

# Control Box CO61 MK2

## Data Sheet



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## Introduction



The LINAK control box CO61 MK2 offers a consolidated range of unprecedented features – all utilising standardised technology, interfaces and compatibility.

The CO61 MK2 for LINAK actuators is intended for the control of, for example, hospital bed movement.

Equipped with 200 W SMPS, optional Bluetooth® Low Energy, excellent and well thought-out cable management as well as multiple easy mounting options, this control box opens up a wide range of application possibilities for the provident manufacturer of hospital and care applications.

With the CO61 MK2, full bridge, IPX6 Washable DURA™ protection and a PCP 2.0 battery port, are all standard options. The entire product platform supports the LINAK principle 'One World – One Box' – worldwide operable and applicable.

### **WeAssist™ ready**

Easily integrated into the WeAssist system solution – smart and intuitive wheel technology for intelligent hospital bed manoeuvrability, enhancing patient care and operational efficiency.

## Features and options

Features	CO61 MK2
Power supply	Universal, SMPS 200 W power output (Switch Mode Power Supply) 100-240 VAC, 50/60 Hz, -15% / +10%
Mains indicator	Yes - Green LED (mains connected)
Actuator interface	4 channels 6-pin Mini-Fit
Hand control interface	1 port 10-pin modular plug
CO-Link™	Link of primary and secondary CO61 MK2 - up to 8 channels and 2x200 W
Bluetooth® Low Energy	Bluetooth low energy Gen2 Value as standard (LCi™/ OneConnect™) Bluetooth low energy Gen2 Performance as option (for LCi /OneConnect + wireless controls)
Programming	Via PB31.
RAPID	CO61 MK2 with Bluetooth Gen2 Value only: LINAK Operating System (LOS): Maintained and operated by LINAK. Customer Application Software (CAS): Built on LOS and tailored to meet specific customer requirements. Customers will be notified of any changes to LOS. Modifications to CAS will only be made following prior written approval from customer.
Service tools	OneConnect for Windows OneConnect for IOS OneConnect for Android See more under tools.
Battery interface	1 port 4-pin Mini-Fit (charging current 300 mA when no actuators are running)
Standby power	Bluetooth Low Energy: Approx. 0.6 W (100-240 VAC)[A
Colour	Light grey (RAL 7035)
Output short-circuit protected	Yes
Control concept	FET (no relay noise)
Power supply circuit method	Full bridge technology: independent actuator movement
Duty cycle	10% - 2/18 min. on/off continuous use. Maximum power is 200 W for 80 seconds and 100 W for 40 seconds at 25 °C
Weight	Low weight 0.7 kg
Actuator compatibility	Actuators with signal, feedback by hall and potentiometer.
Battery charger	Battery input available. No charger, but supports battery with internal charger



Charging indicator	Supported by using BA22
Acoustic warning signal	Internal buzzer
Battery alarm	Supported by using BA22
PCP version	PCP 2.0 (PCP 1.0 available in SW)
EOP	Yes
IP-Rating	IPX6 Washable DURA™
Operation	True parallel (hall feedback)
Max. current	10 A/CH, 2/18 min. Max. 12 A/CH in a limited time period
Accessories	OpenBus™ standard
Power management	High speed at low loads and/or high loads at a lower speed
Overload protection	The CO61 MK2 can reduce the output voltages to prevent overload
Safety system	Thermally protected Short-circuit protected Hot-plugging protected
Start/stop	Soft start/direct stop
Protection class	Class 2 Class 1 is possible with pigtail on mains cable
Cable lock	The control box features an integrated cable lock for actuator, PCP and OpenBus cables. For more details, see section "mounting of cables and cable lock" below.
Mounting	Compatible with a wide range of mounting brackets
WeAssist	Compatible
Hand control compatibility	OpenBus standard
Housing type	V-0, PP, welded (resistant to chemicals)



## Usage

Operation temperature: +5 °C to +40 °C

Storage temperature: -10 °C to +50 °C

Relative humidity: 20% to 80% – non-condensing

Atmospheric pressure: 700 to 1060 hPa

Meters above sea level: Max. 3000 meters

Mains supply grid should be limited to the highest prospective short circuit current of 1,500 A.

Demands to mains supply safety for the application in accordance with IEC 60601-1 ed. 3.2, § 8.11.5

Approvals:

- IEC60601-1 edition 3.1
- ANSI/AAMI ES60601-1:2005/(R) 2012
- CSA CAN/CSA-C22.2 NO. 60601-1:14
- PSE Japan



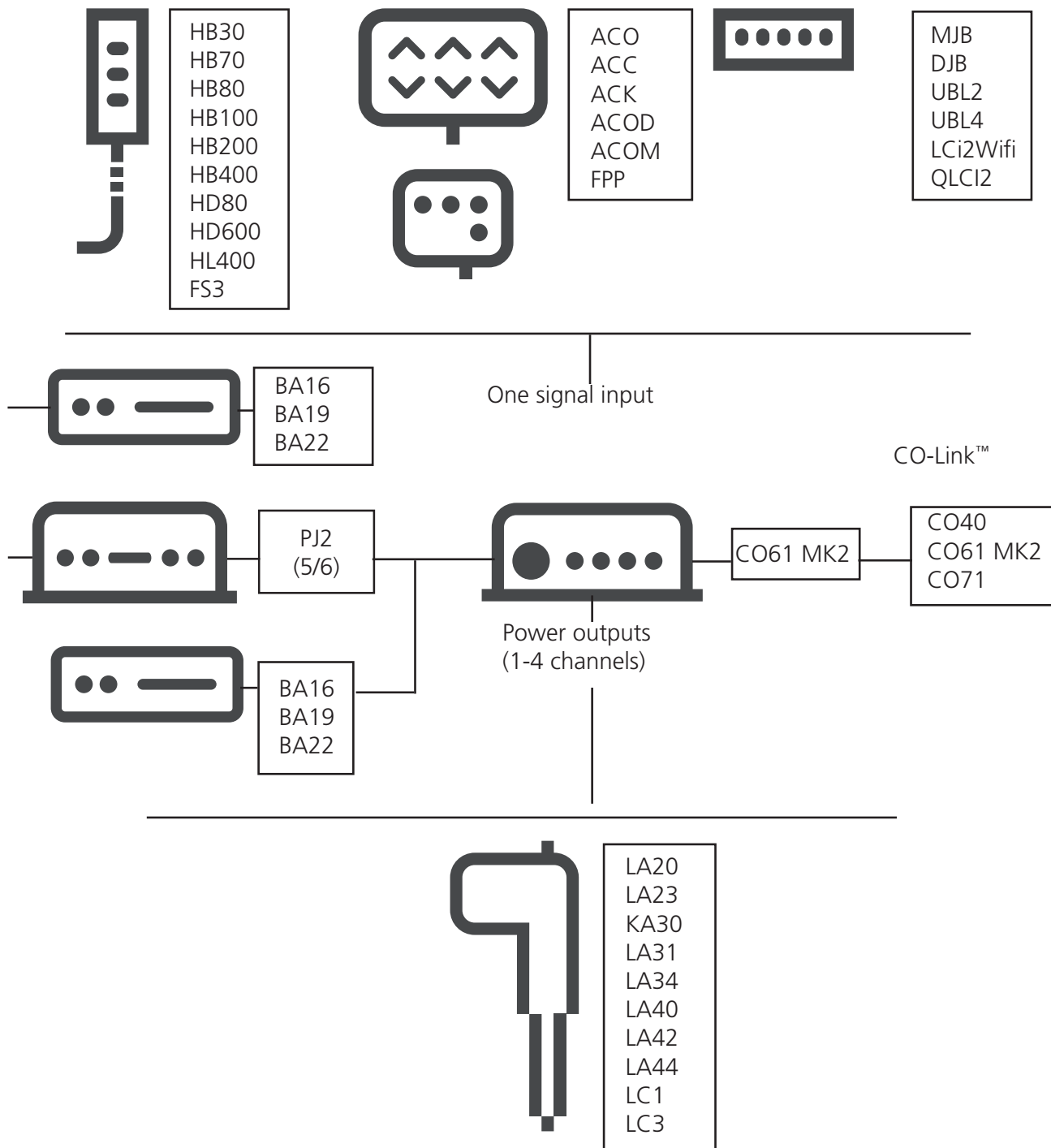
## Ordering example

Product type	<input type="text" value="C"/>	C = Control box
Hand control input	<input type="text" value="0"/>	0 = OpenBus interface
Control box family	<input type="text" value="6"/>	6 = CA63, CO61 or CO65
Colour	<input type="text" value="+"/>	+ = RAL7035 light grey
H-bridge	<input type="text" value="1"/>	1 = Full bridge
IP degree	<input type="text" value="9"/>	9 = IPX6 Washable DURA™      6 = IPX6
Number of channels	<input type="text" value="4"/>	4 = 4 channels
Maximum output power	<input type="text" value="2"/>	2 = 200 W
Input voltage	<input type="text" value="1"/>	1 = 100-240 VAC +10 % / -15 %
Software	<input type="text" value="T"/>	T = No application software      X = Special customer software
Wireless communication	<input type="text" value="5"/>	5 = Bluetooth® Gen2 Value      4 = Bluetooth® Gen2 Performance
Appliance protection class	<input type="text" value="9"/>	9 = Class II
Option	<input type="text" value="2"/>	2 = PCP 2.0
Cable(s)	<input type="text" value="0"/>	0 = Socket W/O ground
Not used	<input type="text" value="0"/>	0 = Not used

Chosen item number: **CO6+19421T59200**



## System overview



## LED indicator



CO61 MK2 is equipped with a green LED for indication of mains power connected.

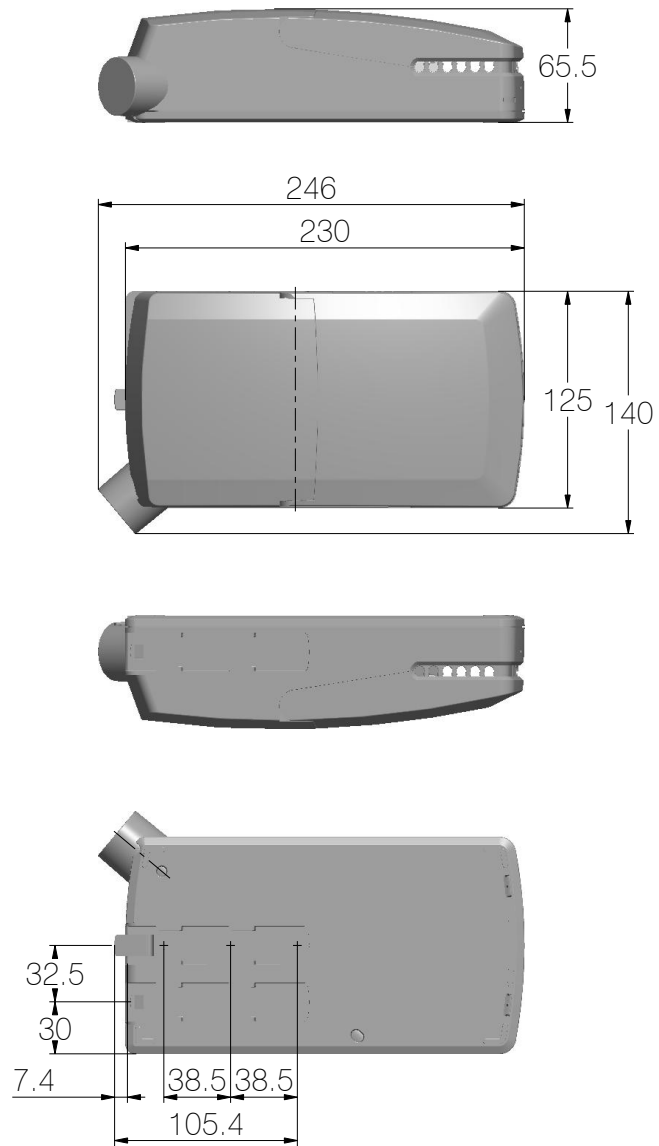
When the CO61 MK2 is connected to mains, the LED is green. Connected only to battery, the LED is off.

## Acoustic signal functionality

The buzzer will make a warning, when a button on the hand control is pressed, and the battery state of charge is low.

The buzzer can also be activated by the control box to signal other conditions. This must be specified in the control box software.

## Dimension drawing



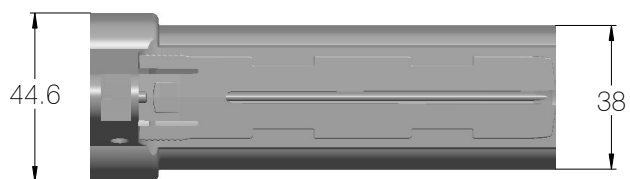
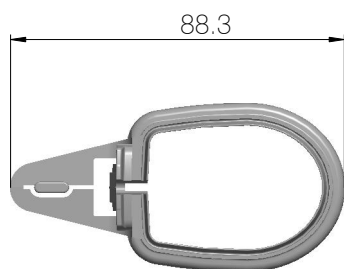
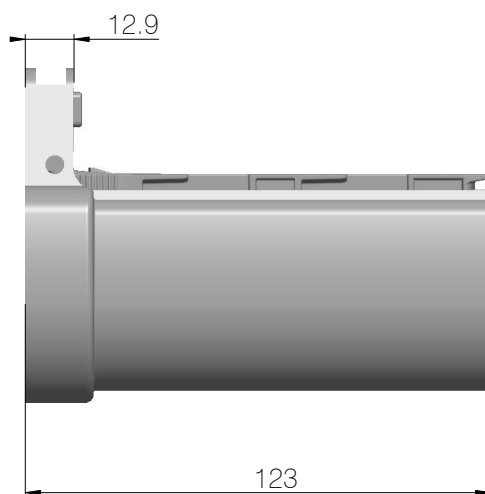
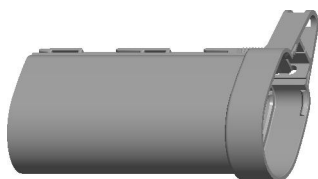
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## Mounting brackets

### For mounting with KA30

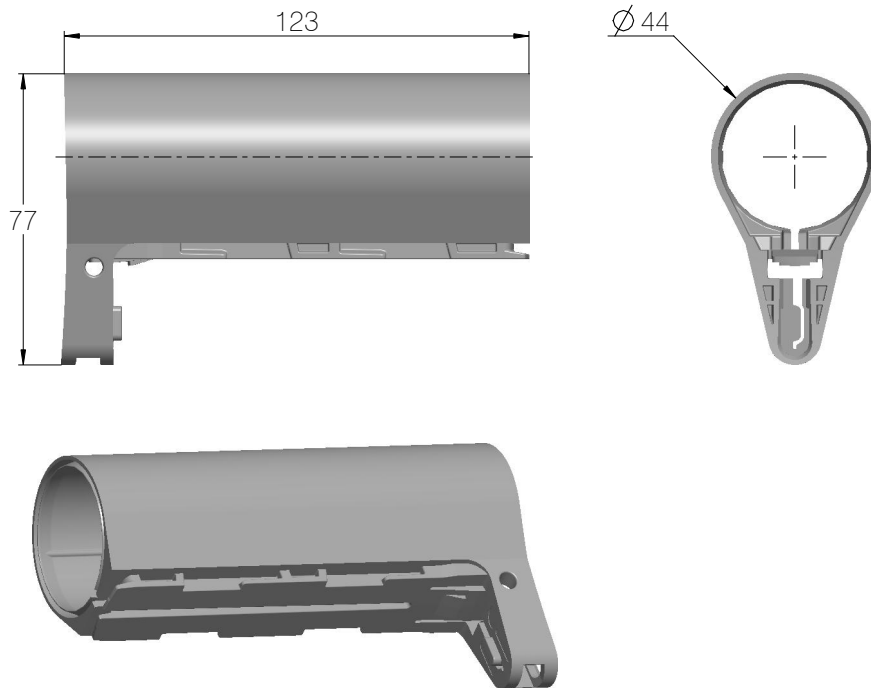
Article No.: 1015W1011



Drawing no.: 1015W4022

**For mounting with LA40**

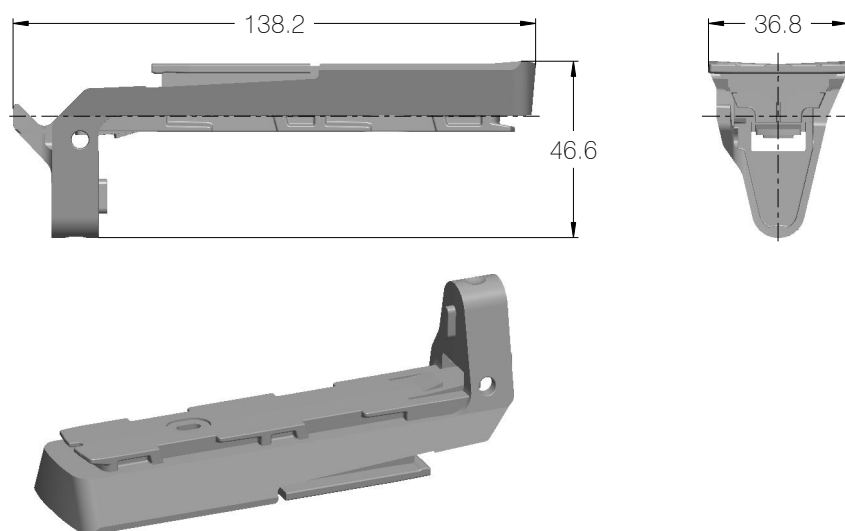
Article No.: 1015W1002



Drawing No.: 1015W4002

**For mounting with LA31**

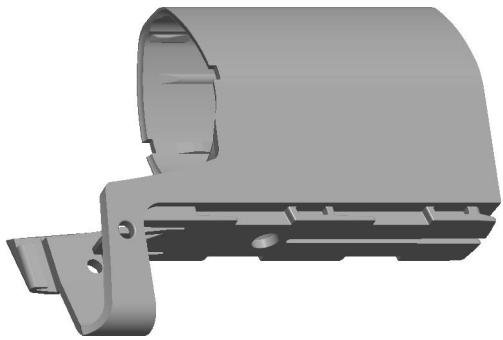
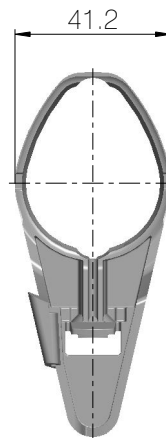
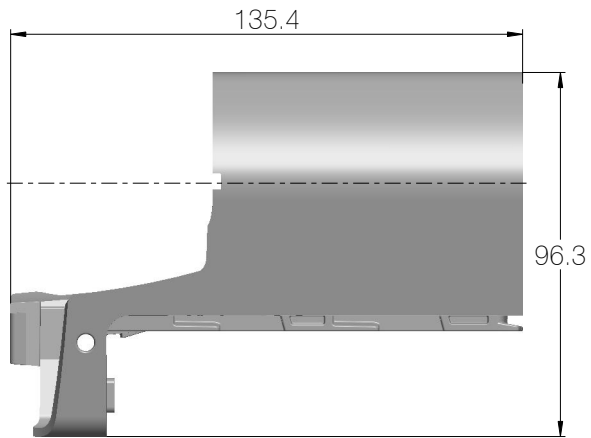
Article No.: 1015W1004



Drawing No.: 1015W4004

**For mounting with LA27**

Article No.: 1015W9003

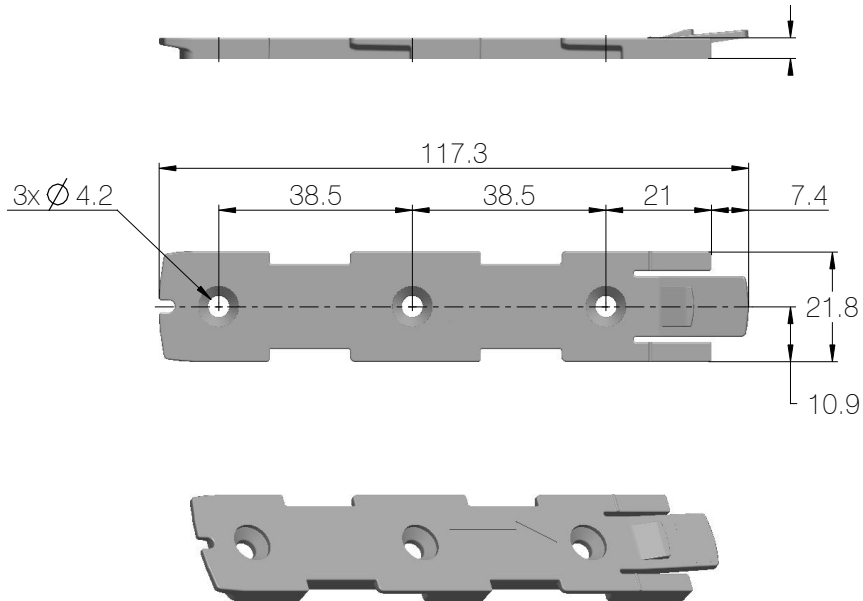


Drawing No: 1015W4003



**Mounting bracket (frame flat)**

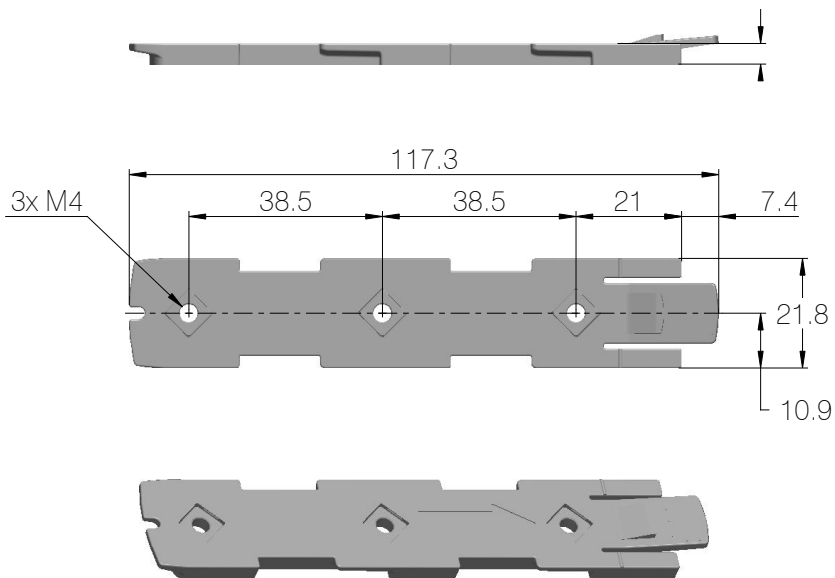
Article No. 1015W1001



Drawing No.: 1015W4001

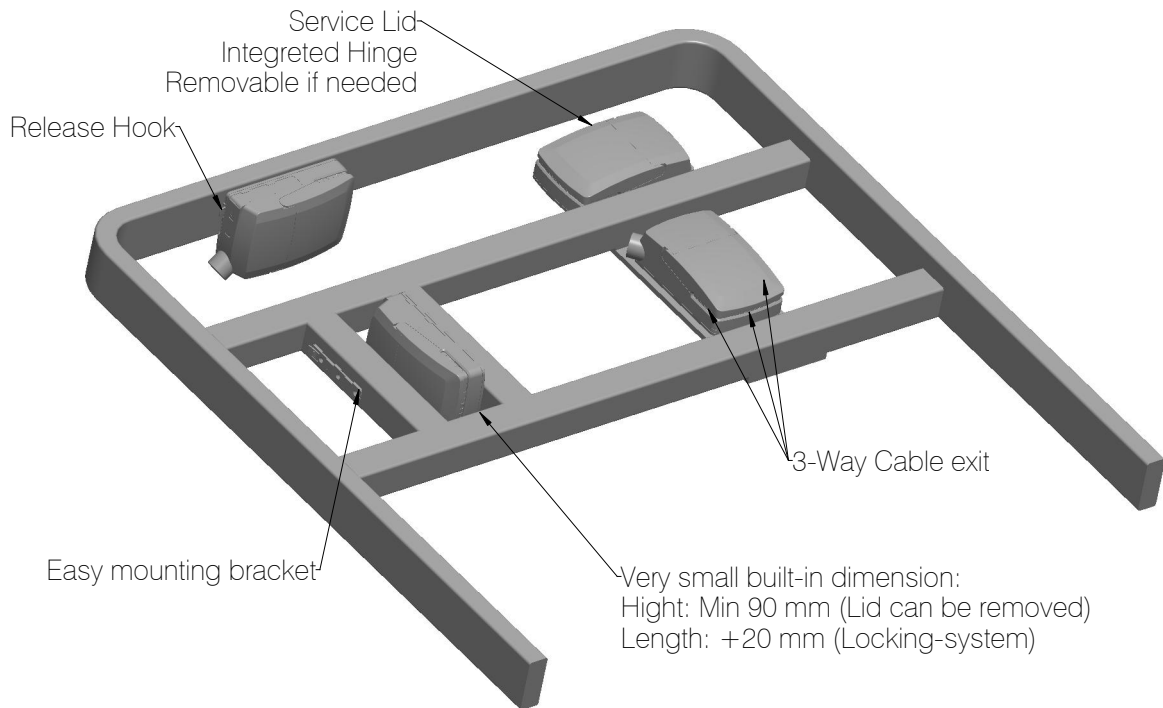
**Mounting bracket (frame flat) w/M4 nuts**

Article No. 1015W9009



Drawing No.: 1015W4009

## Mounted on frame



Drawing No.: 1013W4008

It is recommended to mount the CO61 MK2 in a position that allows water to escape.

Recommended torque: 0.6Nm +/-0.1

The bracket can be mounted to the bed frame or any other application by following one of the following mounting procedures:

1. M6 nut to be placed in bracket and fixed with M6 bolt from the rear side
2. M5 machine screw with flat washer to be fixed through bracket with nut on the rear side
3. Self-tapping screw to be placed through bracket and onto the frame

## Mounting of cables and cable lock

CO61 MK2 has a uniquely designed cable lid. The lid also works as an integrated cable lock when closed.

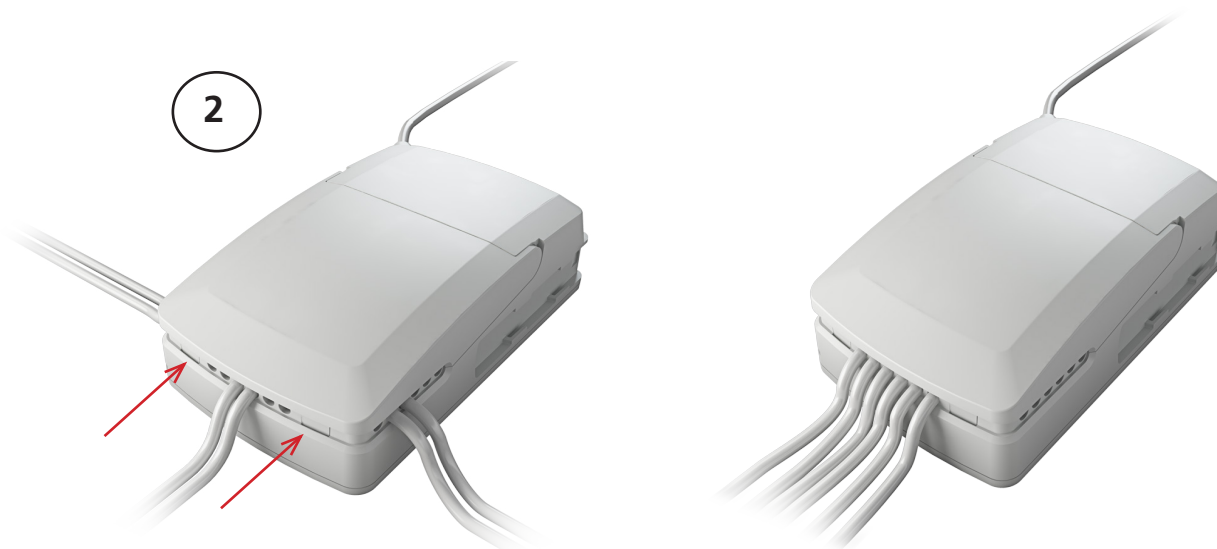
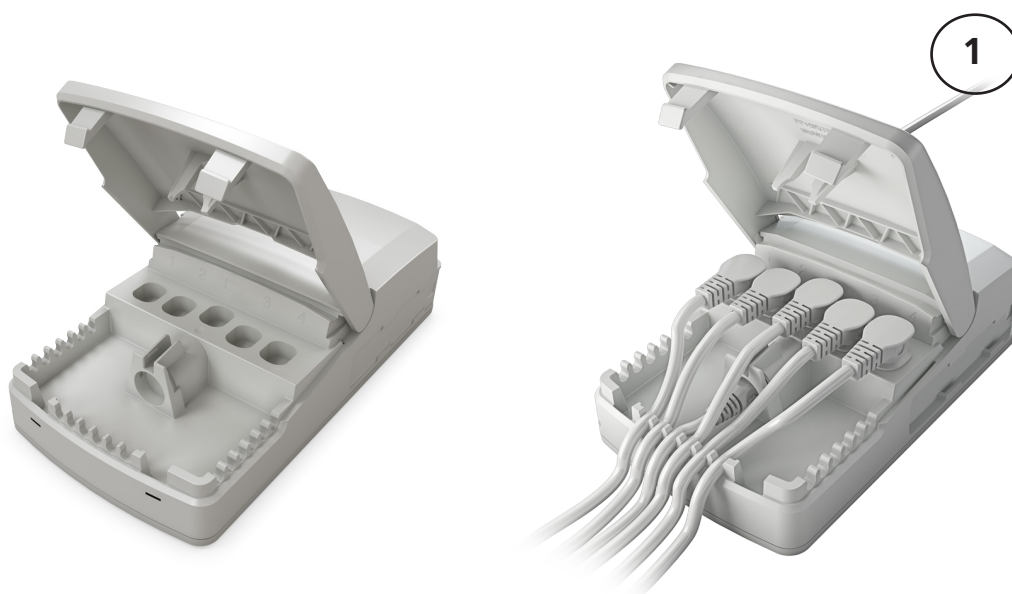
1. Mount cable plugs in control box
2. Close lid until lock snaps into place (see arrows)

To allow free access to the cables, the lid has a rest position when completely opened.

It is possible to remove the lid by lifting it a few degrees and pulling it away from the housing under tight mounting conditions.

3. The mains cable for this control box features an integrated cable lock.
4. These cable locks helps to prevent unintended disconnection, supports reliable operation, and ensures mains port remains sealed during cleaning and ingress protection testing for 60601-1 (e.g. IPX6 Washable DURA™).
5. These cable locks are designed to be removed only with a tool.

## Cable management



## CO-Link™



Up to 8 channels and 2x200 W (or combinations of all CO-control boxes)

A CO-Link software makes it possible to link two CO61 MK2 control boxes (or combinations of all CO-control boxes) into a system with a primary and secondary control box allowing you to run up to 8 channels with 2x200 W.

### All CO61 MK2 benefits and USPs including:

- 1 control – 2 x CO61 MK2s
- 8 channels
- 2 x 200 W
- Standard items
- 2 x 2.85 Ah battery backup – 2 x BA22

## Tools

With OneConnect it is possible to read out service data from the control box and connected accessories.

Visit the link below for more details on OneConnect:

<https://www.linak.com/segments/medline-careline/oneconnect/>



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