



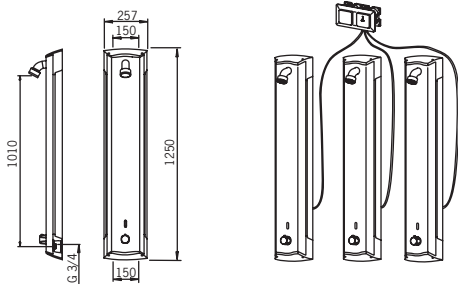
Oras Electra  
6661FT, 6661GT, 6661ST,  
6662FT, 6662GT, 6662ST,  
6664FT, 6664GT, 6664ST

Design and working instructions

Water Is Worth Loving.

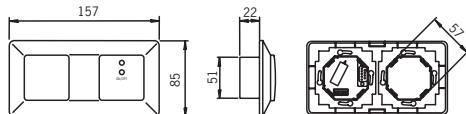


**Oras Electra**  
**6661FT, 6661GT, 6661ST,**  
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**6664FT, 6664GT, 6664ST**



6664FT

**Oras Electra 199099**



**Shower panel**

**Features**

- touchless
- 12 VDC
- maximum flow 12 l/min

**Technical data 6664FT**

Working pressure	100 - 1000 kPa
Water temperature	max. 70°C
Noise class	I (ISO 3822)
Protection class	IP 45
Electrical Connection	12 VDC
Max. flow period	5 min (0 -30 min)
Recognition range	50 cm (30 - 70 cm)
Afterflow period	5 s (0 - 255 s)

**Bus transformer**

**Features**

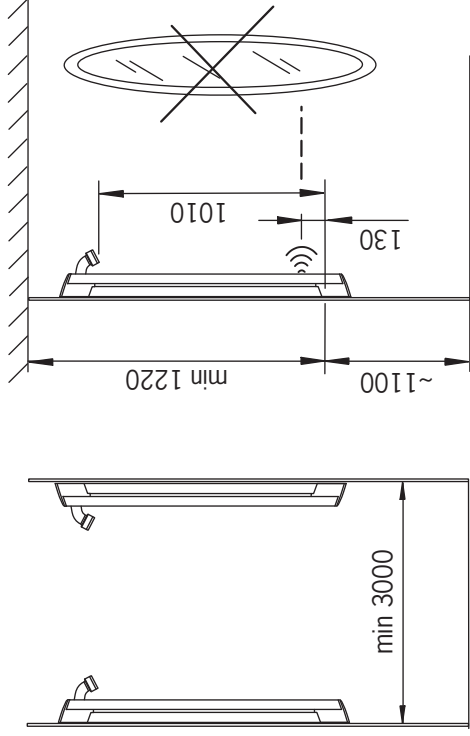
- Output voltage 12 VDC
- Output current 1 A
- Electrical Connection 230 VAC / 12 VDC

**Technical data**

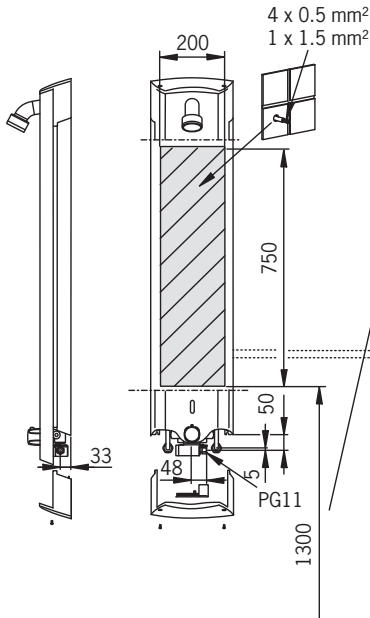
Electrical Connection	230 VAC/12 VDC
Output voltage	12 VDC ±5%
Output current	1 A
Protection class	IP 20
Max. total length of cabling between power supply and the device	max. 50 m
Number of devices connected	max. 8 pcs
Low-voltage cable	4 x 0.5 mm <sup>2</sup>
Suojamaadoitus kaapeli	1 x 1.5 mm <sup>2</sup>

**Note!** The electrical connection may only be carried out by a qualified electrician.

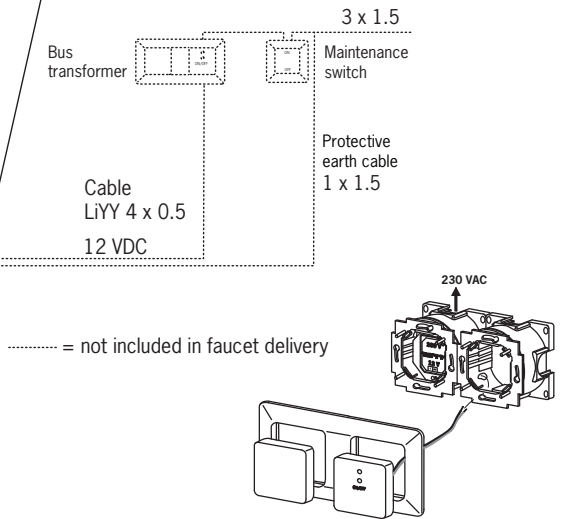
Product nr	6661GT	6661FT	6661ST	6662GT	6662FT	6662ST	6664GT	6664FT	6664ST
PEX-pipe	X	-	X	X	-	X	X	-	X
Flexible hose	-	X	-	-	X	-	-	X	-
Temperature regulator	-	-	-	X	X	X	X	X	X
Pre-mixed water	X	X	X	-	-	-	-	-	-
Handshower	-	-	-	X	X	X	-	-	-
Water connection above	-	-	X	-	-	X	-	-	X
Water connection inside the panel	X	X	-	X	X	-	X	X	-
Pressure loss with flow (0.2 l/s)	340 kPa	-	-	450 kPa	-	-	440 kPa	-	-
Pressure loss 0.2 l/s (without flow controller)	120 kPa	120 kPa	120 kPa	250 kPa	250 kPa	250 kPa	190 kPa	190 kPa	190 kPa
Flow-rate at 300 kPa (with flow controller)	0.195 l/s	0.195 l/s	0.195 l/s	0.17 l/s	-	-	0.18 l/s	-	-
Flow-rate at 300 kPa (without flow controller)	0.315 l/s	0.315 l/s	0.315 l/s	0.22 l/s	0.22 l/s	0.22 l/s	0.25 l/s	0.25 l/s	0.25 l/s



## PLUMBING CONTRACTOR



## ELECTRICAL CONTRACTOR



## Design instructions

### HVAC-designer

- marks on his plans the locations of sanitary wear to be wired (and the types)
- together with the electrical designer, goes through the required cabling and maintenance switch and transformer that need to be purchased

### Electrical designer

- marks on his plans the locations for the maintenance switch and bus transformer and the locations of appliance boxes for them
- marks on his plans the locations for the power sourcing cable
- installs the bus transformer on dry spaces
- marks on his plans the wirings from the group centre to the maintenance switch and transformer
- marks on his plans the wiring between the transformer and the sanitary wear (LiYY 4x0.5 and 1 x 1.5)
- the maintenance/cleaning switch is installed in a location where it can be easily used during maintenance/cleaning work, however in a locked location.

## Work instructions

### Stage 1

#### An electrical contractor must procure and install:

- appliance boxes for the bus transformer and for the service/cleaning switch
- Bus transformer Oras 199099 and a cleaning/maintenance switch for the bus transformer
- plumb and/or wire the maintenance switch and the bus transformer
- plumb and/or wire the appliance boxes from bus transformer to the shower panel (LiYY 4 x 0.5)
- clarifies the exact location of electrical pipe in the lined area in the picture above.

### Stage 2

#### A plumbing contractor must procure and install:

- the shower panel and the needed connectors for attaching the equipment to the plumbing

### Stage 3

#### An electrical contractor must:

- Connect the wiring for the shower panel in the appliance box

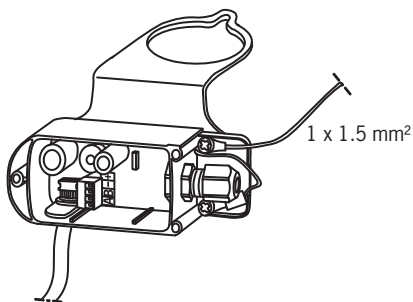
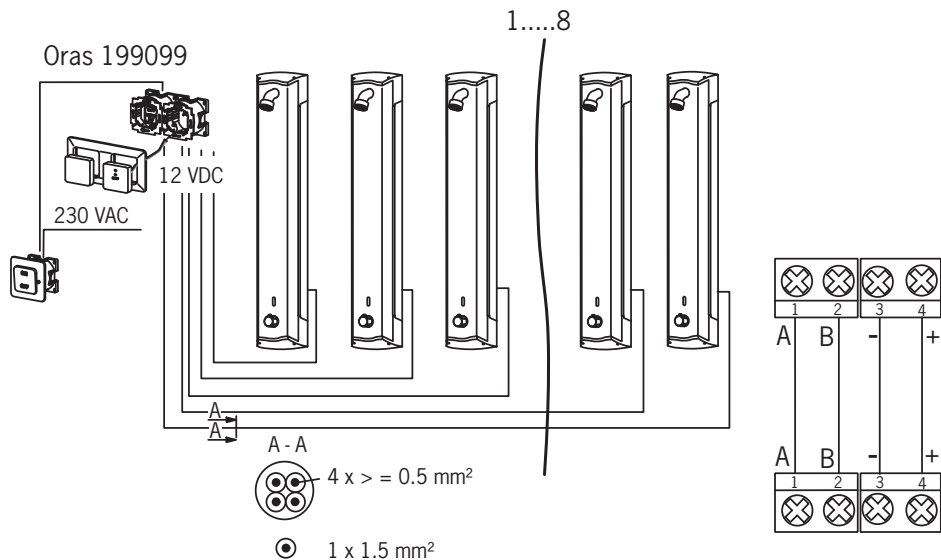
### Stage 4

#### The plumbing contractor must

- test-use the shower panel

# Installationsexempel 1

## 1-8 duschpaneler, Oras Transformator 199099



### Hints for successful installation:

- the shower panels on opposite walls are recommended to be installed overlapping with the width of a shower panel (275 mm).
- considering cleaning and maintenance works, it is recommended that at least two bus transformers with maintenance switches are used per space.
- use standard appliance boxes, e.g. Ensto AU3.2, Strömfors JR00
- should the space have more than one shower panels, it is recommended that at least one of them is installed lower (20-30 cm) than the others; this way the children and for example those who are sitting can use the shower panel without unnecessary closing of water flow.
- it is recommended that one lever/thermostat faucet is installed for cleaning and taking of steam water.
- In order to avoid static electric shocks, we recommend potential levelling (connecting in guarded ground)



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