



WEA 163 / 164 / 165 / 166 / 250 • WEL 100 • WEP 224 0080 • WEV 110 / 111 / 112 / 113 / 114 / 115
KNX accessories for NV Comfort®



Natural
ventilation



KNX product

Applications

- for NV Comfort® Standard and Plus solutions:
control of radiators and floor heating
- for NV Comfort® Plus solutions:
control of mechanical ventilation, light and sun screening

Depending on the building requirements:

- NV Comfort® Standard / Plus can receive and send signals to heat control, operation type and status functions
- NV Comfort® Plus can receive and send signals to the functions hybrid ventilation, light and sun screening control.

The signal exchange is communicated via KNX standard input/output modules and actuators.

Heat control in the individual room

(NV Comfort® Standard / Plus)

NV Comfort® has the ability to control the heating within individual rooms. This function allows seamless coordination between ventilation and heating ensuring unnecessary heat loss.

NV Comfort® can provide 0-10V DC (0-100%) / ON/OFF or pulse-width modulation signals.

The actuator driven, proportional (continuous) valve is connected to the European Installation Bus. Connection to KNX is done directly without additional bus coupler. The supply voltage to the ventilator actuators comes from the KNXbus.

Typical interface components:

- WEV110: KNX valve actuator. The actuator is supplied with power via KNX and requires no separate power supply
- WEV 111/112: 6-12 channel output module for controlling thermo actuator WEV 113
- WEV 113: thermo actuator 24V
- WEV 114/115: adaptor rings for WEV 113
- WEA 165: 4-channel potential free output module. Typically used to start a ventilator or to open a closed valve.
- WEA 166: 4-channel 0-10V analogue output

Option for external input controls

(NV Comfort® Standard / Plus)

NV Comfort® can receive information via third party systems for control such as:

- winter ventilation
- activate secure periods
- building status (in use, in secure use, not in use)
- windows are kept closed
- automatic switch off

Typical interface components

WEA 164: 4-channels input module

Information of operation status

(NV Comfort® Standard / Plus)

NV Comfort® can provide information about operation status:

- need for heat in one or more rooms
- building status (occupied, occupied – secured, unoccupied)
- windows are kept closed
- automatic switch off

Typical interface components

WEA 165: 4-channel potential free output module. Typically used to start a ventilator or to open a closed valve.

Mechanical ventilation (hybrid ventilation)

(NV Comfort® Plus)

If the number or size of a building's windows is not sufficient to achieve an optimal indoor climate with natural ventilation, external fans (mechanical ventilation) can be connected and used at peak loads, since NV Comfort® Plus can send a signal ON/OFF signal and/or 0-10V (0-100%) to the fans and dampers in a balanced ventilation system.

Typical interface components

WEA 165: 4-channel potential free output module
WEA 166: 4-channel 0-10VDC analogue output.

Sun screening

(NV Comfort® Plus)

The sun screening function allows blinds, awnings etc. to be controlled automatically, both in summer and winter, so that the position of the sun screening can be continually adapted to the prevailing lighting and heating situation in a room. This allows an optimal use and exploitation of the sun screening product as well as optimising the use of solar thermal energy. The actual control is based on measurements of lux and temperature.

Typical interface components

WEL 100: lux sensor, outdoor
WEA 250: sun screening actuator – shutter modules:

- WEA 250 0202: with 2 channels
- WEA 250 0402: with 4 channels
- WEA 250 0802: with 8 channels

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Items	Item no.
Analogue input module, 4-channel Manufacturer: ABB. Type: AE/S 4.1.1.3. Homepage: www.ABB.com	WEA 163
Digital input module, 4-channel Manufacturer: ABB. Type: BE/S 4.20.1. Homepage: www.ABB.com	WEA 164
Digital output module, potential free, 4-channel Manufacturer: ABB. Type: SA/S 4.10.1. Homepage: www.ABB.com	WEA 165
Analogue output module 0-10V, 4-channel, master Manufacturer: ABB. Type: AA/S 4.1. Homepage: www.ABB.com	WEA 166
Sun screening actuator – shutter module with 2 channels Manufacturer: ABB. Type: JRA/S 2.230.5.1. Homepage: www.ABB.com	WEA 250 0202
Sun screening actuator – shutter module with 4 channels Manufacturer: ABB. Type: JRA/S 4.230.5.1. Homepage: www.ABB.com	WEA 250 0402
Sun screening actuator – shutter module with 8 channels Manufacturer: ABB. Type: JRA/S 8.230.5.1. Homepage: www.ABB.com	WEA 250 0802
Lux sensor, outdoor Manufacturer: Theben AG. Type: LUNA 133 KNX. Homepage: Theben.de	WEL 100
Power supply 24V AC, 0,83A for WEA 166/167	WEP 224 0080
KNX valve actuator for heat control Manufacturer: Theben. Type: Cheops drive KNX. Homepage: www.Theben.de	WEV 110
6-channel output for operating thermo actuator type WEV 113 Manufacturer: Theben. Type: HMT 6 S KNX. Homepage: www.Theben.de	WEV 111
12-channel output for operating thermo actuator type WEV 113 Manufacturer: Theben. Type: HMT 12 S KNX. Homepage: www.Theben.de	WEV 112
Thermo actuator for WEV 111 and WEV 112 (valve adaptor to be ordered separately) Manufacturer: Theben. Type: ALPHA 24V. Homepage: www.Theben.de	WEV 113
Valve adaptor (for WEV 113) for Danfoss RA Manufacturer: Theben. Type: VA 78. Homepage: www.Theben.de	WEV 114
Valve adaptor (for WEV 113) for e.g. Onda, Schlösser, Oventorp (M30x1,5), Heimeier Manufacturer: Theben. Type: VA 80. Homepage: www.Theben.de	WEV 115
The function of the products is tested together with NV Comfort®. For product descriptions, applications and ETS – pls. see the manufacturer's homepages.	