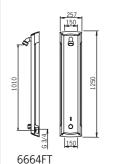
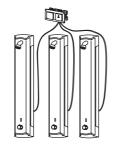


Oras Electra 6661FT, 6661GT, 6661ST, 6662FT, 6662GT, 6662ST, 6664FT, 6664GT, 6664ST

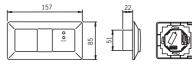
Design and working instructions

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





Oras Electra 199099



Shower panel

Features

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

Technical data 6664FT

100 - 1000 kPa Working pressure 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) 50 cm (30 - 70 cm) Recognition range 5 s (0 - 255 s) Afterflow period

Bus transformer

Features

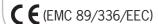
- Output voltage 12 VDC
- Output current 1 A
- Electrical Connection 230 VAC / 12 VDC

Technical data

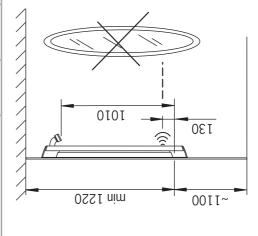
Electrical Connection 230 VAC/12 VDC
Output voltage 12 VDC ±5%
Output current 1 A
Protection class IP 20
Max. total length of cabling between
power supply and the device max. 50 m
Number of devices connected max 8 pcs

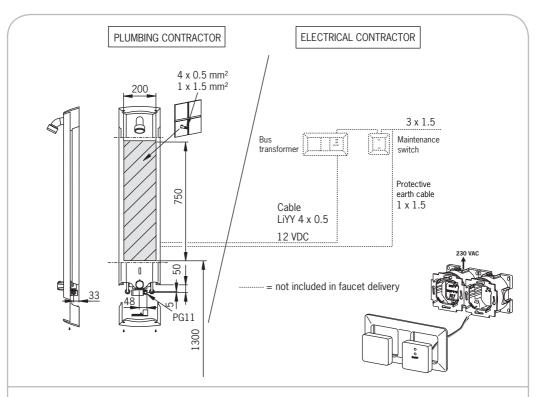
Number of devices connected Max. 8 pcs Low-voltage cable $4 \times 0.5 \text{ mm}^2$ Suojamaadoitus kaapeli $1 \times 1.5 \text{ mm}^2$

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	×		×	×		×	×		×
Flexible hose		×			×			×	
Temperature regulator				×	×	×	×	×	×
Pre-mixed water	×	×	×						
Handshower				×	×	×			
Water connection above			×			×			×
Water connection inside the panel	×	×		×	×		×	×	
Pressure loss with flow (0.2 l/s)	340 kPa			450 kPa			440 kPa		,
Pressure loss 0.2 I/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 I/s	0.195 I/s	0.195 I/s	0.17 1/s	ı		0.181/s		ı
Flow-rate at 300 kPa (without flow controller)	0.315 I/s	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	0.315 I/s	0.22 l/s	0.22 1/s	0.22 l/s	0.25 l/s	0.25 l/s	0.25 I/s





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 cablings 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:

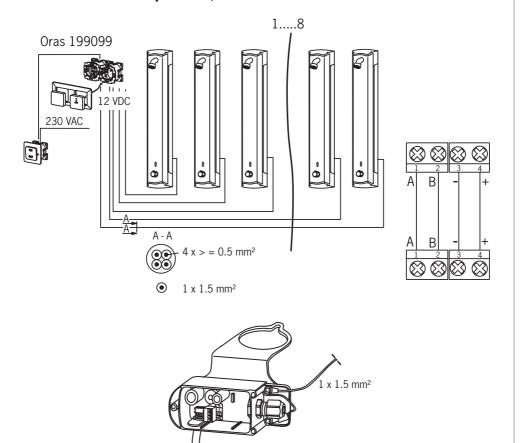
Connect the wiring for the shower panel in the appliance box

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)

Oras is a significant developer, manufacturer and marketer of kitchen and bathroom faucets. Ever since the company's founding in 1945 in Rauma, Finland, Oras has been dedicated to bring products of high quality and design with userfriendly technological solutions to the markets. Each technological improvement is designed to contribute to water and energy savings. As early as in the 1990s. Oras presented the touchless, electronic faucets to the European HVAC markets. Oras' vision is to become the true owner of the electronic faucet markets in Europe.

Oras is entirely owned by a family company Oras Invest. All Oras faucets are produced in Europe, in the company's three factories located in Rauma, Finland, in Olesno, Poland and in Leksvik, Norway. Likewise the raw material and the components used in production are sourced from European suppliers. For more information, visit www.oras.com

Det Norske Veritas Certification OY/AB certifies that the Quality Management System of Oras Oy in Rauma Finland, conforms to the ISO 9001, the Environmental Management System to the ISO 14001 standard and the Occupational Health and Safety System to the OHSAS 18001 standard. The certificates are valid for development, manufacture, marketing, sales and after sales services of faucets, accessories and valves.

The TÜV CERT Certification Body of TÜV NORD Zertifizierungs- und Umweltgutachter Gesellschaft mbH certifies that the Quality Management System of Oras Olesno Sp. z o.o. in Olesno Poland. conforms to the ISO 9001, the **Environmental Management System** to the ISO 14001 standard and the Occupational Health and Safety System to the OHSAS 18001 standard. The certificates are valid for manufacture, storage, marketing, sales and after sales services of faucets, valves and accessories.









ORAS GROUP

Isometsäntie 2, P.O. Box 40 FI-26101 Rauma Finland Tel. +358 2 83 161 Fax +358 2 831 6300 Info.Finland@oras.com

