



# PLE-2CS Plena Two-zone Call Station



The Plena two-zone call station is a modern, high-quality call station with a stable metal base design, a flexible microphone stem and a unidirectional condenser microphone. It can make calls to selected zones in a public address system built with the PLE series two-zone mixer and mixer amplifiers. In addition to tabletop use, the Plena design allows neat flush-mounting in desktops.

## Functions

### Gain, speech filter and intelligibility

This call station features selectable gain, a selectable speech filter, and a limiter for improved intelligibility.

### Range

The call station has a balanced line level output, giving it a maximum range of 200 meters from the mixer, when using CAT-5 extension cables.

### Loop-through

With the loop-through RJ-45 connector, it is possible to daisy chain multiple call stations.

### Priority

The priority is automatic i.e. the call station nearest the mixer has priority and can override a call station further from the mixer. When a call is being made by a higher priority call station, a yellow light will display on the lower priority call stations.

- ▶ **Modern two-zone call station for the PLE series**
- ▶ **Selectable gain**
- ▶ **Speech filter and limiter**
- ▶ **Output level control**
- ▶ **Loop-through option for up to 8 call stations**
- ▶ **LED indications for zone selection, busy, and power on**

### Dip switches and status

DIP switches at the base of the call station select different microphone gain levels, chimes, and the speech filter. A service accessible rotary control provides microphone level attenuation. LEDs on the call station show which zones have been selected. An additional LED give visible feedback on the active state of the microphone and the system:

- Green flashing means standby (chime is sounding)
- Green indicates microphone active
- Amber indicates a higher priority call

### Controls and indicators

- 2 x status LEDs
- PTT key
- 2 x zone selection keys
- 2 x zone selection LEDs
- DIP switches
- Rotary volume control

### Interconnections

- 2 x RJ45 jacks

## Certifications and Approvals

Region	Certification
Europe	CE

Safety	acc. to EN 60065
Immunity	acc. to EN 55103-2
Emission	acc. to EN 55103-1

### Parts Included

Quantity	Components
1	PLE-2CS Plena two-zone call station
1	Cable terminated with a lockable CAT-5 connector

### Technical Specifications

#### Electrical

Voltage range	24 VDC supplied by PLE mixer amplifier or mixer
Current consumption	<30 mA

#### Performance

Nominal sensitivity	85 dB SPL (gain preset 0 dB)
Nominal output level	700 mV
Input sound level (max)	110 dB SPL
Gain preset	-15 / 0 / +6 dB
Limiter threshold	2 V
Compression ratio limiter	1:20
Distortion	<0.6% (maximum input)
Input noise level (equiv.)	25 dB SPLA
Frequency response	100 Hz to 16 kHz
Speech filter	-3 dB at 315 Hz, high-pass, 6 dB/oct
Output impedance	200 ohm

#### Selections

Chimes	6
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#### Mechanical

Base dimensions (H x W x D) without microphone	40 x 100 x 235 mm (1.57 x 3.97 x 9.25 in)
Stem length with microphone	390 mm (15.35 in)
Cable length	5 m (16.4 ft)
Weight	Approx. 1 kg (2.2 lb)
Mounting	Standalone
Color	Charcoal with silver

#### Environmental

Operating temperature	-10 °C to +45 °C (14 °F to +113 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Relative humidity	<95%

### Ordering Information

<b>PLE-2CS Plena Two-zone Call Station</b>	<b>PLE-2CS</b>
metal base design, a flexible microphone stem with a unidirectional condenser microphone and zone selection	

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**Represented by**

# Plena Two-zone Call Station



Security Systems

en | Installation and User Instructions  
PLE-2CS

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## Important safeguards

Before installing or operating this product, always read the Safety Instructions, which are available as a separate document (9922 141 7014x). These instructions are supplied together with all equipment that can be connected to the mains.

Thank you for choosing a Bosch Security Systems product!

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# 1 Introduction

## 1.1 Purpose

The purpose of these Installation and User Instructions is to provide information that is required to install, configure and operate a Plena Two-zone Call Station.

## 1.2 Digital document

These Installation and User Instructions are also available as a digital document in the Adobe Portable Document Format (PDF). All references to pages, figures, tables, etc. in this digital document contain hyperlinks to the referenced location.

## 1.3 Intended audience

These Installation and User Instructions are intended for installers and users of a Plena Two-zone Call Station.

## 1.4 Related documentation

Safety Instructions (9922 141 \*\*\*\*).

## 1.5 Alerts

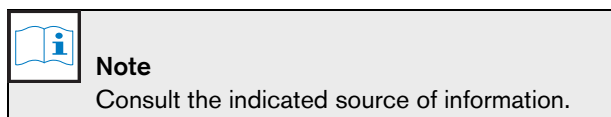
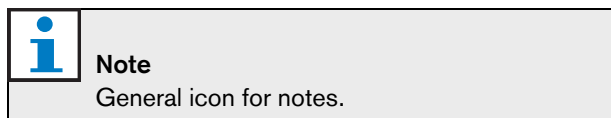
Four types of alerts are used in this manual. The alert type is closely related to the effect that may be caused if it is not observed. These alerts - from least severe effect to most severe effect - are:

- **Note**  
Alert containing additional information. Usually, not observing a note alert does not result in damage to the equipment or personal injuries.
- **Caution**  
The equipment can be damaged if the alert is not observed.
- **Warning**  
Persons can be (severely) injured, or the equipment can be seriously damaged, if the alert is not observed.
- **Danger**  
Not observing the alert can result in death.

## 1.6 Icons

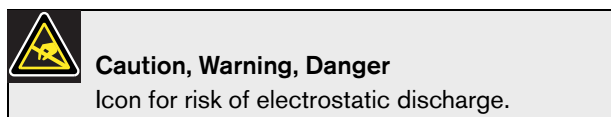
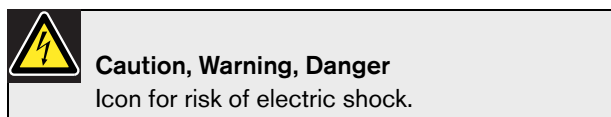
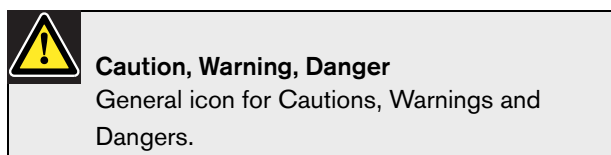
### 1.6.1 Note icons

The icons used in combination with Notes provide extra information about the Note. See the following examples:



### 1.6.2 Caution, Warning, and Danger icons

The icons used in combination with Caution, Warnings, and Dangers indicate the type of hazard present. See the following examples:



## 1.7 Conversion tables

In this manual, SI units are used to express lengths, masses, temperatures etc. These can be converted to non-metric units using the following information.

*table 1.1: Conversion of units of length*

1 in =	25.4 mm	1 mm =	0.03937 in
1 in =	2.54 cm	1 cm =	0.3937 in
1 ft =	0.3048 m	1 m =	3.281 ft
1 mi =	1.609 km	1 km =	0.622 mi

*table 1.2: Conversion of units of mass*

1 lb =	0.4536 kg	1 kg =	2,2046 lb
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*table 1.3: Conversion of units of pressure*

1 psi =	68.95 hPa	1 hPa =	0.0145 psi
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### Note

1 hPa = 1 mbar.

*table 1.4: Conversion of units of temperature*

$^{\circ}F = \frac{9}{5} \cdot ^{\circ}C + 32$	$^{\circ}C = \frac{5}{9} \cdot (^{\circ}F - 32)$
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## 2 Description

### 2.1 The Plena product range

The Plena Two-zone Call Station is part of the Plena product range. Plena provides public address solutions for places where people gather to work, worship, trade, or relax. It is a family of system elements that are combined to create public address systems tailored for virtually any application

The Plena product range includes:

- mixers
- mixer amplifiers
- preamplifiers
- power amplifiers
- a music source unit
- a digital message manager
- a feedback suppressor
- call stations
- an All-in-One system
- a voice alarm system
- a timer
- a charger
- a loop amplifier

The various elements are designed to complement each other thanks to matched acoustical, electrical and mechanical specifications.

### 2.2 Contents of box

The packaging box contains the following:

- PLE-2CS Plena Two-zone Call Station
- Cable terminated with a lockable Cat-5 connector

### 2.3 The Plena Two-zone Call Station

The Plena Two-zone Call Station is a modern, high-quality call station with a stable metal base design, a flexible microphone stem and a unidirectional condenser microphone. It can make calls to selected zones (zone one or two) in a public address system built with the PLE-series two-zone mixer and mixer amplifiers.

In addition to tabletop use, the Plena design allows neat flush-mounting in desktops.

The Plena Two-zone Call Station features:

- a selectable microphone gain level, a selectable speech filter, and a limiter for improved intelligibility
- a balanced line level output. See section 2.3.1.
- two loop-through RJ-45 sockets. See section 2.3.2.
- DIP switches and status LEDs. See section 2.3.3.
- a push-to-talk (PTT) button. See section 2.3.4.

For a detailed description of all controls, connections and indicators, see section 2.4.

#### 2.3.1 Balanced line level output

The Plena Two-zone Call Station has a balanced line level output, giving it a maximum range of 200 m from the controller when using Cat-5 Ethernet cables.

#### 2.3.2 Loop-through RJ-45 sockets

With the loop-through RJ-45 sockets, it is possible to daisy chain up to six call stations. The priority is automatic; the call station nearest to the mixer has priority and can override the call station further away from the mixer.

#### 2.3.3 DIP switches and status LEDs

With the DIP switches at the base of the call station you can select different microphone gain levels, seven different chimes (any .wav file), define the speech filter and the momentary or latching speaking functions. Two LEDs on top of the call station show which zones have been selected. One additional LED gives visible feedback on the active state of the microphone and the system:

- green flashing: microphone is standby (chime is sounding)
- green continuous: microphone is active
- off: a call is being made by a higher priority call station

#### 2.3.4 PTT button

To the PTT button, a pre- and post chime can be assigned that is played at the start or at the end of the call. To this end, the call station is equipped with seven built-in chimes.

## 2.4 Controls, connectors and indicators

### 2.4.1 Top side

See figure 2.1 for an overview of the controls and indicators on the top side of the call station:

- 1 **Zone selection buttons** - Two buttons to select the zones to which the business call is distributed. Each button has a green LED, which indicates the zone to which the business call is distributed.
- 2 **Push-to-talk (PTT) button** - A push-to-talk (PTT) button to start the business call.
- 3 **Status indicator** - A LEDs that indicates the status of the call station. See section 2.3.3.

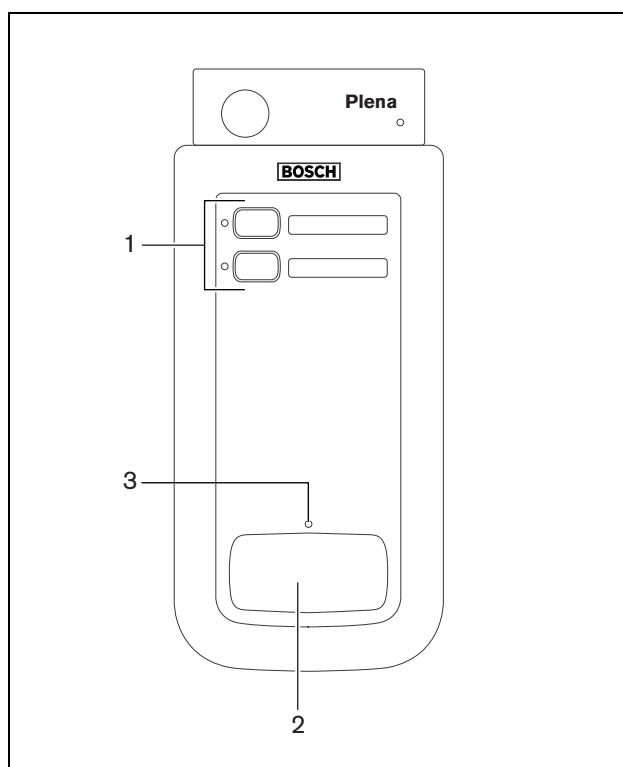


figure 2.1: Top view

### 2.4.2 Bottom side

See figure 2.2 for an overview of the controls and indicators at the bottom of the call station:

- 1 **Configuration settings** - A set of DIP switches to configure the call station (by setting the microphone gain level, the chime and the speech filter). See section 4.2.
- 2 **System sockets** - Two redundant RJ-45 sockets to connect the call station to the PLE-series two-zone mixer or mixer amplifiers using Cat-5 Ethernet cables. When the system requires more than 2 call stations, the system sockets can be used to make loop-throughs. See section 4.1.
- 3 **Rotary volume control** - A rotary volume control (potentiometer) to set the output volume of the call station. See chapter 5.3.

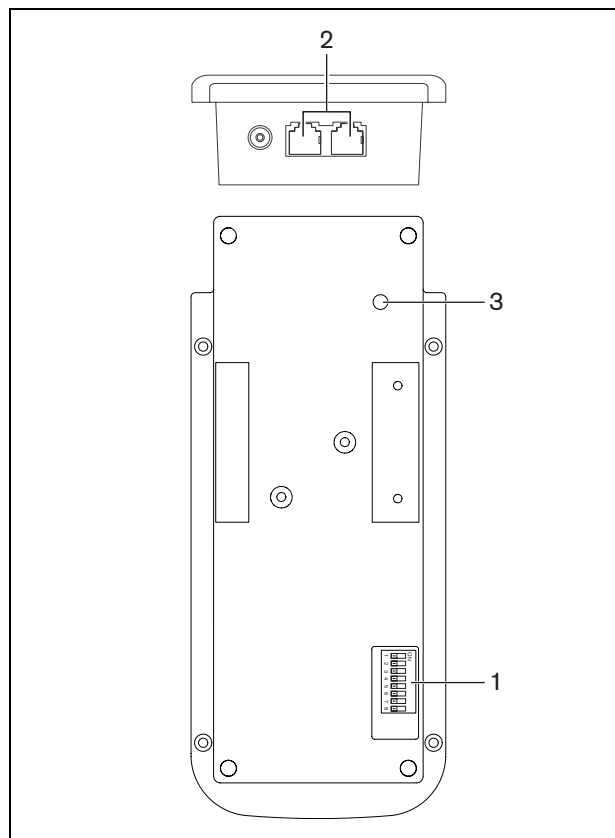


figure 2.2: Bottom view

## 3 Installation

### 3.1 Unpack unit

- 1 Remove the unit from the box, and discard the packaging material according to local regulations.
- 2 Use your fingernails to carefully peel off the protective plastic film. Do not use sharp or pointed objects.

### 3.2 Connect unit to PLE-series two-zone mixer (amplifier)

- 1 Connect the Plena Two-zone Call Station to the PLE-series two-zone mixer or mixer amplifier using a Cat-5 Ethernet cable (see figure 3.1). Either one of the RJ-45 sockets can be used.

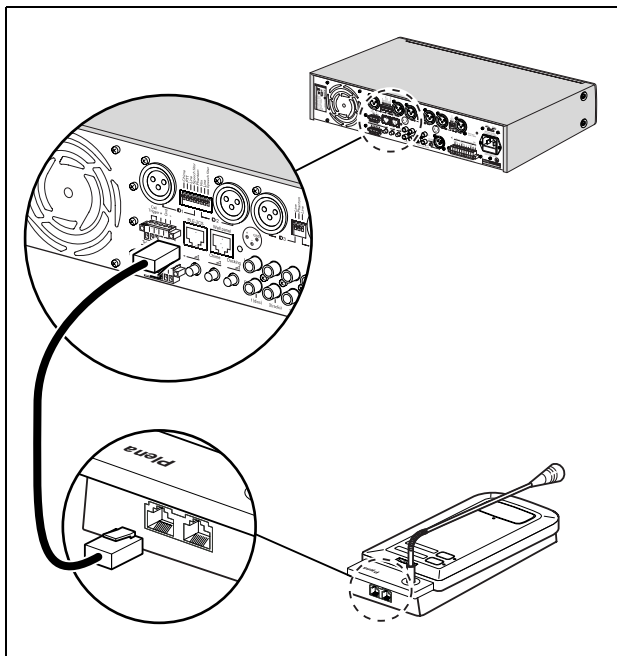


figure 3.1: Connecting the call station to the mixer or the mixer amplifier

### 3.3 Make configuration settings

- 1 Make the configuration settings (see section 4.2).

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## 4 Connections and settings

### 4.1 Connecting multiple call stations

When the configuration requires more than one call station, use the loop-through RJ-45 sockets on the call stations to make loop-throughs.



#### Note

In such a daisy chain configuration the priority is automatic; the call station nearest to the mixer has priority and can override the call station further away from the mixer. Call station number 2 has priority over call station number 3, etc. See figure 4.1.

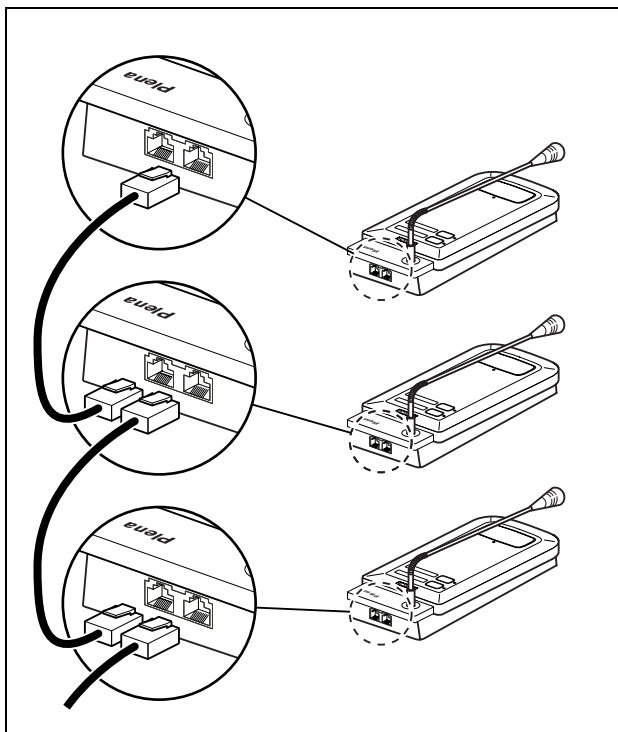


figure 4.1: Connecting multiple call stations

### 4.2 Configuration settings

Use the DIP switches at the bottom of the call station to set the chime, the momentary or latching speaking function, the speech filter and the microphone gain. See figure 4.2.

#### 4.2.1 Chime settings

See figure 4.2. DIP switches number 1, 2 and 3 are used for setting the chime.

1 = ON-position, 0 = OFF-position.

table 4.1: Chime settings

DIP switch setting (1-2-3)	Description
0-0-0	no chime
0-0-1	1-tone chime
0-1-0	2-tone chime
0-1-1	2-tone chime reversed
1-0-1	3-tone chime A
1-0-0	3-tone chime reversed B
1-1-0	4-tone chime A
1-1-1	4-tone chime C

#### 4.2.2 Momentary or latching speaking setting

See figure 4.2. DIP switch number 4 is used for setting the momentary or latching speaking function.

1 = latching, 0 = momentary.

#### 4.2.3 Speech filter setting

See figure 4.2. DIP switch number 5 is used for setting the speech filter ON (1) of OFF (0).

#### 4.2.4 Microphone gain settings

See figure 4.2. DIP switches number 6 and 7 are used for setting the microphone gain.

1 = ON-position, 0 = OFF-position.

table 4.2: Microphone gain settings

DIP switch setting (6-7)	Description
0-0	-15 dB
1-0	0 dB
0-1	+6 dB
1-1	+6 dB

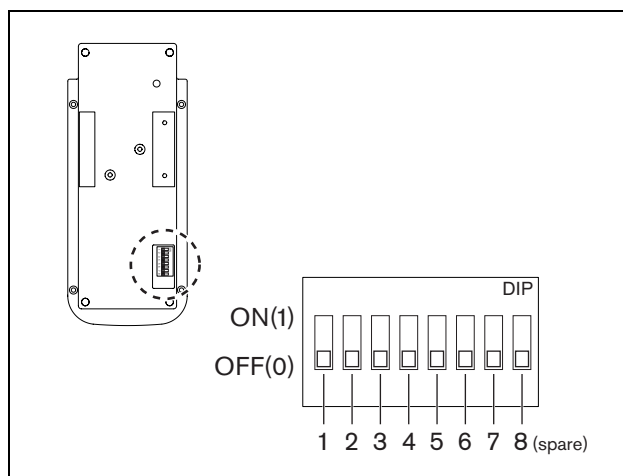


figure 4.2: DIP switches

## 5 Operation

### 5.1 Make calls (momentary speaking function)

- 1 Press the push-to-talk button and keep the button depressed during the business call.
- 2 Make the business call.
- 3 Release the push-to-talk button after the business call.

### 5.2 Make calls (latching speaking function)

- 1 Shortly press the push-to-talk button to start the business call.
- 2 Make the business call.
- 3 Shortly press the push-to-talk button to stop the business call.

### 5.3 Adjust the call station output volume

- 1 Use a screw driver to adjust the output volume of the call station. Turn clockwise to increase the output volume or turn counterclockwise to decrease the output volume. See figure 5.1.

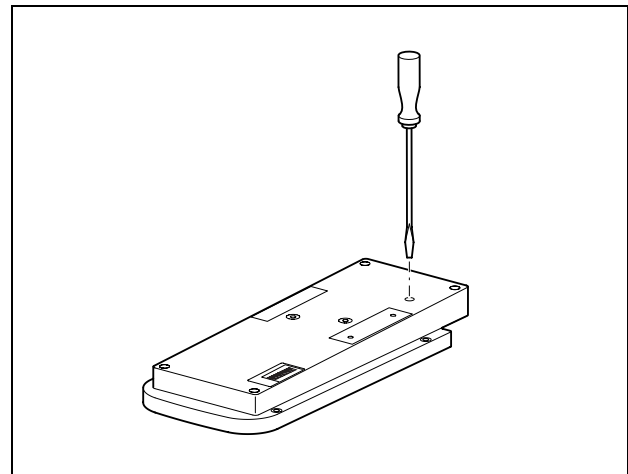


figure 5.1: Adjust the output volume



#### Caution

Be careful not to damage the printed circuit board located directly underneath the orifice. Use a small screw driver, preferably a plastic one.

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## 6 Technical data

### 6.1 Electrical

**Voltage range:**

24 V(DC), supplied by PLE-series mixer or mixer amplifier.

**Current consumption:**

< 30 mA

### 6.2 Performance

**Nominal sensitivity:**

85 dB SPL (gain preset 0 dB)

**Nominal output level:**

700 mV

**Maximum input sound level:**

110 dB SPL

**Gain preset:**

-15 / 0 / +6 dB

**Limiter threshold:**

2 V

**Compression ratio limiter:**

1:20

**Distortion:**

< 0.6% (maximum input)

**Equivalent input noise level:**

25 dB SPL(A)

**Frequency response:**

100 Hz - 16 kHz

**Speech filter:**

- 3 dB @ 315 Hz, high-pass, 6 dB/oct

**Output impedance:**

200 Ω

### 6.3 Interconnection

**Type:**

2x redundant RJ-45 sockets for daisy chaining multiple call stations.

### 6.4 Mechanical

**Base dimensions (H x W x D), without microphone:**

40 x 100 x 235 mm (1.57 x 3.97 x 9.25 in)

**Stem length (with microphone):**

390 mm (15.35 in)

**Cat-5 extension cable length:**

5 m (16.4 ft)

**Weight:**

Approx. 1 kg (2.2 lb)

**Mounting:**

Standalone

**Color:**

Charcoal with silver

### 6.5 Environmental conditions

**Operating temperature range:**

-10 °C to +55 °C (+14 °F to +131 °F)

**Storage temperature range:**

-40 °C to +70 °C (-40 °F to +158 °F)

**Relative humidity:**

< 95%

### 6.6 Certifications and Approvals

**Safety:**

According to EN 60065

**EMC immunity:**

According to EN 55103-2

**EMC emission:**

According to EN 55103-1

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