

Cerberus PACE Compact

Operating and call stations

PT1001-A1, PT1002-A1, PT200x-A1, PTO200x-A1



EN 54-16-certified alarm and standard operating and call stations for demanding, digital, and network-based announcement and evacuation applications.

- Fully redundant configurable system with no single point of failure
- Ethernet interface ('PACE-Net') for networking with other system components
- Serial interface ('PACE-Bus') for connecting to internal and external components
- Real-time configuration, remote maintenance, and remote monitoring via the 'PACE-Design' system software
- Real-time audio transmission and integrated real-time recorder for delayed announcements
- Analog audio inputs and outputs, plus analog and digital control inputs and outputs
- Freely configurable buttons with insertable labels
- Can be extended with button and key switch modules
- Up to 115 buttons can be configured per call station
- Availability of fire brigade call station that conforms to ÖNORM F 3003
- Integrated speaker and monitored microphone
- Integrated micro SD card reader for alarm messages
- Direct operation of the system

Operating terminals are required for displaying and using alarm-related information at a system cabinet or in control panels.

Call stations can be used to play live announcements or stored alarm and evacuation announcements throughout the entire building or in single areas. The system interrupts all other audio outputs throughout the building or in the selected areas as soon as an alarm announcement button or a talk button is pressed.

Fire brigade call stations are designed for use by the fire brigade or trained security personnel.

Cerberus PACE Compact offers a range of operating and call stations for various applications.

System operating unit PT1001-A1

The system operating unit PT1001-A1 displays the operating and fault status of the audio system. It provides color-coded buttons to trigger, reset, and silence alarms. The color-coded LED on the respective button indicates the status of the 'alarm' function or the 'silencing' function.

The PT1001-A1 can be integrated into the Cerberus PACE Compact cabinet door and provides a lockable viewing door. It communicates via the 'PACE-Bus' with the Cerberus PACE Compact system.

The PT1001-A1 is designed for the following applications:

- Control and monitor the Cerberus PACE Compact system by users
- Displaying information on operation, faults, and alarms provided via color-coded indicating elements
- Issuing an acoustic warning via an integrated buzzer if there are error messages in the system
- For other applications, see Features and Functions [▶ 4].

Operating and call station PT1002-A1

The system operating unit PT1002-A1 displays the operating and fault status of the audio system.

Live announcements with the integrated hand-held microphone or stored alarm and evacuation announcements can be played throughout the entire building or in single areas (zones).

It provides color-coded buttons to trigger, reset, and silence alarms. The color-coded LED on the respective button indicates the status of the 'alarm' function or the 'silencing' function.

The PT1002-A1 can be integrated into the Cerberus PACE Compact cabinet door and provides a lockable viewing door.

It communicates via the 'PACE-Bus' and 0 dB symmetrical analog audio transmission with the Cerberus PACE Compact system.

The PT1002-A1 is designed for the following applications:

- Control and monitor the Cerberus PACE Compact system by users
- Displaying information on operation, faults, and alarms provided via color-coded indicating elements
- Selecting speaker circuits
- Selecting an audio source
- Transmitting live announcements via an integrated hand-held microphone
- Issuing an acoustic warning via an integrated buzzer if there are error messages in the system
- For more applications, see Features and Functions [▶ 5]

Desk call station (19 buttons) PT2001-A1

The alarm and standard call station PT2001-A1 is a network based 'PACE-Bus' desk call station with 19 buttons and is designed for the following applications:

- Control and monitor the Cerberus PACE Compact system by users
- Selecting speaker circuits
- Selecting an audio source
- Playback of announcements recorded in advance
- Transmitting live announcements via mounted gooseneck microphone
- Allows a redundant system structure
- For other applications, see Features and Functions [▶ 6].

Up to four additional button modules PTO2001-A1 can be fitted to extend the network-based desk call station PT2001-A1 to a maximum of 115 buttons.

The call station buttons of PT2001-A1 and PTO2001-A1 are basically freely operable.

An optional key switch module PTO2002-A1 or PTO2003-A1 enables all or individual call station buttons to be released or locked individually.

The longer PTO2004-A1 can be used as an alternative to the standard gooseneck microphone.

Fire brigade call station (AT) PT2002-A1/Fire brigade call station (485, AT) PT2003-A1

The PT2002-A1 is a network-based fire brigade call station and allows a redundant system structure. The fire brigade call station PT2003-A1 communicates via 'PACE-Bus' and 0 dB symmetrical analog audio transmission.

They are designed for use by the fire brigade or trained security personnel. The alarm and system status can be monitored.

- The integrated hand-held microphone can be used to make live announcements.
- The pre-configured alarm announcement buttons can be used to play stored alarm and evacuation announcements.

Live announcements or stored alarm and evacuation announcements can be played throughout the entire building or in single areas (zones). The system interrupts all other audio outputs throughout the building or in the single areas as soon as an alarm announcement button is pressed, or the hand-held microphone is taken from its mount.

Desk call station (analog, 3+1) PT2008-A1

The desk call station PT2008-A1 is designed for small standard applications.

The call station buttons of PT2008-A1 are freely operable.



The desk call station PT2008-A1 may only be used for standard applications rather than alarm applications.

Desk call station (RS485, 8+1) PT2009-A1

The desk call station PT2009-A1 is designed for small to medium-sized standard applications. It communicates via the 'PACE-Bus' and a 0 dB symmetrical analog audio transmission.

Up to three additional button modules PTO2006-A1 can be fitted to extend the desk call station PT2009-A1 to a maximum of 32 buttons.

The call station buttons of PT2009-A1 and PTO2006-A1 are freely operable.

Call station interface (RS485) PTO2008-A1

The interface PTO2008-A1 connects the 'PACE-Bus' (RS485) call stations PT2003-A1 and PT2009-A1 to a control panel when required.

Call station interface (redundant) PTO2009-A1


The interface PTO2009-A1 provides a redundant 'PACE-Net' and 24 V connection from the panel to the call stations PT2001-A1 and PT2002-A1.

Remote control panel PT2006-A1

The remote control panel PT2006-A1 is installed in recessed boxes and connected to the audio matrix.





When combined with the audio matrix, it is possible to control the sound level on site, switch between various default settings, and control the audio source, e.g., a CD player or radio tuner, in selected areas.




Features and Functions




PT1001-A1	'System operating unit'
	<ul style="list-style-type: none"> • EN 54-16-compliant indicator panel for visual and acoustic status messages and controlling voice alarms • For installation in a Cerberus PACE Compact cabinet door • Lockable viewing front door • Insertable labels for custom button identification • Insertable labels in English, German and Netherlands are enclosed • Display of system status • Control of voice alarms • Fault warning with acoustic warning signal • Color-coded visual indicators: operation, fault, and alarm <ul style="list-style-type: none"> – Operation: green – Fault: yellow – Voice Alarm: red • Color-coded control buttons: control of voice alarms, acknowledges <ul style="list-style-type: none"> – <Start Voice Alarm>: red LED indicator button – <Reset Voice Alarm>: black button – <Silence Voice Alarm>: green LED indicator button – <Reset Fault>: black button (acknowledge faults) – <Silence Buzzer / LED Test>: black button (acknowledge acoustic warning and LED test) • 8 predefined visual fault indicators: yellow <ul style="list-style-type: none"> – Power fault – Fuse fault – Earth fault – Network fault – Bus (RS485) fault – Amplifier fault – Microphone fault – Speaker circuit fault • 8 user-configurable visual state indicators: yellow • 'PACE-Bus' (RS485) data transmission • Addressable via a 4-way SIP (Single Inline Package) switch for 'PACE-Bus' connection • Supplied with an installation frame • Supplied with a pre-assembled cable to facilitate the wiring to the cabinet door




PT1002-A1**'System operating unit and call station'**

- EN 54-16-compliant indicator panel for visual and acoustic status messages and controlling voice alarms
- Call station with 8 configurable and illuminated zone buttons
- For installation in a Cerberus PACE Compact cabinet door
- Lockable viewing front door
- Insertable labels for custom button identification
- Insertable labels in English, German and Netherlands are enclosed
- Removable hand-held microphone with talk button
- Microphone and line monitoring
- Symmetrical audio transmission, analog
- Audio output 0 dB (line volume)
- Integrated speaker
- Display of system status
- Control of voice alarms
- Fault warning with acoustic warning signal
- Color-coded visual indicators: operation, fault, and alarm
 - Operation: green
 - Fault: yellow
 - Voice Alarm: red
- Color-coded control buttons: control of voice alarms, acknowledges
 - <Start Voice Alarm>: red LED indicator button
 - <Reset Voice Alarm>: black button
 - <Silence Voice Alarm>: green LED indicator button
 - <Reset Fault>: black button (acknowledge faults)
 - <Silence Buzzer / LED Test>: black button (acknowledge acoustic warning and LED test)
- 8 predefined visual fault indicators: yellow
 - Power fault
 - Fuse fault
 - Earth fault
 - Network fault
 - Bus (RS485) fault
 - Amplifier fault
 - Microphone fault
 - Speaker circuit fault
- 8 user-configurable visual state indicators: yellow
- 'PACE-Bus' (RS485) data transmission
- Addressable via 4-way SIP (Single Inline Package) switch for 'PACE-Bus' connection
- Supplied with installation frame
- Supplied with an adapter module PTO2008-A1 and pre-assembled cables to facilitate the wiring to the cabinet door

PT2001-A1	'Desk call station (19 buttons)'
	<ul style="list-style-type: none"> • Call station with electret condenser microphone and gooseneck • Full network participant in a Cerberus PACE Compact system • 2-line text display • Buttons and status indicators to control and monitor the Cerberus PACE Compact system by users. The buttons are basically freely operable • Insertable labels for custom button identification • Monitored microphone • Integrated audio amplifier (1 watt) and speaker • 1x additional audio input (line/mic) and 1x additional audio output • 4x digital inputs, 4x digital outputs, and 6x analog control inputs • Live speech / real-time audio transmission and integrated real-time recorder for delayed announcements • Integrated micro SD card reader/writer with max. 2 GB card capacity for alarm messages • Recording capacity: 256 files with a total duration of approx. 3 hours • Provision of alarm announcements and alarm tones • 2x Ethernet LAN interfaces for connection to 'PACE-Net' • Up to four extension modules PTO2001-A1 per desk call station PT2001-A1 to a maximum of 115 buttons • Can be extended with key switch module PTO2002-A1 or PTO2003-A1 to enable buttons to be released or locked • Adapter module PTO2009-A1 for redundant connection to the control panel
PTO2001-A1	'Desk call station extension (24 buttons)'
	<ul style="list-style-type: none"> • Optional button extension for the desk call station PT2001-A1 • 24 freely configurable buttons • Up to 4x button extensions per desk call station PT2001-A1, offering a total of 115 buttons • Insertable labels for custom button identification
PTO2002-A1	'Desk call station extension (Kaba)'
	<ul style="list-style-type: none"> • Call station extension for PT2001-A1 with key switch (Kaba) • Enables call station operation
PTO2003-A1	'Desk call station extension (Nordic)'
	<ul style="list-style-type: none"> • Call station extension for PT2001-A1 with key switch (Nordic) • Enables call station operation

PTO2004-A1	'ITEC SPM-DM microphone DCS'
	<ul style="list-style-type: none"> • Dynamic gooseneck microphone • Supercardioid characteristics • Excellent suppression of background noise • Highly dynamic performance and wide frequency band with low distortion • XLR connection
PT2002-A1	'Fire brigade call station (AT)'
	<ul style="list-style-type: none"> • Alarm call station with standard-compliant housing and control panel • Full network participant in a Cerberus PACE Compact system • 7 standardized and configurable buttons • 3 standardized and preconfigured displays • Removable hand-held microphone with talk button • Microphone and line monitoring • Integrated audio amplifier (1 watt) and speaker • Real-time audio transmission with constant latency: 4.6 ms analog-in/analog-out • Integrated industrial micro SD card reader/writer with max. 2 GB card capacity for alarm messages • Recording capacity: 256 files with a total duration of approx. 3 hours • Provision of alarm announcements and alarm tones • 2x Ethernet LAN interfaces for connection to 'PACE-Net' • One additional audio input (line) and one additional audio output • Adapter module PTO2009-A1 for redundant connection to the control panel
PT2003-A1	'Fire brigade call station (485, AT)'
	<ul style="list-style-type: none"> • Alarm call station with standard-compliant housing and control panel • 7 standardized and configurable buttons • 3 standardized and preconfigured displays • Removable hand-held microphone with talk button • Microphone and line monitoring • Symmetrical audio transmission, analog • Audio output 0 dB (line volume) • 'PACE-Bus' (RS485) data transmission • Connection to control panel via CAT5 cable (max. 500 m) • Connection to control panel with RJ45 or screw terminal connector • Adapter module PTO2008-A1 for connection to the control panel • Addressable via 4-way SIP (Single Inline Package) switch in device

PT2008-A1	'Desk call station (analog, 3+1)*'
	<ul style="list-style-type: none"> • Call station with 3 configurable zone buttons plus talk button • Buttons are freely operable. • Electret condenser microphone with gooseneck • Symmetrical audio transmission, analog • Audio output 0 dB (line volume) • Control signals for zones 1-3 and 'Talk' • Connection to control panel via CAT5 cable or above (max. 150 m) and RJ45 connector • Supplied adapter module for connection to control panel • Insertable labels for custom button identification • Robust sheet steel housing <p>* The desk call station PT2008-A1' may only be used for standard applications and not for alarm applications.</p>
PT2009-A1	'Desk call station (RS485, 8+1)'
	<ul style="list-style-type: none"> • Call station with 8 configurable, illuminated zone buttons plus talk button • Buttons are freely operable • Electret condenser microphone with gooseneck • Monitored microphone • Symmetrical audio transmission, analog • 'PACE-Bus' (RS485) data transmission • Audio output 0 dB (line volume) • Connection to control panel via CAT5 cable or above (max. 500 m) and RJ45 connector • Up to 5 call stations can be configured in a cascade 'daisy chain' • Adapter module PTO2008-A1 for connection to the control panel • Option to add up to three extension modules, each with 8 zone buttons • Addressable via 8-way SIP (Single Inline Package) switch in device • Insertable labels for custom button identification • Robust sheet steel housing
PTO2006-A1	'Call station extension (RS485, 8)'
	<ul style="list-style-type: none"> • Optional button extension for desk call station PT2009-A1 • Up to 3 button extensions possible for desk call station PT2009-A1, offering a total of 32 buttons • 8 configurable, illuminated zone buttons • Insertable labels for custom button identification

PTO2008-A1	'Call station interface (RS485)'
 <p>The image shows a green printed circuit board (PCB) adapter. It features a 1201500 component at the top, an RJ45 port in the center, and several green terminal blocks on the left and bottom. Labels include 'Callstation18-Adapt', 'UL0', 'X3', 'X4', 'R2', 'R1', 'LED1', and '1T 1F 1B'.</p>	<ul style="list-style-type: none"> • Adapter connecting 'PACE-Bus' (RS485) call stations to a control panel • Can be used for PT2003-A1 and PT2009-A1
PTO2009-A1	'Call station interface (redundant)'
 <p>The image shows a green PCB adapter with two RJ45 ports at the top, two yellow capacitors in the center, and multiple green terminal blocks at the bottom. Labels include 'Callstation18-Adapt', 'UL0', 'X3', 'X4', 'R2', 'R1', 'LED1', and '1T 1F 1B'.</p>	<ul style="list-style-type: none"> • Adapter connecting net-based 'PACE-Net' call stations to a control panel • Provides redundant 'PACE-Net' and 24 V connection • Monitors 'PACE-Net' and 24 V connection • Automatic switch to redundant pair in case of a connection fault • Can be used for PT2001-A1 and PT2002-A1
PT2006-A1	'Remote control panel'
 <p>The image shows a white, square-shaped remote control panel with a central LCD display and several buttons around it. It is designed for recessed installation.</p>	<ul style="list-style-type: none"> • Buttons and display for channel selection • Sound level settings • Connection of up to 16 remote control panels to the digital audio matrices possible via the RS485 interface • Supplied with installation frame • For installation in recessed box • 4-pin cables for RS485 interface and power supply




Operating and call stations

Type	PT1001-A1	PT1002-A1
		
Designation	System operating unit	System operating unit and call station
Order number	S54451-B202-A1	S54451-B203-A1
W x H x D mm	353.5 x 254 x 102.2	353.5 x 254 x 102.2
Weight	3272 g	3564 g
Features		
System state indicator	•	•
Acknowledgement of fault messages	•	•
Operation of alarming functions	•	•
Network		
'PACE-Net' (Ethernet)	–	–
'PACE-Bus' (RS485)	•	•
Max. cable lengths (copper)	Supplied with pre-assembled cables	

Type	PT1001-A1	PT1002-A1
Buttons and displays		
Number of configurable buttons	–	8
Buttons configurable for:		
- Announcements	–	•
- Control signals	–	•
Text display	–	–
Memory		
Micro SD card reader	–	–
Real-time recorder	–	–
Inputs and outputs		
Buzzer	•	•
Integrated speaker	–	•

- Included
- Not included

Call stations

Type	PT2001-A1	PT2008-A1*	PT2009-A1
			
Designation	Desk call station (19 buttons)	Desk call station (analog, 3+1)	Desk call station (RS485, 8+1)
Order number	S54451-B6-A1	S54451-B32-A1	S54451-B33-A1
W x H x D mm	220 x 55 x 220 (without microphone)	105 x 65 x 185 (without microphone)	
Weight	2.2 kg	1.1 kg	



Type	PT2001-A1	PT2008-A1*	PT2009-A1
Network			
'PACE-Net' (Ethernet)	● (2x)	–	–
'PACE-Bus' (RS485)	–	–	●
Direct I/O control connection	–	●	–
Max. cable lengths (copper)	100 m	150 m	500 m
Buttons and displays			
Number of configurable buttons	19	3	8
Buttons configurable for:			
- Announcements	●	●	●
- Control signals	●	–	–
Text display	●	–	–
Memory			
Micro-SD card reader	●	–	–
Real-time recorder	●	–	–
Inputs and outputs			
Integrated speaker	●	–	–
Additional audio outputs	1	–	–
Additional audio inputs	1	–	–
Digital control inputs and outputs	●	–	–
Analog control inputs	●	–	–

● Included

– Not included

* May only be used for standard applications and not for alarm applications





Fire brigade call stations

Type	PT2002-A1	PT2003-A1
		
Designation	Fire brigade call station (AT)	Fire brigade call station (485, AT)
Order number	S54451-B9-A1	S54451-B10-A1
W x H x D mm	200 x 300 x 157	200 x 300 x 157
Weight	4.5 kg	4.5 kg
Network		
'PACE-Net' (Ethernet)	• (2x)	–
'PACE-Bus' (RS485)	–	•
Max. cable lengths (copper)	100 m	500 m
Buttons and displays		
Number of configurable buttons	–	–
Buttons configurable for:		
- Announcements	•	•
- Control signals	•	•
Text display	–	–
Memory		
Micro-SD card reader	•	–
Real-time recorder	–	–


Type	PT2002-A1	PT2003-A1
Inputs and outputs		
Integrated speaker	●	–
Additional audio outputs	1	–
Additional audio inputs	1	–
Digital control inputs and outputs	–	–
Analog control inputs	–	–

- Included
- Not included

Call station extensions

Type	PTO2001-A1	PTO2002-A1	PTO2003-A1	PTO2006-A1
				
Designation	Desk call station extension (24 buttons)	Desk call station extension (Kaba)	Desk call station extension (Nordic)	Call station extension (RS485, 8)
Order number	S54451-B7-A1	S54451-B8-A1	S54451-B48-A1	S54451-B51-A1
W x H x D mm	220 x 55 x 220	95 x 55 x 220		105 x 65 x 185
Weight	1.9 kg	0.98 kg		1.0 kg
Properties				
Number of buttons	24	–		8
Key switch	–	●		–
Compatible with:				
PT2001-A1	●	●	●	–
PT2009-A1	–	–	–	●

- Compatible
- Not compatible

Type	PT2006-A1
	
Designation	Remote control panel
Order number	S54451-B13-A1
System state indicator	–
Acknowledgment of fault messages	–
Operation of alarming functions	–
Selection of audio source	•
Selection of default audio settings	•
Volume control	•
19"	–
Aluminum sheet for switch cabinet installation	–
Open frame design	–
Frame for recessed box installation	•

- Included
- Not included

Accessories

You will find information on suitable accessories in the data sheet with the document ID 'A6V11940275'.

Type	Designation	Order number
Operating terminals		
PT1001-A1	System operating unit	S54451-B202-A1
PT2006-A1	Remote control panel	S54451-B13-A1
Operating and call stations		
PT1002-A1	Operating and call station	S54451-B203-A1
Call stations		
PT2001-A1	Desk call stat. (19 buttons)	S54451-B6-A1
PT2008-A1	Desk call stat. (analog, 3+1)	S54451-B32-A1
PT2009-A1	Desk call stat. (RS485, 8+1)	S54451-B33-A1
Fire brigade call stations		
PT2002-A1	Fire brigade call stat. (AT)	S54451-B9-A1
PT2003-A1	Fire brig call stat (485, AT)	S54451-B10-A1
Microphone extensions		
PTO2001-A1	Desk call stat. ext.(24 btn)	S54451-B7-A1
PTO2002-A1	Desk call stat. ext. (Kaba)	S54451-B8-A1
PTO2003-A1	Desk call stat. ext.(Nordic)	S54451-B48-A1
PTO2006-A1	Call station ext. (RS485, 8)	S54451-B51-A1
Call station interfaces		
PTO2008-A1	Call stat. interface (RS485)	S54451-B58-A1
PTO2009-A1	Call stat interf (redundant)	S54451-B59-A1
Microphone		
PTO2004-A1	ITEC SPM-DM microphone DCS	S54451-B49-A1

You will find more information on the Cerberus PACE Compact system and its components in the following documents:

Title	Document ID
IT security policies	
Cerberus PACE Compact – IT security policies	A6V11439692
System documentation	
Cerberus PACE Compact – planning	A6V11899877
'PACE-Design' – configuration	A6V10429097
Cerberus PACE Compact – mounting / installation	A6V11899867
Cerberus PACE Compact – operation	A6V11899865
Data sheets	
System data sheet	A6V11868429
Voice alarm panel Compact 400	A6V11940263
Voice alarm panel Compact 1000	A6V11940268
Network components	A6V11940273
Operating and call stations	A6V11940274
Power supply and batteries	A6V11940272
Accessories and options	A6V11940275
Loop isolator (100V)	
Loop isolator (100V) - technical manual	A6V11571319
Environmental declaration	
Cerberus PACE – environmental declaration	A6V11948779
Cerberus PACE Compact – environmental declaration	A6V12161830

Download center

Related documents such as environmental declarations, CE declarations, etc., can be downloaded at the following Internet address:

<http://siemens.com/bt/download>

Safety


⚠ CAUTION
National safety regulations

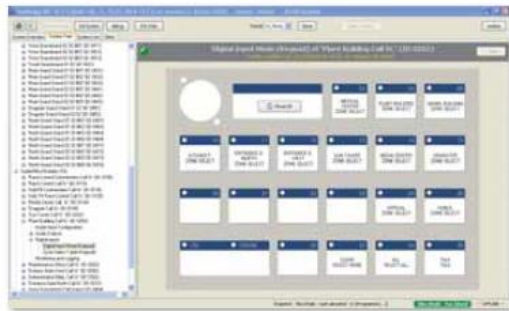
Failure to comply with national safety regulations may result in personal injury and property damage.

- Observe national provisions and comply with the appropriate safety regulations.

Configuration

'PACE-Design' is a Windows-based software used to configure and monitor the Cerberus PACE Compact system.

Large-scale systems become easier to operate because of its comprehensive monitoring and logging features. DSP and controller software can be updated from any point within the network.

Example PT2001-A1

System Tree Keypad Config Table

Different functions can be assigned to each switch, for example:

- Zone selection
- Talk switch
- All zones
- Gong
- Deleting
- Alarm messages
- Volume +/-, up/down, etc.

Disposal



The device is considered an electronic device for disposal in accordance with the European Guidelines and may not be disposed of as domestic garbage.

- Dispose of the device through channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

Environmental compatibility

The Environmental Product Declarations (EPDs) for 'Cerberus PACE VANSYS' and 'Cerberus PACE Compact VANSYS' contain data and information on the product's environmentally compatible design features and its ratings; for example, its RoHS conformity, composition, packaging, environmental benefits, and disposal information. You can obtain the documents A6V11948779/A6V12161830 via the following Internet address:

<https://siemens.com/bt/download>

Enter the document ID in the search field.

Guarantee

The application-specific technical data is guaranteed only in combination with 'Cerberus PACE' and 'Cerberus PACE Compact' Siemens products. If third-party products are used, any guarantee provided by Siemens will be invalidated.

Technical data**Operating and call stations**

	PT1001-A1	PT1002-A1
Supply		
Power supply	DC 24 V	
Current consumption	50 mA	100 mA
Interfaces		
Serial interfaces	'PACE-Bus' (RS485) (9600, 19200, 57600, 115200 baud)	
Adapter module	-	PTO2008-A1 supplied with PT1002-A1
Max. cable lengths (copper)	Supplied with pre-assembled cables	
Ambient conditions		
Operating temperature	-5...+40 °C	
Storage temperature	-20...+70 °C	
Operation in humid environments (without moisture condensation)	10...90 % rel.	
Storage in humid environments (without moisture condensation)	5...90 % rel.	
Dimensions and weights		
W x H x D mm	353.5 x 254 x 102.2	353.5 x 254 x 102.2
Weight	3272 g	3564 g
Protection category and color		
Protection category (IEC 60529)	IP30	
Color	Anthracite	
Standards	EN 54-16	EN 54-16

Call stations

	PT2001-A1	PT2002-A1	PT2003-A1
Supply			
Power supply	DC 24 V (18 V...32 V)		
Current consumption	260 mA		150 mA
Number of inputs / outputs			
Audio inputs 0 dB (external source)	1		–
Audio outputs 0 dB (to amplifier / external)	1		–
Analog control inputs 0...10 V	6 (plug-in terminal blocks)	–	–
Digital inputs	4 (Schmitt trigger inputs on plug-in terminal blocks)	–	–
Digital outputs	4 (Open collector outputs on plug-in terminal blocks)	–	–
Digital inputs			
Input voltage	Low <1.6 V / High >8 V	–	–
Max. permissible voltage	18 V	–	–
Input current at 10 V	~0.2 mA	–	–
Digital outputs			
Max. voltage	36 V	–	–
Max. current	200 mA per output / total 500 mA (total of all switched outputs)	–	–
Analog control inputs			
Voltage range	DC 0...10 V	–	–
Resolution	8 bits	–	–
Input current at 10 V	~0.2 mA	–	–
Interfaces			
Serial interfaces	RS232 (9600, 19200, 57600, 115200 baud)		PACE-Bus (RS485)
Ethernet connection 100Base-TX	2x RJ45		–
Adapter module	PTO2009-A1 for redundant 'PACE-Net' and 24 V		PTO2008-A1
Max. cable lengths (copper)	100 m		500 m

	PT2001-A1	PT2002-A1	PT2003-A1
Audio properties			
Frequency band	40 Hz...20 kHz / -1 dB		
Distortion factor	<0.0005 %		
Total dynamic range	103 dB		
Inputs:	Symmetrical; max. amplification freely selectable between - 20 dB...+60 dB		–
• Phantom voltage	+12 V; switchable	–	–
• Input impedance	6.6 kOhm		
Outputs:	Out1: Speaker, 1 W Out2: Symmetrical		–
• Max. output level (only for Out2)	+15 dB		–
• Output impedance (only for Out2)	300 Ohm		–
Ambient conditions			
Operating temperature	-5...+40 °C		
Storage temperature	-20...+70 °C		
Operation in humid environments (without moisture condensation)	10...90 % rel.		
Storage in humid environments (without moisture condensation)	5...90 % rel.		
Dimensions and weights			
W x H x D mm	220 x 55 x 220 (Housing without microphone)	200 x 300 x 157	
Weight	2.2 kg	4.5 kg	
Protection category and color			
Protection category (IEC 60529)	IP44		
Color	Light gray	Red	
Standards	EN 54-16	EN 54-16, ÖNORM F 3033	
Approval	–	ÖNORM F 3012	

	PT2008-A1	PT2009-A1
Supply		
Power supply	DC 10...12 V (via RJ45)	DC 24 V (via RJ45)
Current consumption	Max. 100 mA	Max. 50 mA
Number of inputs / outputs		
Audio outputs 0 dB (to amplifier / external)	1	
Interfaces		
Serial interfaces	–	RS485
Adapter module	Supplied with PT2008-A1	PTO2008-A1
Max. cable lengths (copper)	150 m	500 m
Ambient conditions		
Operating temperature	-5...+40 °C	
Storage temperature	-20...+70 °C	
Operation in humid environments (without moisture condensation)	10...90 % rel.	
Storage in humid environments (without moisture condensation)	5...90 % rel.	
Dimensions and weights		
W x H x D mm		
• Housing without microphone	105 x 65 x 185	
• Housing with microphone	105 x 330 x 185	
• Adapter for connection to control panel	45 x 42 x 68 mm	70 x 36 x 70 mm
Weight	1.1 kg	
Protection category and color		
Protection category IEC 60529	IP20	
Color	Light gray	
Standards	EN 54-16	

Call station extensions

	PTO2001-A1	PTO2002-A1	PTO2003-A1	PTO2006-A1
Power supply	DC 24 V (18 V...32 V)			
Number of buttons and key switches				
Buttons	24	–	–	8
Key switch (Kaba)	–	1	–	–
Key switch (nordic)	–	–	1	–
Ambient conditions				
Operating temperature	-5...+40 °C			
Storage temperature	-20...+70 °C			
Operation in humid environments (without moisture condensation)	10...90 % rel.			
Storage in humid environments (without moisture condensation)	5...90 % rel.			
Dimensions and weights				
W x H x D mm Housing	220 x 55 x 220	95 x 55 x 220		105 x 65 x 185
Weight	1.9 kg	0.98 kg		1.0 kg
Protection category and color				
Protection category (IEC 60529)	IP30			IP20
Color	Light gray			
Standards	EN 54-16			

Call station interfaces

	PTO2008-A1	PTO2009-A1
Power input DC 24 V		
Number	1	2
Cable connector	Plug-in terminal blocks	Plug-in terminal blocks
Power output DC 24 V		
Number	-	1
Cable connector	-	Plug-in terminal blocks
Analog audio input		
Number	1	-
Cable connector	Plug-in terminal blocks	-
Interface RS485 input		
Serial interface to matrix	1x RS485	-
Cable connector	Plug-in terminal blocks	-
Interface Ethernet input		
Interface to matrix	-	2
Cable connector	-	Plug-in terminal blocks
Interface Ethernet output		
Interface to matrix	-	2
Cable connector	-	RJ45
Combined inputs DC 24 V, audio input, audio output, RS485		
Number from previous PTO2008-A1	1	-
Cable connector	RJ45	-
Combined outputs DC 24 V, audio input, audio output, RS485		
Number to call stations	2	-
Cable connector	1x RJ45 1x plug-in terminal block	-
Number to next PTO2008-A1	1	-
Cable connector	RJ45	-
Fault relays for DC 24 V inputs		
Number	-	2
Relay contact	-	Max. 48 V/500 mA
Cable connector	-	Plug-in terminal blocks

	PTO2008-A1	PTO2009-A1
Fuse		
DC 24 V to call stations	1x 500 mA	-
Ambient conditions		
Operating temperature	-5...+40 °C	
Storage temperature	-20...+70 °C	
Operation in humid environments (without moisture condensation)	10...90 % rel.	
Storage in humid environments (without moisture condensation)	5...90 % rel.	
Housing type	Open frame design	
Mounting	DIN rail mounting (TS35)	
Dimensions and weights		
W x H x D mm	70 x 70 x 36	70 x 70 x 36
Weight	90 g	90 g
Standards	EN 54-16	

Microphone

	PTO2004-A1
Type	Dynamic microphone
Connection	XLR / M
Audio properties	
Directional characteristics	Supercardioid
Frequency band -6 dB	100...10000 Hz
Sensitivity	-56 dB V/PA (1.58 m V/PA) \pm 3dB; 1Pa = 94 dB SPL
Nominal impedance	500 Ohm
Ambient conditions	
Operating temperature	-10...+50 °C
Storage temperature	-20...+70 °C
Operation in humid environments (without moisture condensation)	10...90 % rel.
Storage in humid environments (without moisture condensation)	5...90 % rel.
Material	Metal
Dimensions and weights	
W x H x D mm	41 x 360 x 41
Weight	170 g
Protection category and color	
Protection category (IEC 60529)	IP30
Color	Black
Standards	EN 54-16

Issued by
Siemens Switzerland Ltd
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Global Headquarters
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www.siemens.com/buildingtechnologies

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Document ID A6V11940274_en--_b
Edition 2021-03-12