OPA2-VC
Communicating Operation terminal

Features
- Display and change of operation state and set points
- Display input values according to real values not voltage signals
- Display and change of configuration parameters
- Integrated temperature sensor (-T)
- Surface mounting

Applications
- Configuration and operation of TCX2 controllers
- Remote supervision (RS485)

General Description
The OPA2-VC is a remote display and operation terminal for TCX2 series controllers.

Ordering

| Item Name	Item Code	Passive inputs	Humidity sensor	Description/Option
OPA2-VC	40-50 0007			Operation terminal for TCX2 controller with internal temperature sensor

Mounting location
- Install the operation terminal on an easy accessible interior wall, approx. 1.5 m above the floor in an area of average temperature.
- Avoid direct sunlight or other heat sources, e.g. the area above radiators and heat emitting equipment.
- Avoid locations behind doors, outside walls and below or above air discharge grills and diffusers.
- Location of mounting is less critical if external temperature sensors are used.

Installation
See installation sheet no. 70-000113C (www.vectorcontrols.com).

Dimensions
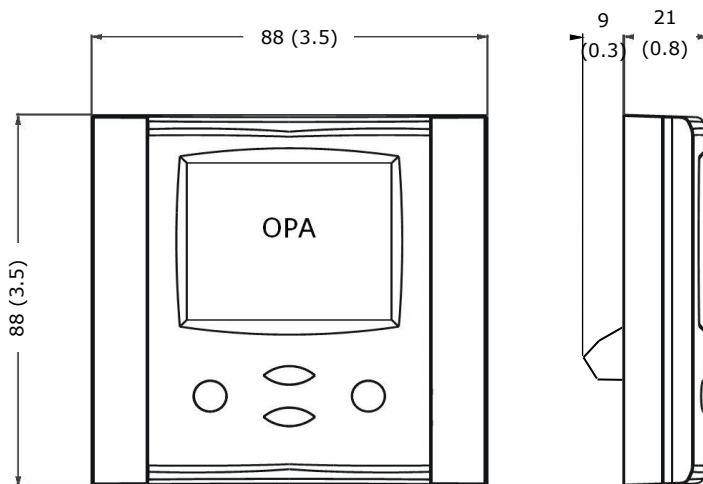
Important notice and safety advice

This device is for use as operating controls. It is not a safety device! Where a device failure endangers human life and/or property, it is the responsibility of the client, installer and system designer to add additional safety devices to prevent a system failure caused by such a device failure. Ignoring specifications and local regulations may cause equipment damage and endangers life and property. Tampering with the device and misapplication will void warranty.

Technical Specification

Power Supply	Operating voltage	10-30VDC, 10-26V AC
	Power consumption	Max 0.5 VA
	Electrical Connection	Terminal Connectors, wire 0.34...2.5 mm^2 (AWG 24...12)
Temperature Input	Type	NTC 10kΩ @ 25°C (77°F)
	Range	0...50 °C (32...122 °F)
	Accuracy	0.2 K
Communication	Communication Type Protocol	RS485, Peer to peer, VCPP: Vector Controls Proprietary Protocol
	Cabling Impedance Nominal capacitance Nominal velocity	Shielded Twisted Pair (STP), CAT5 or CAT6. balanced 100 to 120 ohm 50 pF/m 16pF/ft or lower 65% or higher
Environment	Operation Climatic Conditions Temperature Humidity	To IEC 721-3-3 class 3 K5 0...50 °C (32...122 °F) <95 % r.H. non-condensing
	Transport & Storage Climatic Conditions Temperature Humidity Mechanical Conditions	To IEC 721-3-2 and IEC 721-3-1 class 3 K3 and class 1 K3 -25...70 °C (-13...158 °F) <95 % r.H. non-condensing class 2M2
Standards	Pollution Class	Normal acc. to EN 60 730
	Degree of Protection	IP30 to EN 60 529
	Safety Class	III
General	OPA Dimensions (H x W x D)	88 x 88 x 30 mm (3.5" x 3.5" x 1.1")
	Housing Material	Fire proof ABS plastic
	Mounting Plate	Zinc coated steel
	Standard Color	White RAL 9003
	Weight (including package)	185 g (6.5 oz)

Product testing and certification

CE   Declaration of conformity   Information about the conformity of our products can be found on our website www.vectorcontrols.com on the corresponding product page under "Downloads"
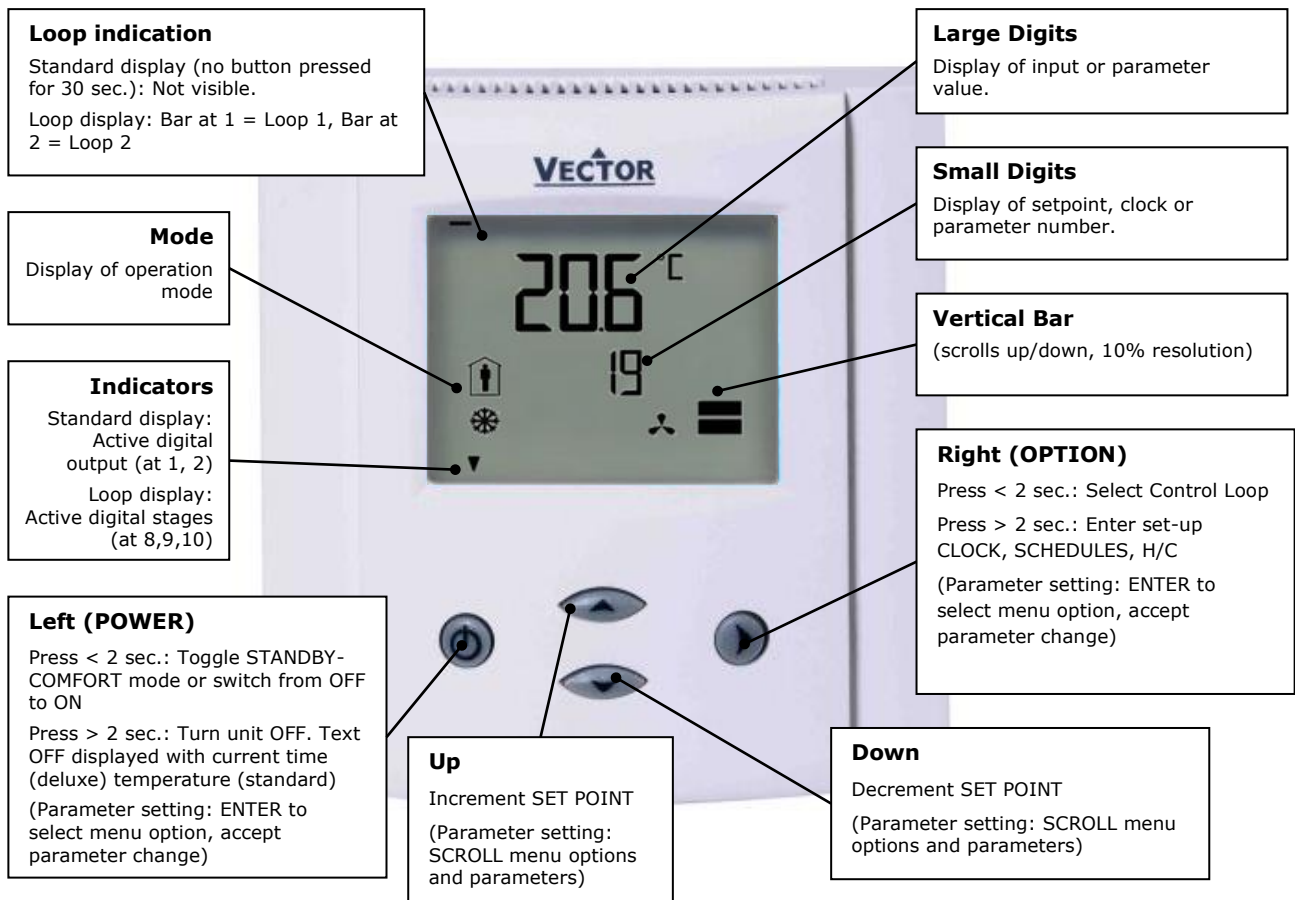
Connection Diagram

Description

1 OP1   V+ Power supply
2 OP2   ⊥ Power supply
3 OP3   RS485
4 OP4   RS485
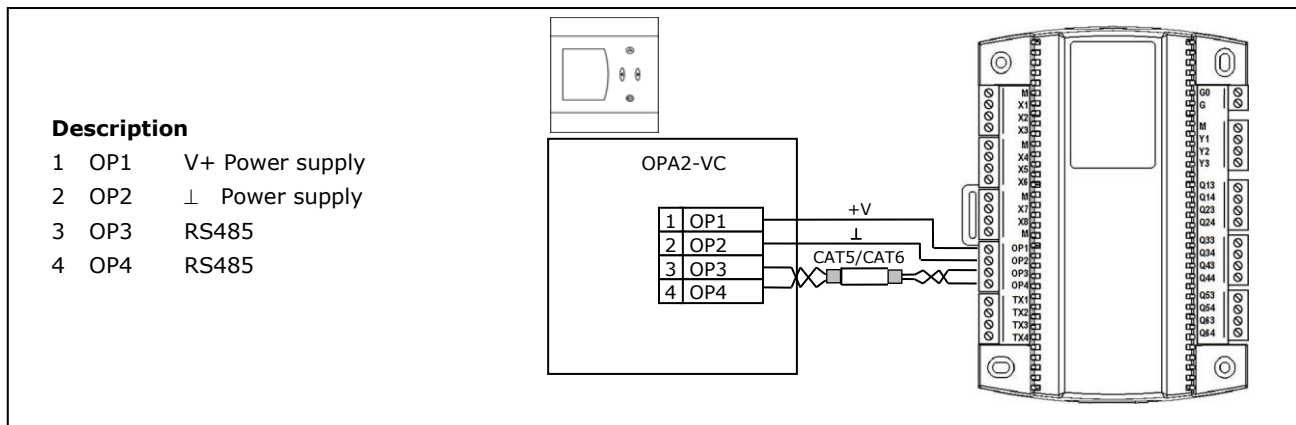
Installation

See installation sheet no:

OPA2-VC   70-000113 (www.vectorcontrols.com)

Display and Operation

Loop indication

Standard display (no button pressed for 30 sec.): Not visible.

Loop display: Bar at 1 = Loop 1, Bar at 2 = Loop 2

Mode

Display of operation mode

Indicators

Standard display: Active digital output (at 1, 2)

Loop display: Active digital stages (at 8,9,10)

Left (POWER)

Press < 2 sec.: Toggle STANDBY-COMFORT mode or switch from OFF to ON

Press > 2 sec.: Turn unit OFF. Text OFF displayed with current time (deluxe) temperature (standard)

(Parameter setting: ENTER to select menu option, accept parameter change)

Up

Increment SET POINT

(Parameter setting: SCROLL menu options and parameters)

Down

Decrement SET POINT

(Parameter setting: SCROLL menu options and parameters)

Large Digits

Display of input or parameter value.

Small Digits

Display of setpoint, clock or parameter number.

Vertical Bar

(scrolls up/down, 10% resolution)

Right (OPTION)

Press < 2 sec.: Select Control Loop

Press > 2 sec.: Enter set-up CLOCK, SCHEDULES, H/C

(Parameter setting: ENTER to select menu option, accept parameter change)

	Operation modes		Control symbols
👤	Occupied: (Comfort) All control functions operating per set points.	☀	Heating (reverse) active
🏠👤	Unoccupied: (Standby, Economy) If enabled, alternative setpoints are used with the intention to reduce energy consumption.	❄	Cooling (direct) active
OFF	OFF: (Energy Hold Off, EHO) Normal control functions are inactive, inputs are monitored for alarms.	🕐	Schedule set
		☝	Manual override, delay on enable function
		✱	Fan active

Idle display

- The idle display is activated when no key has been pressed for 30 seconds.
- The contents of the idle display are selectable through parameters UP08 to UP14.
- Setting UP08 to OFF will disable idle display. Last active control loop or manual output will remain displayed.

Display of control loop

- Active when changing set points. Large digits show input value. Small digits show set point. Horizontal bars top left show which loop is being displayed.

Operation manual

This operation terminal works with the latest generation X2 control devices. Detailed operating instructions for all devices equipped with this operating system can be downloaded here:

http://www.vectorcontrols.com/products/x2

Also available are programming instructions for technicians and an application database.

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