

## Flush-mounted sensors and room operator units for KNX PL-Link

QMX3.P35H..., QMX3.P38H...



### Communicating sensors, switches and room operator units with KNX PL-Link (for Desigo™ Room Automation)

Functions (depending on type)

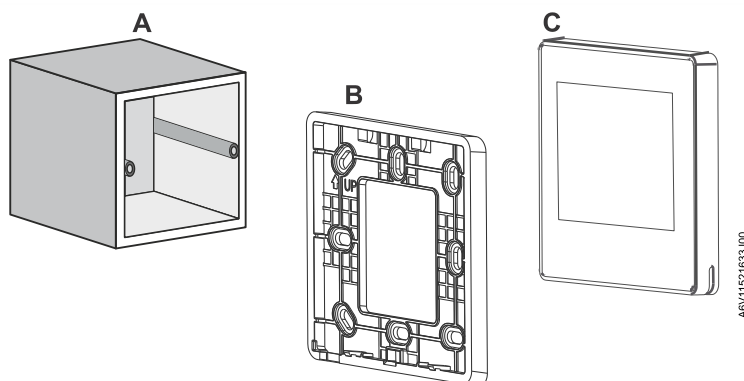
- 160 x 128 pixel touch screen
- Energy efficiency function ("Green Leaf")
- Built-in room temperature sensor
- LCD display for room temperature, CO<sub>2</sub>, humidity, PM2.5, operating mode etc.
- User interface for lighting, blinds and scene control (QMX3.P38H)
- KNX PL-Link (plug & play)
- Powered over KNX PL-Link
- Sound buzzer
- White or black housing

## Use / compatibility

The room automation station determines the functions of both LCD display and touch screen.

- Measure and indicate the room temperature
- Display humidity, PM2.5, and CO<sub>2</sub>
- Operate room functions
- Indicate external information (outdoor temperature, outdoor humidity)

## Mechanical design



- The devices are designed for a common conduit box (A).
  - Conduit box: Keep in mind the dimensions of the conduit box!
- The base plate (B) has screw holes for all common conduit boxes (A). The screw head height must not exceed 3 mm.
- The device (C) incorporates a KNX PL-Link plug, a tool plug, sensor element and LCD touch panel. The cable can be hidden into conduit box.
- A KNX plug is enclosed with the devices.

## Type summary

Product no.	Stock no.	Color type	Suitable for
QMX3.P35H	S55624-H137	White, RAL9003	Square conduit box <sup>1)</sup>
QMX3.P35H-BSC	S55624-H139	Black, Pantone Black C	Square conduit box <sup>1)</sup>
QMX3.P38H	S55624-H138	White, RAL9003	Square conduit box <sup>1)</sup>
QMX3.P38H-BSC	S55624-H140	Black, Pantone Black C	Square conduit box <sup>1)</sup>


<sup>1)</sup> Conduit boxes are not included and must be ordered separately.

## Product documentation

Title	Document ID
Mounting instruction	A6V11521631
Mounting and installation PXC3.., DXR2..	A6V10361918
CE declaration	A6V11579510
RCM declaration	A6V11579512
Environmental product declaration	A5W90009021

Related documents such as environmental declarations, CE declarations, etc., can be downloaded at the following Internet address: <http://siemens.com/bt/download>

## Security

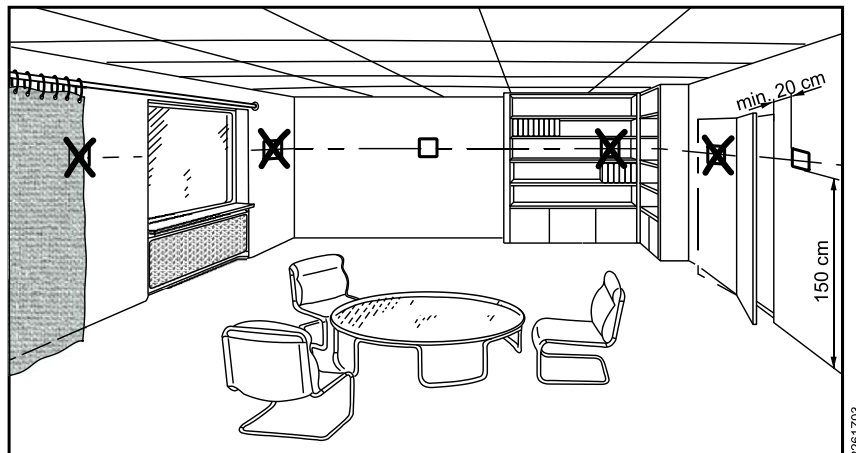
	<p><b>⚠ CAUTION</b></p>
	<p><b>National safety regulations</b></p> <p>Failure to comply with national safety regulations may result in personal injury and property damage.</p> <ul style="list-style-type: none"> <li>Observe national provisions and comply with the appropriate safety regulations.</li> </ul>

## Engineering

- The room operator units offer plug & play functionality.
- The room operator units receive power from the connected room automation station via the KNX PL-Link interface.
- KNX PL-Link supports plug & play functionality for pre-configured devices
- For KNX PL-Link wiring (topology, allowed cables and cable length), see the Desigo installation guide, CM111043.
- Only electrical installers may install the base plate and the KNX PL-Link plug.
- Use the tear-off label with the barcode on the packaging / display and stick it on the floor plan to prepare commissioning for several room operator units per room automation station.  
The same barcode label with unique identifier is available on the device.

## Mounting and installation

### Mounting



- The devices are suitable for wall and flush mounting with conduit box.
- Recommended height: 1.50 m above floor.
- Do not mount the devices in recesses, shelves, behind curtains or doors, or above or near heat sources.
- Avoid direct solar radiation and drafts.
- Seal the conduit box or the installation tube, as air currents can affect sensor readings.
- Adhere to allowed ambient conditions.
- Mounting instruction A6V11521631 is enclosed with the devices.

### Installation

- For KNX PL-Link wiring (topology, allowed cables and cable length), see the Desigo TRA installation guide, A6V10361918.
- Use the correct cables for the KNX PL-Link bus

- Do not interchange the wires of the KNX PL-Link cable.
  - The red terminal is for KNX PL-Link +
  - The gray terminal is for KNX PL-Link –
- Observe all local installation regulations.

**CAUTION!** The devices are not protected against accidental connection to AC 230 V.

## Operation

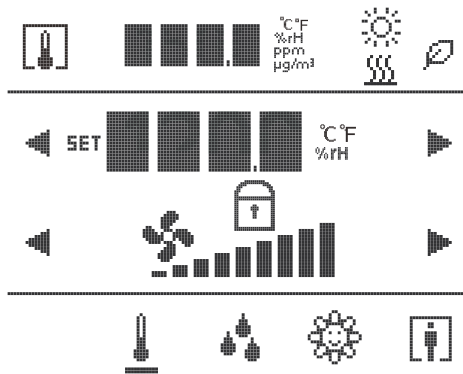
### Operational setting

<b>!</b>	<b>NOTICE</b>
	Operation and display of the room operator unit depend on the control program of the room automation station.

Main page displaying HVAC functions for all types (QMX3.P35H..., QMX3.P38H...)



## Example

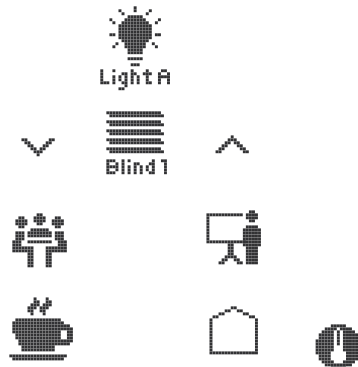


Icon	Description
	Inside and outside temperature
	Temperature display in °C or °F, humidity display in % r.h., CO <sub>2</sub> display in ppm, PM2.5 display in ug/m <sup>3</sup>
	Operating mode: Comfort, Pre-comfort, Economy, Protection
	Heating/Cooling
	Green leaf
	An arrow indicates that an element can be operated
	Display of the relative or absolute setpoint for temperature, humidity
	Indicates that the room operator unit is locked by the system
	Fan speed: Fan AUTO, Fan OFF, Fan 1, Fan 2, Fan 3
	Navigation: Toggle the display / setpoint setting between temperature / humidity / CO <sub>2</sub> / PM2.5. The black bar points to the displayed information.
	Occupancy state
	Programming mode
	Connection test
	Reset device to factory setting







Main page displaying lighting, blinds and scenes (QMX3.P38H, QMX3.P38H-BSC)



Example





Icon	Description
	Control lights: Light A, Light B, Light C, Light D
	Control blinds: Blind 1, Blind 2, Blind 3, Blind 4
	Meeting
	Presentation
	Break
	Occupied/Unoccupied
	Cleaning
	Do not disturb
	Amusement

Icon	Description
	Service
	Sleep
	Brighter
	Softer
	Change the blinds angle
	HVAC operation, identical with QMX3.P35H (touch this icon to go to the HVAC home page)

### Manual commissioning (KNX PL-Link)

All commissioning work is done via the room automation station, using SSA-DNT or ABT. ABT is never connected directly to a room operator unit.

When more than one QMX3.P... room operator unit is on the same trunk of the KNX PL-Link bus, manual commissioning is as follows:

1. Connect SSA-DNT or ABT to the room automation station and activate the online commissioning function.
2. Load web page "KNX PL-Link identification".  
Activate the identification function.  
The room automation station now waits for a signal from the room operator unit.
3. On the room operator unit, enter Engineering mode:
  - For unconfigured units, press the blank space on the bottom right corner for at least 5 seconds;
  - For QMX3.P35H..., press  for at least 5 seconds;
  - For QMX3.P38H..., press  for at least 5 seconds
4. The "Engineering" page is displayed.

 Program      Off

 Con\_test


 Reset device



5. Press "Program".  
The display changes from "Off" to "On".  
The tool identifies the current room operator unit that is operated and assigns an address.
6. After the device is commissioned, the display automatically changes to "Off".

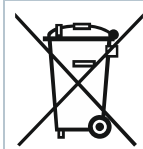
## Maintenance

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	<b>NOTICE</b>
	The device can be cleaned with off-the shelf, solvent-free cleaning agents. Do not use mechanical aids (rough sponge or similar materials) – only a soft, damp cloth.

## Disposal

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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.



## Warranty

Technical data on specific applications are valid only together with Siemens products. Siemens rejects any and all warranties in the event that third-party products are used.



Power supply		
Operating voltage	KNX / PL-Link DC 21...30 V <sup>1)</sup>	
Power consumption (room automation station)	QMX3.P35H	Max. 15 mA at DC 24 V
	QMX3.P35H-BSC	Max. 15 mA at DC 24 V
	QMX3.P38H	Max. 15 mA at DC 24 V
	QMX3.P38H-BSC	Max. 15 mA at DC 24 V

<sup>1)</sup> The device receives power from the connected room automation station via the KNX / PL-Link interface.

Operating data	
Temperature sensor (all types)	
Measuring element	NTC resistance sensor
Measuring range	0...50 °C
Measuring accuracy(5...30 °C)	< 0.8 K
Measuring accuracy (25 °C)	< 0.5 K

Display	
Type	LCD touch screen
Information displayed depends on the application in the room automation station.	<ul style="list-style-type: none"> <li>• Room temperature, humidity, CO<sub>2</sub>, PM2.5</li> <li>• Outdoor temperature, humidity</li> <li>• Setpoint adjustment</li> <li>• Operating mode</li> <li>• Auto or manually selected fan speed</li> <li>• Occupancy/Vacancy</li> <li>• Scenes</li> </ul>

Ports/interface	
Type of port between room automation station and operator unit	KNX/PL-Link
Baud rate	19.2 kbps
Standard KNX plug	Wire diameter 0.8 mm, max. 1.0 mm (solid conductors only)
Cable type	Solid conductors 2-core, twisted pair
Single cable length (from room automation station to room operator unit)	< 1000 m
Cables must comply with KNX specifications, see TRA Install. manual, A6V10361918 *)	

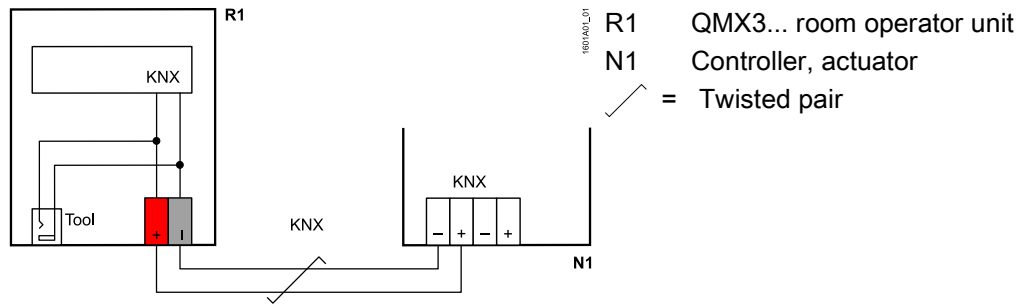
\*) The document can be downloaded from <http://siemens.com/bt/download>.

Ambient conditions and protection classification	
Protection standard as per EN 60529	IP30
Insulation protection class	III
Climatic ambient conditions <ul style="list-style-type: none"> <li>• Storage as per EN 60721-3-1</li> <li>• Transport (packaged for transport) as per EN 60721-3-2</li> <li>• Operation as per EN 60721-3-3</li> </ul>	<ul style="list-style-type: none"> <li>• Class 1K3 Temperature: -5...45 °C Humidity: 5...95 % r.h.</li> <li>• Class 2K3 Temperature: -25...70 °C Humidity: 5...95 % r.h.</li> <li>• Class 3K5 Temperature: -5...45 °C Humidity: 5...95 % r.h.</li> </ul>
Mechanical ambient conditions Storage as per EN 60721-3-1 Transport as per EN 60721-3-2 Operation as per EN 60721-3-3	Class 1M2 Class 2M2 Class 3M2

Standards, directives and approvals	
EU conformity (CE)	A6V11579510
RCM conformity	A6V11579512
REACH	Regulation (EC) No 1907/2006 Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
Environmental compatibility	The product environmental declaration (A5W90009021) contains data on environmentally compatible product design and assessments (RoHS compliance, China RoHS compliance, materials composition, packaging, environmental benefit, disposal).

General	
Color type (front housing)	
QMX3.Pxx	White, RAL9003
QMX3.Pxx-BSC	Black, Pantone Black C
Weight with package	
QMX3.P35H	163 g
QMX3.P35H-BSC	
QMX3.P38H	
QMX3.P38H-BSC	

Connection diagrams



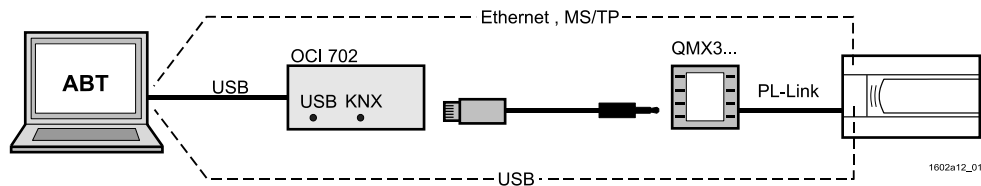
KNX / PL-Link plug

- + Red KNX PL-Link (positive)
- Gray KNX PL-Link (negative)

**NOTICE**

- Wires are NOT interchangeable. The device is protected against faulty wiring, and communications do not work on interchanged wires.
- Do not connect the KNX / KNX PL-Link bus to the tool plug, only the tool.

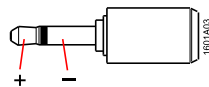
Connect the tool



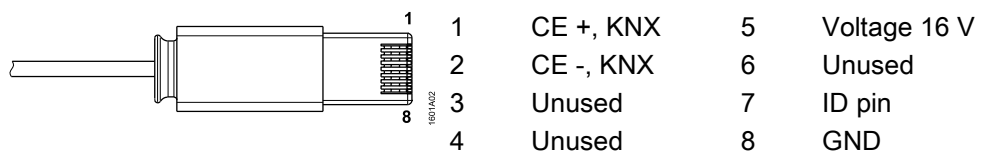
Connect ABT to load the application in the room automation station, or for service purposes:

- Directly to the room automation station.
- To the room unit using the tool cable and the OCI702 service interface (see data sheet A6V10438951).

Tool plug (2.5 mm jack)

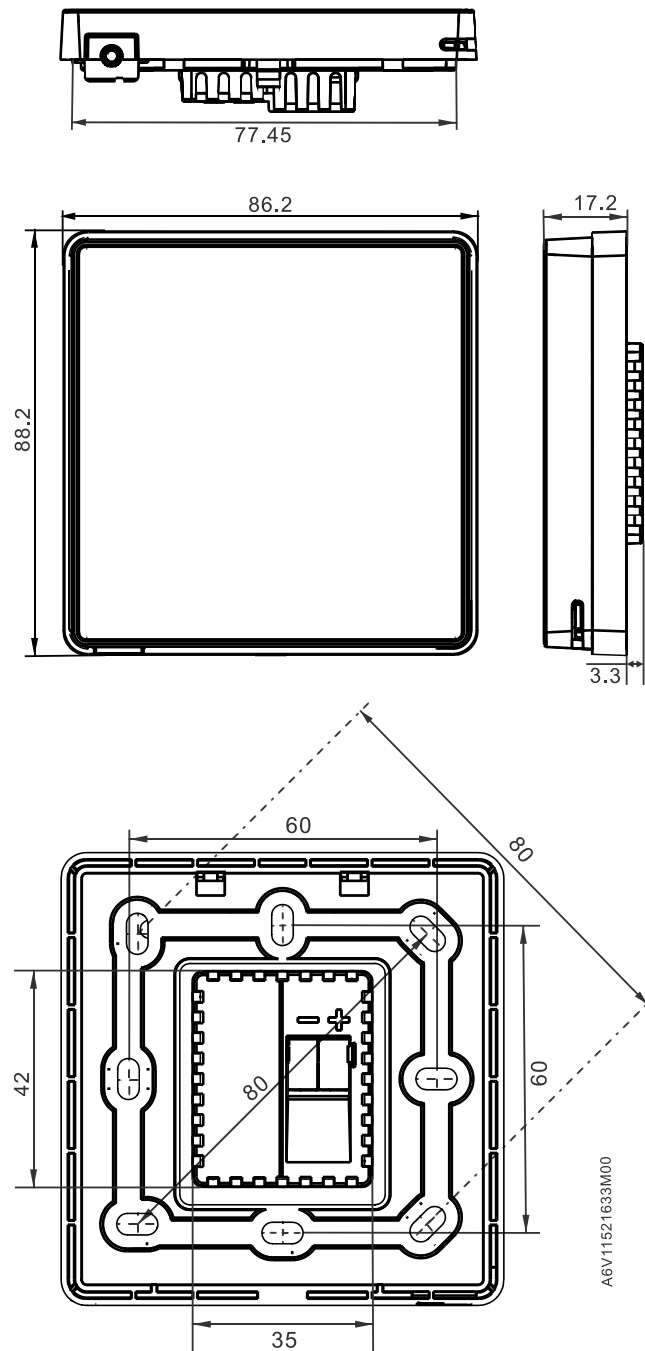


RJ45 plug of the tool cable



## Dimensions

Dimensions in mm



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