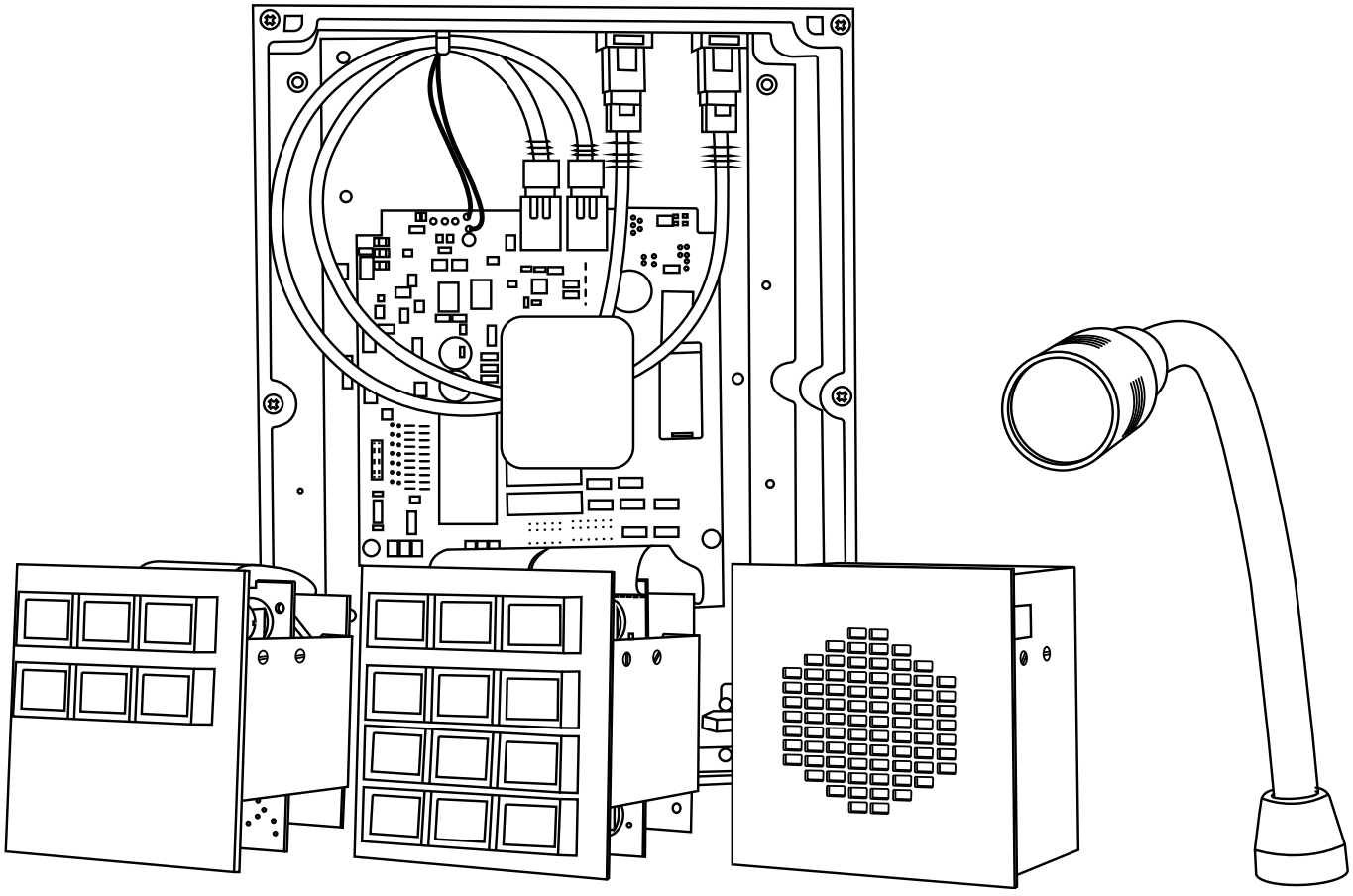
DS-22 MDES IP
Multifunctional panel-mount call station

DS 22 | SPI-22 on board | Dual use Native SIP or WL/EL Neumann protocol | Web interface | PoE | Web interface | Software PLC | 8Ω Broadband loudspeaker | + more

MQTT



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Proven Neumann Elektronik quality

- **Full compatibility with DS-22 system / SPI-22 platform**
- **Remotely configurable and remotely monitorable**
- **Configuration via WEB interface**
- **Dual use - Native SIP protocol / terminal or WL/EL Neumann protocol selectable**
- **Half / full duplex compatibility**
- **Software PLC**
- **Direct voice connections via key-controlled line selection**
- **High speech intelligibility (up to 22kHz bandwidth - depending on codec selection)**
- **Low and high volume control (12dB level reduction)**
- **Integrated voice memory**
- **Free key assignment as WL target keys or for local functions**
- **Integrated Class-D 7W amplifier for horn loudspeakers for best speech intelligibility with wide frequency range**
- **One Ethernet interface and one service interface**
- **Line keys can be freely assigned with destinations**
- **Status messages, such as call and busy signals, are indicated by LEDs**
- **Cyclic acoustic self-test for loudspeaker and microphone monitoring**

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- **Fault management via IoT MQTT interface**
- **Adjustable and monitored electret microphone with electronic noise compensation and dynamic compression**
- **Shock- and break-proof sheet steel housing**
- **Dynamic 8Ω built-in loudspeaker**
- **Flexible gooseneck electret microphone 420mm or 550mm in length**
- **Keypad with 6, resp. 12 line keys**
- **Expandable by up to 3 keypads with 6, resp. 12 keys each to up to 120 keys, resp. 240 keys**
- **Optional connection for monitoring or announcement loudspeaker**
- **Adjustment of loudspeaker volume via configured keys with key functions louder and softer**
- **Optional potential-free relay contact for connecting a flashing light for visual signalling or a signal horn for acoustic signalling**
- **PoE phantom or PoE spare pairs power supply**
- **Optional mains node supply or local supply DC 48V available**
- **DR-Intercom and crossing barrier station as integrated special functions for railway applications**
- **Optional retrofittable coloured buttons**

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The DS-22 MDES IP multifunctional panel-mount call station is used in the DS-22 decentralised communication system. It enables direct speech connections with other call stations, loudspeaker announcements and telephone operation. The DS-22 MDES IP Multifunctional Panel-mount Call Station is intended for indoor use. Due to its versatility and great expandability, it finds its application in many areas of heavy industry and railway engineering by programming many special functions.

The DS-22 MDES IP multifunctional panel-mount call station corresponds technically to the DS-22 MTSD IP multifunctional desk call station, but is broken down into individual modular assemblies. These include key plates, built-in loudspeaker, gooseneck microphone and a housing with the electronic and connection elements.

Switch plates and built-in loudspeakers are accommodated in standard housings of 96mm x 96mm. They fit into built-in openings complying with IEC 61554 and are thus ideally suited for the harmonious built-in of call stations in control panels, switchboards and control desks.

At the same time, the DS-22 MDES IP multifunctional panel-mount call station also offers programmable local functions.

In addition to the destination buttons for WL/EL, the DS-22 MDES IP multifunctional panel-mount call station features monitoring of the gooseneck electret microphone with electronic noise compensation and dynamic compression, volume control, an integrated voice memory for playback of customised announcement texts, tone sequences or audio files, which can be played back at the touch of a button.

The switch plates of the DS-22 MDES IP multifunctional panel-mount call station have 6 or 12 line keys, depending on the variant.

As standard, the DS-22 MDES IP multifunctional panel-mount call station is powered via Power over Ethernet. Optionally, however, a DC 48V mains node supply or local supply is also possible. For this purpose, the manufacturer supplies various mounting rail power supply units for installation in the network node, as well as plug-in and desktop power supply units for local power supply.

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Technical data	
Art. no.	1 xxx x
Mechanical data	
Weight	Approx. 3.5kg
Housing dimensions (HxWxD)	Electronics housing: 110mm x 230mm x 300mm Modules 96mm x 96mm (installation opening according to IEC 61554) Gooseneck microphone length: 420mm / 550mm
Housing colour	Front panels textured lacquer (RAL 7032)
Material	Sheet steel
Number of talk keys	Key plate with 6 Keys: 6-12-18-24-36-48-54-60-66-72-78-84-90-96-102-108-114-120 (depending on number of enclosures) Key plates with 12 Keys: 12-24-36-48-60-72-84-96-108-120-132-144-156-168-180-192-204-216-228-240 (depending on number of enclosures)
Electrical data	
Nominal power consumption (without expansion stages)	20W
Maximum power consumption (including all expansion stages)	90W
Frequency range	100Hz to 22kHz (depending on the set codec)
Connectivity	
PoE (up to 48 Keys)	PoE phantom call station power supply via the Ethernet interface two-pair with PoE Class 4 according to IEEE 802.3at
PoE (48 Keys up to full extension)	PoE spare pairs call station power supply via the Ethernet interface four-pair with PoE Class 8 according to IEEE 802.3bt
Mains node supply (up to 48 Keys)	For locations without PoE call station power supply, optional DC 48V mains node power supply via 60W trunking power supply unit
Mains node supply (48 Keys up to full extension)	For locations without PoE call station power supply, optional DC 48V mains node supply via 150W mounting rail power supply unit
Local feeding (up to 48 Keys)	For locations without PoE call station power supply, optional local power supply DC 48V via 60W plug-in or desktop power supply unit
Local feeding (48 Keys up to full extension)	For locations without PoE call station power supply, optional local power supply DC 48V via 120W plug-in or desktop power supply unit
Mains supply	
Ethernet interfaces	1 (IEEE 802.3u)
Service interfaces	1
Transmission protocol	Neumann DS-22 IP
Environmental conditions	
Temperature range	0°C to +50°C
Protection class according to DIN 60529, resp. IEC 60529	IP20

Module	
1 186 6	Button plate with 6 push-buttons
1 187 7	Button plate with 12 push-buttons
1 214 8	Built-in loudspeaker
1 288 9	Gooseneck microphone (approx. 420mm)
1 289 0	Gooseneck microphone (approx. 550mm)
1 185 5	Electronics and connection housing

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Accessories	
229 8001 175 5	Plug-in power supply AC 230V / DC 48V 60W for the european market
229 8101 175 6	Table power supply AC 230V / DC 48V 60W for international applications, equipped with an IEC320-C14 plug, for adaptation of country-specific connection cables
229 8201 175 7	Table power supply AC 230V / DC 48V 120W for international applications, equipped with an IEC320-C14 plug, for adapting country-specific connection cables
999 1980 002 7	Connection cable for table power supply. IEC320 connection cable with socket C14 for the european market
949 1412 172 0	Carrier rail power supply AC 230V / DC 48V 60W for mains node supply
949 1412 173 1	Carrier rail power supply AC 230V / DC 48V 150W for mains node supply
229 8601 666 6	External power supply module in weatherproof housing AC 230V / DC 48V 60W for local power supply of DS-22 units
229 8701 666 7	External power supply module in weatherproof housing AC 230V / DC 48V 150W for local power supply of DS-22 units
919 1116 097 4	PoE Injector according to IEEE802.3at (30W) for mounting rail installation in the mains node (Attention! Power supply unit 949 1412 172 0 required for power supply)
919 1116 098 5	PoE Injector according to IEEE802.3bt (90W) for mounting rail installation in the power supply node (Attention! Power supply unit 949 1412 173 1 required for power supply)
919 1116 724 1	24-port switch Class 4 with 600W and 4 additional SFP portsfor fibre-optic modules for 19“ mounting in the network node For this purpose: 919 1116 726 3 licences per unit 919 1116 725 2 SFP module fibre-optic multimode
919 1116 759 9	8-port switch with 4 ports PoE Class 8 for rail mounting in the network node
999 1980 088 1	T-piece for connecting 2 additional devices to an 8-pole M12 round connector
919 1111 446 7	Illuminated white LED for use in illuminated push buttons
929 1216 015 6	Push-button cover clear for push buttons
929 1215 051 5	Bonnet puller for push buttons for push-button bonnet change
929 1216 022 4	Lamp puller for push buttons for changing the luminous diodes
929 1216 016 7	Green push-button cover for illuminated push buttons
929 1216 017 8	Push-button cover red for push buttons
929 1216 018 9	Yellow push-button cover for push buttons
929 1216 014 5	Protective cap clear for push buttons
919 1250 011 9	Replacement battery

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Neumann Elektronik system overview

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