Installation instructions for the Control box for pressure-controlled pump, part no. 809535-81/82/83, coil heat exchangers, GOLD

1. General

The control box for coil heat exchangers consists of an IQlogic+ module mounted inside a metallic enclosure.

The metallic enclosure has cable gland screw caps for cable entry.

2. Application area

The control box is designed for controlling a pipework package for coil heat exchangers.

3. Installation

The control box can be mounted on a wall, air handling unit or some other suitable place. Use four screws for the installation (not included in the delivery).

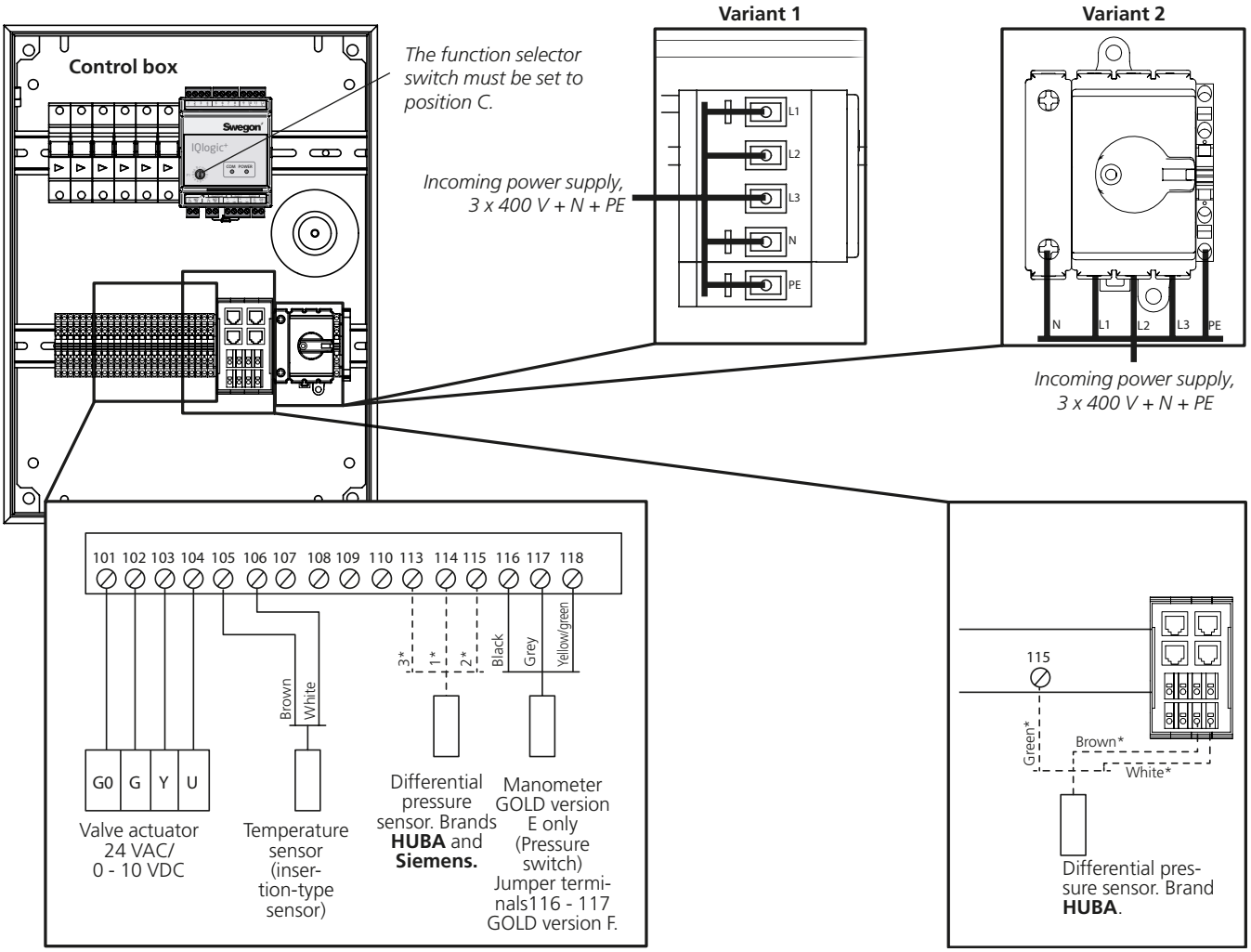
Install an insertion-type sensor for temperature measurement on the incoming water pipe of the extract air coil.

4. Technical data

Supply voltage	***Variant 1*** **809535-81** GOLD SD 04-30: 3x400 VAC, +N +PE, 6 A **809535-82** GOLD SD 35-80: 3x400 VAC, +N +PE, 10 A **809535-83** GOLD SD/CX 100/120: 3x400 VAC, +N +PE, 16 A ***Variant 2*** **809535-81** GOLD SD 04-80: 3x400 VAC, +N +PE, 10 A **809535-83** GOLD SD/CX 100/120: 3x400 VAC, +N +PE, 16 A
CE-approved to	EN 61000-6-2, EN 61000-6-3
Enclosure class	IP 65
Ambient temperature at relative humidity	-20 °C – +40 °C 10 – 95%
Weight	8 kg
Dim.(W x H x D)	300 x 400 x 120 mm
Fuse F1, power supply voltage	*Variant 1* 809535-81 GOLD SD 04-30: 3 pole, 6A, C characteristic 809535-82 GOLD SD 35-80: 3 pole, 10A, C characteristic 809535-83 GOLD SD/CX 100/120: 3 pole, 16A, C characteristic V*ariant 2* 809535-81 GOLD SD 04-80: 3 pole, 10A, C characteristic 809535-83 GOLD SD/CX 100/120: 3 pole, 16A, C characteristic
Fuse F2, control voltage	2-pole, 0.25 A, C characteristic
Transformer	230VAC/24VAC

5. Connections

5.1 Valve actuator and temperature sensor



** There are three cable variants. These variants depend on the brand of pressure sensor.*

HUBA and Grundfos brands have different coloured cables. For Siemens each cable is numbered 1 - 3.

Siemens is voltage fed with 24 VAC via the terminal in the control box. Grundfos is voltage fed with 24 VDC via the cable adapter in the control box. HUBA can be voltage fed with either 24 VAC via the terminal in the control box or 24 VDC via the cable adapter in the control box.

HUBA	Siemens
1 = Brown	*1 = 1*
2 = Green	*2 = 2*
3 = White	*3 = 3*

NOTE! Check the make of pressure sensor carefully before connecting!

Valve actuator

Connect the power supply voltage to Terminals 101 (G0) and 102 (G).
Connect the 0-10 V DC (Y) control signal conductor to Terminal 103.
Connect the position indicator, 0-10 VDC (U), to Terminal 104.

Temperature sensor (insertion type)

Connect to Terminals 105 (brown) and 106 (white).

Differential pressure sensor

HUBA/Siemens: Connected to terminals 113 (white/3*), 114 (brown/1*) and 115 (green/2*).

Grundfos: Connected to terminals 115 (light grey/white), 119 (black) and to cable adapter terminal 1 (blue) and terminal 2 (brown).

Pressure switch (GOLD version E only)

Connect to Terminals 116 (black), 117 (grey) and 118 (yellow/green). Jumper terminals116 - 117 on GOLD version F.

Power supply

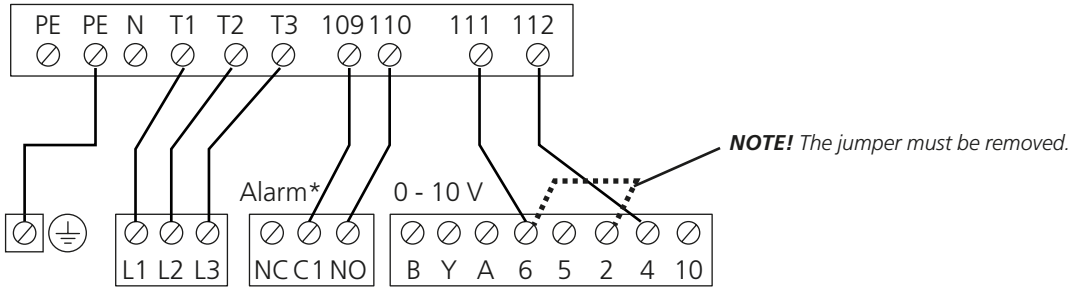
3 x 400 VAC +N +PE

5.2 Circulation pump

Circulation pump Grundfos CRE (Swegon standard) with external control 0 - 10 V.

3 x 400 VAC

Wiring terminals in the control box of the coil heat exchangers.



Wiring terminals on circulation pump

**Alarms can be selected as disabled or contactor function in the GOLD air handling unit's hand-held micro terminal. The factory setting is contactor function.*

5.3 Communication, cable adapters

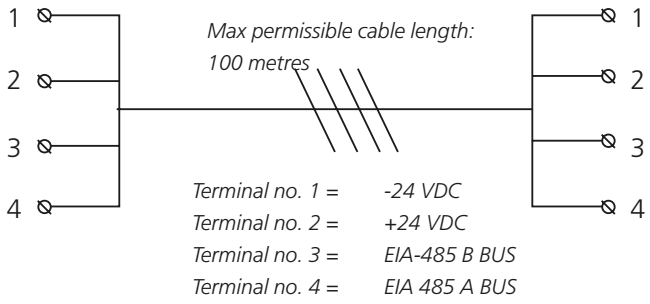
Control box in combination with GOLD CX 100/120

Connect the RJ12-cable between the cable adapter and optional bus contact marked COM6 - 11 on the control circuit card of the GOLD unit.

Control box in combination with GOLD SD

The illustrations show electrical equipment cubicles for size 20 GOLD SD units. The principle is however the same for all the unit sizes.

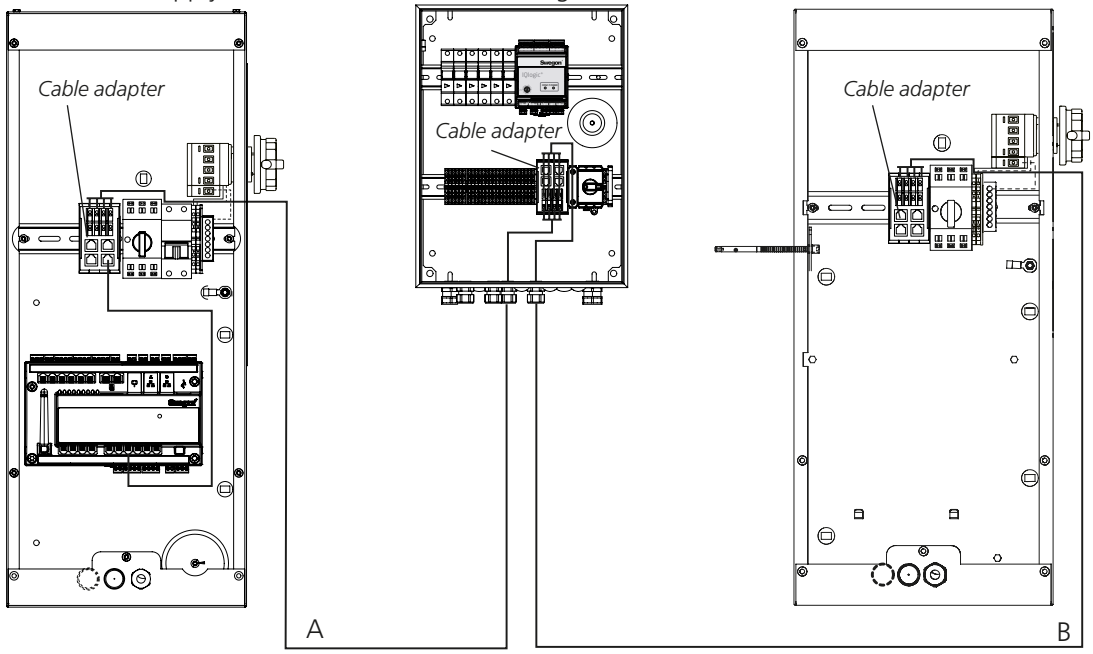
Always connect cables between cable adapters from terminal to terminal, see figure below.
The cable between units is not included in the supply.
Twisted-pair cables are recommended. Use one cable pair for 24 V and the other cable pair for bus communication.



GOLD SD units with control unit (supply air)

Control box, coil heat exchangers

GOLD SD units without control unit (extract air)



Twisted-pair communication cable A min. 4x0.5 mm² (Max total length communication cable A + B = 100 metres Not included in the delivery)

Twisted-pair communication cable B min. 4x0.5 mm² (Max total length communication cable A + B = 100 metres Not included in the delivery)

Communication cable B can also be connected to the cable adapter in the electrical equipment cubicle on the air handling unit with the control unit if this makes the installation work easier.