



**Operating Manual**  
**MSA HUB**  
**SCBA Telemetry Version**



Order No.: 10204590/01



***The Safety Company***

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## 1 Safety Regulations

### 1.1 Correct Use

The MSA HUB – hereafter referred to as device – is an industrial router that wirelessly connects MSA devices to the Internet or intranet. It is a stand-alone device with Long Range Radio (LRR) connectivity and a gateway connection that connects local MSA networks with MSA Cloud Services.



#### **WARNING!**

Read this manual carefully before using the device. The device will perform as designed only if it is used and maintained in accordance with the manufacturer's instructions. Otherwise, it could fail to perform as designed and persons who rely on this device for their safety could sustain serious personal injury or death.

Before use the product operability must be verified. The product must not be used if the function test is unsuccessful, it is damaged, a competent servicing/maintenance has not been made, genuine MSA spare parts have not been used.

### 1.2 Liability Information

MSA accepts no liability in cases where the device has been used inappropriately or not as intended. The selection and use of the device are the exclusive responsibility of the individual operator.

Product liability claims, warranties and guarantees made by MSA with respect to the device are voided, if it is not used, serviced or maintained in accordance with the instructions in this manual.

### 1.3 Warranty

Local rules apply.

For any additional information relative to use or repair, call 1-877-MSA-FIRE (1-877-672-3473) during regular working hours or write an e-mail to [fire.cs@msasafety.com](mailto:fire.cs@msasafety.com).

For additional contact information refer to the MSA website at <http://www.MSAafety.com>.

## 2 Description

### 2.1 Scope of Delivery

This package includes:

MSA HUB Fireservice

- MSA HUB Fireservice device
- Wall power supply
- Power cable for truck installation (25 m)
- Multi antenna with cable for truck installation (3 m)
- LRR antenna for truck installation
- Antenna cable for LRR antenna (3 m)
- Quick Start Guide: Truck Version

MSA HUB Fireservice Standard

- MSA HUB Fireservice Standard device
- Industrial power supply
- Main power cable (5 m)
- Additional power cable (25 m)
- LRR antenna
- Quick Start Guide: Standard Version

The A2 Software can be downloaded via the MSA Software Product website on <http://www.MSAafety.com>.

## 2.2 Overview

### 2.2.1 MSA HUB Fireservice for Truck Installation

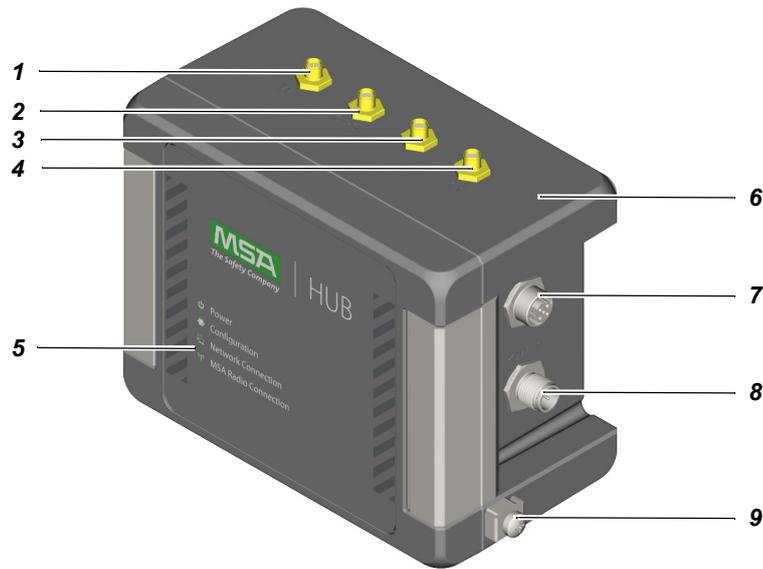


Fig. 1 MSA HUB Fireservice for Truck Installation

- |   |                                |   |                    |
|---|--------------------------------|---|--------------------|
| 1 | WiFi connector                 | 6 | Housing            |
| 2 | GPS connector (for future use) | 7 | Ethernet connector |
| 3 | LTE connector (for future use) | 8 | Power connector    |
| 4 | LRR connector                  | 9 | Grounding terminal |
| 5 | Status LEDs                    |   |                    |

The device consists of a compact housing with five connections – WiFi, GPS, LRR, Ethernet and power. A SIM card holder is included inside the housing lid.

When the device is installed and configured, it can connect MSA devices to the Internet or intranet and transfer data. The status LEDs show the respective connection status.

The device is intended to be used in a vehicle with top mounted antennas.

## 2.2.2 MSA HUB Fireservice Standard

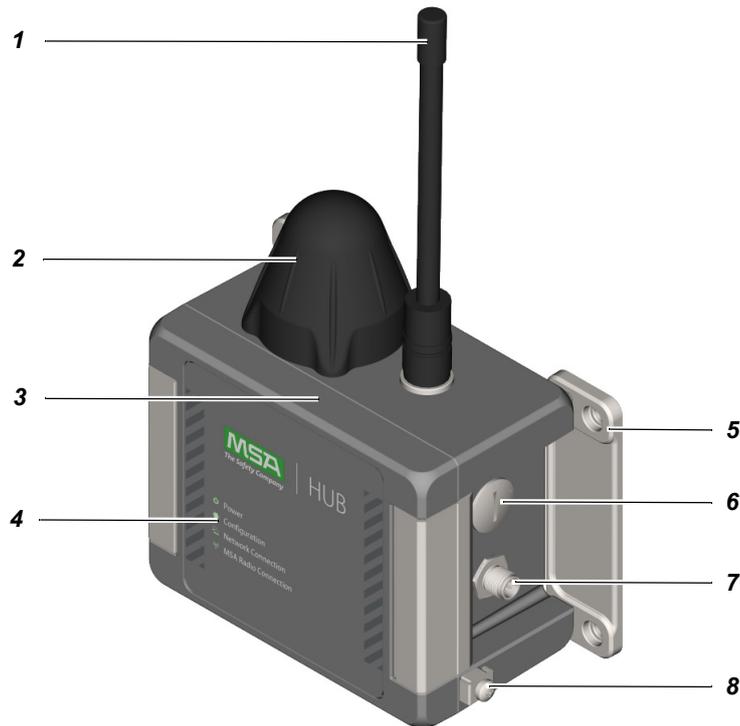


Fig. 2 MSA HUB Fireservice Standard

- |   |   |   |                                   |
|---|---|---|-----------------------------------|
| 1 | LRR antenna                                       | 5 | Wall brackets                     |
| 2 | Multi antenna (WiFi, Mobile, GPS) with dust cover | 6 | Sealing plug (Ethernet connector) |
| 3 | Housing   | 7 | Power connector                   |
| 4 | Status LEDs                                       | 8 | Grounding terminal                |

The device consists of a compact housing with two antennas and two connections – Ethernet and power. The Ethernet connector kit is available separately (Part Number 10195741). A SIM card holder is included inside the housing lid.

When the device is installed and configured, it can connect MSA devices to the Internet or intranet and transfer data. The status LEDs show the respective connection status.

### 3 Assembly and Installation

**⚠ WARNING!**

Do not assemble or operate damaged components. Failure to do so can result in electric shocks and personal injury.

**⚠ CAUTION!**

The device must only be operated with a distance of at least 20 cm to the user's body due to emissions. Failure to do so can cause minor injury.

**NOTICE**

Do not open the device when it is operated. Otherwise, the device may be damaged.

**NOTICE**

Do not use the device without antenna(s). Otherwise, the device may be damaged.

**NOTICE**

Do not connect or disconnect the MSA HUB when energized. Otherwise, the device may be damaged.

Always plug in power cable and then connect to the local power supply afterwards.

**NOTICE**

The device contains electrostatically sensitive components. Adopt precautionary measures against electrostatic discharge during assembly. Otherwise, the device may be damaged.

The device must only be used with approved antennas.

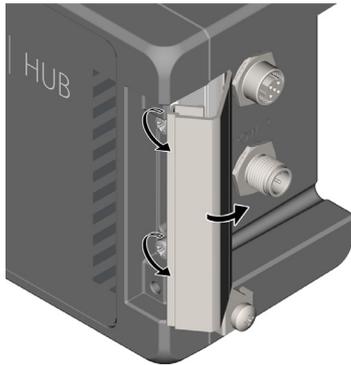
The device must be disconnected from the power supply prior to assembly. The power supply may be activated only after the device is fully assembled and connected.

To ensure the IP degree of protection:

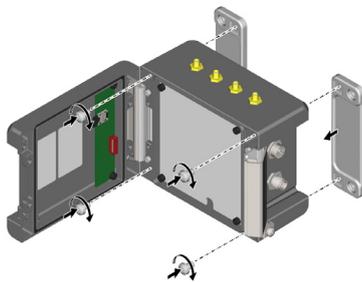
- all seals must be undamaged and correctly fitted
- all housing/housing cover screws must be tightened with the appropriate torque
- only cables of the appropriate size must be used in the connectors
- all connectors must be tightened with the appropriate torque
- all empty panel connectors must be sealed with sealing plugs

### 3.1 Assembly

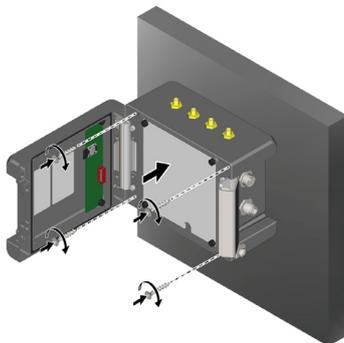
#### 3.1.1 MSA HUB Fireservice for Truck Installation with Wall Brackets



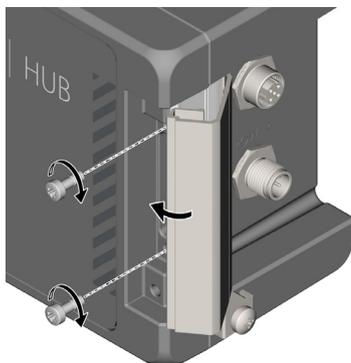
- (1) Open housing by opening the right joints and unscrew the lid screws using a Torx T20.



- (2) Use four M6 screws with a torque of 1.8 Nm to fasten the wall brackets (Part Number 10203364) at the back of the housing.

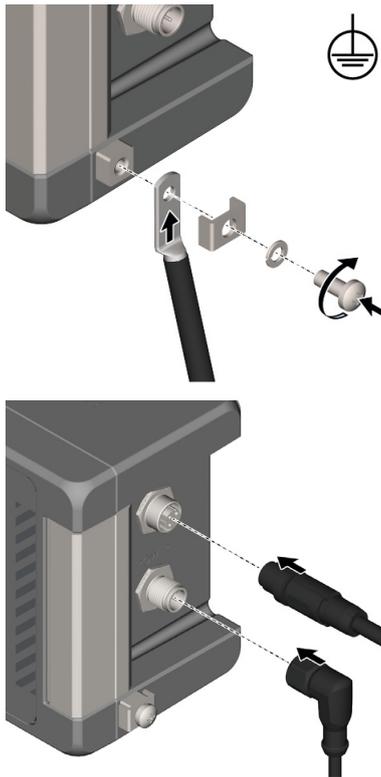


- (3) Install device at the desired space.  
When installing the device on a solid plain surface, use four appropriate screws and apply a torque of 5 Nm.



- (4) Close housing lid by tightening the lid screws with a torque of 1.5 Nm.
- (5) Close right joints.

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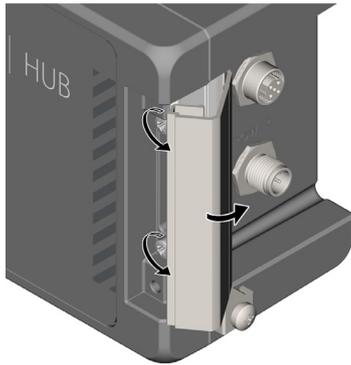


- (6) Optional:  
Loosen grounding clamp.  
a) Insert grounding cable and re-tighten grounding clamp with a torque of 2 Nm.

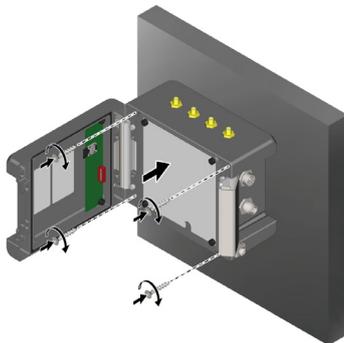
- (7) If needed, plug in and screw Ethernet plug with a torque of 0.4 Nm.  
(8) Plug in power plug and screw union nut with a torque of 1.2 - 1.5 Nm using a wrench SW14.

*The device is assembled.*

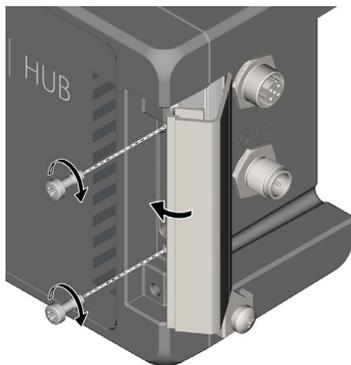
### 3.1.2 MSA HUB Fireservice for Truck Installation without Wall Brackets



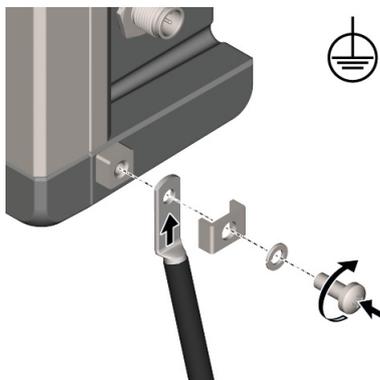
- (1) Open housing by opening the right joints and unscrew the lid screws using a Torx T20.



- (2) Install device at the desired space.  
When installing the device on a solid plain surface, use four appropriate screws and apply a torque of 5 Nm.

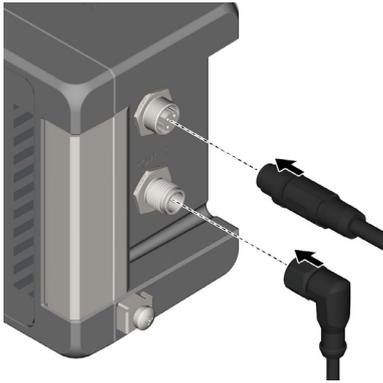


- (3) Close housing lid by tightening the lid screws with a torque of 1.5 Nm.
- (4) Close right joints.



- (5) Optional:  
Loosen grounding clamp.  
a) Insert grounding cable and re-tighten grounding clamp with a torque of 2 Nm.

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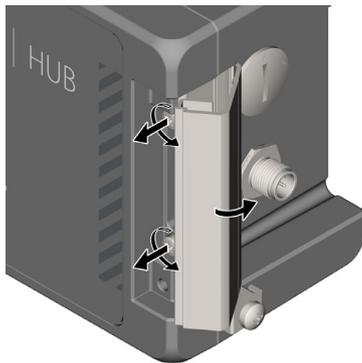
- (6) If needed, plug in and screw Ethernet plug with a torque of 0.4 Nm.
- (7) Plug in power plug and screw union nut with a torque of 1.2 - 1.5 Nm using a wrench SW14.

*The device is assembled.*

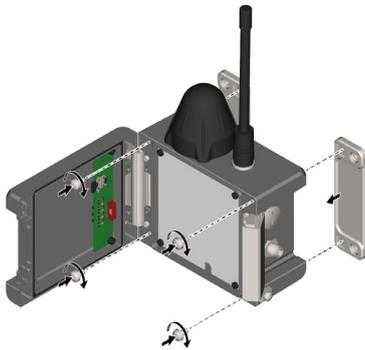
### 3.1.3 MSA HUB Fireservice Standard



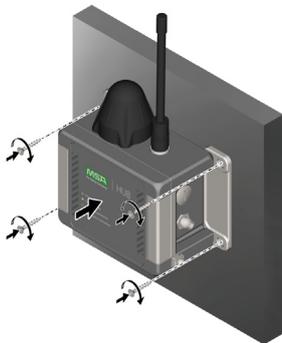
(1) Hand-screw LRR antenna.



(2) Open housing by opening the right joints and removing the lid screws.

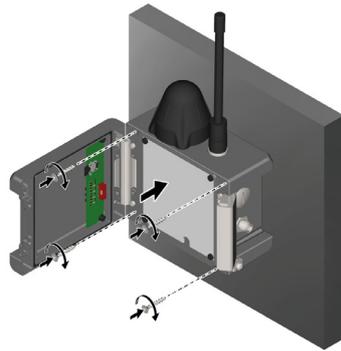


(3) Optional:  
Use four screws to fasten the wall brackets to the housing.

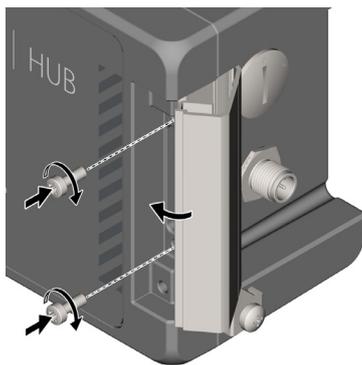


(4) Use four screws to fasten the wall brackets to the surface and apply a torque of 5 Nm.

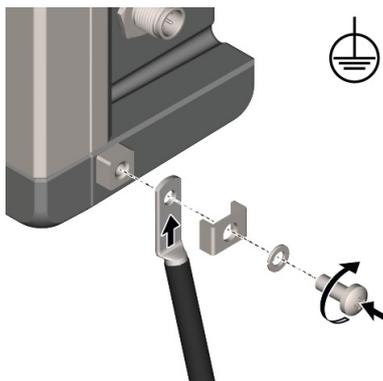
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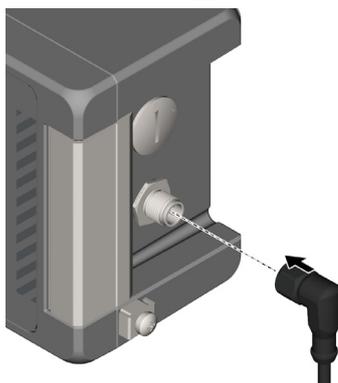
**Note:** If no wall brackets are used, mount the device to the surface directly.  
Use four appropriate screws and apply a torque of 5 Nm.



- (5) Close housing lid by tightening the lid screws with a torque of 1.5 Nm.
- (6) Close right joins.



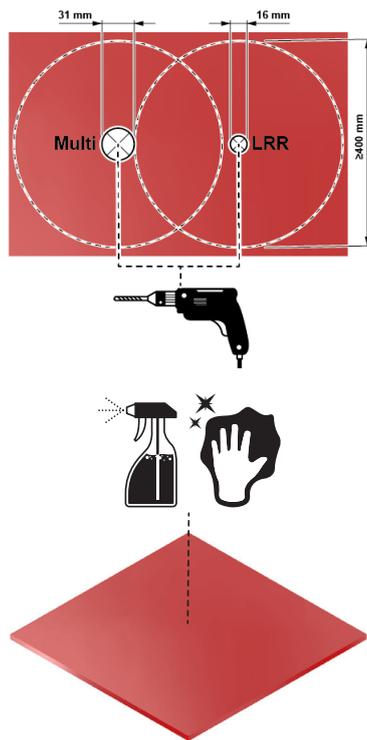
- (7) Optional:  
Loosen grounding clamp.
  - a) Insert grounding cable and re-tighten grounding clamp with a torque of 2 Nm.



- (8) Plug in power plug and screw union nut with a torque of 1.2 - 1.5 Nm using a wrench SW14.

*The device is assembled.*

### 3.2 Antenna Installation (for Truck Installation only)



- (1) Drill holes for antennas into the rooftop.
  - a) For the Multi antenna, drill a hole with 31 mm diameter.
  - b) For the LRR antenna, drill a hole with 16 mm diameter.

**Note:** Keep at least 20 cm distance between the antennas and from other metal parts.

- (2) Clean the relevant surface on the roof from any dirt and dust.

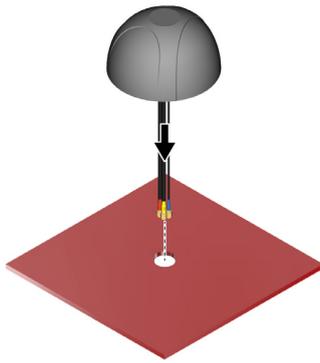
#### 3.2.1 Multi Antenna



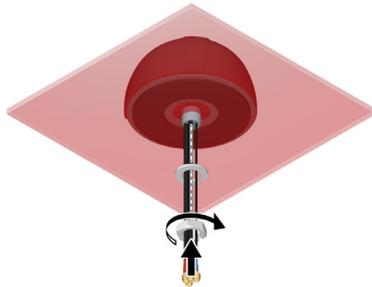
- (3) Remove lock nut, spring lock washer and flat washer.

- (4) Remove protective foil from adhesive area.

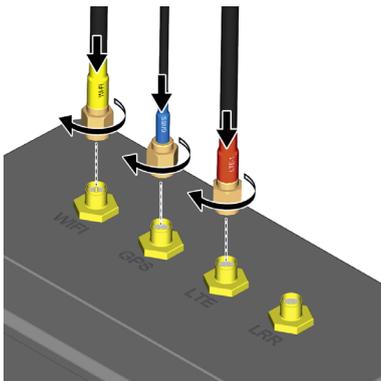
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- (5) Pass the antenna cables through the hole.
- (6) Put the antenna on the surface.  
*The adhesive area completely sticks to the surface.*



- (7) Re-attach flat washer, spring lock washer and lock nut.
- (8) Screw lock nut with a torque of 50 Nm.



- (9) Attach antenna cables to the relevant MSA HUB antenna connections.  
**Note:** GPS and LTE connection for future use. The MIMO 1 cable is to be connected to the LTE port on the MSA HUB. The MIMO 2 cable needs to be safely secured but not necessarily isolated at the installation place.

### 3.2.2 LRR Antenna

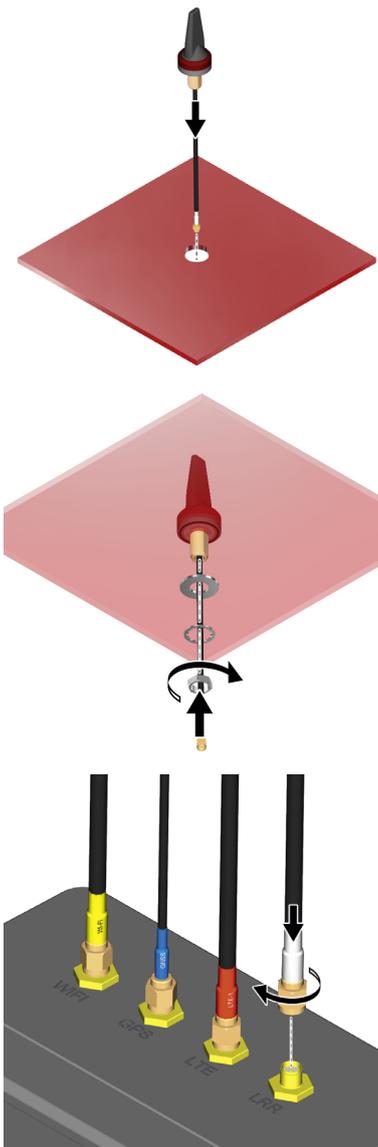
*The Multi antenna is installed.*

- (10) Remove any burrs, particularly on the roof under the side of the hole.
- (11) Remove any paint in a narrow ring around the hole.



- (12) Remove the lock nut, tooth lock washer and flat washer.  
**NOTE:** The antenna illustration may differ from the original product.

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(13) Pass the antenna cables through the hole.

**Note:** Metal-to-metal contact between the mounting surface and the mount is essential for best performance of the antenna.

(14) Re-attach flat washer, tooth lock washer and lock nut.

(15) Screw lock nut with a torque of 10 Nm.

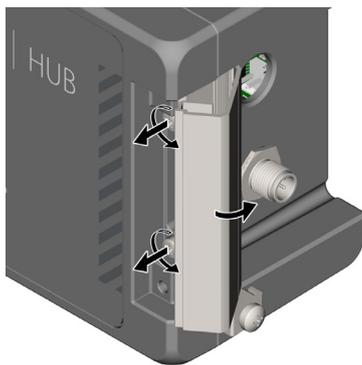
(16) Attach the antenna cable to the LRR connection on the MSA HUB.

*The LRR antenna is installed.*

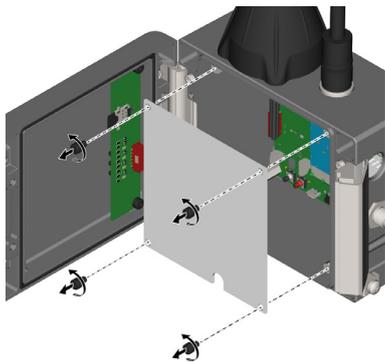
### 3.3 Ethernet Kit Installation (MSA HUB Fireservice Standard only)



(1) Remove the sealing plug.

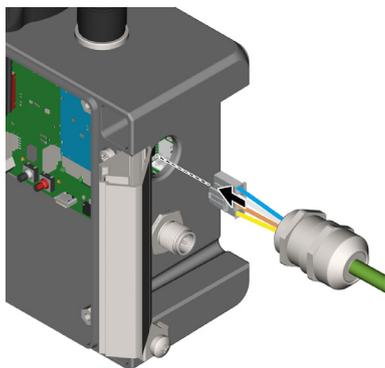


(2) Open housing by opening the right joints and removing the lid screws.



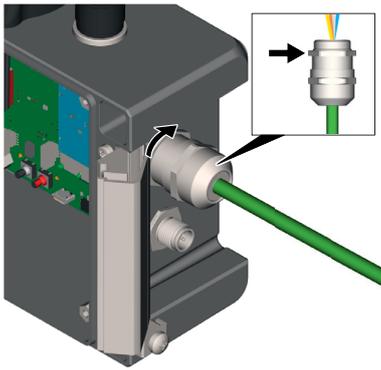
(3) Unscrew the four cover panel screws.

(4) Remove cover panel.



(5) Pass Ethernet plug through the hole.

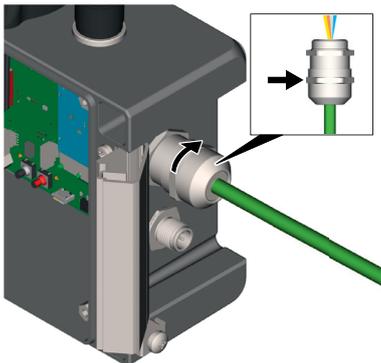
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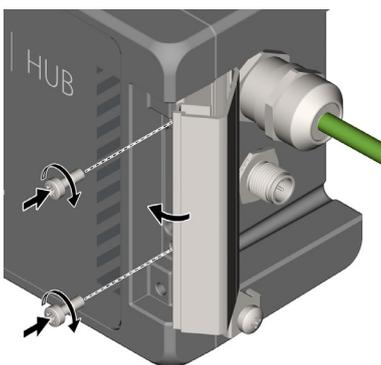
- (6) Tighten upper nut with a torque of 7.5 Nm.  
*The cable gland is fixed in the housing.*



- (7) Plug Ethernet socket onto mainboard.



- (8) Tighten lower nut with a torque of 0.4 Nm.  
*The cable is fixed within the cable gland.*

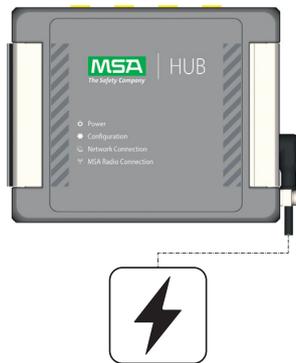


- (9) Close housing lid by tightening the lid screws with a torque of 1.5 Nm.  
(10) Close right joins.

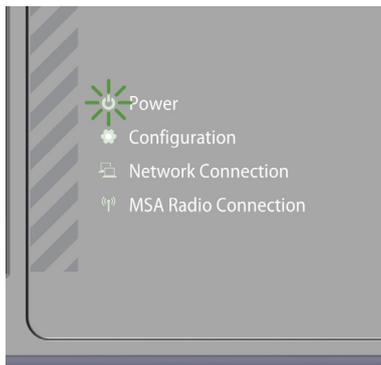
*The Ethernet connector is installed.*

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## 4 Connectivity



(1) Provide a power supply via mains supply.  
**NOTE:** When installing the HUB in a truck, secure with a 2A fuse (slow).



*The Power LED flashes.*



*The device searches for a network connection.*

Connectivity functionality (including monitoring, configuration, and registration) is provided through A2 Software.

Upon the initial setup, connect the HUB provided network that is active by default. The default connection settings are found on the HUB type label.

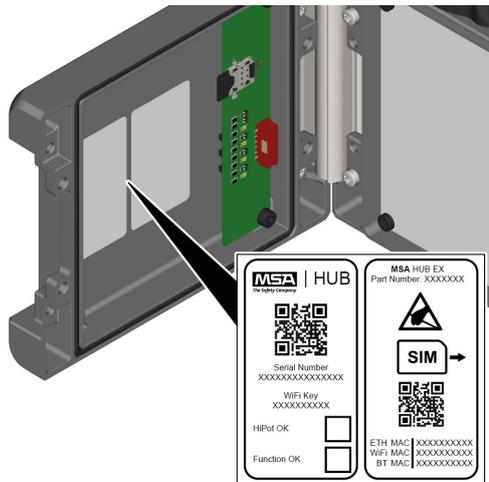


Fig. 3 MSA HUB Type Label



Factory reset the device to reset the password. Refer to chapter 5.4 "Factory Reset".

For additional information regarding connectivity functionality (including monitoring, configuration, and registration), refer to the A2 Software Manual on the Software Product website at <http://www.MSAafety.com>.

## 5 Operation

### 5.1 LED Status Description



Fig. 4 LEDs

No.	Name	Status	Description
1	Power	On / Off	On - device is on Off - device is off
2	Configuration	N/A	For future use
3	Network Connection	On / Off	Default: off Connection to Safety io FireGrid established
4	MSA Radio Connection	On / Off	Off - no user connected On - at least one user connected
1 + 2 + 3 + 4	Error Case	Blinking	Any module is in error state
1 + 2 + 3 + 4	Update process	Flashing in repeat	The device is loading and installing a software update.

### 5.2 Firmware Update

Regularly check for new updates by using the A2 Software. Refer to the A2 Manual on the MSA Software Product website at <http://www.MSAsafety.com>.

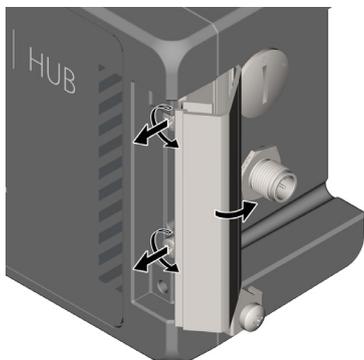
### 5.3 Error Cases

<b>Error</b>	<b>Description</b>	<b>Action</b>
all LEDs blinking	Error, Device stops working	Unpower the device for 30 seconds and power it again. If the error persists, please contact MSA Customer Support.
Network Connection LED off	Connection interrupted (Important for users with Safety io FireGrid support only.)	Check internet connection. If the error persists, restart the device.
all LEDs off	Device does not start	Reset the device, refer to chapter 5.4 "Factory Reset". If the error persists, please contact MSA Customer Support.

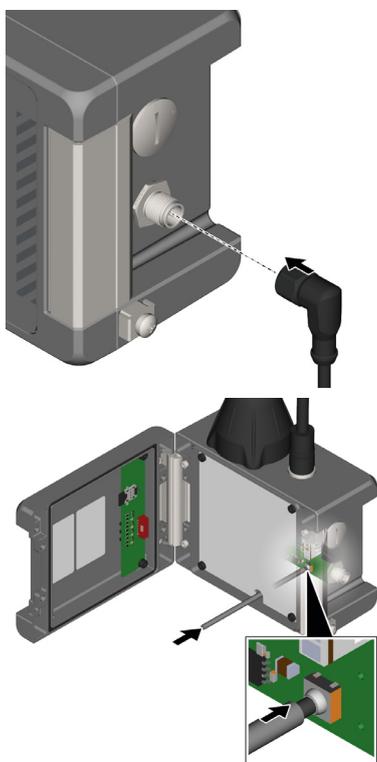
#### 5.4 Factory Reset

If the device access password has been lost and no further access is possible, a factory reset can be performed to reset all values to their defaults. The default parameters can be found in section "Factory Reset Parameters".

(1) Remove the device from incident scene.

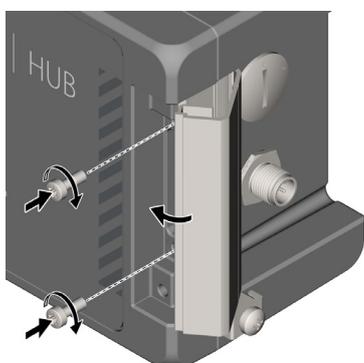


(2) Open housing by opening the right joints and unscrew the lid screws using a Torx T20.



(3) Power the device.

(4) Use a thin object (e.g. a pencil) to push the reset button for 10 seconds.  
*All LEDs switch on and off.  
 After the 10 seconds, the device will restart.*



(5) Close housing lid by tightening the lid screws with a torque of 1.5 Nm.

(6) Close right joints.

*The device is reset.*

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**Factory Reset Parameters**

<b>Parameters</b>	<b>Value</b>	<b>Default</b>
Ethernet	dhcp	true
	disabled	false
Hostname		ccimx6sbc
WLAN configuration	Client	Hotspot
	Hotspot	
	disabled	
WiFi client configuration	previous connections to WLAN networks are deleted	
WiFi hotspot configuration	ssid	MSA HUB <serial number>
	key	<random on name plate>

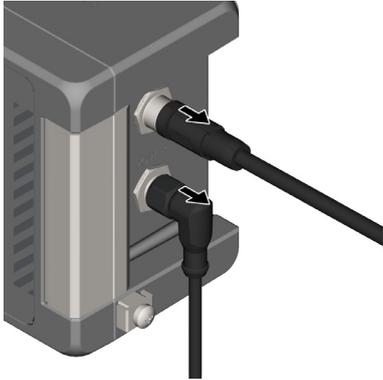
## 6 Decommission and Disposal

### 6.1 Decommission

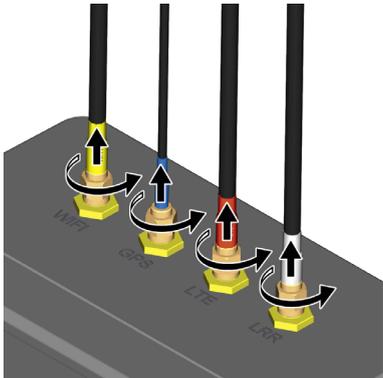
#### NOTICE

Do not carry the device by holding the antennas or cables. Otherwise, device parts can be damaged.

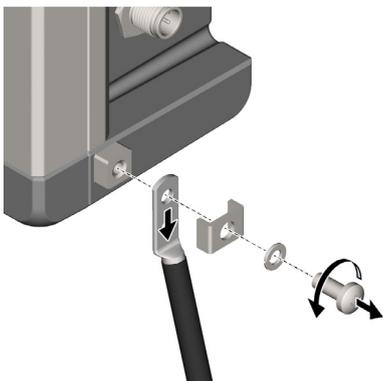
#### 6.1.1 MSA HUB Fireservice for Truck Installation without Wall Brackets



- (1) Unplug the power plug and remove Ethernet cable, if present.

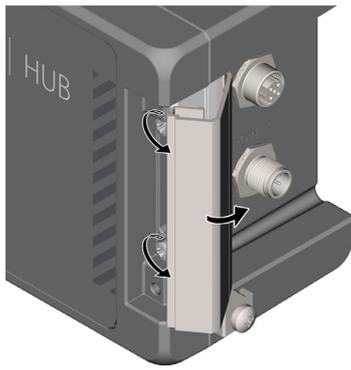


- (2) Remove antenna cables.

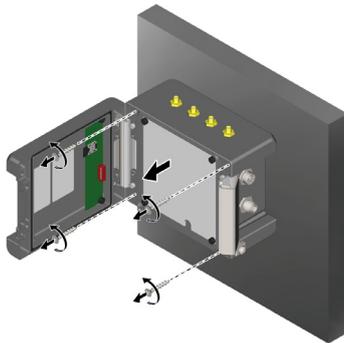


- (3) If a grounding terminal is used, loosen grounding clamp and remove grounding cable.
- (4) Reattach grounding clamp.

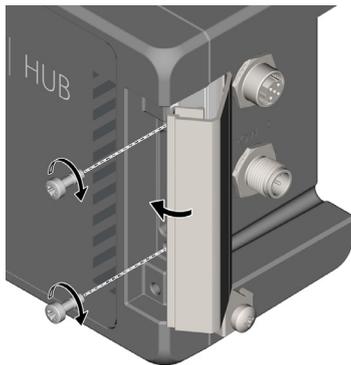
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- (5) Open housing by opening the right joints and unscrew the lid screws using a Torx T20.



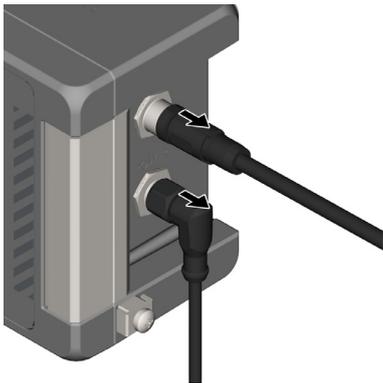
- (6) Remove the screws from the surface.
- (7) Take the device off the installed place.



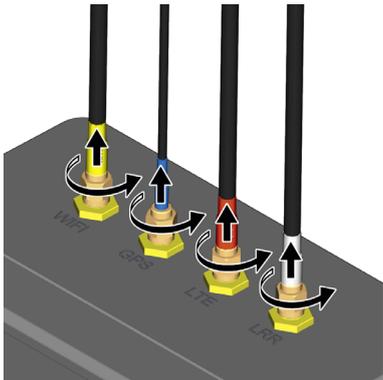
- (8) Close housing lid.
- (9) Close right joints.

*The device is decommissioned.*

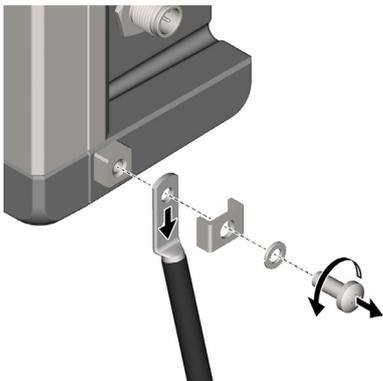
### 6.1.2 MSA HUB Fireservice for Truck Installation with Wall Brackets



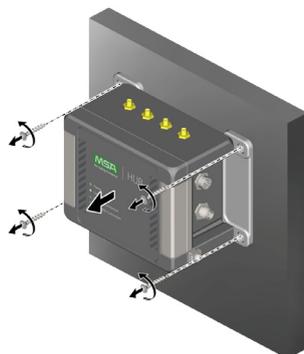
- (1) Unplug the power plug and remove Ethernet cable, if present.



- (2) Remove antenna cables.

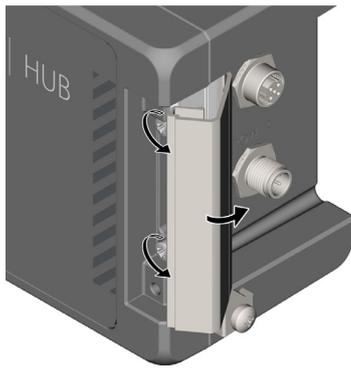


- (3) If a grounding terminal is used, loosen grounding clamp and remove grounding cable.
- (4) Reattach grounding clamp.



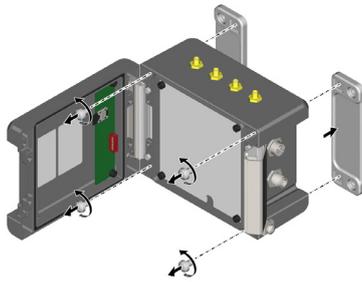
- (5) Remove the wall bracket screws from the surface.
- (6) Take the device off the installed place.

*The device is decommissioned.*

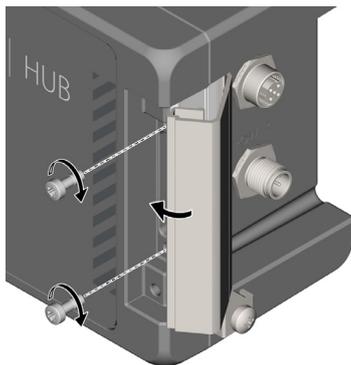


Optional:

- (7) Open housing by opening the right joints and unscrew the lid screws using a Torx T20.

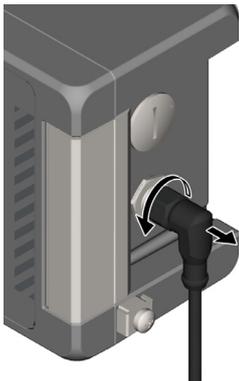


- (8) Remove the four screws and the wall brackets at the back of the housing.

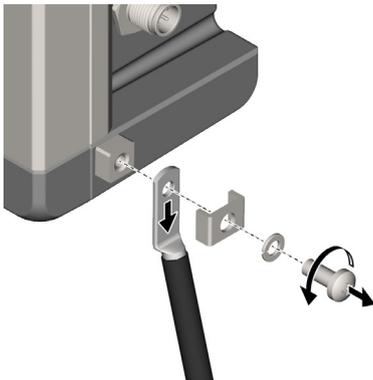


- (9) Close housing lid.
- (10) Close right joints.

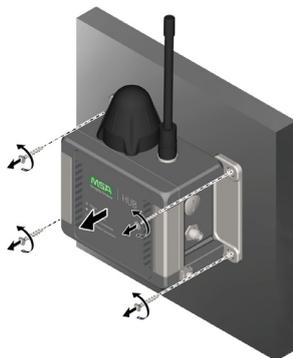
### 6.1.3 MSA HUB Fireservice Standard with Wall Brackets



- (1) Unplug the power plug and remove Ethernet cable, if present.

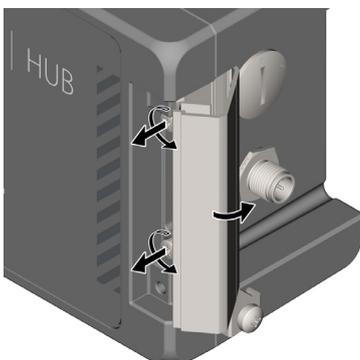


- (2) If a grounding terminal is used, loosen grounding clamp and remove grounding cable.
- (3) Reattach grounding clamp.



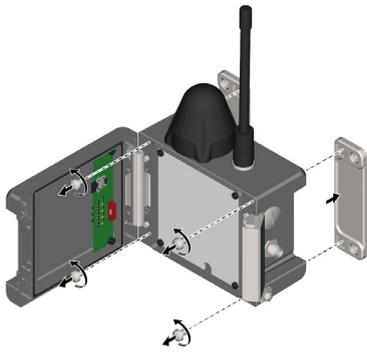
- (4) Remove the wall bracket screws from the surface.
- (5) Take the device off the installed place.

*The device is decommissioned.*

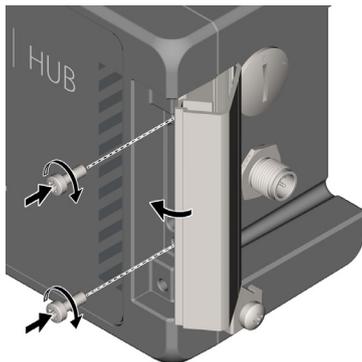


Optional:

- (6) Open housing by opening the right joints and unscrew the lid screws using a Torx T20.



- (7) Remove the four screws and the wall brackets at the back of the housing.

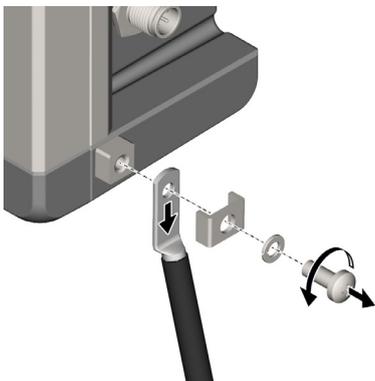


- (8) Close housing lid.  
(9) Close right joints.

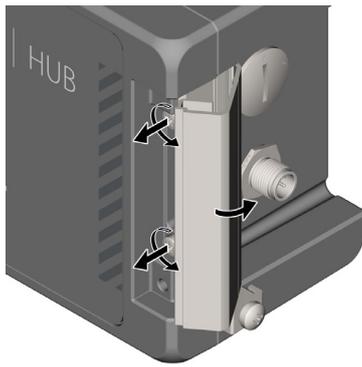
#### 6.1.4 MSA HUB Fireservice Standard without Wall Brackets



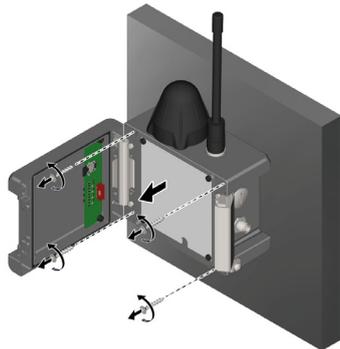
- (1) Unplug the power plug and remove Ethernet cable, if present.



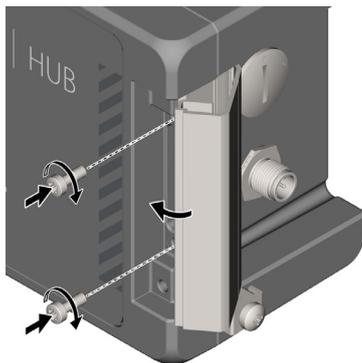
- (2) If a grounding terminal is used, loosen grounding clamp and remove grounding cable.  
(3) Reattach grounding clamp.



- (4) Open housing by opening the right joints and unscrew the lid screws using a Torx T20.



- (5) Remove the screws from the surface.  
 (6) Take the device off the installed place.



- (7) Close housing lid.  
 (8) Close right joints.

*The device is decommissioned.*

## 6.2 Disposal

For disposal of the device and batteries, local regulations are to be observed.

## 7 Maintenance

Repairs and maintenance must be carried out only by MSA.

Consider to update the device firmware regularly. Refer to chapter 5.2 "Firmware Update" for instructions.

### 7.1 Cleaning

#### **NOTICE**

Do not rub the device and never clean plastic surfaces with a dry cloth. Otherwise, electrostatic charges can occur and damage the device.  
Always use a damp cloth instead.

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#### **NOTICE**

Avoid alcoholic and chemical detergents. Otherwise, the device will be damaged and the labels might be unreadable.

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Periodically clean the exterior of the device with a damp cloth.

## 8 Certification

The Declaration of Conformity can be found under the following link: <https://MSAsafety.com/DoC>

## 9 Technical Data

Dimensions L x W x H (housing)	MSA HUB Fireservice for Truck Installation:	174 mm x 92 mm x 135 mm (without radio antenna and wall mount kit)
	MSA HUB Fireservice Standard:	174 mm x 92 mm x 190 mm (without radio antenna and wall mount kit)
Weight	MSA HUB Fireservice for Truck Installation:	1,27 kg
	MSA HUB Fireservice Standard:	1,46 kg
Ambient temperature range	-20°C to +60°C	
Storage temperature range	-20°C to +60°C	
Humidity	10 to 95 % r.H. (non-condensing)	
Degree of protection	IP67	
Power dissipation	continuously:	$P_D < 5 \text{ W}$
	peak:	$P_D < 12 \text{ W}$
Power supply	Connector type:	MSA HUB Fireservice for Truck Installation: M12, 4-Pin, A-coded
		MSA HUB Fireservice Standard: Ethernet kit (optional) with cable bushing included
	Minimal input voltage:	12 V DC
	Nominal input voltage:	24 V DC
	Maximal input voltage:	30 V DC
Connectivity	Connector type:	M12, 4-Pin
		10 BASE-T/ 100 BASE-TX, galvanic isolated
		Bluetooth 4.0 Class 1.5
		Wi-Fi: IEEE 802.11 a/b/g/n

## 10 Ordering Information

### 10.1 Spare Parts

Use only genuine MSA replacement parts when performing any maintenance procedures.

Contact your local MSA sales representative:

1-877-MSA-FIRE (1-877-672-3473)

or

fire.cs@msasafety.com

MSA HUB Fireservice for Truck Installation

Description	Part Number
Wall power supply	10201790-SP
Power cable for truck installation (25 m)	10195720-SP
Multi antenna with antenna cable for truck installation (3 m)	10201801-SP
LRR antenna for truck installation (UK version)	10213771-SP
LRR antenna for truck installation (EU, US, AUS version)	10201944-SP
Antenna cable for LRR antenna (3 m)	10205446-SP

MSA HUB Fireservice Standard

Description	Part Number
Industrial power supply	10202199-SP
Power cable (25 m)	10203365-SP
Main power cable (5 m)	10203573-SP
LRR antenna (EU)	10202197-SP
LRR antenna (US)	10202198-SP

### 10.2 Accessories

Description	Part Number
Ethernet Kit (MSA HUB Fireservice Standard)	10195741
Ethernet Cable 20 m (MSA HUB Fireservice for Truck Installation)	10195743
Ethernet Cable 5 m (MSA HUB Fireservice for Truck Installation)	10195747
Wall brackets (all)	10203364

