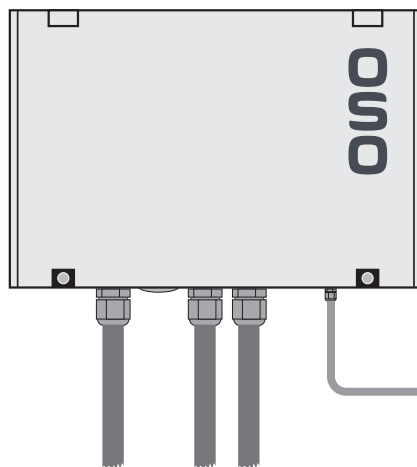


OSO Maxi Charge - MAC

Control unit for optimisation of power consumption in OSO commercial water heaters

EN



SAFETY INFORMATION
O&M INFORMATION
INSTALLATION MANUAL

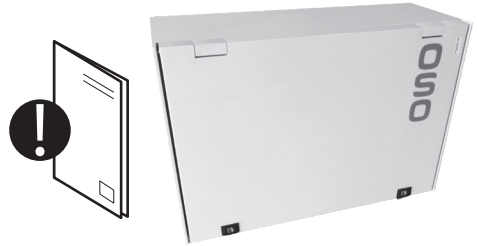
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1. SAFETY INSTRUCTIONS

1.1 General information

- Read the following safety instructions carefully before installing, maintaining or adjusting the control unit and temp. sensor.
- Personal injury or material damage may result if the product is not installed or used in the intended manner.
- Keep this manual and other relevant documents where they are accessible for future reference.
- The manufacturer assumes compliance (by the end user) with the safety, operating and maintenance instructions supplied and (by the installer) with the fitting manual and relevant standards and regulations in effect on the date of installation.



Symbols used in this manual:

 WARNING	Could cause serious injury or death
 CAUTION	Could cause minor or moderate injury or damage to property
 DO NOT	
 DO	

1.2 Safety instructions for users

⚠ WARNING	
⊘	The product must NOT be covered in any way.
⊘	The product must NOT be modified or changed from its original state.
⊘	Children must NOT play with the product or go near it without supervision.
❗	Maintenance/settings should only be carried out by persons over 18 years of age, with sufficient understanding

1.3 Safety instructions for installers

⚠ WARNING	
❗	The power supply cable from the electrical cabinet with the control unit to the junction box on the hot water heater must be able to withstand a continuous temperature of 90°C.
❗	The relevant regulations and standards, as well as this installation manual, must be followed.

⚠ CAUTION	
❗	The product must be easily accessible for use and maintenance and must not be covered in any way.

2. PRODUCT DESCRIPTION

2.1 Product identification

Identification details for your product can be found on the rating plate affixed to the product. The rating plate contains details of the product. See the Declaration of Conformity at www.oso-hotwater.com for more information.

2.2 Intended use

OSO Maxi Charge is designed for the management and control of the power consumption of OSO Maxi commercial water heaters, see table.

OSO product	Volume	Period of manufacture
Maxi Standard - MS	600-1000 l.	26/9 - 2017 >
Maxi Xpress - MX	600-1000 l.	26/9 - 2017 >
17RE	600-1000 l.	1/1 - 2010 >
17RED	600-1000 l.	1/1 - 2010 >

OSO Hotwater AS is certified for

- Quality ISO 9001
- Environment ISO 14001
- Working Environment ISO 45001

2.3 CE marking



The CE mark shows that the product complies with the relevant directives. See the Declaration of Conformity at www.osohotwater.com for more information.

The product complies with directives for:

- Low-voltage LVD 2014/35/EU
- Radio equipment RED 2014/53/EU
- RoHS RoHS2011/65/EU

The product is designed and manufactured in accordance with:

- Safety standard IEC 60730

2.4 External management

- Wi-Fi 2.4 GHz b/g/n
- Bluetooth 4.3
- Integrated eSim (4G/LTE)

2.5 Technical data

NRF No.	OSO product no.	Product:	Description	Dimension - mm.
8000944	11012318	MAXI CHARGE R3 (2x7.5kW) - 2x25A,230V/400V with temp. sensor	Control unit with electrical cabinet	615x415x230
8000945	11012319	MAXI CHARGE R3 (3x9kW) - 3x25A,230V/400V with temp. sensor	Control unit with electrical cabinet	615x415x230
8000946	11012320	MAXI CHARGE R3 (1x15kW) - 1x40A,230V/400V with temp. sensor	Control unit with electrical cabinet	615x415x230
8000947	11012321	MAXI CHARGE R3 (2x15kW) - 2x40A,230V/400V with temp. sensor	Control unit with electrical cabinet	615x415x230
8000948	11012322	MAXI CHARGE Temp. sensor Kit / 3xDS18B20	Temp. sensor	340x227x50

The products are classified as IP66.

2.6 Spare parts

NRF No.	OSO product no.	Product:	Description	Dimension - mm.
8000948	11012322	MAXI CHARGE Temp. sensor - kit/3xDS18B20	Temp. sensor	340x227x30
8002002	11011373	CHARGE R3 - 16A/1x230,EU,WiFi LTE	Control unit	165x315x60
8000578	11013036	Single sensor DS18B20, 3m.	Single temp. sensor	130x90x20

2.7 Product description - control unit

The control unit controls the heating element of the water heater using hybrid relays. Based on temperature readings, consumption, variable electricity prices, demand rates and other factors, the product will create a plan to heat water for the anticipated consumption in the most cost-effective manner possible. The product

communicates with OSO Energy's cloud solution via WiFi or 4G/LTE.

OSO Charge syncs continuously with Norpool and will also take into account variations in the power grid in order to optimise the heating times of the water heater.

2.7.1 Technical data - MAXI CHARGE R3 (2x7,5kW) - 2x25A,230V/400V with temp. sensor

Data	Description
Type	Integrated (1.C Action - IEC 60730-2-9) - intended for indoor use only
Power supply	400V (convertible to 230V)
Maximum load	2x7.5 kW (max. 25A)
Ambient temperature	0-40°C (max.)
Impulse voltage	2500 V
IP Class	66

2.7.2 Technical data - MAXI CHARGE R3 (3x9kW) - 3x25A,230V/400V with temp. sensor

Data	Description
Type	Integrated (1.C Action - IEC 60730-2-9) - intended for indoor use only
Power supply	400V (convertible to 230V)
Maximum load	3x9 kW (max. 25A)
Ambient temperature	0-40°C (max.)
Impulse voltage	2500 V
IP Class	66

2.7.3 Technical data - MAXI CHARGE R3 (1x15kW) - 1x40A,230V/400V with temp. sensor

Data	Description
Type	Integrated (1.C Action - IEC 60730-2-9) - intended for indoor use only
Power supply	400V (convertible to 230V)
Maximum load	1x15 kW (max. 40A)
Ambient temperature	0-40°C (max.)
Impulse voltage	2500 V
IP Class	66

2.7.4 Technical data - MAXI CHARGE R3(2x15kW) - 2x40A,230V/400V with temp. sensor

Data	Description
Type	Integrated (1.C Action - IEC 60730-2-9) - intended for indoor use only
Power supply	400V (convertible to 230V)
Maximum load	1x30 kW (max. 40A)
Ambient temperature	0-40°C (max.)
Impulse voltage	2500 V
IP Class	66

3. INSTALLATION INSTRUCTIONS

3.1 Products covered by these instructions

- MAXI CHARGE R3 (2x7.5kW) - 2x25A,230V/400V w/temp. sensor
- MAXI CHARGE R3 (3x9kW) - 3x25A,230V/400V w/temp. sensor
- MAXI CHARGE R3 (1x15kW) - 1x40A,230V/400V w/temp. sensor
- MAXI CHARGE R3 (2x15kW) - 2x40A,230V/400V w/temp. sensor
- MAXI CHARGE temp. sensor kit 3xDS18B20

3.2 Included in delivery

Ref no.	Number of	Description
1	1	MAXI CHARGE Electrical cabinet with Charge R3
2	1	Installation manual (this document)
3	1	MAXI CHARGE Temp. sensor kit / 3xDS18B20

3.3 Product dimensions

Control unit with electrical cabinet. All dimensions in mm.

Product	A	B	C
MAXI CHARGER3 - 2x25A,230V/400V	615	415	230
MAXI CHARGER3 - 3x25A,230V/400V	615	415	230
MAXI CHARGER3 - 1x40A,230V/400V	615	415	230
MAXI CHARGER3 - 2x40A,230V/400V	615	415	230

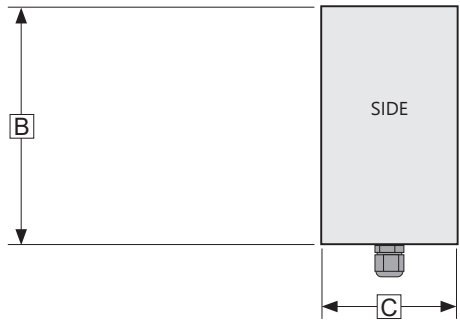
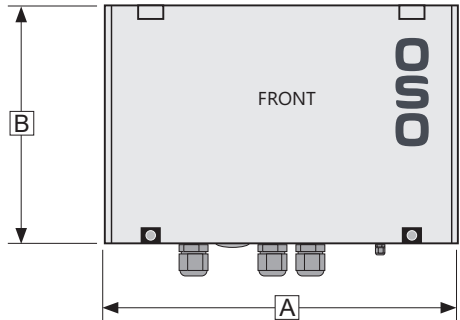
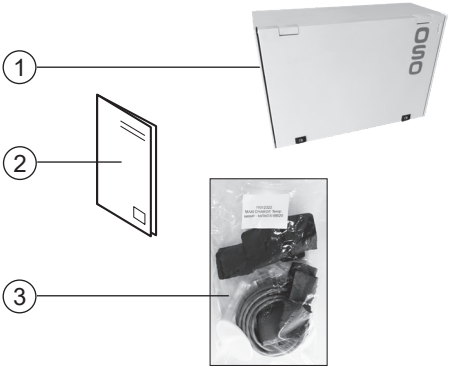
3.3.1 Delivery

The product must be transported carefully. The electrical cabinet that houses the temp. sensor and control unit must be protected against shock, impact, etc.

⚠ CAUTION
Wires, cables and similar must not be used to lift the product, as this could cause malfunctions.

3.4 Requirements for installation location and positioning

⚠ CAUTION	
❗	The product shall be placed in a dry and permanently frost-free position.
❗	The product shall be easily accessible for servicing and maintenance within the building.
⊘	The product must not be covered in any way.
❗	The control unit, including electrical cabinet, must be wall-mounted. (Screws not included). The unit must be positioned so that the cable from the temp. sensors can reach the control unit electrical cabinet and junction box, and so that the cable from the electrical cabinet and control unit to the water heater can reach the water heater junction box.



3.5 Installation of OSO Maxi Charge

3.5.1 Requirements for installation, location and positioning

OSO Maxi Charge must be installed with permanent electrical connection and the installation must be carried out in accordance with prevailing local rules and regulations. Installation must be carried out by an authorised electrician. These installation instructions must be followed.

3.5.2 Installation of Maxi Charge electrical cabinet on wall

- A. Find a suitable location for the electrical cabinet on the wall near the water heater. The cabinet must be positioned so that the Grey 5-wire cable (sensor wire, 4 m) can reach the water heater sensors.
- B. The electrical cabinet must be wall-mounted using four appropriate screws, max. Ø5 mm (not supplied). The screw holes for the cabinet must be drilled into the rear wall of the cabinet in the most appropriate locations. Choose appropriate screws/fixings for the wall type and quality. The cabinet must be fitted level.

3.6 Installation of temp. sensors

OSO product	Volume	Period of manuf.
Maxi Standard - MS	400-1000l.	26/9 - 2017 >
Maxi Xpress - MX	600-1000l.	26/9 - 2017 >
RE	400-1000l.	1/1 - 1996 >
RED	400-1000l.	1/1 - 1996 >

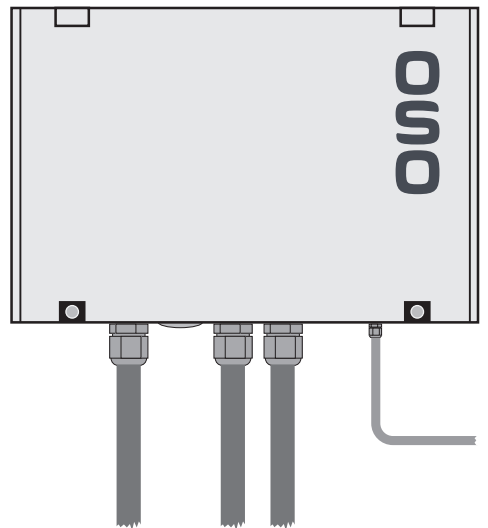
3.6.1 Temp. sensor kit - contents

Number	Component	Description
1	Grey 5-wire cable, 4 m.	sensor wire, 22AWG
1	Sensor DS18B20, 3m.	Temp. sensor A with wire
2	Sensor DS 18B20	Temp. sensor B
2	Terminal block	5-wire, transparent
4	Connector	2-wire, transparent
1	Cover	White, with strain relief
2	Cover	White
21	End sleeve	Orange, 0.5 mm ^2
4	Cellular rubber insulation	55x55x32
4	Cellular rubber insulation	40x40x10, self-adhesive

stalling the Grey 5-wire cable and cables for the DS18B20 Temp. sensors.

 **WARNING**

Constant voltage is present at terminals and is automatically controlled. Voltage to the water heater can be connected without warning. Before any electrical work is done, the power supply must be disconnected and secured against activation while the work is in progress.



End sleeves (supplied) **MUST** be used when in-

3.6.2 Sensor installation in water heater

The instructions apply to all products shown in Section 2.2.

- A. Disconnect the power supply to the water heater and ensure that the power cannot be connected while work is ongoing.
- B. Shut off the water supply to the water heater.
- C. The Maxi Charge electrical cabinet must be wall-mounted using suitable fittings, see Section 3.5.2. The cabinet must be positioned so that the Grey 5-wire cable (4) from the temp. sensor kit can run from the water heater to the electrical cabinet and can be installed in accordance with prevailing requirements and regulations.
- D. Three holes Ø54 mm (1-3) must be drilled into the outer sleeve of the water tank as shown.

Important: Use extreme caution when drilling so that the stainless steel inner tank is not damaged.

The holes should be drilled in a vertical line and the centre of the holes should be 110 mm to the right of the centre of the water heater cold water supply connection. See illustration.

I) The upper sensor (3) must be positioned at the same height as the water heater cold water supply connection, as shown.

II) The lower sensor (1) must be positioned centre-aligned with the top of the electrical cover, as shown.

III) The middle sensor (2) must be positioned midway between the lower and upper sensors (1) and (3).

- E. Remove all insulation from the holes to access the stainless steel inner tank. Be careful as the inner tank may be very hot.

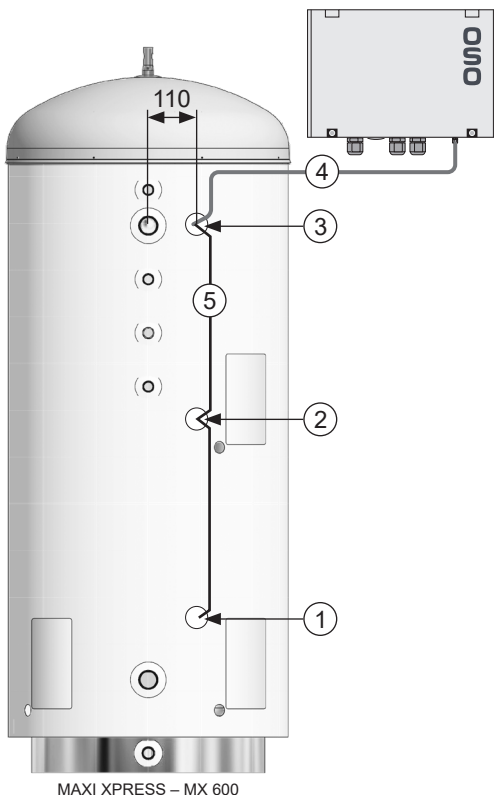
Install the Grey 5-wire cable (4) in the most favourable connection point in the upper or lower sensor hole. OSO recommends connecting sensors from the top down, but bottom-up is also possible if needed. Both connection options are described in Section 2.7.4.

The three sensors must be connected using the sensor wire (5) supplied.

Connect the Grey 5-wire cable (4) to the Maxi Charge control unit after connecting all sensors,

see Section 3.6.4

Installation and connection of sensors: See Section 3.6.3 on the next page.



3.6.3 Installation of sensors

OSO recommends installing sensors from the top down, but bottom-up is also possible if needed. Both connection options are described in Section 3.7.4.

- A. The first sensor, equipped with a 3 m cable, must be positioned in the first sensor hole. The remaining two sensors must be positioned in the respective sensor holes. Ensure that sensors are positioned flush against the stainless steel inner tank. Secure the sensors using the supplied self-adhesive 40 x 40 mm cellular rubber pads. Ensure that the water heater insulation does not get stuck in the cellular rubber adhesive during installation, as this could result in reduced contact between the sensor and the stainless steel tank.
- B. Connect the Grey 5-wire cable to the first sensor using the terminal block, see illustration. The Grey 5-wire cable must be routed through the strain relief in the cover. Make sure that the Grey 5-wire cable is installed in accordance with prevailing NEK standards.
- C. Install the supplied sensor wire from the upper sensor to the middle sensor. Connect the cable to the middle sensor connector, see illustration.
- D. The sensor wire must then be routed to the final sensor and connected using the 2-wire connector.
- E. Fill all holes using the supplied 55 x 55 cellular rubber pads. Ensure that cables are installed without any risk of wear/damage.
- F. Fit the covers on the sensor holes. The cover equipped with a strain relief must be used on the sensor hole for the first sensor in the series. Strain relief must be used for the Grey 5-wire cable (4). The Grey 5-wire cable must be routed to the Maxi Charge control unit in the electrical cabinet, see Section 3.6.4

The Grey 5-wire cable can be connected to the temp. sensors from the top down (default) or from the bottom up as needed. If the Grey 5-wire cable is connected bottom-up, the yellow wire from the first sensor must still be connected to the green wire in the Grey 5-wire cable.

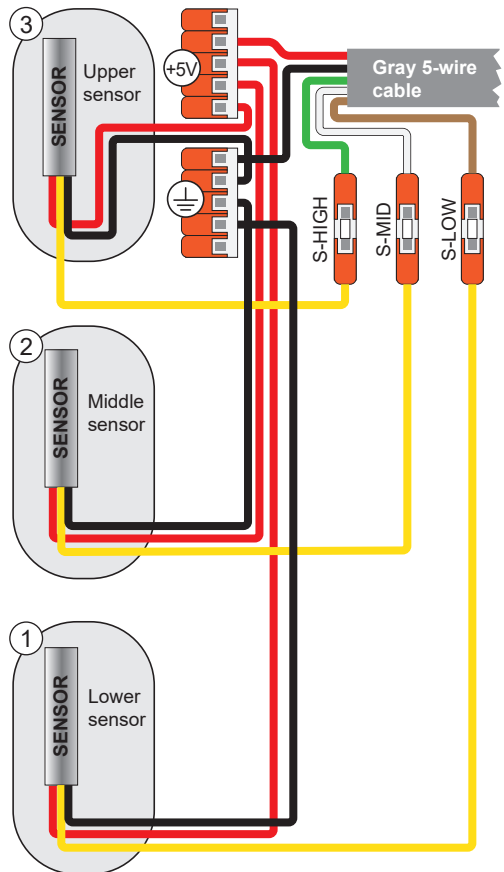
The coupling illustration is schematic. The Grey 5-wire cable must be routed into the first sensor box through the strain relief in the cover, and 5-wire terminal blocks must be placed inside the first sensor box so that all connections are shielded. If the sensors are connected bottom-up, use the cover with strain relief on the lower sensor box and place the

terminal block/connectors here.

The Grey 5-wire cable and sensor wires must be secured and positioned so that there is no risk of exposure to mechanical, thermal or chemical impact. Damaged wires must be replaced with wires of the correct quality - contact the installer. See contact details in Section 8.1.

3.6.4 Connecting the Grey 5-wire cable to the Maxi Charge control unit

The Grey 5-wire cable (4) must be installed in accordance with the prevailing NEK regulations from the sensors to the Maxi Charge control unit in the electrical cabinet. Insert the wire into the cabinet and connect to the control unit terminal block in accordance with Section 3.7.4.



Important: The end sleeves supplied MUST be used for all wires.

3.7 Electrical installation

3.7.1 Electrical components

Component	Note
Maxi Charge electrical cabinet	
Charge R3 control unit	Installed in electrical cabinet
Supply cable, control unit	Installed in electrical cabinet
Supply cable connector	Installed in electrical cabinet
Sensor wire	Supplied
DS18B20 Temp. sensor	Supplied, 2 pcs
DS18B20 Temp. sensor 3M	Supplied, 1 pcs

⊘ DO NOT

The upper cover of the control unit (3) must NOT be opened. The warranty will be void if the upper cover of the unit is opened.

3.7.2 Charge R3 control unit - components

No.	Component	Description
1	Lower cover	Junction box cover
2	Fastening screws	Screws for the lower cover
3	Pairing/operating status button	For WiFi pairing. The LED light indicates the status of the unit.
4	Sensor wire	From temp. sensor in water heater to control unit.

3.7.3 Access to junction box

The lower cover (1) of the control unit covers the junction box. Loosen the fastening screws (2) and lift the cover to remove. Disconnect the power supply to the product before removing the cover. Ensure that the power supply cannot be connected while work is ongoing.

The cover (1) must always be installed correctly before the power is turned back on.

The control unit is equipped with a plugged AUX input for the connection of auxiliary equipment (not supplied).



⚠ WARNING

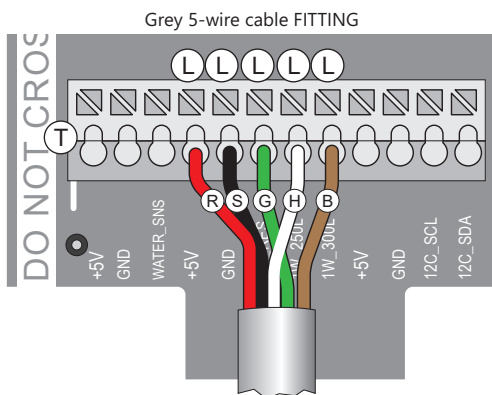
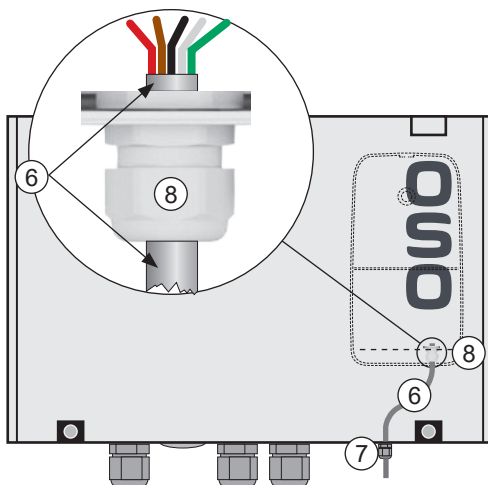
❗	The water heater should be filled with water before the power is switched on, otherwise the warranty will be void.
❗	Fixed electric fittings must be used for installation according to applicable local rules and regulations.
❗	In the event that the sensor cable is damaged, the cable must be replaced by a suitable cable with the correct specification.
❗	Electrical cables must be installed in such a way that they are not exposed to damaging mechanical, thermal or chemical impact. Strain relievers must be used. Damaged cables must be replaced.

3.7.4 Connecting the Grey 5-wire cable from temp. sensors

The Grey 5-wire cable connects the water heater temp. sensors to the OSO Charge control unit. The Grey 5-wire cable must be connected in the control unit junction box. The control unit is located inside the OSO Maxi Charge electrical cabinet as shown. All electrical installations must be carried out by an authorised electrician.

The Grey 5-wire cable is installed as follows:

- A. Loosen the lower nut on the strain relief (7) and insert the Grey 5-wire cable through this into the electrical cabinet. Pull the wire to the control unit junction box.
- B. Remove the lower cover on the control unit, see pt. 3.7.3.
- C. Unscrew the lower nut on the strain relief (8) and pull the Grey 5-wire cable through the nut.
- D. The Grey 5-wire cable (6) must be inserted into the strain relief (8). Make sure that the outer jacket of the wire protrudes a few millimetres through the strain relief (8) into the junction box, as shown. The strain relief nut must be screwed on and tightened using only hand force.
- E. Connect the Red (R), Black (S), Green (G), White (H) and Brown (B) wire in the control unit junction box as shown in the wiring diagram.
Wires must be connected to the terminal (T) by pushing down the locking tabs (L) and inserting the bare end of the Grey 5-wire cable into the junction box. The wire will be secured when the locking tab is released.
- F. When connections has been performed in accordance with the desired layout, the control unit cover must be reinstalled correctly before the power supply is reconnected.



Important: The end sleeves supplied MUST be used for all wires.

3.7.5 Electrical connection - Maxi Charge

Fixed electrical fittings must be used. All electrical work should be performed by an authorised electrician.

Supply cables for electrical cabinets (1, 2 and 3) in suitable quality and dimensions (determined by electrician) must be routed to the cabinet and led through the three factory-mounted strain relievers (MUST be used). Power supply cables must be installed by an authorised electrician as shown in the illustration below.

Power supply 400V 3~ TN:

Connect as shown in the illustration below. Do NOT use a bridge connector/link.

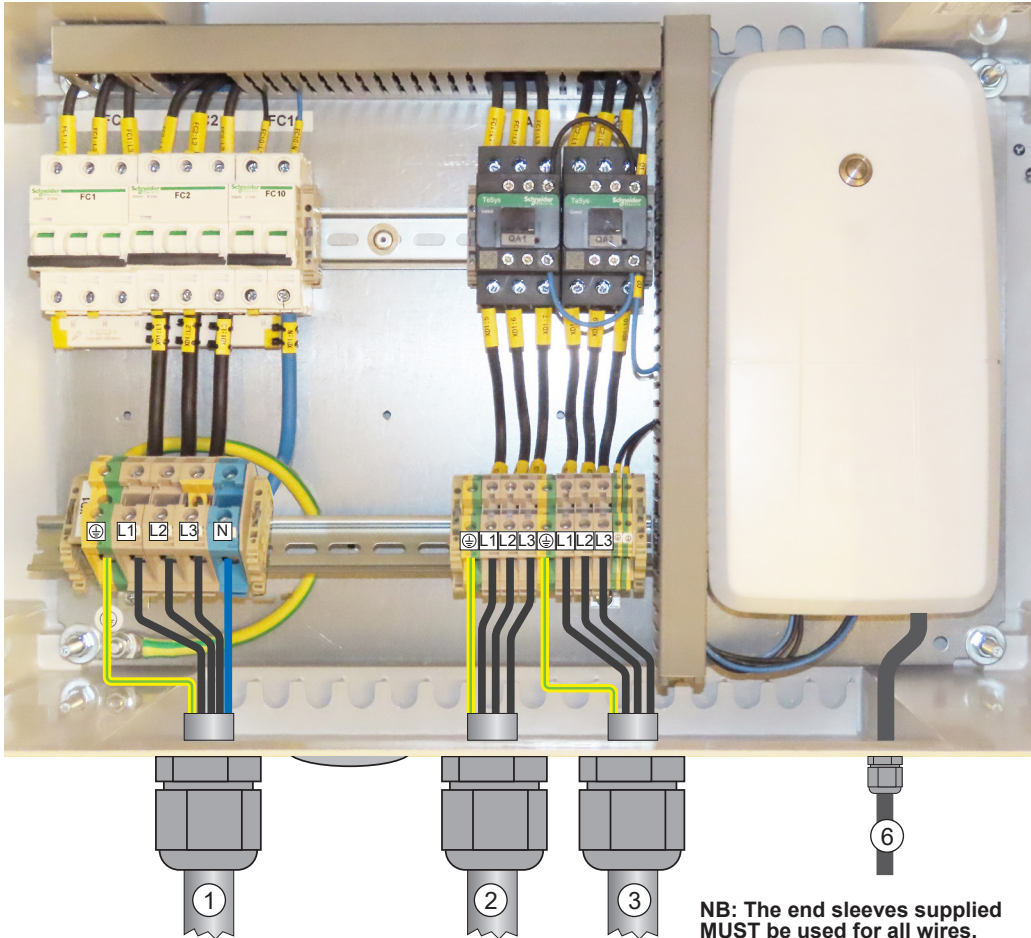
Power supply 230V 3~ IT:

Connect as shown in the illustration below. DO use a bridge connector/link. Bridge connector/link is supplied with the product.

Wire (6) is the Grey 5-wire cable from the water heater temp. sensors to the control unit. Connect as described in Section 3.7.4.

⚠ WARNING

Constant voltage may be present at the terminals. Caution must be exercised during general access to the control unit. Before any electrical work is carried out on connections in the cabinet, the power supply must be disconnected and secured against activation while work is ongoing.



NB: The end sleeves supplied MUST be used for all wires.



DO

All working thermostats in the junction boxes **MUST** be set to 75°C. Operational problems may otherwise occur.

WARNING

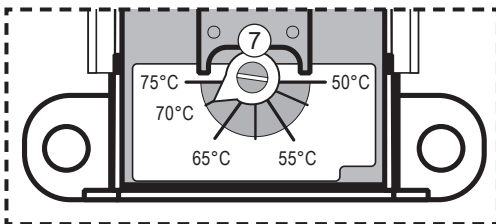
Constant voltage is present at terminals and is automatically controlled. Voltage to the water heater can be connected without warning. Before any electrical work is done, the power supply must be disconnected and secured against activation while the work is in progress.

3.7.6 Adjusting the water heater thermostats

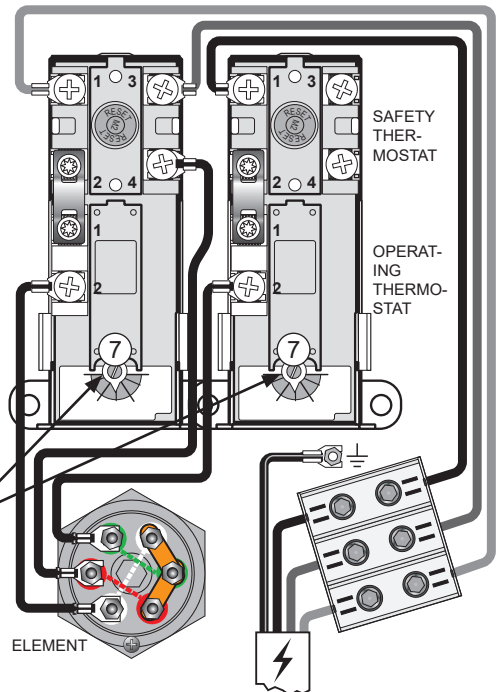
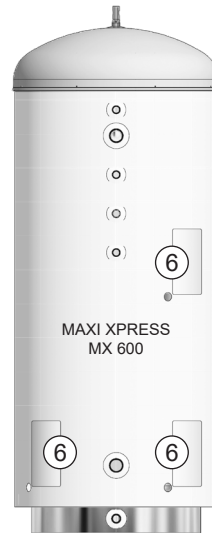
IMPORTANT: The water heater thermostats **MUST** be adjusted in accordance with the description below.

The OSO Maxi range consists of products that may be equipped with multiple junction boxes, each supplied with two thermostats. See e.g. Maxi Xpress (illustration), which is supplied with 3 x 9 kW junction boxes (6) as standard. All thermostats in all product junction boxes must be set to 75°C. This is done as follows:

- Disconnect all power supply to the product and secure against activation while work is ongoing.
- Remove the electrical cover by loosening the screw.
- The correct temperature (75°C) must be set on both thermostats by adjusting the arrow (7) using a screwdriver.
- The cover must be reinstalled correctly before the power supply is reconnected.



For more information about the water heater electrical system, see the manual supplied with the water heater.



DO

The water heater must be filled with water before the power is switched on.

4. INITIAL COMMISSIONING

WARNING

The water heater must be filled with water before the power is switched on.

The control unit must not be covered in any way.

4.1 Preparations before start-up

After installation, the water heater will be controlled by the OSO Maxi Charge control unit. The control unit is located inside the electrical cabinet and is operated using the button at the front (1) and a mobile application. We recommend downloading the app before the system is prepared for operation, see Section 4.4.

4.2 Checkpoints before start-up

1. Check that wires are not exposed to mechanical, thermal or chemical impact.
2. Check that the electrical cabinet is securely attached to the wall, not covered and easily accessible.

4.3 Turning on the control unit

The control unit starts when the power supply is connected.

4.4 Installing the OSO inCharge app

OSO inCharge is a mobile application used to configure a Maxi Charge-connected water heater and to combine multiple water heaters. The app will also provide insight into usage patterns and allows for the optimisation of the water heater.

You can download and install the OSO inCharge app from the Apple AppStore or Google Play Store. The QR codes shown can be used.

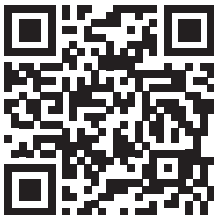
Login: At initial start-up, new users must create an account with a username and password. If a user manages multiple OSO Charge installations, separate accounts must be created for each installation. We recommend that technicians create a work user account that is used solely to configure water heaters at customer premises.

Technician menu: A menu is displayed after login. The installer must select "Technician". The Maxi Charge control unit is registered and configured here. The user can scan the QR code on the control unit or enter the device ID displayed on the inside of the lower control unit cover (2) when requested by the app. Follow the instructions in the app and configure each water heater so that each water heater and the total combination of water heaters is correct.

4.5 WiFi & LTE connection

Launch the OSO inCharge app. Press and hold the Maxi Charge control unit button (1) for at least 3 seconds to start pairing with Bluetooth. The button will slowly flash blue. The device is now in pairing mode. Follow the instructions in the app to pair.

When the configuration has been completed, the control unit will automatically return to normal operating mode. This is indicated by the button being continuously turquoise for WiFi and green for 4G/LTE. If you do not update the configuration from the app after placing the control unit in configuration mode, the unit will automatically return to normal operating mode after three minutes. Switching between WiFi mode (turquoise) and 4G/LTE mode (green) is done by pressing the button (1) for 1-3 seconds.



Apple AppStore



Google Play Store

4.6 Handover to end-user

THE INSTALLER MUST:

Brief the end-user on safety and maintenance instructions.

Brief the end-user on the use of the product.

Enter contact details in Section 8.1.

Hand this manual over to the end-user.

5. SETTINGS

5.1 Managing the control unit

The control unit is managed by the OSO inCharge app. Download the app and follow the instructions. See Sections 4.4 and 4.5.

5.2 Maintenance and annual inspections

The control unit must be subjected to annual inspections in the same way as other electrical equipment. Check that the control unit is not covered in any way and that cables are not at risk of being exposed to mechanical, thermal or chemical impact.

All connections in the electrical cabinet must be tightened annually to prevent contact reductions over time:

- Disconnect all power supply to the product and secure against activation while work is ongoing.
 - Open the electrical cabinet and tighten all connections using a suitable tool. Tighten using manual force.
 - Make sure that the electrical cabinet is correctly closed before the power supply is reconnected.
- Water heaters and pipe connections must also be inspected annually, see water heater manual.

Maintenance must only be carried out by persons over 18 years of age with sufficient expertise.

5.3 Troubleshooting

If problems arise when the product is in use, check for possible faults and fixes in the table below. If the problem does not appear in the table or you are unsure what is wrong, contact the installer

(see contact details on page 19) or OSO Energy AP - see contact details on the back of this manual.

5.4 Bypass mode

In the event of a fault in the control unit or sensor that causes the hot water heater not to heat, the Maxi Charge control unit can be placed in bypass mode. This means that the heater will not use Charge smart features and will behave like a standard heater. This is done by opening the electrical cabinet and pressing the button for 10-15 seconds until the LED in the button turns red.



5.5 Status table, control unit

CONTROL UNIT STATUS		
Button (1) light pattern	LED colour	Description
ON (50ms) / OFF (950ms)	Green	Initialising LTE connection
ON (700ms) / OFF (700ms)	Green	Connected to internet via LTE, connecting to IoT hub
ON	Green	Connected to IoT via LTE
ON (50ms) / OFF (950ms)	Turquoise	Initialising WiFi connection
ON (700ms) / OFF (700ms)	Turquoise	Connected to internet via WiFi, connecting to IoT hub
ON	Turquoise	Connected to IoT via WiFi
ON (30ms) / OFF (60ms)	Blue	Preparing to activate Bluetooth
ON (700ms) / OFF (700ms)	Blue	Bluetooth discoverable (ready to pair)
ON	Blue	Bluetooth connected
ON	Red	Bypass mode enabled

6. TERMS OF USE

The service, an optimisation application for hot water tanks, ("the Service"), is provided by OSO Hotwater AS, business registration no. 986 173 617, Industriveien 1, NO-3300 Hokksund ("OSO").

The terms of use ("the Terms") apply to the natural person ("you") using the Service.

ABOUT THE SERVICE

The Service is an optimisation service for OSO hot water tanks with associated control units ("the Product") and is used to optimise water heating in relation to cost and other considerations. The Service can be downloaded as a mobile phone application (app). Further information about OSO and its products and services can be found at <https://osohotwater.no/>

THE AGREEMENT

The agreement between yourself and OSO comprises these Terms and the OSO Privacy Policy. The agreement applies solely to your use of the Service. Terms and conditions of purchase and use of the Products follow from your agreement with the seller of the Product.

USE OF THE SERVICE

You must be 18 years of age or older to access the Service. In order to use the Service, the customer must identify themselves in accordance with the applicable authentication requirements in the application. This could be SMS, e-mail or other supported solutions.

The Service is an optimisation service for the Product and should be used to attempt to optimise the water and power consumption of the product. The app provides insight into the available volume of hot water, historical consumption data and general information about the water heater. The app supports multiple water heaters and allows the customer to manage these using a single interface. The Service includes functionality to optimise the heating of water in relation to cost, as well as maintaining quality in terms of e.g. frequency, hot water availability and voltage. You will have access to certain configuration options for optimisation. The app supports notifications.

Optimal use and benefit of the Service is subject to the Product having been mounted, installed and positioned in the manner and environment specified in the instructions for use of the Product. Moreover, the Product control unit must not have been opened or otherwise damaged or impacted.

The Service must be used in accordance with any instructions provided by OSO. The Service must not be used for purposes that contravene the Terms or legislation or for anything other than the intended Products. You are responsible for all actions and activities associated with your use of the Service and neither OSO nor its subcontractors are liable for any unauthorised access to the Service resulting from negligence on your part.

You may not copy, reproduce, sell, license, distribute, modify, decompile or otherwise make changes to the Service or make the Service or parts thereof available to others.

Please refer to the current user manual available at www.osohotwater.no/bbrukermanual for an exhaustive description of the service and its features.

ACCESSIBILITY

If you experience any difficulties using the Service, please contact OSO via email: info@osohotwater.no or phone: +47 32 25 00 00. OSO will respond as soon as possible and usually within one working day.

OSO may implement appropriate measures that may affect access to the Service for technical, maintenance or safety reasons. To the extent that it is practicable, OSO will provide information about any unavailability of/limitations to Services. Such information will be issued via the communication channels to which OSO has access, e.g. via the application or OSO website, and in the manner and to the extent deemed appropriate by OSO.

LIMITED ACCESS TO THE SERVICE

The Service may be interrupted due to circumstances outside of the control of OSO or its subcontractors if such circumstances may affect the functionality and availability of the Service. Neither OSO nor its subcontractors can control such circumstances and OSO can therefore not guarantee continuous or uninterrupted access to the Service. Nevertheless, OSO will seek, to a reasonable extent, to eliminate any factors that interrupt or risk interrupting the functionality and availability of the Service.

OSO reserves the right to terminate your access to the Service at any time if OSO suspects that you are violating the Terms or otherwise acting in a manner that means that OSO or its subcontractors, other users or persons are at risk of loss or damage. You are financially liable to OSO to the extent that follows from general tort law.

UPGRADED FEATURES AND NEW VERSIONS OF THE SERVICE

Upgraded features and new versions of the Service will be implemented in the Service to the extent deemed necessary by OSO. OSO reserves the right to modify or adjust the Service or the way in which the Service is delivered without prior warning and at any time.

The Service shall remain available for at least five years after installation. The Products to which the Service is linked may have a longer service life than the period for which the Service is delivered. The Products will also work for their intended purpose without the Service.

PERSONAL DATA

The following data will be processed by OSO in order for OSO to deliver the Service:

- A. Information about the serial number of your Product
- B. Information or data about you as collected from the control unit linked to the Product, including location (map coordinates - for installation), meter point ID, temperature, hot water volume and electricity readings for the Product;
- C. Information or data you choose to enter in the Service; and
- D. Information or data created in the Service, as statistics.

OSO may share information about you related to your use of the Service with other parties in order to improve the Service/Product and contribute to more efficient utilisation of the power grid.

A more comprehensive and detailed description of the collection and processing of your personal data can be found in the Privacy Policy at <https://osohotwater.no/personvern/>

LINKS TO OTHER WEBSITES

You may encounter links to websites provided by third parties in the Service. OSO has no control over or responsibility for such affiliated websites or the contents thereof and shall not be held liable for any damage arising in connection with the use of services available on linked websites. You should read the respective terms of use and privacy policies for such third party websites.

INTELLECTUAL PROPERTY RIGHTS

All rights to the Service and Product, including intellectual property rights, are owned by OSO and OSO's subcontractors. Such rights include, but are not limited to, the operation, method, software and design of the Service. You shall not acquire any intellectual property rights to the Service or any rights to the material generated in connection with your use of the Service.

THIRD-PARTY APPLICATIONS

You may require access to certain third-party applications in order to use parts of the Service. You are responsible for installing and updating such third-party applications.

You must use third-party applications in accordance with the terms of the application. You must indemnify OSO and its subcontractors in the event of any claims against OSO or its subcontractors arising as a result of your use of third-party applications.

Neither OSO nor its subcontractors are liable for defects in, and cannot guarantee the functionality of, any third-party application.

LIABILITY AND LIMITATION OF LIABILITY

Neither OSO nor its subcontractors shall be liable for loss of earnings, repayments to third parties or other indirect or consequential losses. This limitation shall not apply in the event of gross negligence or wilful intent.

FORCE MAJEURE

OSO and its subcontractors shall not be liable for non-fulfilment of the obligations under the Terms, during the period in which and to the extent that OSO or its subcontractors are hindered by circumstances outside our control, including war, warlike conditions, labour disputes, epidemics, pandemics, new or amended legislation, government measures, interruptions or faults in electricity or communication systems, fire, flooding or other factors of similar significance.

MODIFICATION AND TERMINATION OF THE SERVICE

OSO reserves the right to modify or supplement these Terms at any time. You will be notified of any significant modifications.

All modified terms will automatically take effect no later than fourteen (14) days after the modifications have been published in the Service. By continuing to use the Service after fourteen (14) days, you will be deemed to have accepted the new Terms.

You may stop using the Service at any time. Please note that uninstalling the Service from your mobile or stopping using the Service will not automatically result in the closure of your account in the Service. You need to actively close your account in the app.

COMMUNICATION

You accept that all communication from OSO or its subcontractors may be submitted electronically, either via the Service or to your email address.

DURATION

The Terms apply from the date on which you register a user account for the use of the Service and until you have closed your account in the app, at portal.osoenergy.no or the Service is discontinued by OSO.

CHOICE OF LAW AND LEGAL VENUE

The Terms shall be interpreted in accordance with and as supplemented by Norwegian law. Attempts shall be made to resolve any dispute arising as a result of or in connection with these Terms or in connection with breach, termination or invalidity of the Terms through negotiations. If negotiations are not successful, you, as the consumer, may contact the Norwegian Consumer Authority to request arbitration, cf. Complaining to the Norwegian Consumer Authority - Norwegian Consumer Authority.

If the parties agree, or if you a business, the case can be brought directly before the ordinary courts.

If you are consumer residing in another EU country, you may lodge a complaint via the European Commission's complaints portal: <http://ec.europa.eu/odr>

Last updated: 16/03/2022 See www.osohotwater.no for the latest version.

7. WARRANTY CONDITIONS

Scope

OSO Hotwater AS ("OSO") warrants for 2 years from the date of purchase that the Product will: i) conform to OSO specifications, ii) be free from defects in materials and workmanship, subject to the conditions below. All components are guaranteed to be free from defects in materials and workmanship for 2 years.

The warranty on products purchased by legal persons or installed for commercial use is governed solely by the Norwegian Sale of Goods Act and the following warranty conditions and limitations.

Coverage

If a defect occurs and a valid claim is received within the statutory warranty period, OSO shall, at its own choice and within the framework of the law, either: i) repair the defect, or; ii) replace the defective product with a new product that is identical or equivalent in terms of features, or; iii) refund the purchase price for the product.

Products or components replaced in connection with warranty claims become the property of OSO. The product or component being replaced will not result in an extension of the original warranty period.

Assumptions

This warranty applies only if the following conditions are met:

- The product has been installed according to the installation instructions supplied and in compliance with all relevant regulations, standards and requirements in effect at the date

of installation.

- The product has not been modified, changed, subjected to abnormal effects, and no factory-fitted or supplied parts have been removed.
- Service and maintenance have been carried out by an expert according to the requirements in the accompanying installation instructions and all relevant technical regulations. Any component used for servicing is an original OSO spare part.
- Any warranty cost has been approved in writing by OSO before it is charged.
- A purchase receipt and/or receipt for the installation and the defective product will be provided to OSO on request.

If the above conditions are not met, this may result in damage to the product.

Limitations

The warranty does not cover:

- Any fault or costs arising from incorrect installation or use, lack of maintenance, negligence, misuse, alteration or repair carried out incorrectly or any fault caused by changing the product from its original form.
- Any consequential damage or any indirect loss caused by any failure or malfunction of the product.
- Equipment connected to the product.
- Transport damage. The carrier should be notified of any such damage upon receipt.
- Costs incurred due to the fact that the product is not easily accessible for service.

7.1 Customer service

In case of problems that cannot be resolved with the aid of the troubleshooting guide in this installation manual (Section 6.1), contact either:

- A) The installer who supplied the product.
B) OSO Hotwater AS: Tel.: +47 32 25 00 00
oso@oso.no / www.oso.no

7.2 Removal

1. OSO Maxi Charge electrical cabinet: Disconnect the power supply, disconnect all cables and wires.
 2. Loosen the suspension screws in the wall.
 3. Water heater: See water heater manual.
 4. The product can now be removed.
- Maxi Charge can be recycled and must be disposed of at a recycling centre as electrical waste. The water heater can also be recycled.

8. CONTACT DETAILS

8.1 Contact details, installer

Installers should enter their contact details using the form below. Any comments or other information can be entered in Section 8.2.

CONTACT DETAILS	
Installed by (company):	
Company address:	
Company phone:	
Company email:	
Installer name:	
Installation date:	



OSO Hotwater AS

Industriveien 1
3300 Hokksund - Norway
info@osohotwater.no
www.osohotwater.no

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