

Intrinsically Safe Telephone (Ex ia II)

Telephone with barrier for use in areas with explosive atmospheres

- ▶ Receiver amplifier
- ▶ 10 direct-dialling keys
- ▶ Wall-mounted telephone and barrier, protection degree IP 66



Application

The telephone system consists of an intrinsically safe desk or wall-mounted telephone and a stand-alone or rack-mountable barrier (see fig. 1).

The telephone can be connected to an analogue public telephone network or a private branch exchange. The desk or wall-mounted telephone is designed for use in areas with group II explosive atmospheres. Every desk or wall-mounted telephone is connected to a barrier with a interchangeable two-wire cable (max. cable length approx. 500 m). The desk or wall-mounted telephone is supplied with power by the corresponding barrier via this connection cable. This power supply is intrinsically safe and an additional power supply to the telephone is not necessary. The barrier separates the non intrinsically safe part of the circuit from the intrinsically safe part. If the stand-alone

or rack-mountable barrier is connected within a private branch exchange, the DC supply voltage of 45–63 V of the branch exchange can also be used for the barrier. If the single-line or rack-mountable barrier is installed outside the branch exchange and there is no DC supply voltage available for the barrier, the barrier can be powered by the 230 V mains. If both supply voltages are connected at the same time, the barrier is supplied solely from the 230 V mains, thereby sparing the DC source. If, however, the mains power supply fails, the device is automatically switched over to DC power supply.

The stand-alone and rack-mountable barriers are equipped with an additional contact (marking: W, W 1), with which an external device (e.g. a secondary ringer) can be operated. If several desk or wall-mounted telephones are used

Telephone in an analytical laboratory

The barrier separates the non intrinsically safe part of the circuit from the intrinsically safe part.



Technical specifications

Desktop/Wall-mounted telephone

Operating mode	Adjustable PD 1.5:1 or 2:1 DTMF (according to CCITT directive)
Recall key	Adjustable earth key, La to earth for PD and DTMF or flash key for DTMF.
Power supply	Intrinsically safe via the barrier
Line length	
Barrier/Telephone	Approx. 500 m with 2 x 0.8 mm dia. (0.5 mm ²) wire See operating instructions for exact specification
Ambient temperature	-20° C to +40° C
Certification	BVS 97.D.2065, BVS 98.D.2020X
BAPT approval no.	D 131781 J
Expl. protection class	EEx ia IIC T6

Desktop telephone only

Volume	4 levels, max. 70 dB(A), 1m (Regarding volume specifications, please see the chapter "Technical Informations".)
Protection degree	IP 30

Wall-mounted telephone only

Volume	Approx. 90 dB(A), 1m (Regarding volume specifications, please see the chapter "Technical Informations".)
Protection degree	IP 66
Potential-free contact for connection of additional external signalling devices	Intrinsically safe
Weight	Approx. 5.3 kg

Barrier

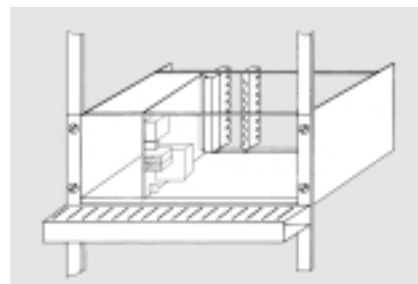
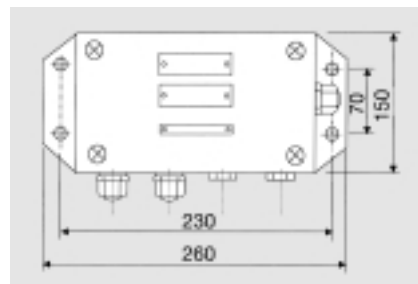
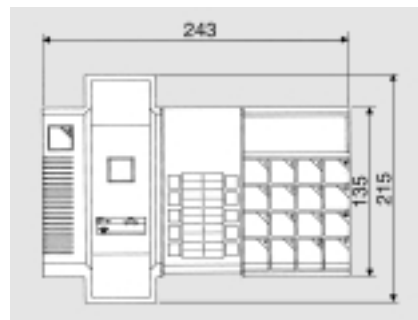
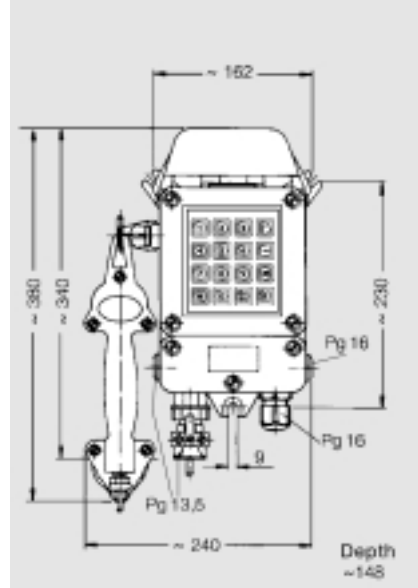
Analogue telephone line connection

Supply voltage	24 VDC–66 VDC
Loop current	19 mA–60 mA
Call voltage	32 VAC–75 VAC
Call frequency	15 Hz–63 Hz
Signal earth	La to earth
Accessory terminal	Available

Power supply

Line and/or emergency battery	230 VAC +/- 10% 50 Hz 60 VDC + 5% -25% (if the mains power supply fails, the device is automatically switched over to DC power supply so that the telephone remains in operation)
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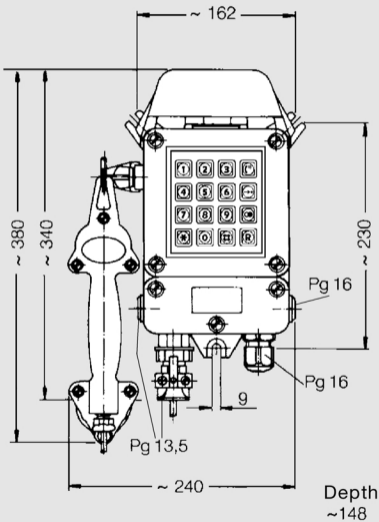


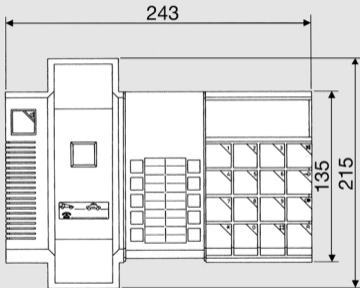
Order information

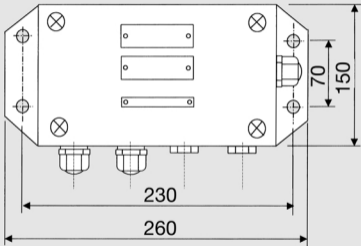
Type	Name	Version	Article no.
5240	DesktopTelephone		112 251 12
5241	Barrier	Single-line barrier	112 251 13
5241	Barrier	Rack-mountable barrier	112 251 14
5239	Wall-mounted telephone	Version without second earpiece	112 251 11
5239	Wall-mounted telephone	Version with second earpiece	112 251 16
5239	Wall-mounted telephone	Version with stabiliser bracket	112 251 15
5239	Wall-mounted telephone	Version with second earpiece and stabiliser bracket	112 251 17

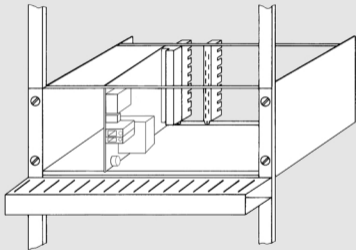
Accessories

Assembly rack 19" for max. 7 lines available on request	5241.9.0004
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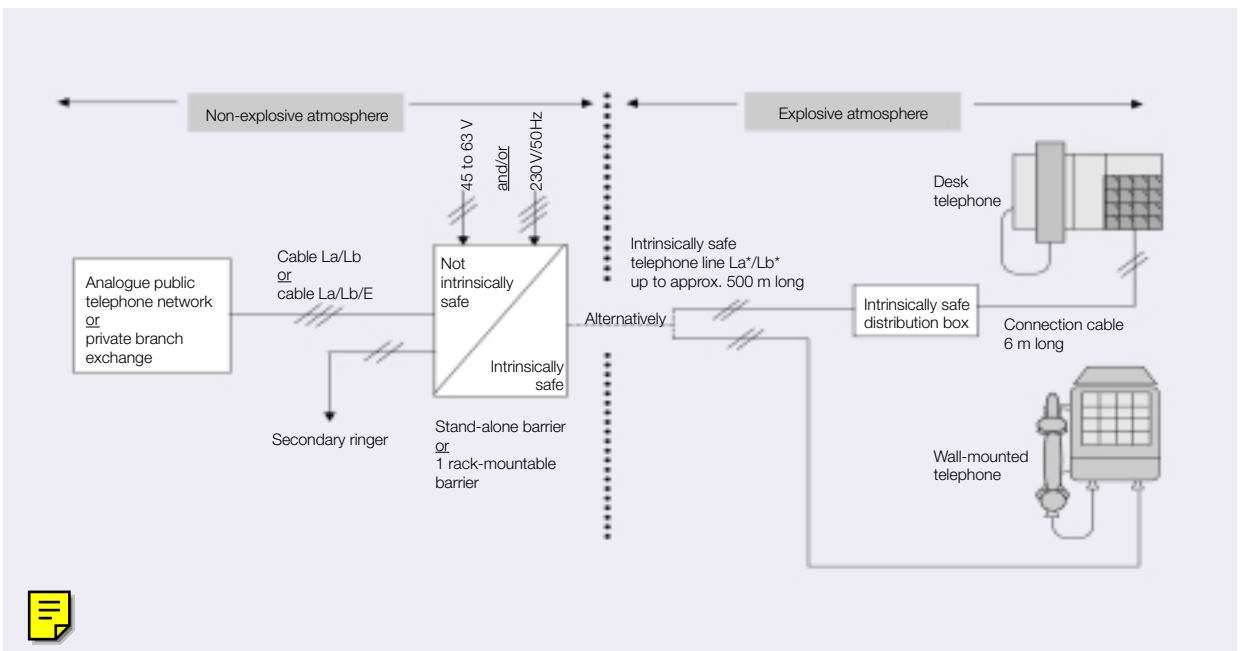


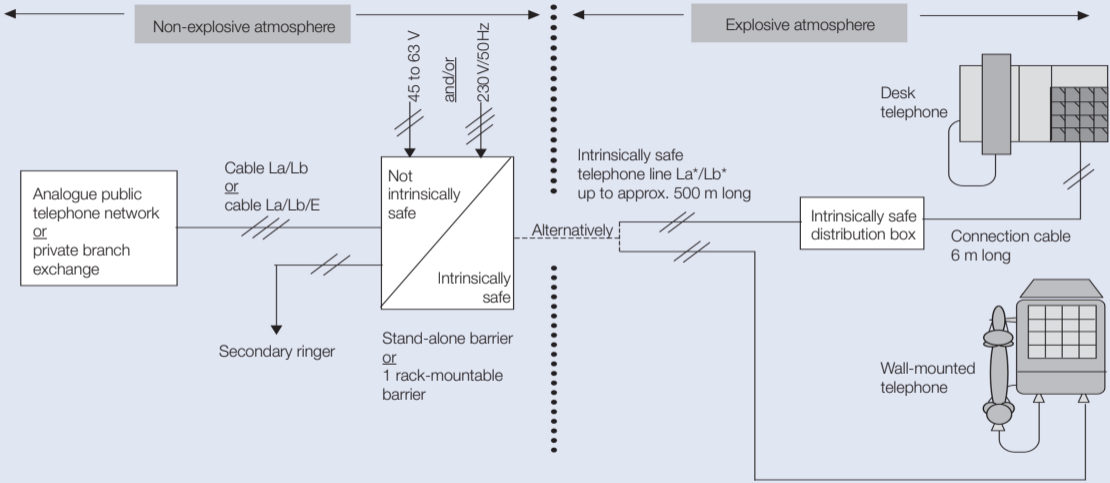




together, a rack-mountable barrier installed in a 19" assembly rack is recommended. The rack can be equipped with a maximum of seven rack-mountable barriers. The 19" rack must be installed in a cubicle with at least protection degree IP 20 and may only be set up outside the hazardous area.

Approx. 500 m





The new wall-mounted telephone with barrier for outdoor use in rough conditions in areas with explosive atmospheres

The same intelligent technology and the same universal possibilities – the missing direct-dialling keys of the desktop telephone are substituted here by the intelligent multifunction key – the same proverbial reliability as the desktop device – that is the EEx II wall-mounted telephone with barrier for outdoor use. Regardless of whether it is exposed to splash water, condensation as a result of high air humidity, extreme temperature fluctuations, ongoing frost or high

mechanical stress, the EEx II wall-mounted telephone always keeps a perfection connection. Coming with large, user-friendly keys for use with work gloves, it is highly resistant to dirt and grease.



Receiver amplifier



The desktop and wall-mounted telephones are equipped with a receiver amplifier supplied with power from the telephone network. The volume of the receiver can be increased by 6 dB or 12 dB at the press of a key.



Multifunction key

This key can be programmed for two different basic functions:

1. Direct-dialling

The direct-dialling function enables direct dialling of a pre-determined subscriber, e.g. company fire brigade or area control room. Depending on the technical equipment of the telephone switchboard, it can also be used to redirect incoming calls or activate an automatic recall.

2. Abbreviated dialling

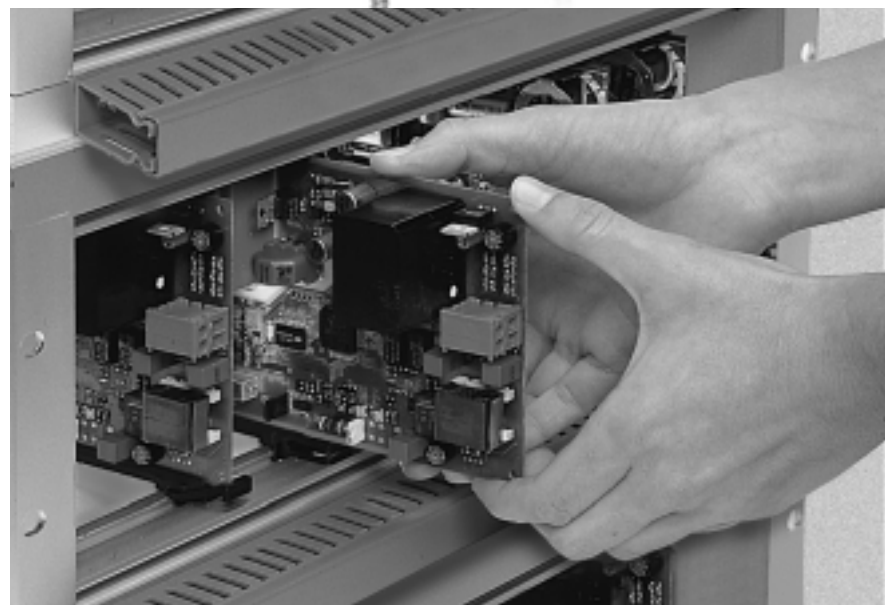
Alternatively to the function described above, the key can also be used to initiate abbreviated dialling. In this mode the user can use all 12 keys to save and call up telephone numbers of at most 23 digits. The system-specific features already mentioned under 1 can naturally also be used with the help of the abbreviated-dialling memory.

Second earpiece

A second earpiece is recommended for especially noisy work areas. By simultaneously using the handset and a second earpiece, loud extraneous noise can be reduced so much that good voice communication is possible. The second earpiece also allows a second person to listen to a conversation.

Handset cord

The handset cord is steel-reinforced and can withstand a tensile stress of 1600 N.



Rack-mountable barrier in 19" assembly rack for max. 7 lines.

