

Desigo™ PX

## Operator unit

For one automation station

## PXM10

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**Local operator unit for monitoring and operation of ONE PX compact or PX modular automation station**

- **High-grade display with adjustable contrast**
- **Easy operation with a push-dial, giving direct access to the required plant information**
- **Choice of generic view or "Favorites" view for operation and display of plant functions (alarm handling, time schedules, calendars, setpoint adjustments, display of measured values, etc.)**
- **System date and time setting**
- **Optimized for use in a fixed location**

## Application

The PXM10 operator unit is used for operation and monitoring of a Desigo PX automation station. The unit incorporates user-friendly "single-button" operation with a push-dial and a high-quality display panel. The operator unit can be installed in a control panel or mounted on a modular automation station.

The PXM10 is ideal for regular on-site work on the plant as an alternative to the PXM20. It is used with the PXC... modular and compact automation stations, and with the PXR... (suitable for a smaller number of room controllers).

## Functions

The PXM10 can be used for local operation of a Desigo PX automation station with the following views, which can be selected:

- The generic view for the "Basic" and "Standard" operating levels (default).
- Favorites view (needs to be engineered)
- Both generic and Favorites view.

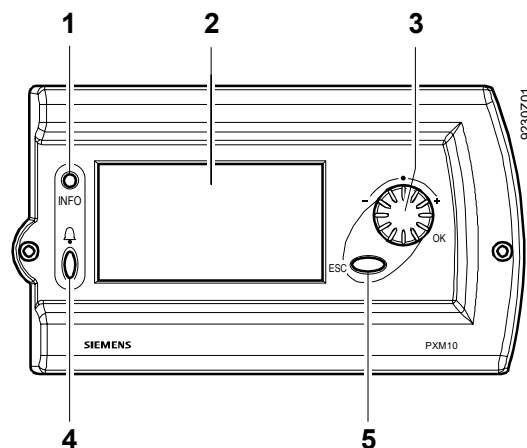
All the objects from these operating levels are mapped in the device. No user login is required. Inputs on the operator unit are transmitted to the automation station where they are processed and saved. The operator unit itself does not store any data. Information for the user is collated in the automation station and transmitted to the operator unit where it can be viewed in the display panel:

- Display of current values
- Setpoint and parameter settings
- Maintenance and error messages
- Alarm lists and display of individual alarms with acknowledge and reset options
- Programming of time schedules (7-day schedules and special periods)
- System date and time settings (primary server only)
- Plant switching

The PXM10 and PXM20 can be used in parallel for operation and monitoring of a PXC...-U automation station by plugging the PXM10 directly into the automation station and connecting the PXM20 to the HMI/tool socket via cable PXA-C1.

## User's guide

The functions of the PXM10 are described in detail in document CM110397.



## Indicators and operator controls

- |                |                                |
|----------------|--------------------------------|
| 1. Info button | 4. Alarm button with alarm LED |
| 2. Display     | 5. Esc button (reset button)   |
| 3. Push-dial   |                                |

## Operation and monitoring

The structure of the menu tree varies according to the application software. The push-dial is used for navigation.

## Alarms and events

If the PXM10 operator unit receives an alarm or an event, a pop-up window appears with the relevant information.

### Optical alarm

When an alarm is present, the alarm button also flashes. It changes to a steady light when all alarms have been acknowledged.

## The alarm list

Alarms are written to the alarm list in chronological order, with an alarm symbol, object name or notification text, and the date and time. Alarms can be acknowledged in the list. After acknowledgement, the alarm entry disappears from the alarm list. In the case of an extended alarm, the alarm must first be acknowledged and then reset.

## Time schedule

The time schedule allows the user to program time-dependent switch-on and switch-off and time-dependent setpoint adjustments.

The time schedule consists of a 7-day schedule and an exception period.

Tagesprofil	Sonderperiode
Montag	Neue Eingabe
Dienstag	Sonstige
Mittwoch	19.04.04 Montag
Donnerstag	

The profile for a day or an exception period is easy to set, modify or delete, using the push-dial on the unit.

For the exception period, the exceptions are also created, modified and deleted with the push-dial. It is possible to define exception days (e.g. a bank holiday) as well as exception periods (e.g. holiday periods).

Click the "Exceptions" field to display a list of all the programmed exceptions.



### Important!

The system data and time can be modified via the "Settings" menu (in the primary server only, and not the backup server).

## Info concept

Pressing the Info button causes the unit to switch to "Info mode" in which two types of information are available:

- Pressing the Info key a second time results in a display of general information about the currently displayed object (e.g. complete path, plain text for the object).
- Pressing a direct access key in Info mode displays information about the object or value on the associated line.

The user can exit from **Info** mode by pressing any key.

## Access protection

PXM10 does not incorporate access protection.

## Language

The language used for operation of the PXM10 is determined at the project engineering stage.

The software text (firmware) is originally in English and it may be necessary to translate it into the required language in the firmware library and load it in accordance with the instructions into the automation station using Desigo TOOLSET.

## Ordering

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### 1 PXM10 operator unit

## Mechanical design

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- Housing
- Printed circuit board with indicators and operator controls (see page 2)

The connections for the automation stations are incorporated at the bottom and on the back of the unit (see page 6).

## Accessories

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Description	Type
Connection cable, length 3.0 m (order separately)	PXA-C1
Mounting frame for mounting on the wall or on the control panel door (order separately)	PXA-H1

## Mounting instructions

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The PXM10 unit is suitable for mounting in control panel fronts or vertical panels (e.g. remote operating panels or similar units) The unit is also suitable for DIN rail snap-mounting. In addition, the PXM10 can be mounted direct on any modular automation station.

### Commissioning note

The preferred view for operation can be selected via the "Settings" menu, as required in accordance with the plant data.

If the PXM10 connection is interrupted briefly, it may take up to 15 seconds for the polling cycle to resettle. The display can be re-enabled by operating any of the operator controls.



**Important!**

The following is a list of the software blocks supported by the PXM10 operator unit. This is of particular importance when creating "Favorites" for operation with PXM10. Favorites are determined by the engineers when creating the software for the plant. They **cannot** be defined by the end user.

The list of all the possible objects is derived from:  
BACnet objects and properties; documentation for experts, document CM110506

**Objects supported by PXM10:**

- Analog Input
- Analog Output
- Analog Value <sup>1)</sup>
- Analog Value <sup>2)</sup>
- Analog Value <sup>3)</sup>
- Binary Input
- Binary Output
- Binary Value <sup>1)</sup>
- Binary Value <sup>2)</sup>
- Binary Value <sup>3)</sup>
- Multi-state Input
- Multi-state Output
- Multi-state Value <sup>1)</sup>
- Multi-state Value <sup>2)</sup>
- Multi-state Value <sup>3)</sup>
- Calendar
- Schedule
- Integer Value <sup>3)</sup>
- Unsigned Value <sup>3)</sup>
- Duration Value <sup>3)</sup>
- Date Time Value <sup>3)</sup>
- String Value <sup>3)</sup>
- Hierarchy <sup>4)</sup>
- Block <sup>4)</sup>
- Favorite Object <sup>4)</sup>

- 1) Function block
- 2) Function block with reduced functionality (simple-value objects)
- 3) Interface variable
- 4) Not displayed directly, but required for navigation purposes

**Objects NOT supported by PXM10:**

- |                    |                        |
|--------------------|------------------------|
| Command            | Life Safety Zone       |
| Device             | Text Group             |
| Event-Enrollment   | Access Control Profile |
| File               | Discipline IOs         |
| Group              | Mapping Table          |
| Loop               | Modem Setting          |
| Notification Class | Group Object           |
| Program            | Pulse Converter        |
| Averaging          | Alarm Collection       |
| Trendlog           |                        |
| Life Safety Point  |                        |

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**Disposal**



The devices are considered electronics devices for disposal in term of European Directive 2012/19/EU and may not be disposed of as domestic waste.

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

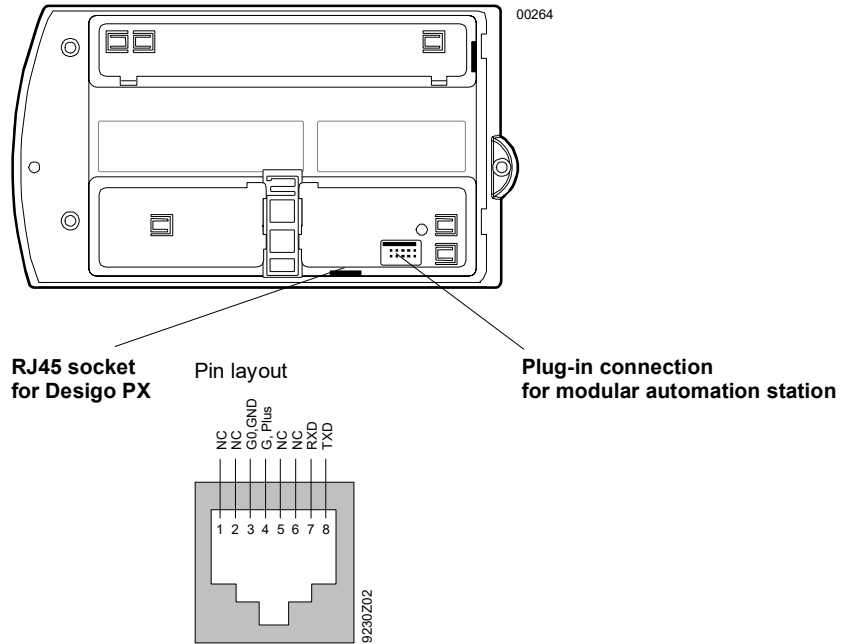
## Technical data

General device data	Operating voltage	AC 24 V $\pm$ 20 % or DC min. 12 V ... max. 40 V
	Safety extra-low voltage SELV	
	Extra-low voltage PELV	HD 384
	Frequency	50/60 Hz
	Power consumption	AC 24 V Max. 1 VA DC 12 ... 40 V Max. 0.7 W
Display	Internal fuse	Thermal, self-resetting
	Mechanical	
	LCD display	STN Yellow Transflective
	Display area	82 x 42 mm
	No. of dots	128 x 64 dots
	Optical	
	Contrast ratio	11:1
Viewing angle	$\pm$ 29°	
Viewing direction	12 o'clock	
Background lighting	LED (Yellow-Green)	
RS232 interface	Data bits	8
	Parity	None
	Stop bits	1
	Baud rate	38.4 kbps
	Protocol	Software handshake
Maximum distance (cable length) between automation station and PXM10		3 m
Mounting options	– –	For control panel mounting, remote operating panels, etc.
	– –	DIN rail mounting
	– –	Direct on PXC...-U modular automation stations
	–	Mounting instructions are supplied with the device.
Connections	<i>See page 7 for details</i>	
	Bottom of housing	RJ45
	Rear of housing	Plug-in connection
Housing protection	Protection standard to EN 60529	IP 40 (built-in) / IP30
Protection class	Protection class	III to EN 60730-1
Ambient conditions	Normal operation	Class 3K5 to IEC 721
	Temperature	0 ... 50°C
	Humidity	< 75 % rh
	Transport and storage	Class 2K3 to IEC 721
	Temperature	– 25 ... 80 °C <sup>1)</sup>
	Humidity	< 75 % rh
Standards and guidelines	Product standard	EN 60730-1 Automatic electrical controls for household and similar use
	Product family standard	EN 50491-3 General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS)
	EU Conformity (CE)	CM1T9230xx *)
	UL approbation	UL 916

Environmental compatibility	The product environmental declaration CM1E9230en_01 <sup>1)</sup> contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).	
Dimensions	Weight (including packaging)	0.350 kg
	117 x 210 x 37 mm (H x W x D)	See "Dimensions", page 7
	Weight (including packaging)	0.350 kg

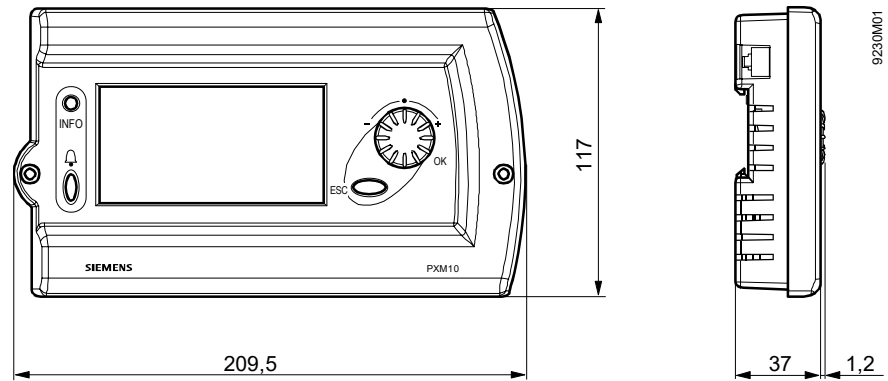
- 1) The background color of the display may, temporarily, change slightly, depending on the ambient temperature.
- \*) The documents can be downloaded from <http://siemens.com/bt/download>.

## Connections



## Dimensions

All dimensions in mm



Drilling and  
cutout template

