

PVA-4CR12 Controller

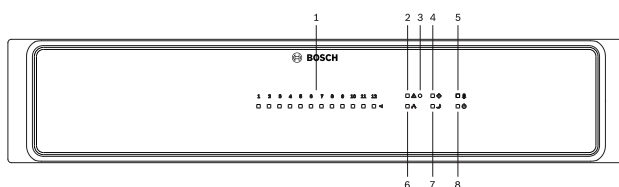
PAVIRO



The PVA-4CR12 controller is the central paging manager for the PAVIRO system. Eight local audio inputs can be switched to four audio outputs. A two channel message manager is integrated. The controller provides all the audio processing, supervision and control functions for a complete PAVIRO system. A single controller supports up to 100 priorities, 16 call stations and 492 paging zones; up to 8000 fault, warning and event conditions can be logged. The controller is equipped with 12 zones, 18 GPIs and 19 GPOs. One controller can handle up to 2000 W loudspeaker load. Additional zones and power can be added by using up to 20 external routers and 40 amplifiers with each 2 x 500 W. The zone indicator lights on the front indicate the current status of every zone:

- Green: Zone in use for non-emergency purpose
- Red: Zone in use for emergency purpose
- Yellow: Zone fault detected
- Off: Zone in idle condition

System overview



1 Zone status indicator light

- ▶ Public address and emergency sound system control unit
- ▶ Control and routing of 4 simultaneous audio channels
- ▶ One controller supports 12 zones, expandable up-to 492 zones with 24-zone routers
- ▶ Four controllers can be networked using OMNEO interface module
- ▶ EN 54-16 system certification

2 Combined fault warning indicator light

3 Recessed button

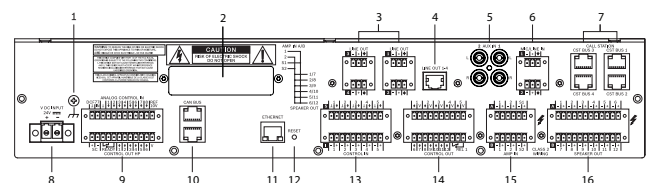
4 System fault indicator light

5 Voice alarm indicator light

6 Network indicator light

7 Standby indicator light

8 Power indicator light



1 Grounding screw

2 Blind cover for optional OM-1 Module

3 LINE OUT 1-4 ports (Euroblock)

4 LINE OUT 1-4 port (RJ-45)

5 AUX IN 1/2 ports (RCA)

6 MIC/LINE IN 1/2 ports (Euroblock)

- 7 CST BUS 1-4 ports (RJ-45, for connection of call station)
- 8 DC power input
- 9 CONTROL IN/OUT port (including pins for DCF77 and slave clock)
- 10 CAN BUS port
- 11 ETHERNET port
- 12 Reset button
- 13 CONTROL IN ports
- 14 CONTROL OUT ports
- 15 AMP IN ports
- 16 SPEAKER OUT ports

Certifications and approvals

Emergency standard certifications

Europe	EN 54-16
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Emergency standard compliance

UK	BS 5839-8
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Austria	ÖNORM F 3033
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Environmental directive compliance

Safety	EN 62368-1
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Immunity	EN 50130-4
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Emissions	EN 61000-6-3 ICES-003 FCC-47 part 15B class A
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Environment	EN 50581
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Maritime	EN 60945
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Conformity

Europe	CE/CPR
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USA	FCC
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Canada	ICES
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Australia	RCM
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Korea	KCC
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Conformity

Russian Federation	EAC
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Environment	RoHS
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Parts included

Quantity	Component
1	PVA-4CR12 Controller
1	Set of connectors
1	Set of feet
1	Installation manual
1	Important safety instructions

Technical specifications

Electrical

Audio	8 audio inputs, 4 audio outputs
Safety/redundancy	Internal supervision, system monitoring, watchdog, fault output
PC configuration and control software	- Configuration Wizard: Easy system configuration. - IRIS-Net: Integration of controller, amplifiers, call stations, routers and peripheral control; configuration, control, and supervision for complete audio systems; programmable user control panels and access levels. - Hot Swapper (included in IRIS-Net package): Easy updating of messages during runtime.
Frequency response (ref. 1 kHz)	20 Hz to 20 kHz (-0.5 dB)
Signal-to-noise ratio (A-weighted)	Line in to line out: 106 dB typical
THD+N	< 0.05%
Crosstalk (line level)	Line in to line out (0 dB gain): < 100 dB at 1 kHz
Sample rate	48 kHz
DSP processing resolution	24-bit linear A/D and D/A conversion, 48-bit processing
Audio inputs (microphone/line level)	MIC/LINE: 2 x 3-pin port, electronically symmetric

	AUX: 2 x Stereo RCA
• Input level (nominal)	MIC/LINE: 15 dBu AUX: 9 dBu
• Input level (max. before clip)	MIC/LINE: 18 dBu AUX: 12 dBu
• Input impedances	MIC/LINE: 2.2 k Ω AUX: 8 k Ω
• Common mode rejection	MIC/LINE: > 50 dB
• Phantom power, switchable	MIC/LINE: 48 V DC
• A/D conversion	24 Bit, Sigma-Delta, 128 times oversampling
Audio inputs (100 V)	AMP IN: 2 x 6-pin port
• Max. voltage	120 V
• Max. current	7.2 A
• Max. power	500 W
• Signal detection	≥ 3 V
Audio outputs (line level)	LINE OUT: 1 x RJ-45, 4 x 3-pin port
• Output level (nominal)	6 dBu
• Output level (max. before clip)	9 dBu
• Output impedance	<50 Ω
• Min. load impedance	400 Ω
• D/A conversion	24 Bit, Sigma-Delta, 128 times oversampling
Audio outputs (100 V)	SPEAKER OUT: 2 x 12-pin port
• Max. voltage	120 Veff
• Max. current	7.2 A
• Max. power	500 W
• Crosstalk (100 V)	AMP IN to SPEAKER OUT: < 100 dB at 1 kHz with 1 k Ω load
• Breakdown voltage	Pole - Pole: 120 Veff, Pole - Ground: 60 Veff
Call station bus (CST)	4 x integrated power+CAN+audio interface, RJ-45

• Power	+24 V DC, electronic fuse
• CAN	10, 20 or 62.5 kbit/s
• Audio	electronically symmetric
• Max. length	1000 m
ANALOG CONTROL IN	1 x 12-pin port
• Control inputs	• 8 (analog 0-10 V/logic control; low: $U \leq 5$ V DC; high: $U \geq 10$ V DC; $U_{\max} = 32$ V DC)
• Reference outputs	• +10 V, 100 mA • GND
• Time sync input	1 (DCF-77 receiver)
CONTROL OUT HP	1 x 12-pin port
• Control outputs	• 6 High Power outputs (open collector, $U_{\max} = 32$ V, $I_{\max} = 1$ A)
• Reference output V	• +24 V, $I_{\max} = 200$ mA
• Ready/fault output	1 (NO/NC relay contacts, $U_{\max} = 32$ V, $I_{\max} = 1$ A)
• Slave clock output	1 (24 V DC, max. 1 A)
CONTROL IN	2 x 10-pin port
• Control inputs	• 5 supervised inputs (0-24 V, $U_{\max} = 32$ V) • 5 isolated inputs (low: $U \leq 5$ V DC; high: $U \geq 10$ V DC; $U_{\max} = 32$ V)
CONTROL OUT	2 x 10-pin port
• Control outputs	12 Low Power outputs (open collector, $U_{\max} = 32$ V, $I_{\max} = 40$ mA)
• Control relay	1 (NO/NC relay contacts, $U_{\max} = 32$ V, $I_{\max} = 1$ A)
Interfaces	
• Ethernet	1 x RJ-45, 10/100 MB (for PC connection)
• CAN BUS port	2 x RJ-45, 10 to 500 kbit/s (for amplifier, router connection)

• OM-1 interface Module (optional)	Ethernet connectors (Primary/Secondary) 100/1000 Mbit/s, RJ-45, integrated transformer isolation
• RTC clock accuracy	±4 minutes/month
DC power input	21 to 32 V DC
Power consumption	10 to 250 W
Maximum supply current (24V)	
• Standby	< 600mA + external load
• Idle/announcement/alert	< 800mA + external load

Environmental

Operating temperature	-5 °C to +45 °C (+23 °F to +113 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Humidity (non-condensing)	5% to 90%
Altitude	Up to 2000 m

Mechanical

Dimensions (HxWxD)	88 mm x 483 mm x 391 mm (2 RU)
Weight (net)	8.0 kg
Mounting	Standalone; 19 in. rack
Color	Black with silver

Ordering information

PVA-4CR12 Controller

System controller for audio processing, routing and supervision of a PAVIRO system, rack unit 2 RU.

Order number **PVA-4CR12 | F.01U.396.302**

F.01U.298.639

Services

EWE-PAVIRO-IW 12 mths wrty ext. PAVIRO

12 months warranty extension

Order number **EWE-PAVIRO-IW | F.01U.360.718**

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