PM9-CSLW Wallmount LCD call station
PROMATRIX 9000

DYNACORD

- Wall mount housing with fixed hand-held microphone and helix cable

- Housing fits surface-mounting or flush-mounting

- 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.

It can be configured for use as business call station, but also as emergency call station.

The stylish design uses a heavy metal base with a recessed press-to-talk button and provides a hand-held omni-directional 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.

Every call station must have at least one PM9-CSE call station extension for zone selection, with a maximum of four extensions.

Functions

IP-network connection
- Direct connection to the IP-network. One shielded CAT5e cable is sufficient for Power over Ethernet, audio and control.
- For dual redundancy of network and power connection, a second shielded CAT5e cable can be connected.
- 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.
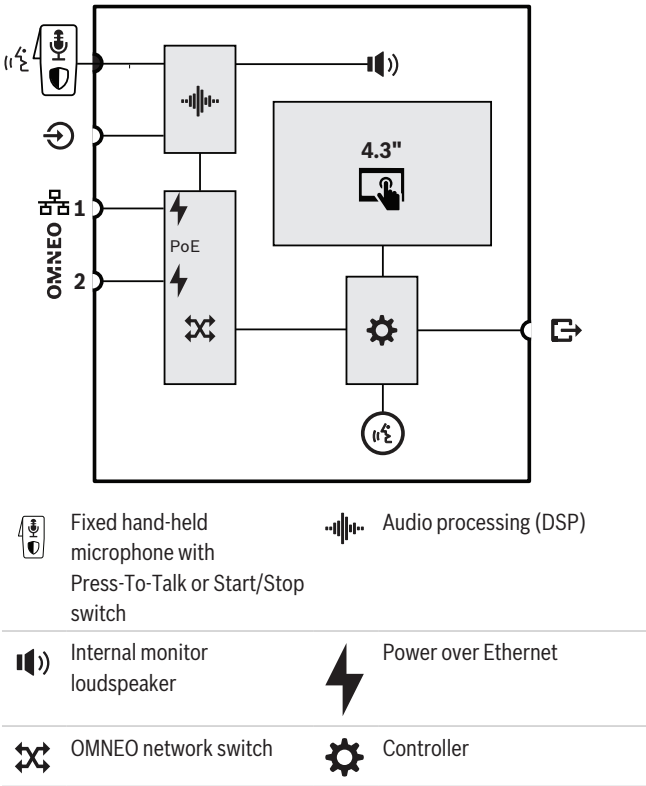
Business operation
- Full color 4.3" capacitive touch screen with intuitive function menu navigation provides guidance and feedback during the process of live announcements, pre-recorded messages and music control. Successful broadcast of announcements/messages and changes to the background music settings are clearly indicated.
- Press-to-talk switch on hand-held microphone.
- 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).
- 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

	Fixed hand-held microphone with Press-To-Talk or Start/Stop switch		Audio processing (DSP)
	Internal monitor loudspeaker		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	Red
	Microphone active	Red blinking
	Alarm tone/message active	
	4.3" full-color capacitive touch screen	LCD
	Identification mode / Indicator test	All LED's blink

Top-side controls

	Fixed hand-held Press-To-Talk	Microphone Switch
	4.3" full-color capacitive touch screen	LCD

Bottom-side

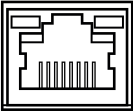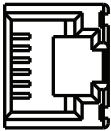

Bottom-side indicators

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

Bottom-side controls

	Device reset (to factory default)	Button

Bottom-side and side interconnections

	Network port 1-2 (PoE PD)	
	Local source audio line input	
	PM9-CSE interconnection (RJ12)	

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. The wallmount call station shall have a hand-held omnidirectional 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.

Certifications and approvals

Emergency standard certifications	
Europe	EN 54-16

Regulatory areas	
Safety	EN 62368-1
Immunity	EN 55024
	EN 55103-2 (E1, E2, E3)
	EN 50130-4
Emissions	EN 55032
	EN 61000-6-3
Environment	EN 50581
Railway applications	EN 50121-4
Maritime applications	DNV-GL Type Approval

Conformity declarations	
Europe	CE/CPR

Parts included

Quantity	Component
1	Wallmount LCD call station
1	Bracket (attached to bottom)
1	Connector cover (attached to bottom)
1	Microphone clip
1	Safety information

Technical specifications

Electrical

Microphone (PM9-CSLW)	
Nominal acoustic input level (configurable)	85 to 105 dBSPL
Maximum acoustic input level	120 dBSPL
Signal to Noise Ratio (SNR)	> 73 dBA
Directivity	Unidirectional

Microphone (PM9-CSLW)

Frequency response (+3 / -6 dB)	500 Hz to 8 kHz (noise cancelling)

Display

Size	4.3"
Touch screen	Capacitive
Color depth	24-bit
Resolution	480 x 272 px
Brightness	300 cd/m^2

Monitor loudspeaker

Maximum sound pressure level, at 1 m	75 dBSPL
Volume control	Mute, -40 dB to 0 dB
Frequency range (-10 dB)	400 Hz to 10 kHz

Line input

Signal to Noise Ratio (SNR)	> 96 dBA
Total Harmonic Distortion + Noise (THD+N)	< 0.1 %

Power transfer

Power over Ethernet (PoE 1-2)	
Nominal DC input voltage	48 V
Standard	IEEE 802.3af (mode B)
Power consumption	
Call station (general use)	4.2 W
Call station (alarm use)	5.4 W
Per call station extension (indicators off / on)	0.1 W / 1.0 W
Input voltage tolerance	37 to 57 VDC

Supervision (PM9-CSLW)

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

Network interface

Ethernet	100BASE-TX, 1000BASE-T
Protocol	TCP/IP
Redundancy	RSTP
Audio/control protocol	OMNEO
Network audio latency	10 ms
Audio data encryption	AES128
Control data security	TLS

Ports	2

Reliability

MTBF (extrapolated from calculated MTBF of PM9-AD608)	1.000.000 h

Environmental

Climatic conditions

Temperature	
Operating	-5 to +50 °C (23 to 122 °F)
Storage and transport	-30 to +70 °C (-22 to 158 °F)
Humidity (non-condensing)	5 to 95 %
Air pressure (operating)	560 to 1070 hPa
Altitude (operating)	-500 to +5000 m (-1640 to 16404 ft)
Vibration (operating)	
Amplitude	< 0.35 mm
Acceleration	< 5 G
Bump (transport)	< 10 G

Mechanical

Enclosure (PM9-CSLW)

Dimensions (HxWxD)	62 x 130 x 189 mm (2.44 x 5.12 x 7.44 in)
Ingress protection	IP30
Base	
Material	Zamak
Color	RAL9017
Panel	
Material	Plastic
Color	RAL9017 RAL9022HR
Weight	1.0 kg (2.21 lb)

Ordering information

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