



CO61MK2  
Data Sheet

## Contents

<b>Introduction</b> .....	<b>3</b>
<b>Features and options</b> .....	<b>4</b>
<b>Ordering example</b> .....	<b>7</b>
<b>CO61MK2 system overview</b> .....	<b>8</b>
<b>LED indicator</b> .....	<b>9</b>
<b>Acoustic signal functionality</b> .....	<b>9</b>
<b>Dimension drawing</b> .....	<b>10</b>
For mounting with LA31 .....	11
For mounting with LA27 .....	12
Mounting bracket (frame flat) .....	13
Mounting bracket (frame flat) w/M4 nuts .....	13
Mounting of cables and cable lock.....	15
Cable management .....	15
<b>CO-Link</b> .....	<b>16</b>

## Introduction

The LINAK control box CO61MK2 offers a consolidated range of unprecedented features – all utilising standardised technology, interfaces and compatibility.

The CO61MK2 for LINAK actuators is intended for the control of, for example, hospital bed movement.

Equipped with 200 W SMPS, *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 hospital and care products manufacturer.

With the CO61MK2, FET, IPX6 Washable DURA™ protection and a battery port, are all standard options. The entire product platform supports the LINAK principle 'One World – One box' – worldwide operable and applicable.

## Features and options

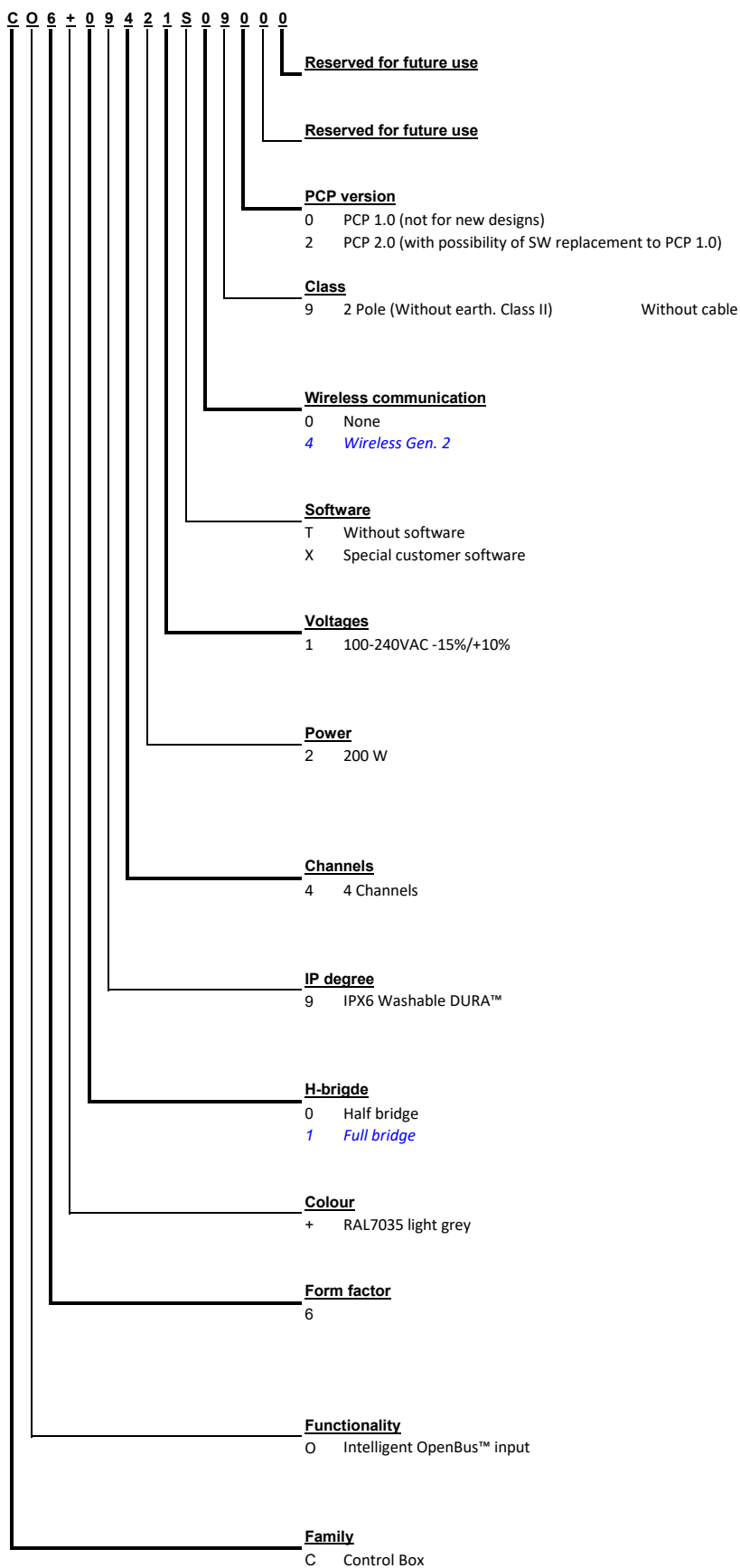
Features	CO61MK2	CB6OBMe
Power supply	Universal, SMPS 200 W Input 100-240 VAC, 50/60 Hz Output 24VDC;4.5A	SMPS, 270 W, 100-240 V 50/60 Hz or toroidal transformer 270 W, 230 V
Mains indicator	Yes - Green LED (mains connected)	Yes - two-colour LED Functionality can be defined in software
Actuator interface	4 channel 6 pin Mini-Fit	4 channel 6 pin Mini-Fit
CO-Link™	Link of primary and secondary CO61 - up to 8 channels and 2x200 W	N/A
Hand control interface	1 port 10 pin modular plug	1 port 10 pin modular plug
Battery interface	1 port 4 pin Mini-Fit (output 300 mA when no actuators are running)	Yes
Standby power	<i>w/o Bluetooth Low Energy: Approx. 0.5 W (100-240 V AC) w/ Bluetooth Low Energy, Approx. 0.6 W (100-240 V AC)</i>	Transformer version standby current approx. 2.5 W SMPS version 0.8 W Sleep mode 0.004 W
Colour	Light grey (RAL 7035)	Light grey (RAL 7035)
Output short-circuit protected	Yes	No
Control concept	FET (no relay noise)	Relays (EAS protection)
Power Supply Circuit Method	Half bridge/ <i>Full bridge</i>	N/A
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	10 % - 2/18 min. on/off continuous use
Weight	Low weight 0.7 kg	Transformer version 1.7 kg SMPS version 0.85 kg
Actuator compatibility	Actuators with signal, feedback by hall and potentiometer.	Actuators with no feedback/ encoded feedback, feedback by hall and potentiometer. See chapter 3 for detailed information
Hand control compatibility	OpenBus™ standard	OpenBus standard
Battery charger	Battery input available No charger, but supports battery with internal charger	Yes, in control box

Features	CO61MK2	CB6OBMe
Charging indicator	Supported by using BA21	Supported
Acoustic warning signal	Internal buzzer	Internal
Battery alarm	Supported by using BA21	Yes, supported (low battery alarm at 19 V)
EOP	Yes	Yes
IP-Rating	IPX6 Washable DURA™	IPX6
Operation	True parallel (hall feedback)	Semi parallel
Max. current	10 A/CH, 2/18 min. Max. 12 A/CH in a limited time period	8 A/CH (peak) at single-channel running is covered by all approvals
Accessories	OpenBus™ standard	OpenBus standard
Power management	High speed at low loads and/or high loads at a lower speed	Not supported
Overload protection	The CO61 can reduce the output voltages to prevent overload	The CB6 OBMe can reduce the output voltages to prevent overload
Safety system	Thermally protected Short-circuit protected Hot-plugging protected	Transformer version thermally protected by hardware thermofuse. SMPS version thermally protected by software (Duty Cycle Guard) Hot-plugging protected Short-circuit protected
Start/stop	Soft start/ direct stop	Soft start/ direct stop
Protection class	Class 2 Class 1 is possible with pigtail on mains cable	Class 2 Class 1 is possible with pigtail on mains cable
Cable lock	Integrated in lid	Separate part
External power support (hand control output)	40 V/200 mA (polyfuse protection)	40 V/200 mA (polyfuse protection)
Mounting	Compatible with a wide range of mounting brackets - see pages 14 and 15	Compatible with existing CB6-bracket. LA27 and LA40 mounting possible (only with SMPS because of weight)
PCP version	PCP 2.0 (PCP 1.0 available in SW)	N/A
<i>Bluetooth® Low Energy</i>	<i>Bluetooth® Low Energy version 2 on request</i>	<i>N/A</i>

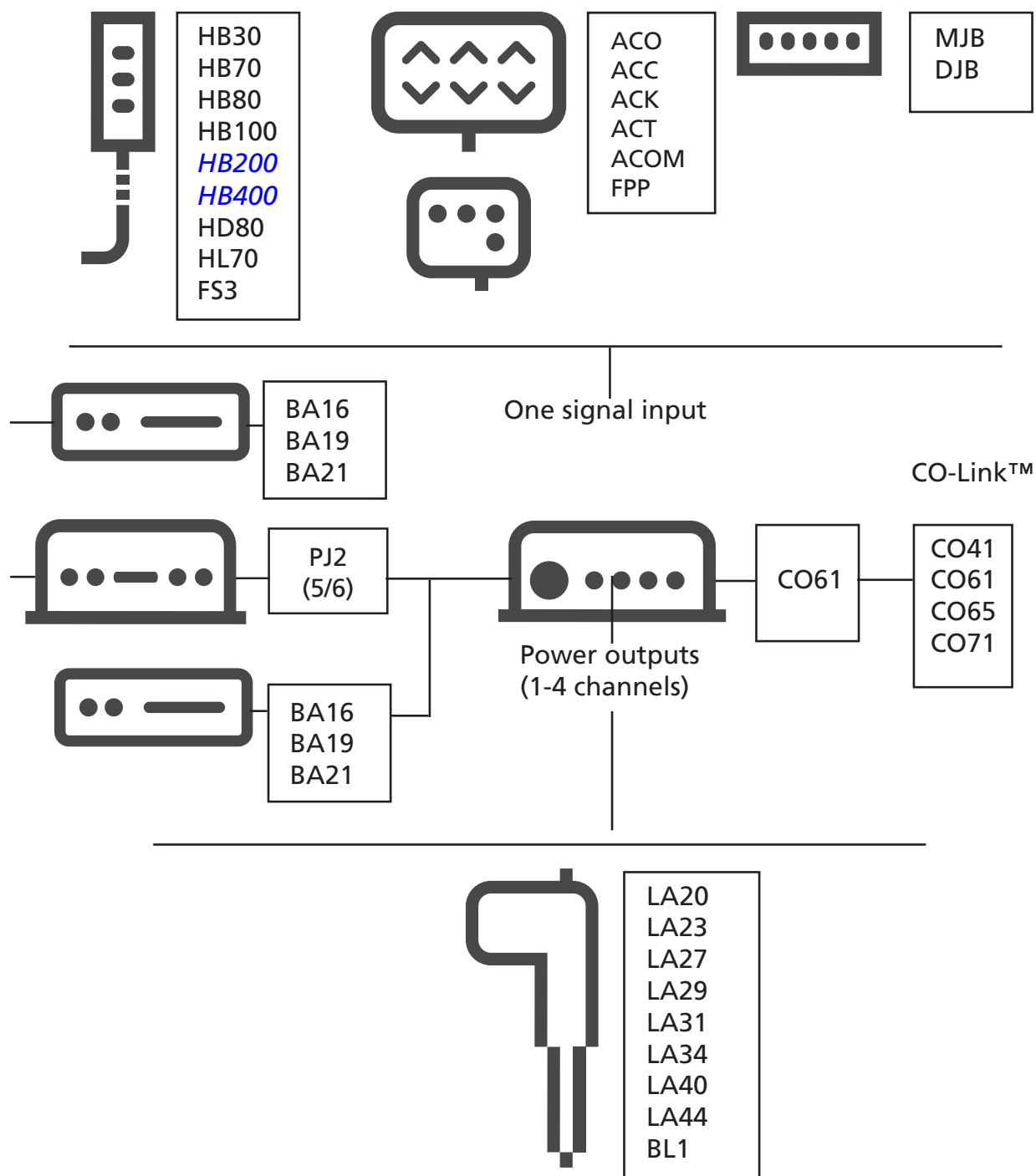
## Usage

	CO61MK2
Operating temperature	+5 °C to +40 °C
Storage temperature	-10 °C to +50 °C
Relative humidity	20% - 80% - non-condensing
Atmospheric pressure	700 to 1060 hPa
Meters above sea level	Max. 3000 meters
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



## CO61 system overview





## LED indicator



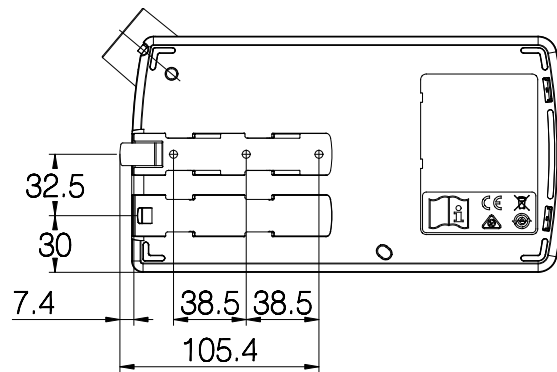
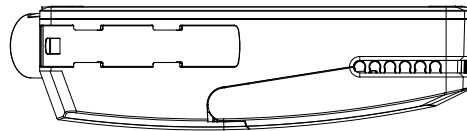
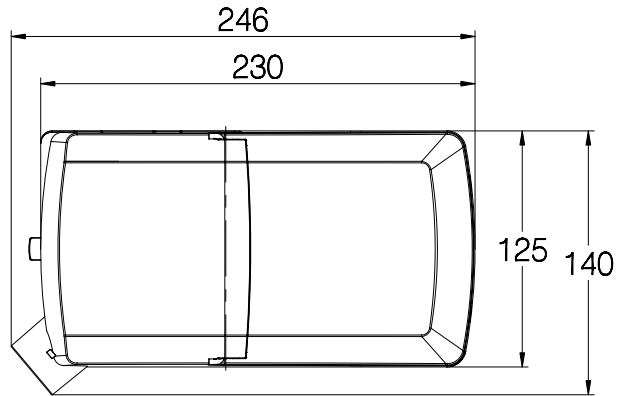
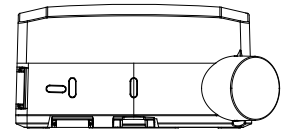
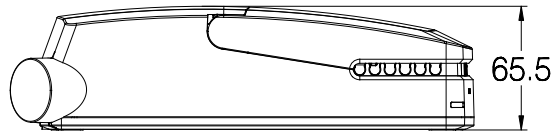
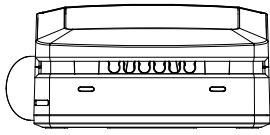
CO61MK2 is equipped with a green LED for indication of mains power connected.

## 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

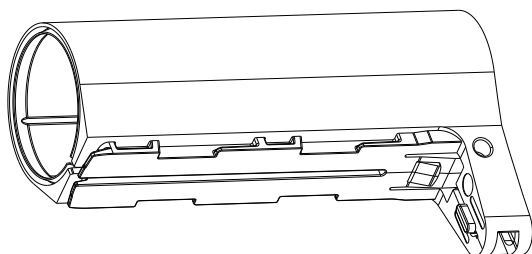
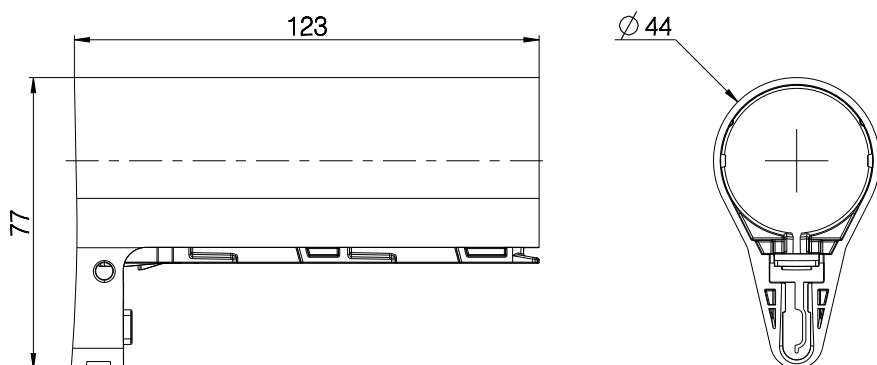


Drawing No.: 1014W4010

## Mounting brackets

### For mounting with LA40

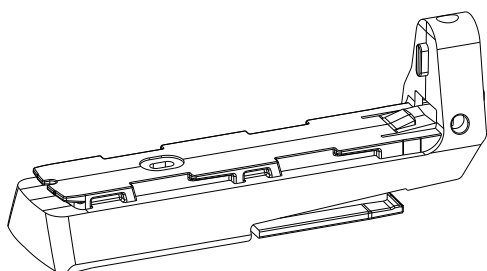
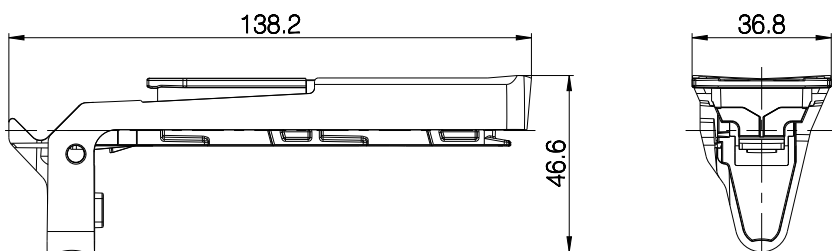
(Article No.: 1015W1002)



Drawing No.: 1015W4002

### For mounting with LA31

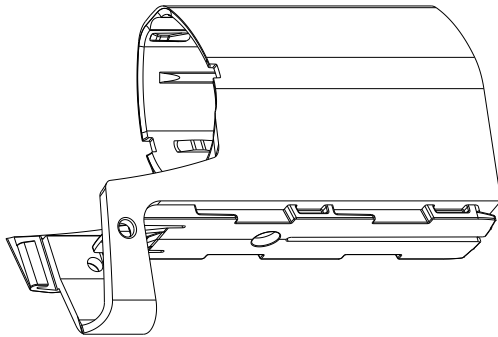
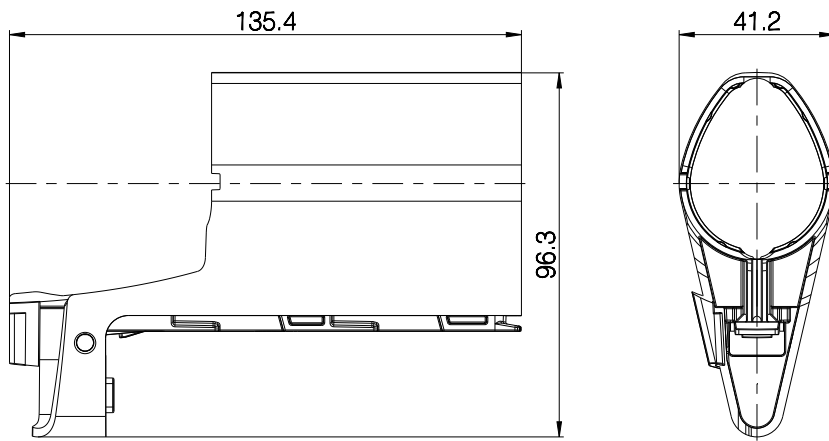
(Article No.: 1015W1004)



Drawing No.: 1015W1004

**For mounting with LA27**

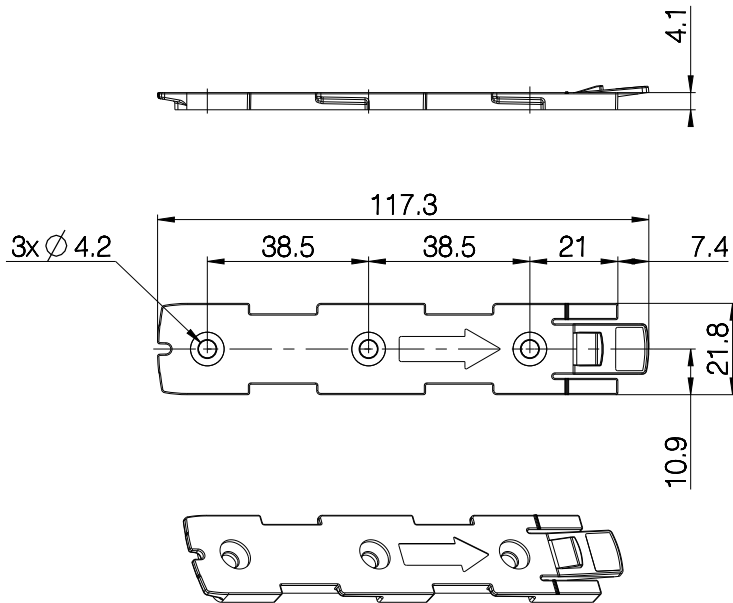
(Article No.: 1015W9003)



Drawing No: 1015W4003

## Mounting bracket (frame flat)

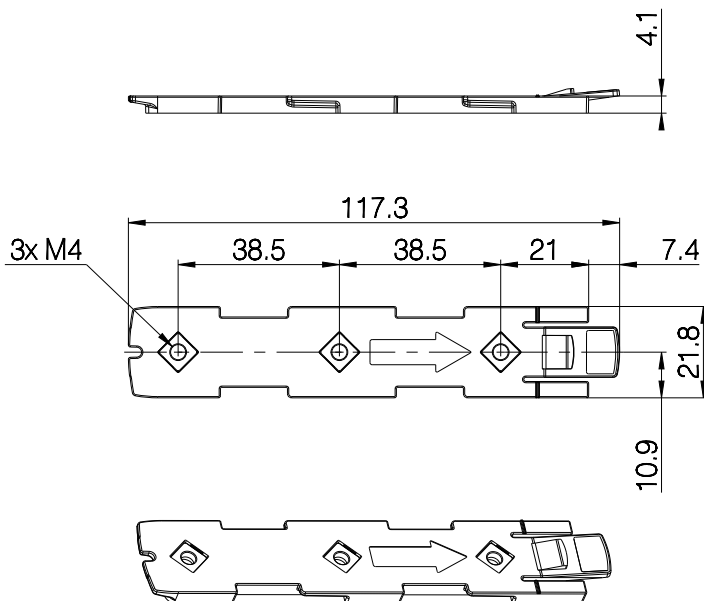
(Article No. 1015W1001)



Drawing No.: 1015W4001

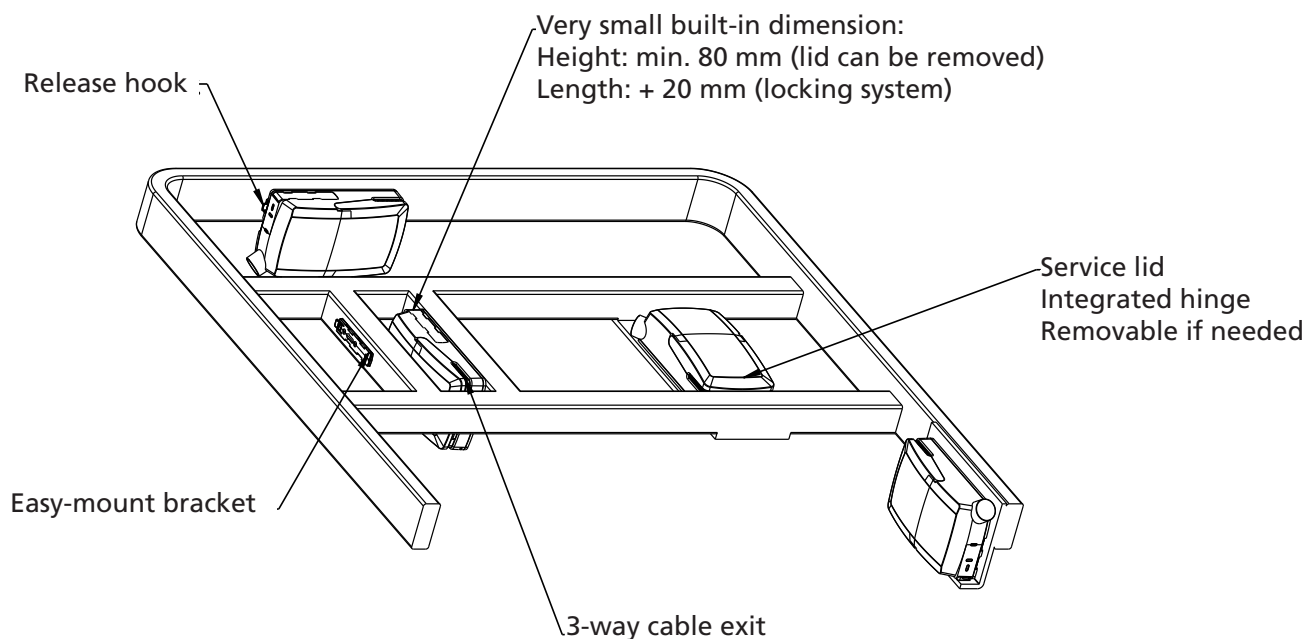
## Mounting bracket (frame flat) w/M4 nuts

(Article No. 1015W9009)



Drawing No.: 1015W4009

## Mounted on frame



Drawing No.: 1013W4008

It is recommended to mount the CO61MK2 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

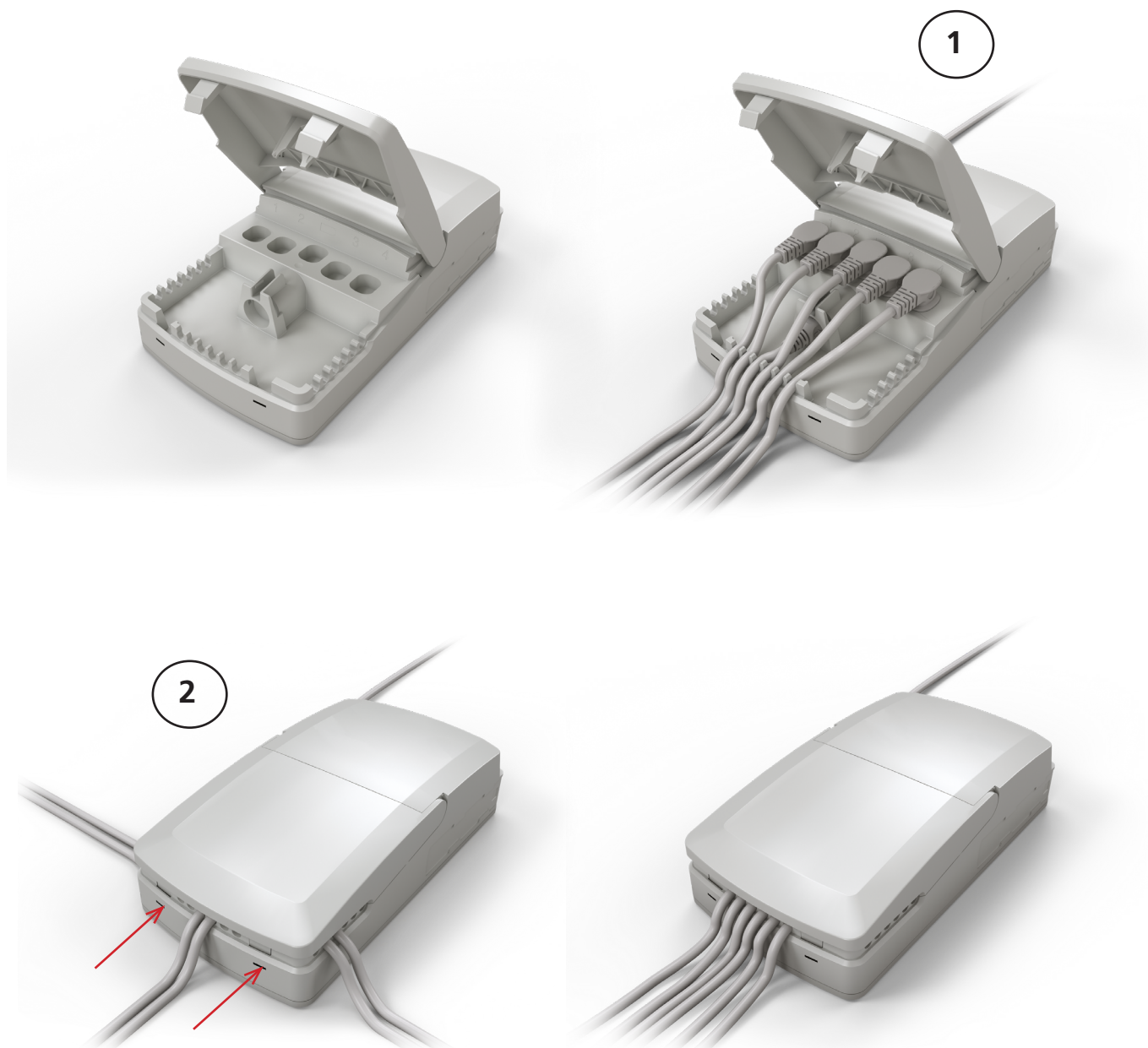
## Mounting of cables and cable lock

CO61 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.

## 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 CO61MK2 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 benefits and USPs including:

- 1 control – 2 x CO61s
- 8 channels
- 2 x 200 W
- Standard items
- 2 x 2.2 Ah battery backup – 2 x BA21
- SoftCon2 SW – Instant programming and compiling!

### FCC and IC Statements

For RF-emitting products (e.g. BLUETOOTH®, Wi-Fi) intended to be used on the North American continent, the following applies:

#### FCC statement

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

#### IC statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) L' appareil ne doit pas produire de brouillage;
- (2) L' appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d' en compromettre le fonctionnement.



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