PM9-CSLW Wallmount LCD call station
PROMATRIX 9000

- Wallmount housing with detachable fist microphone and coiled cable
- 4.3" full-color capacitive touch screen
- Graphical user interface for optimum user guidance and feedback
- Status and fault indicators for voice alarm purposes
- Dual OMNEO IP-network connection and redundant Power over Ethernet

This call station for use in PROMATRIX 9000 Public Address and Voice Alarm systems is easy to install and intuitive to operate because of its touch screen LCD, providing clear user feedback about setting up a call and monitoring its progress, or controlling back ground music.

The call station allows for positioning without much effort, because it only requires a connection to an OMNEO IP-network with Power over Ethernet (PoE) for communication and power supply combined. The housing is fit for surface mounting and flush mounting. It can be configured for use as business call station, but also as emergency call station.

The stylish design uses a heavy metal base and provides a detachable, omnidirectional fist microphone to eliminate the proximity effect, which creates a boomy sound when a user speaks close to the microphone. It has a built-in loudspeaker for call monitoring and a socket to connect a local background music source. It can be easily installed in a wall mount cabinet or flush-mounted on a panel.

The 4.3" high-resolution full-color capacitive touch screen gives the operator optimum control and feedback at all times.

Add up to four PM9-CSE call station extensions for zone selection and other functions. Without extensions the call station can only be used with a pre-configured zone selection.

Functions

IP-network connection
- Direct connection to the IP-network. One shielded Ethernet cable is sufficient for Power over Ethernet and data exchange.
- Connect a second shielded Ethernet cable for dual redundancy of network and of power connection.
- Integrated network switch with two OMNEO ports allows for loop-through connections to adjacent devices (at least one must provide PoE). Rapid Spanning Tree Protocol (RSTP) is supported to enable recovery from failing network links.
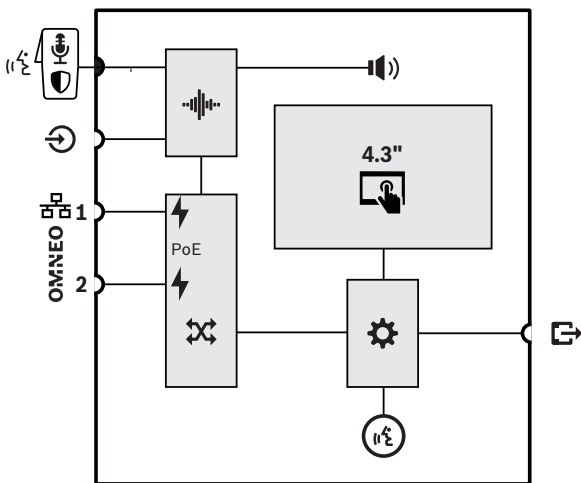
Business operation
- Full color 4.3" capacitive touch screen with intuitive function menu navigation provides guidance and feedback during the process of live announcements, pre-recorded messages and music control. Successful broadcast of announcements/ messages and changes to the background music settings are clearly indicated.
- Detachable fist microphone with a press-to-talk button for easy operation. The microphone with cable is connected to the call station with a lockable connector. It can be replaced. The PRA-FML, a detachable fist microphone with a longer cable, is available separately.
- Built-in monitor loudspeaker with volume control.

- Local audio line input (with stereo to mono conversion) for connecting an external audio source. The audio channel will be available on the network and can be played in any loudspeaker zone.
- Connection of up to four PM9-CSE extensions, each with twelve buttons. The buttons can be configured for various functions, but they are especially useful for zone selection, giving a clear overview of accessible zones and the LED indicators for each button show the status of the respective zone (like being selected, occupied or at fault).
- A User number and PIN code can protect the device in public places against unauthorized access.
- If the call station is not used for a while, it will switch to sleep mode to save energy. It will immediately wake up when the screen, or a button, is touched.

Emergency operation
- The call station fully complies to the standards for voice alarm applications when the firemen's user interface is configured and at least one PM9-CSE is connected to it.
- All critical alarm functions are accessible via buttons for operators wearing gloves. The 4.3" screen gives feedback on the system status.
- Each of the two RJ45 network connectors accept PoE to power the call station. This provides fail-safe network connection redundancy, as one connection is sufficient for full operation.
- Supervision of all critical elements; the audio path is supervised, as well as the communication to the network.

Connection and functional diagram

	Detachable fist microphone with Press-To-Talk or Start/ Stop switch		Audio processing (DSP)
	Internal monitor loudspeaker/buzzer		Power over Ethernet

	OMNEO network switch		Controller
	Call/Microphone status LED-ring		

Top side

Top side indicators

	Power on	Green
	Device in identification mode	Green blinking
	Device fault present	Yellow
	Status business call	
	Microphone active	Green
	Chime/message active	Green blinking
	Status emergency call	
	Microphone active	Red
	Alarm tone/message active	Red blinking
	4.3" full-color capacitive touch screen	LCD
	Identification mode / Indicator test	All LEDs blink

Top side controls

	Press-To-Talk	Switch
	4.3" full-color capacitive touch screen	LCD

Bottom side

Bottom side indicators

⊡	100 Mbps network 1-2	Yellow
	1 Gbps network 1-2	Green

Bottom side controls

↻	Device reset (to factory default)	Button

Architects' and engineers' specifications

The IP-networked wallmount call station shall be designed exclusively for use with Dynacord PROMATRIX 9000 systems. The wallmount call station shall provide an interface for control data and multi-channel digital audio over OMNEO using dual Ethernet ports for redundant network connection, supporting RSTP and loop-through cabling. It shall receive Power over Ethernet (PoE) via either one or both network connections. The wallmount call station shall provide a backlit full-color capacitive touch panel LCD as user interface for business and evacuation purposes. The wallmount call station shall accept up to four optional call station extensions, each offering 12 configurable buttons for zone selection and other purposes. It shall provide control and routing of live speech calls, stored messages and music with volume control per zone. Authentication on the LCD with user number and PIN code shall protect the device against unauthorized access. The wallmount call station shall have an omnidirectional fist microphone for live calls and a 3.5 mm jack line level input for background music, and provide software-configurable signal processing including sensitivity control, parametric equalization and limiting. The wallmount call station shall be certified for EN 54-16, marked for CE and be compliant with the RoHS directive. Warranty shall be three years minimum. The wallmount call station shall be a Dynacord PM9-CSLW.

Regulatory information

Emergency standard certifications	
Europe	EN 54-16 (0560-CPR-202190028)
Maritime applications	DNV GL Type Approval

Emergency standard compliance	
Europe	EN 50849

Regulatory areas	
Safety	EN 62368-1
Immunity	EN 55035 EN 50130-4
Emissions	EN 55032 EN 61000-6-3
Environment	EN/IEC 63000
Railway applications	EN 50121-4

Parts included

Quantity	Component
1	Wallmount LCD call station
1	Bracket (attached to bottom)
1	Connector cover (attached to bottom)
1	Microphone with coiled cable and connector
1	Microphone bracket
1	P-clip for microphone cable
1	Safety information

Technical specifications

Electrical

Microphone

Nominal acoustic input level (dB SPL) (configurable)	89 dB SPL – 109 dB SPL
Maximum acoustic input level (dB SPL)	120 dB SPL
Minimum signal-to-noise ratio (dBA)	73 dBA
Self noise (dB SPL)	< 28 dB SPL
Polar pattern	Omnidirectional
Frequency response (Hz)	500 Hz – 8,000 Hz (noise cancelling)
Cable length (cm)	300 cm (stretched)

Display

Display size (in)	4.30 in
Touchscreen	Capacitive
Color depth	24-bit
Display resolution (pixels)	480 x 272 px
Brightness	300 cd/m2

Monitor loudspeaker

Maximum sound pressure level, at 1 m	75 dB SPL
Volume control	Mute, -40 dB — 0 dB
Frequency range (-10 dB) (Hz)	400 Hz – 8,000 Hz

Line input

Minimum signal-to-noise ratio (dBA)	96 dBA
Frequency response (-3 dB) (Hz)	20 Hz – 20,000 Hz
Total harmonic distortion + noise (%)	0.10%

Power transfer

PoE input	PoE IEEE 802.3af Class 3
Nominal voltage (VDC) (input)	48 VDC
Input voltage (VDC) (tolerance)	37 VDC – 57 VDC
Power consumption (W) (business use)	4.2 W
Power consumption (W) (emergency use)	5.4 W
Power consumption (W) (per call station extension, indicators off / on)	0.1 W / 1.0 W

Supervision

Microphone	Impedance
Audio path	Pilot tone
Press-to-talk switch	Impedance
Controller continuity	Watchdog
PoE (1-2)	Voltage

Network interface

Ethernet type	100BASE-TX; 1000BASE-T
Ethernet protocol	TCP/IP
Redundancy	RSTP
Audio/control protocol	OMNEO
Latency (ms)	10 ms
Audio encryption	AES 128
Security	TLS
Number of Ethernet ports	2

Reliability

Mean time between failures (MTBF) (h) (Telcordia SR-332 Issue 3)	1,000,000 h

Environmental

Operating temperature (℃)	-5 ℃ – 50 ℃
Storage temperature (℃)	-30 ℃ – 70 ℃

Operating relative humidity, non-condensing (%)	5% – 95%
Air pressure (hPa)	560 hPa – 1,070 hPa
Installation altitude (m)	-500 m – 5,000 m
Vibration (operating)	
Amplitude	< 0.35 mm
Acceleration	< 5 G
Bump (transport)	< 10 G (IEC 60068-2-27)

Mechanical

Dimensions (H x W x D) (mm) (excluding microphone)	62 mm x 130 mm x 189 mm
IP rating	IP30
Material	Plastic; Zamac
Color (RAL)	RAL 9017 Traffic black
Weight (kg)	1 kg

Ordering information

PM9-CSLW Wallmount LCD call station
Network-connected, PoE powered, touch screen call station with fist microphone.
Order number **PM9-CSLW | F.01U.351.327 F.01U.421.562**