

> TOUCHPOINT ONE

Roombus



With the Touchpoint One, users of a room can set and display the living climate.

Characteristics

- control functions for:
 - temperature
 - ventilation
 - lighting
 - sun blind
- customisable control functions
- 2 digital inputs
- variants: Touchpoint One and Touchpoint One CO₂
- available with black or white display
- the language-independent display can be read clearly in various lighting conditions
- mounting directly on a wall or in a standard flush-fit box
- immediately ready for use in a Roombus configuration

Touchpoint One specifications

General		
Article description	Touchpoint One (incl. mounting bracket, 7-pin screw connector and 10x3 mm locking screw)	Touchpoint One CO ₂ (incl. mounting bracket, 7-pin screw connector and 10x3 mm locking screw)
Article number	400301 (black) 400302 (white)	400303 (black) 400304 (white)
Dimensions (W x H x D)	131 x 89 x 22 mm (5.2 x 3.5 x 0.9 inch)	131 x 89 x 30 mm (5.2 x 3.5 x 1.2 inch)
Weight (incl. mounting bracket)	175 g	175 g
Assembly	<ul style="list-style-type: none"> • on the wall • in standard flush-fit box 	

Customisable control functions

With the Priva engineering software, the control functions can be customised to suit the room and the connected equipment. In this way, a control unit can be configured for each room or zone with the functions required for that specific room or zone.

Variants: Touchpoint One and Touchpoint One CO₂

The Touchpoint One is available in two variants: Touchpoint One and Touchpoint One CO₂. The Touchpoint One CO₂ also measures the CO₂ level in the room. With an additional software licence, the Touchpoint One (CO₂) can also measure relative air humidity.

The language-independent display can be read clearly in various lighting conditions

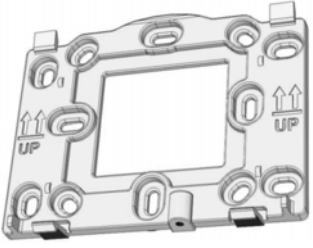
The use of universal icons instead of text means that the Touchpoint One is language-independent.

The display can be read clearly in various lighting conditions. The brightness of the display depends on the light intensity of the room: the lighter the room, the brighter the display.

The Touchpoint One has a built-in proximity sensor. The Touchpoint One can then switch on automatically if anyone approaches the Touchpoint One (depending on configuration).

Immediately ready for use in a Roombus configuration

Via the Roombus interface, the device can be immediately included in a Roombus configuration with a Comforte CX2 or Comforte CX2 VAV.

Accessories	
Article	Article number
Mounting bracket (79.5 x 96.6 x 12.6 mm) (supplied)	400390
	
7-pin screw connectors (set of 25) (1 supplied)	400391

Electrical		
Input voltage	12 ... 26.4 VDC	
Supply current at 16 VDC (power supply of the Comforte)	93 mA	200 mA
Supply current at 24 VDC (power supply of the Roombus power supply)	63 mA	120 mA

Measurements	
Temperature	
Measurement range	0 ... 40°C (32 ... 104°F)
Accuracy ¹	± 0.5°C
Resolution	0.1°C
Measurement interval	1 s (average over 20 s)
Relative humidity (if licensed)	
Measurement range	0 ... 100% relative humidity
Accuracy (nominal, T = 15 ...35 °C)	± 5% (10% ≤ RH ≤ 60%)
Resolution	0.1%
Measurement interval	1 s
Long-term drift	± 0.25%/year
Proximity	
Range	approx. 25 cm
Detection angle	± 10°
CO₂ (for Touchpoint One CO ₂)	
Measurement range	200 ... 2500 ppm
Accuracy ²	± (30 ppm + 5% of the measurement)
Resolution	1 ppm
Measurement interval	30 s
Air pressure dependency	+ 1.6% per kPa compared to standard air pressure (101.3 kPa).

¹ On account of automatic calibration, the accuracy only applies after the Touchpoint One has been operational for a minimum of 3 hours.

² On account of automatic calibration, the accuracy only applies after the Touchpoint One has been operational for a minimum of 3 weeks.

Digital inputs	
Number	2
Maximum cable length	3 m
Type of connector	screw terminals
Usage	voltage-free contact to GND
Internal pull-up resistance	10 kOhm
Nominal voltage on input without load	3.5 VDC
Minimum high input voltage with open contact	2.6 VDC
Maximum low input voltage with closed contact	0.8 VDC
Minimum resistance with open contact	30 kOhm
Maximum resistance with closed contact	3 kOhm
Nominal sampling time	80 ms
Protected against overvoltage	-30 ... +30 VDC



Display and operation	
Display	touchscreen with language-independent icons
Operation	via icons (function configurable)
Number of icons (configurable)	6
Display of values	7-segment LED
Colour of icons and values	bright white

Connections	
Type of connector	7-pin plug and screw connector (power supply, Roombus and digital inputs) 1
Cable type	twisted pair, shielded or unshielded
Communication interface	RS-485
Communication protocol	Modbus RTU
Transmission speeds (adjustable with DIP switch)	9600, 19200, 57600 or 115200 baud default setting: 115200 baud
Bus load	< 1/4 Unit Load
Other parameters	number of data bits: 8 parity: none, even, odd (adjustable with DIP switch, default setting: even) number of stop bits: 1 stop bit for even/odd parity, 2 stop bits for no parity (default setting: 1 stop bit)
RS-485 port protection	protected against overvoltage -30 ...30 VDC
Cross section	0.08 – 1.5 mm ² (without ferrule connector) 0.08 – 0.5 mm ² (with ferrule connector)
Strip length / connector length	6 mm

¹ a set of 25 connectors is available under article number 400391

Housing	
Material	base: ABS front: PMMA
IP code	IP30 (IEC 60529)
Flammability class (UL 94)	HB
Recycle code	7
Colour of base	signal white (RAL 9003)
Colour of front	400301 and 400303: graphite black (RAL 9005) 400302 and 400304: signal white (RAL 9003)

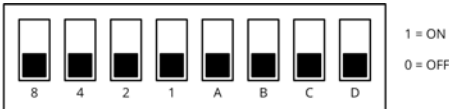
Environment	
Permissible ambient temperature during use	0 ... 40°C (32 ... 104°F)
Permitted temperature during transport and storage	-20 ... 70°C (-4 ... 158°F)
Permissible ambient relative humidity	10% ... 95% at 40°C (non-condensing)
Degree of pollution	2
Installation category	II
External connections	External connections (power supply, RS-485 and digital inputs) must meet the requirements of an ES1 circuit in accordance with EN-62368-1:2014 + C1:2015 + A11:2017 + C12:2017

Regulations and standards	
Europe	 <ul style="list-style-type: none"> Low Voltage Directive (2014/35/EU): <ul style="list-style-type: none"> EN 62368-1 (audio/video, information and communication technology equipment) EMC Directive 2014/30/EU: <ul style="list-style-type: none"> EN 61000-6-1 (generic immunity standard) EN 61000-6-3 (generic emission standard) RoHS directive 2011/65/EU
	 <p>in compliance with WEEE directive 2012/19/EU</p>

Addressing


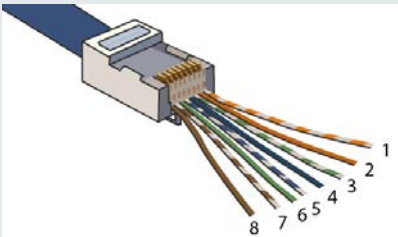
Addressing	
Structure of address	fixed address offset + adjustable address section
Fixed address offset	128
Adjustable address section	0 - 15
Available address range	128 - 143

DIP-switches



Label	Description	Example
8	device address (bit 3, MS-bit)	8 - 4 - 2 - 1
4	device address (bit 2)	address offset + 0 - 0 - 0 - 0 = 128 (default setting)
2	device address (bit 1)	address offset + 0 - 0 - 0 - 1 = 129
1	device address (bit 0, LS-bit)	address offset + 0 - 1 - 0 - 1 = 133 address offset + 1 - 1 - 1 - 1 = 143
A	baud rate (bit 1)	A - B
B	baud rate (bit 0)	0 - 0 = 115200 baud (default setting) 0 - 1 = 57600 baud 1 - 0 = 19200 baud 1 - 1 = 9600 baud
C	parity (bit 1)	C - D
D	parity (bit 0)	0 - 0 = even (default setting) 0 - 1 = odd 1 - 0 = none 1 - 1 = none









Connection specifications





Description	Touchpoint One connector	Roombus connector
	Plug-in screw connector 	RJ45 connector 
+ of power supply	V+	pin 1 (orange/white)
GND of power supply and RS485	0	pin 2 (orange)
RS485-A	A	pin 3 (green/white)
RS485-B	B	pin 6 (green)
GND for digital inputs	0	N/A
digital input 1	D1	N/A
digital input 2	D2	N/A

Screen icons Touchpoint One (CO₂)



Screen with all possible icons

Icon	Meaning
	Sustainability indicator (ECO) This icon appears if the current settings mean that the system is being used sustainably. This is the case if the fan has been set to <i>Automatic</i> and the desired temperature is no more than 1 degree above or below the default temperature. The system then does not need to heat or cool too much. If the system does not have active cooling or heating, the sustainability indicator is also displayed in the event of a difference of more than 1 degree. In that case, no energy is being used for cooling or heating.
	Air quality indication (based on CO ₂ measurement)
	Measured value or set value
	Temperature goes up (heating is on or will go on) This icon appears if the user sets a desired temperature that is higher than the measured temperature or the default temperature and the room will therefore heat up.
	Temperature goes down (cooling is on or will go on) This icon appears if the user sets a desired temperature that is lower than the measured temperature or the default temperature and the room will therefore cool down.
	Relative air humidity is displayed
Function keys	
 and 	<ul style="list-style-type: none"> Switch between display of temperature, relative air humidity and CO₂ value (if present) Increase or decrease the desired temperature, fan position or light intensity of lighting Sun blind up or down Open/closed tilting of slats (firmware version 9 or higher required)

Icon	Meaning
	Set the desired temperature Depending on the configuration in TC Engineer, the desired temperature or the temperature difference compared to the set default temperature will be set. The default temperature is a comfortable temperature that has been defined in the building design.
	Set the fan position If the user sets a desired temperature that is higher or lower than the measured temperature, the fan always switches to <i>Automatic</i> . Even if the fan had been set to <i>Off</i> .
	Operate the sun blind (max. 2 groups)
	Operate the lighting (max. 2 groups)

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