

Embedded Systems SIA, VAT No LV40003411103

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CANx 10 x Push-button inputs / 1 x PT1000 sensor input / Thermostat, flush-mounted

Flush mounted 10 binary inputs / LED control with temperature sensor and thermostat is simply mounted on the backside of the conventional switch and makes it as a canX sensor. In total 10 push buttons can be connected to one device. It acts also like a normal thermostat by having temperature sensor on-board. Each port of the device can be used as output for LED control. Further, the device has PT1000 sensor input.

ENG - Data sheet

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Application

Lighting, HVAC applications

Types of product

CANx 10 x Push-button inputs / 1 x PT1000 sensor input, flush-mounted CAN-UI10

Standards and norms compliance

EMC: EN61000-6-1
EN61000-6-3
PCT Certificate

Technical data:

Power supply:	12 - 32V DC	
Power consumption:	11 mA	Input mode
Interface:	Binary inputs or outputs	10
	Voltage if used as output	5V
	Current if used as output	5mA (enough for regular LED)
	Temperature sensor	1

	PT1000 input	1
Clamps:	CAN FT	CAN FT Connection Terminal 0.8mm ²
	Inputs/Outputs	Sharp ZH 1.5mm connector (6pin cables included)
	Power supply	Connection Terminal 0.8mm ²
Operating elements	1 – programming LED 1 – programming button	
Enclosure:	Material:	Polyamide
	Color:	White
	Dimensions:	52(W)x48(H)x15(L) mm
Usage temperature:	-5C ... +55C	
Storage temperature:	-20C ... +70C	
Weight:	100g	
Warranty:	2 years	



Caution Security advice

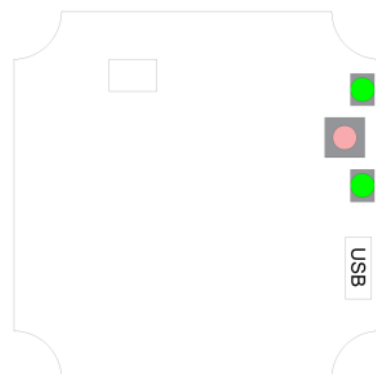
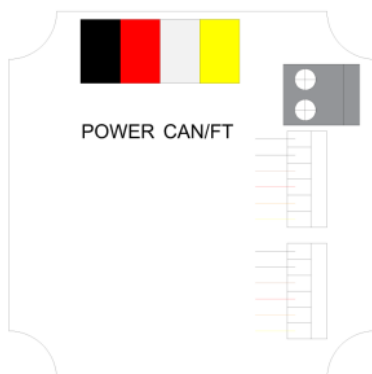
The installation and assembly of electrical equipment may only be performed by skilled electrician. The devices must not be used in any relation with equipment that supports, directly or indirectly, human health or life or with application that can result danger of people, animals or real value

Mounting advice

The devices are supplied in operational status. The cables connections included can be clamped to the housing if required.

Electrical connection

The devices are constructed for the operation of protective low voltage (SELV). Grounding of device not needed. When switching the power supply on or off, power surges must be avoided.



Default settings

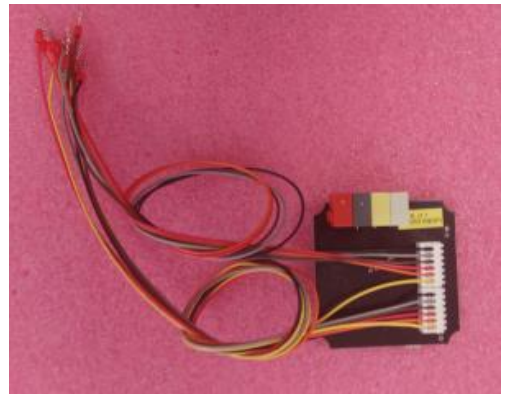
Line ID: 0

Node ID: 1

Max. number of group addresses per object : 16

Reset to defaults

Press programming button for 5 seconds, the RED LED blinks 2 times, then release button - GREEN lights up shortly.

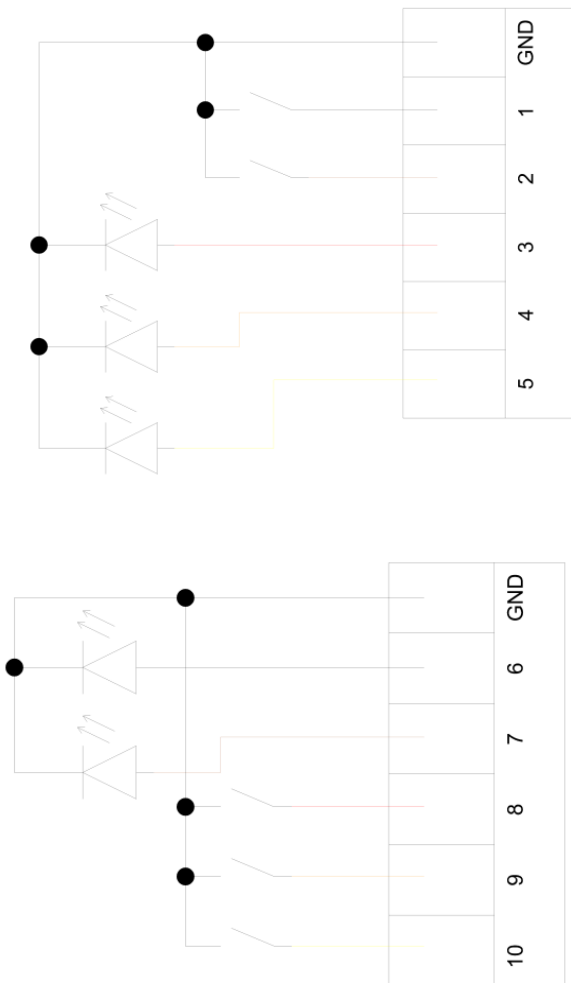


Programming physical address

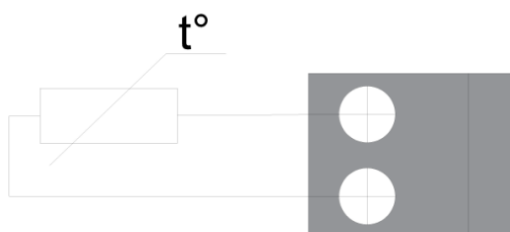
Press programming button shortly, GREEN LED lights up. After you have programmed address from canX application, it will automatically switch off the LED.

1. Terminal connection scheme CAN-EXT10T

Binary input / LED output



PT1000 Temperature sensor input



canX software settings

Binary input

UI10 (10 Universal inputs + Thermostat) (0.3)

AllEnabledDisabled

Port 1Port 2Port 3Port 4Port 5Port 6Port 7Port 8Port 9Port 10Temperature sensorThermostatHeatingCooling

Input 1

Input 1

Switch - On/OffDisabledSwitch - On/OffSwitch - Off/On (inverse)Switch - ToggleButton - Toggle (optional long press)Button - On (optional long press)Button - Off (optional long press)Button - Start/StopButton - Stop/Start (inverse)

Flags

F

T

R

W

Save and write to device

Save

Cancel

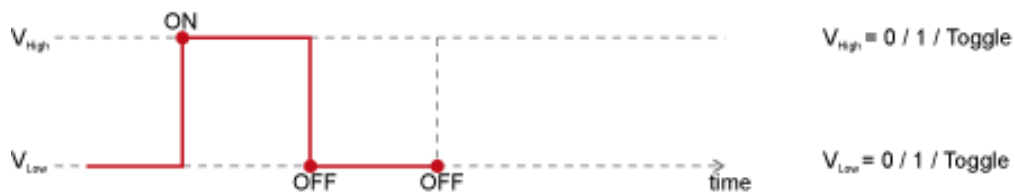
Default flags: read (R), write (W), transmit (T)

Input mode:

Switch on/off – send 1 to bus if switched ON or 0 if switched OFF

Switch off/on (inverse) – send 0 to bus if switched ON or 1 if switched OFF

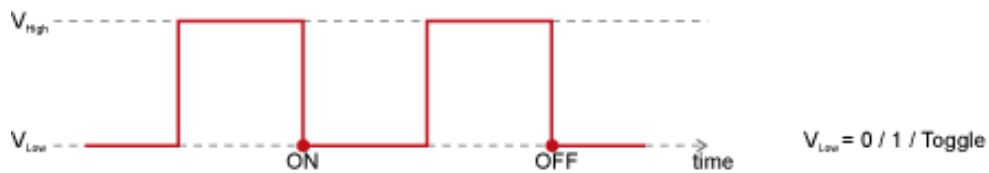
Switch Toggle - change status to inverted with every push



Button Toggle (optional long press) – change status to inverted with every push

Button On (optional long press) – push 1 to bus every pulse

Button Off (optional long press) – push 0 to bus every pulse



Button Start/Stop – send 1 when pushed and 0 when released

Button Stop/Start (inverse) – send 0 when pushed and 1 when released



Button long press toggle - Send 0 or 1 to bus with every long press

Button long press send 1 - Send 1 with every long press

Button long press send 0 - Send 0 with every long press



UI10 (10 Universal inputs + Thermostat) (0.3)

All
Enabled
Disabled

Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
Port 8

Input 1
Input 1 - Long press

Input 1 - Long press

Long press - Toggle
Disabled
Long press - Toggle
Long press - On
Long press - Off
Q No group addresses selected

Flags
F
T
R
W

Tags
Q No tags set

Temperature sensor

UI10 (10 Universal inputs + Thermostat) (0.3) Device location + Add - No location - ×

All Enabled Disabled

Port 1

Port 2

Port 3

Port 4

Port 5

Port 6

Port 7

Port 8

Port 9

Port 10

Temperature sensor

Thermostat

Heating

Cooling

Temperature sensor value ✓ Value correction

Temperature sensor value

Use internal sensor

Disabled

Use internal sensor

Use external sensor (PT1000)

UI10 (10 Universal inputs + Thermostat) - Temperature sensor value

Q

Flags

F

T

R

W

Tags

Q No tags set

Default flags: read (R), transmit (T)

Temperature sensor value: defines either to use internal sensor or externally connected PT1000 sensor

Value correction: temperature value compensation. Used for example in the situation when UIO10 is located in room other than the one we need to control heating/cooling

UI10 (10 Universal inputs + Thermostat) (0.3) ×

All Enabled Disabled

Port 1

Port 2

Port 3

Port 4

Port 5

Port 6

Port 7

Port 8

Port 9

Port 10

Temperature sensor

Thermostat

Heating

Cooling

Temperature sensor value Value correction

Value correction

No correction

No correction

+1°C

+2°C

+3°C

+4°C

+5°C

+6°C

+7°C

-1°C

-2°C

-3°C

-4°C

-5°C

-6°C

-7°C

Thermostat

UI10 (10 Universal inputs + Thermostat) (0.3) ×

All Enabled Disabled

Port 1

Port 2

Port 3

Port 4

Port 5

Port 6

Port 7

Port 8

Port 9

Port 10

Temperature sensor

Thermostat

Heating

Cooling

Thermostat control

Setpoint

Hysteresis

Stand-by mode

Thermostat control

Enabled

Flags

F

T

R

W

Thermostat can be enabled/disabled via control object

Group addresses Add 1 bit (boolean)

✕ 0/0/2 UI10 (10 Universal inputs + Thermostat) - Thermostat control

Tags

No tags set

Default flags: write (W)

Thermostat control:

Disabled – thermostat control is disabled

Enabled – thermostat control is enabled

Setpoint: base setpoint settings

UI10 (10 Universal inputs + Thermostat) (0.3)

✕

All
Enabled
Disabled

Thermostat control
Setpoint
Hysteresis
Stand-by mode

Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
Port 8
Port 9
Port 10
Temperature sensor
Thermostat
Heating
Cooling

Group addresses
Add
4 byte floating point

0/0/3 UI10 (10 Universal inputs + Thermostat) - Setpoint

Flags
F
T
R
W

Tags
No tags set

Hysteresis [+1..+7C]: interval during which the status will remain as current value. Used to exclude border value instability

UI10 (10 Universal inputs + Thermostat) (0.3)

✕

All
Enabled
Disabled

Thermostat control
Setpoint
Hysteresis
Stand-by mode

Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
Port 8
Port 9
Port 10
Temperature sensor
Thermostat
Heating
Cooling

Hysteresis


±1°C (Comfort)


±1°C (Comfort)
±2°C
±3°C (Night mode/Stand-by)
±4°C
±5°C (Freeze/overheat protection)
±6°C
±7°C

Stand-by mode: Stand-by mode / night mode

UI10 (10 Universal inputs + Thermostat) (0.3)

×

All	Enabled	Disabled
Thermostat control  Setpoint Hysteresis Stand-by mode		
Port 1		
Port 2		
Port 3		
Port 4		
Port 5		
Port 6		
Port 7		
Port 8		
Port 9		
Port 10		
Temperature sensor		
Thermostat		
Heating		
Cooling		

Group addresses  Add 1 bit (boolean)

✕ 0/0/22 UI10 (10 Universal inputs + Thermostat) - Stand-by mode

Q

Flags

F T R **W**

Tags


Q No tags set

Heating

Heating control: define either enable/disable heating thermostat functionality

UI10 (10 Universal inputs + Thermostat) (0.3)


×

All	Enabled	Disabled
Heating control  Heating output		
Port 1		
Port 2		
Port 3		
Port 4		
Port 5		
Port 6		
Port 7		
Port 8		
Port 9		
Port 10		
Temperature sensor		
Thermostat		
Heating		
Cooling		

Heating control

Enabled ▼

Heating can be enabled/disabled via control object

Group addresses  Add 1 bit (boolean)

✕ 0/0/23 UI10 (10 Universal inputs + Thermostat) - Heating control

Q

Flags

F T R **W**

Tags

Q No tags set

Heating output: define either disable/enable heating output via group address

UI10 (10 Universal inputs + Thermostat) (0.3) ✕

AllEnabledDisabled

Port 1

Port 2

Port 3

Port 4

Port 5

Port 6

Port 7

Port 8

Port 9

Port 10

Temperature sensor

Thermostat

Heating

Cooling

Heating control

Heating output

Group addresses 1 bit (boolean)

✕ 0/0/24 UI10 (10 Universal inputs + Thermostat) - Heating output

Q

Flags

F

T

R

W

Tags

Q No tags set

Cooling

Cooling control: define either enable/disable cooling thermostat functionality

UI10 (10 Universal inputs + Thermostat) (0.3) ✕

AllEnabledDisabled

Port 1

Port 2

Port 3

Port 4

Port 5

Port 6

Port 7

Port 8

Port 9

Port 10

Temperature sensor

Thermostat

Heating

Cooling

Cooling control

Cooling output

Cooling control

Enabled

Flags

F

T

R

W

Cooling can be enabled/disabled via control object

Group addresses 1 bit (boolean)

✕ 0/0/25 UI10 (10 Universal inputs + Thermostat) - Cooling control

Q

Tags

Q No tags set

Cooling output: define either disable/enable cooling output via group address

UI10 (10 Universal inputs + Thermostat) (0.3) ✕

AllEnabledDisabled

Port 1

Port 2

Port 3

Port 4

Port 5

Port 6

Port 7

Port 8

Port 9

Port 10

Temperature sensor

Thermostat

Heating

Cooling

Cooling controlCooling output

Group addressesAdd1 bit (boolean)

✕ 0/0/26 UI10 (10 Universal inputs + Thermostat) - Cooling output

Q

Flags

FTRW

Tags

Q No tags set