

# PVA-4CR12 Controller

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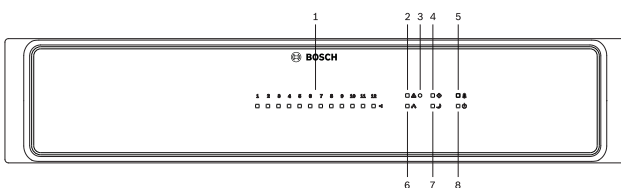


- ▶ Low power consumption in standby mode
- ▶ Extreme flexibility
- ▶ Excellent sound quality > 106 dB s/n ratio
- ▶ Up to 85 minutes internal digital message storage
- ▶ Up to four decentralized controllers using the OM-1 interface

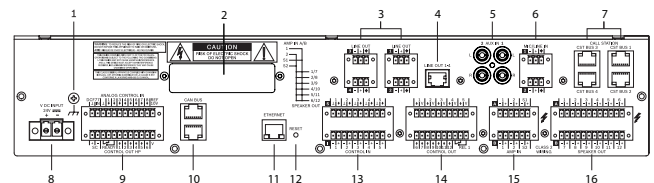
The PVA-4CR12 controller is the central paging manager for the PAVIRO system. Eight local audio inputs can be switched to four audio outputs. A two channel message manager is integrated. The controller provides all the audio processing, supervision and control functions for a complete PAVIRO system. A single controller supports up to 16 call stations and 492 paging zones. 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
- 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

- IEC 60065
- EN 61000-6-3
- EN 50130-4
- EN 60945
- EN 60950
- EN 54-16

### Parts included

| Quantity | Component   |
|----------|---|
| 1        | PVA-4CR12   |
| 2        | CAN terminating resistor (120 ohm)  |
| 1        | Euroblock connector 2-pole (Phoenix, PC 5/2-STF-7,62, 1975697, F.01U.108.398)       |
| 6        | Euroblock connector 3-pole (Phoenix, MC 1,5/3-STF-3,81, Nr. 1827716, F.01U.104.680) |
| 2        | Euroblock connector 6-pole (Phoenix, MC 1,5/6-ST-3,81, 1827745, F.01U.104.179)      |
| 4        | Euroblock connector 10-pole (Phoenix, MC 1,5/10-STF-3,81, 1827787, F.01U.301.445)   |
| 2        | Euroblock connector 12-pole (Phoenix, MC 1,5/12-STF-3,81, 1827800, F.01U.108.397)   |
| 4        | Foot stand (self-adhesive)  |
| 1        | Operation manual  |
| 1        | Important safety instructions   |

### Technical specifications

|                   |   |
|-------------------|---|
| Audio             | 8 audio inputs, 4 audio outputs                                 |
| Safety/redundancy | Internal supervision, system monitoring, watchdog, fault output |

|                                       |  |
|---------------------------------------|--|
| PC configuration and control software | <ul style="list-style-type: none"> <li>• Configuration Wizard: Easy system configuration.</li> <li>• 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.</li> <li>• Hot Swapper (included in IRIS-Net package): Easy updating of messages during runtime.</li> </ul> |
| 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 × 3-pin port, electronically symmetric<br>AUX: 2 × Stereo RCA  |
| • Input level (nominal)               | MIC/LINE: 15 dBu<br>AUX: 9 dBu   |
| • Input level (max. before clip)      | MIC/LINE: 18 dBu<br>AUX: 12 dBu  |
| • Input impedances                    | MIC/LINE: 2.2 kΩ<br>AUX: 8 kΩ  |
| • 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 × 6-pin port   |
| • Max. voltage                        | 120 V  |
| • Max. current                        | 7.2 A  |
| • Max. power                          | 500 W  |
| 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 × 12-pin port  |
| • Max. voltage         | 120 V <sub>eff</sub>  |
| • Max. current         | 7.2 A   |
| • Max. power           | 500 W   |
| • Crosstalk (100 V)    | AMP IN to SPEAKER OUT: < 100 dB at 1 kHz with 1 kΩ load   |
| Call station bus (CST) | 4 × 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 × 12-pin port   |
| • Control inputs       | • 8 (analog 0-10 V/logic control; low: U ≤ 5 V DC; high: U ≥ 10 V DC; U <sub>max</sub> = 32 V DC) |
| • Reference outputs    | • +10 V, 100 mA<br>• GND  |
| • Time sync input      | 1 (DCF-77 receiver)   |
| CONTROL OUT HP         | 1 × 12-pin port   |
| • Control outputs      | • 6 High Power outputs (open collector, U <sub>max</sub> = 32 V, I <sub>max</sub> = 1 A)          |
| • Reference output V   | • +24 V, I <sub>max</sub> = 200 mA  |
| • Ready/fault output   | 1 (NO/NC relay contacts, U <sub>max</sub> = 32 V, I <sub>max</sub> = 1 A)                         |
| • Slave clock output   | 1 (24 V DC, max. 1 A)   |
| CONTROL IN             | 2 × 10-pin port   |

|   |  |
|---|--|
| • Control inputs                            | • 5 supervised inputs (0-24 V, U <sub>max</sub> = 32 V)<br>• 5 isolated inputs (low: U ≤ 5 V DC; high: U ≥ 10 V DC; U <sub>max</sub> = 32 V) |
| CONTROL OUT                                 | 2 × 10-pin port  |
| • Control outputs                           | 12 Low Power outputs (open collector, U <sub>max</sub> = 32 V, I <sub>max</sub> = 40 mA)   |
| • Control relay                             | 1 (NO/NC relay contacts, U <sub>max</sub> = 32 V, I <sub>max</sub> = 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)<br>100/1000 Mbit/s, RJ-45, integrated transformer isolation  |
| DC power input                              | 21-32 V DC   |
| Power consumption                           | 10 to 250 W  |
| Operating temperature                       | -5 °C to +45 °C (+23 °F to +113 °F)  |
| Storage and transport temperature           | -40 °C to +70 °C (-40 °F to +158 °F)   |
| Electromagnetic environment                 | E1, E2, E3   |
| Product dimensions (Height x Width x Depth) | 19", 2 HU, 88.2 mm 483 mm x x 391 mm   |
| Net weight                                  | 8.0 kg   |
| Shipping weight                             | 9.5 kg   |

#### Ordering information

#### PVA-4CR12 Controller

Central paging manager for the PAVIRO system.  
Order number **PVA-4CR12**

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