Fans RP

Fans RQ

Fans RO

Fans RE

Fans RF

Fans RPH

Fans EX

Controllers
...

ORE 5 DISTANT CONTROLLER

USE OF CONTROLLER

The ORe 5 remote controller is intended for remote control of TRN controllers and RPFM frequency inverters.

→ It serves to set the speed of fans while simultaneously signalling the operating state.

→ If the control unit is used in an air-handling assembly, the controller also serves to switch it on/off.

→ The controller enables automatic restart of the fan controller after a power failure.

OPERATING CONDITIONS

→ Power supply: 24 V AC / DC, max. 80 mA
→ Control outputs: dry contacts, separated by relay.
→ Protection Class: II IEC 536
→ Degree of protection: IP 40
→ Environment: Normal Influence Class
→ Dimensions (W × H × D): 83 × 125 × 37 mm

ORe 5 controllers must be energized by a power supply which complies with safety rules of protection against electric shock - SELV circuit in accordance with the ČSN 33 2000-4-41, ed 2 standard.
ORe 5 controller is built into a plastic casing, which enables the controller to be installed in residential as well as commercial building interiors. It can be installed in the vertical position with its rear side to the wall.
One ORe 5 controller can drive two TRN speed controlor up to four RFFM controllers.

FIGURE 25 – ORE 5 FRONT VIEW

LED signaling:

Speed 5
Speed 4
Speed 3
Speed 2
Speed 1
Stop
Operation
Fault

Adjustment button

USER SETTINGS

Blocking of the fan's switching-off

Configuring the controller for security protection function – delayed shutdown of fans for air handling units with electric heater and control unit. If the „0" speed stage is blocked, the control unit will not stop the fans until the electric heater cools down. The switching-off request from the controller is only transmitted, and the fan's speed is set to stage # 1 to cool the heater down. If the ORe 5 controller is connected to a control unit and an electric heater, blocking of the „0" stage is compulsory! It is not necessary to block the „0" stage with an air-handling assembly equipped with a water heater.

Setting the Sequence of Output Stages

User sequence settings of transition from one speed to another in two variants (0, 1, 2, 3, 4, 5, 4, 3, 2, 1, 0, …) or (0, 1, 2, 3, 4, 5, 0, 1, 2, 3, 4, 5,…).
If the stage "0" is blocked (after switching to this position) the yellow LED (STOP) and green LED (speed) "1" is lit (until the device is stopped by control unit), finally LED for level 1" then goes off.

User settings procedures, see ORe 5 user manual.
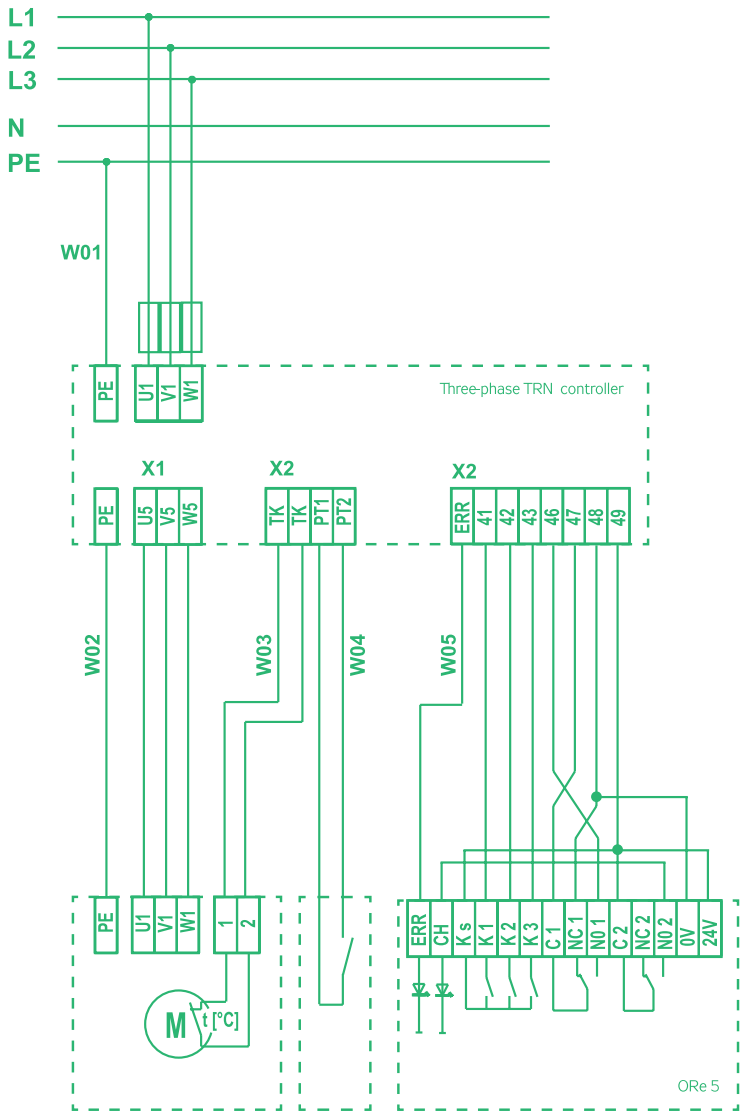
CONNECTING TO TRN CONTROLLERS

→ The connection of the ORe 5 controller to the TRN controllers is shown in figure # 26 and # 27.

→ For connection to RFFM refer to figure # 28.

→ The connection of the controller to the TRN controllers is included in the control unit's documentation.

→ Control cable must be routed separately from power cables with minimal concurrency.

→ The ORe 5 controller is connected to the speed controller using an SYKFY 4×2×0,5 shielded cable.

Note:
If necessary, to control the output for a group of roof fans RF (total air-flow) it is recommended to always consider the possibility of regulating the air-flow by turning off individual fans and without the use of ORe 5 and RFFM controllers (cost savings, ease of installation, eliminating the EMC solutions).

ORE 5 DISTANT
CONTROLLER

Fans
RP

Fans
RQ

Fans
RO

Fans
RE

Fans
RF

Fans
RPH

Fans
EX

Controllers
...

The following space belongs to illustrative examples of installations and electrical wiring of the ORe 5 controller.

FIGURE 26 – ORE 5 CONNECTION TO TRN-D CONTROLLER

ORE 5 DISTANT
CONTROLLER

Fans RP
Fans RQ
Fans RO
Fans RE
Fans RF
Fans RPH
Fans EX
Controllers
...

FIGURE 27 – CONTROLLER CONNECTION,
TWO TRN CONTROLLERS

three-pahse TRN controller

X2

49 48 47 46 43 42 41 ERR

W05.1

PT2 PT1 TK TK

X2

W03.1

TK TK

M t[°C]

W1 V1 U1

W01.1

W5 V5 U5

X1

W1 V1 U1

PE

PE

W02.1

PE

L1 L2 L3 N PE

24V 0V NO 2 NC 2 C2 NO 1 NC 1 C1 K3 K2 K1 K s CH ERR

ORe 5

three-pahse TRN controller

X2

49 48 47 46 43 42 41 ERR

W05

W04

PT2 PT1 TK TK

X2

W03

TK TK

M t[°C]

U1 N

X1

U1 U2 Z1 Z2

PE

PE

W02

PE

L1 W01 N PE

W01

L1 N PE

ORE 5 DISTANT
CONTROLLER

Fans RP

Fans RQ

Fans RO

Fans RE

Fans RF

Fans RPH
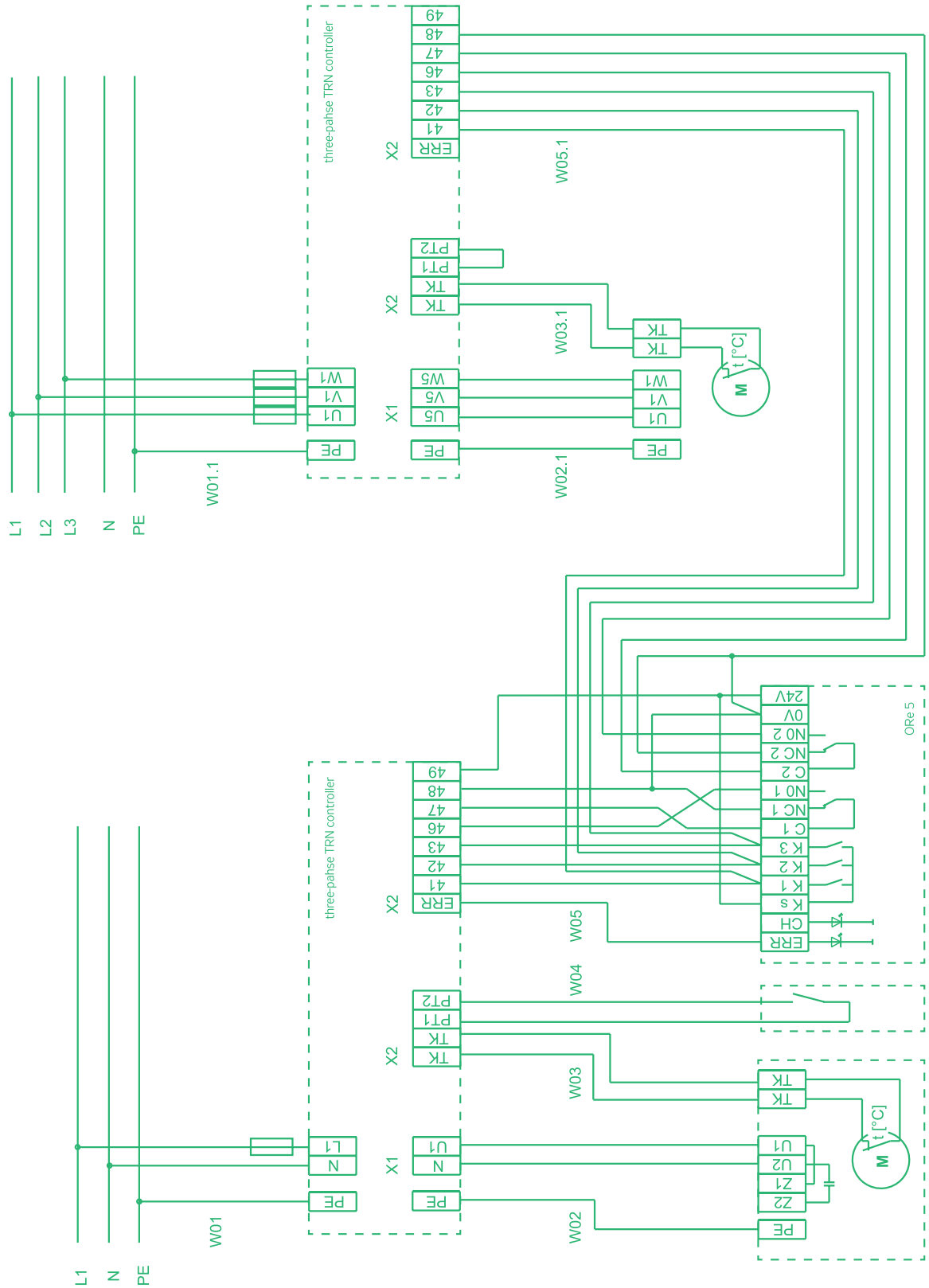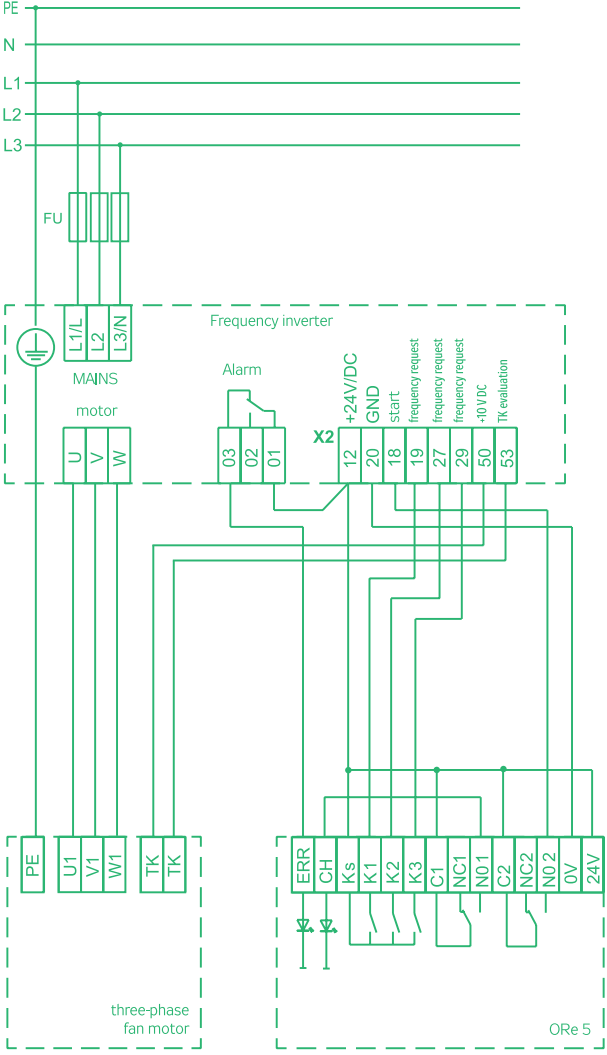
Fans EX

Controllers …

FIGURE 28 – CONTROLLER CONNECTION
TO RFFM CONTROLLER (3 × 400 V)

Connecting multiple RFFM controllers to ORe 5:

If two or more (max. 5) RFFM regulators have to be connected to one ORe 5 controller, regulators terminals for frequency request (19, 27, 29) to the ORe 5 K1, K2, K3 terminals should be connected in parallel, equally in parallel are connected controllers terminals for start (18, 20) to the NO2, 0V terminals of the controller. 12 (+ 24V) terminal of only one reference controller is connected to 24 V, Ks, C1, C2 terminals of ORe 5 controller.

At the same time, 01 terminals of all alarm contacts of RFFM regulators are connected in parallel to 12 (+24 V) terminal of the same controller (do not interconnect 12 (+ 24V) terminal of any controller!). ERR failure terminal of ORe 5 controller is connected to the 03 (Alarm) terminal of all controllers.