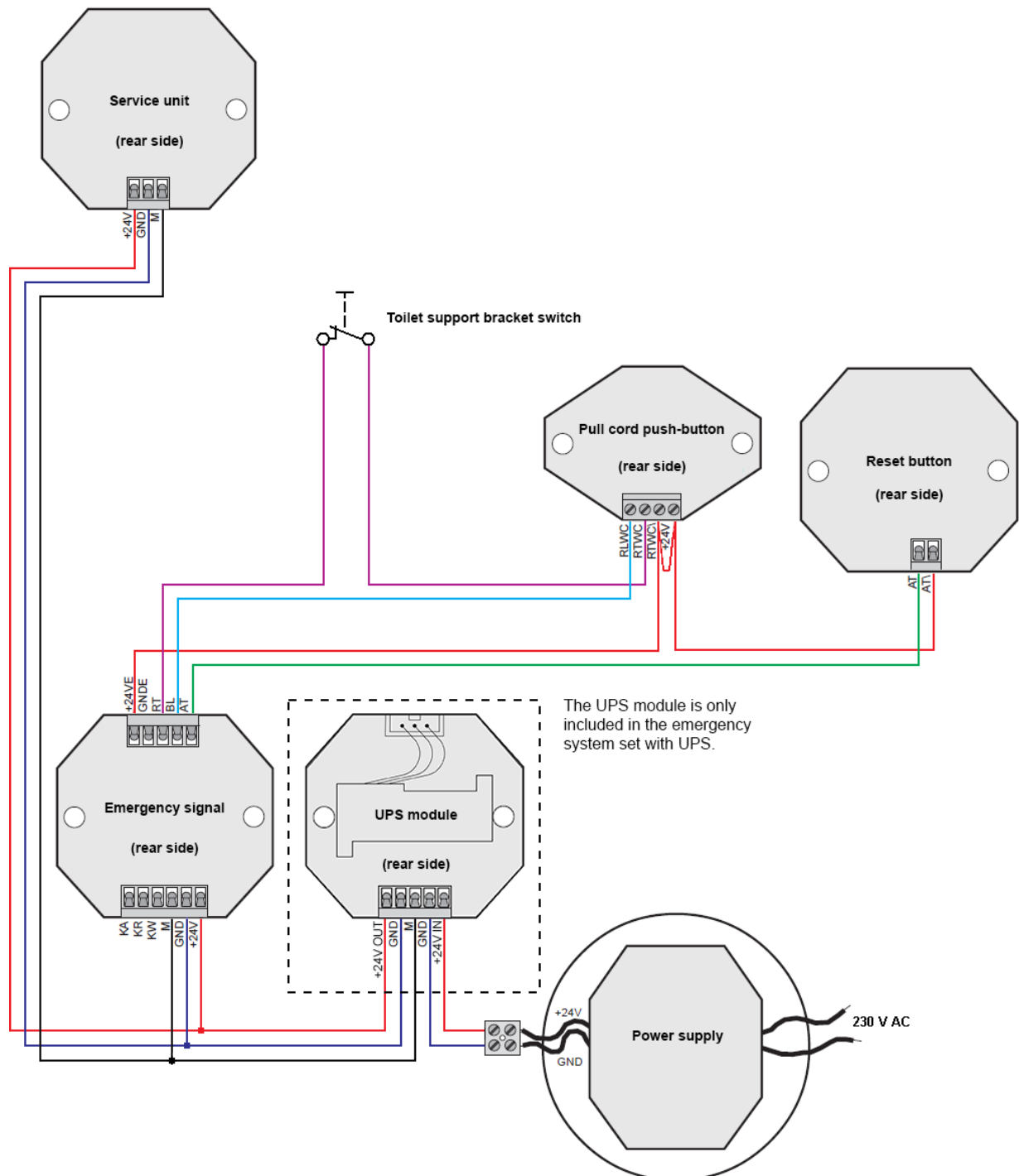
Up to 2 service units can be connected in parallel.

## Example wiring plan: Call triggered by additional push-buttons

Triggering the call additional using another push-button (e.g. in the toilet support bracket) is possible.

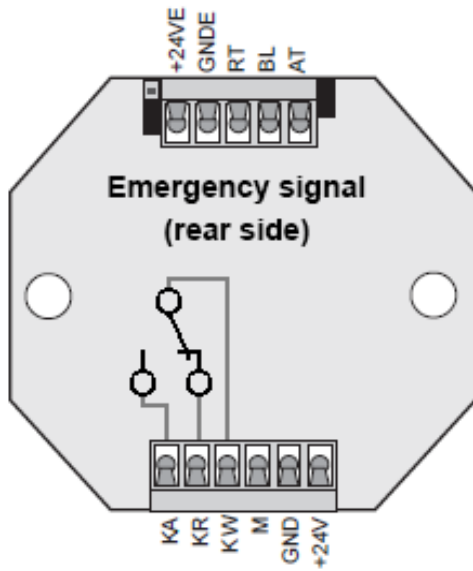
For this, RT must be connected via an NC contact.

The call is triggered at the interruption.

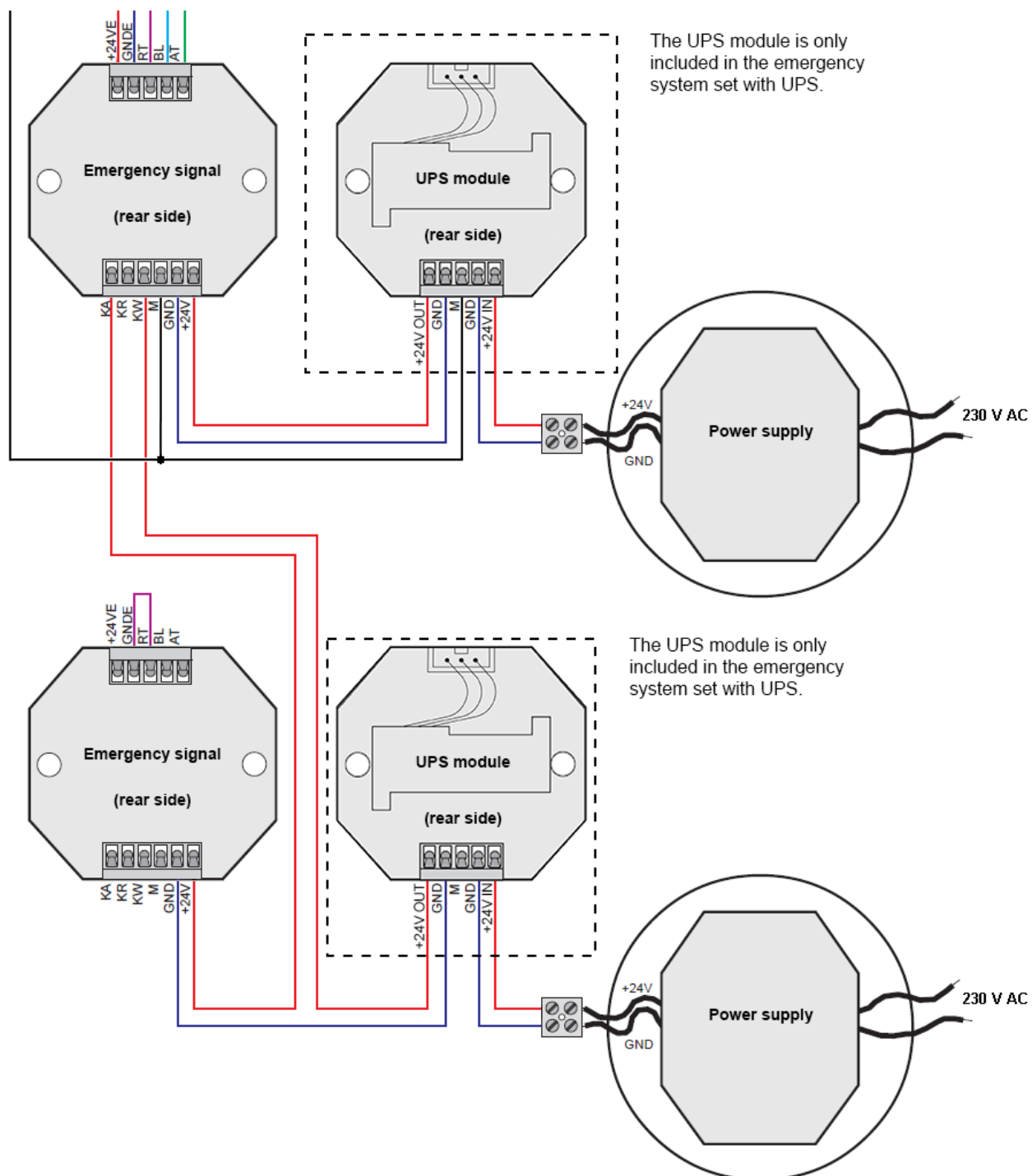


## Example wiring plan: Unmonitored call

The emergency signals have a floating relay contact (DC 24 V, 1 A) which is suited for unmonitored calls.



## Example wiring plan: Emergency signal as light signal



The emergency signal can be used as a room light signal if GNDE and RT are connected. As long as power is supplied, a call will be issued. Not suitable for monitored calls. It is recommended, in certain cases even required, to use an additional power supply and an additional UPS module (only included in the emergency system set with UPS: NRS .. 0834-2 ..).

## Current consumption and voltage drop

### Current consumption

The power supply of the emergency system can provide 250 mA.

When accumulator-operated via the UPS module (only included in the emergency system set with UPS: NRS .. 0834-2 ..) the following data applies:

Maximum load accumulator-operated: 300 mA / 0.25 h

Rated load accumulator-operated: 130 mA / 1 h

Current consumption of the individual components:

Emergency signal	stand-by 8 mA, call mode 65 mA, (without buzzer 48 mA)
Service unit	stand-by 3 mA, call mode 57 mA
Call and pull cord push-button	stand-by 3 mA, call mode 19 mA

#### Example 1:

An emergency system set should include a second emergency signal and a service unit.

Emergency signal	1 x	65 mA
Emergency signal	1 x	65 mA
Pull cord push-button	1 x	19 mA
Service unit	1 x	<u>57 mA</u>
		206 mA

Operation is permissible.

#### Example 2:

An emergency system set should include a second emergency signal and two service units.

Emergency signal	1 x	65 mA
Emergency signal	1 x	65 mA
Pull cord push-button	1 x	19 mA
Service unit	1 x	57 mA
Service unit	1 x	<u>57 mA</u>
		263 mA

Operation is not permitted. The second emergency signal must be fed from a separate power supply.

### Voltage drop

Observe the voltage drop of the power cables. It must not be higher than 10 %.

This equals 2.4 V.

This results in a maximum loop resistance of the power supply of:

Emergency signal	36.9 ohm
Service unit	126.3 ohm
Call and pull cord push-button	41.1 ohm

Cable length a-b / M-P in m	Wire diameter	
	0.6 mm	0.8 mm
	Loop resistance in $\Omega$	
10	1.22	0.69
20	2.45	1.38
30	3.67	2.07
40	4.90	2.76
50	6.12	3.44
100	12.24	6.89
150	18.37	10.33
200	24.49	13.09
250	30.61	17.22
300	36.73	20.66
350	42.86	24.11
400	48.98	27.55
450	55.10	31.00
500	61.22	34.44

Table 1: Loop resistance

For the combination of several device via the power cable, the sum of the currently must be observed. In certain cases, wires must be connected in parallel or larger diameters must be used.

#### Example 1:

A service unit at a distance of 150 m is to be connected with a J-Y(St)Y 4x2x0.6 wire.

According to table 1, this results in a loop resistance of 18.37 ohm and is lower than the maximum loop resistance of 126.3 ohm.

Operation is permissible.

#### Example 2:

A service unit at a distance of 150 m is to be connected with a J-Y(St)Y 4x2x0.8 wire.

Emergency signal	1 x	65 mA
Service unit	1 x	<u>57 mA</u>
		122 mA

According to Ohm's law, the following is true for the maximum loop resistance:

$$I = V / R = 2.4 \text{ V} / 122 \text{ mA} = 19.67 \text{ ohm}$$

According to table 1, this results in a loop resistance of 10.33 ohm and is lower than the maximum loop resistance of 19.67 ohm.

Operation is permissible.

## Disposal of batteries



Remove empty batteries immediately and dispose of in an environmentally friendly manner. Do not throw batteries into household waste. Consult your local authorities about environmentally friendly disposal. According to statutory provisions, the end consumer is obligated to return used batteries.

## Warranty

We offer a warranty within the scope of the legal requirements.

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