

13. SLS (MEDLINE® CARELINE® TECHLINE®)



LINAK has designed a switch that can be mounted in connection with the 24V DC actuators: LA12, LA22, LA28, LA28S, LA31, LA32, or LA34 and a control box on e.g. a bed frame.

The Safety Limit Switch (SLS). The SLS Switch is primarily used as a Limit Switch in systems consisting of a control box, LA28/28S and/or LA32.

As an example the SLS can be installed on the actuator cable where it disconnects the actuator in either inward or outward direction when activated. The SLS can also be used as a signal control directly connected to a control box.

14. Under Bed Light (MEDLINE® CARELINE®)



The Under Bed Light (UBL) can be mounted under the bed to provide a discrete guiding light when the patient leaves the bed during night. With an Under Bed Light it is easy to switch the light on and off by means of a handset or controlling it automatically with the Out of Bed functionality of the MJB8.

Usage:

- Operating temperature: + 5 °C to + 40 °C
- Storage temperature: - 10 °C to + 50 °C
- Atmospheric pressure: 700 to 1060hPa (3000 m)
- Approvals: IEC 60601-1, ANSI/AAMI ES60601-1, CAN/CSA-22.2 No 60601-1
- Connectivity: To be connected to MJB5 and MJB8



Recommendations

- The Under Bed Light (Item P/N.: 0964135) must be mounted on the bed with metal screws in order to maintain ESD protection.

15. Under Bed Light 2 (MEDLINE® CARELINE®)



The Under Bed Light (UBL2) provides a powerful light with a good distribution. The UBL2 is to be used for beds within hospitals, nursing homes and in homecare.

The Under Bed Light makes it easier for patients and other people in need of care to find their way at night in the dark to prevent falling accidents and to make them feel safe.

Usage:

- Operating 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 (3000 m)
- Height above sea level: Max. 3000 meters
- Approvals: EN62471, IEC60601-1



Recommendations and Precautions

- If 2 or more UBL2 products with dimming function are connected to the same application, it is recommended to have a factory reset key to be able to synchronize the dimming direction and light intensity if one of the UBL2s is replaced.
- Screw holes in application are needed for mounting. Inform the customer to use M4 Ø12 screws with Ø12 washer, when mounting the UBL2. Max. torque 2.5 Nm.
- Hot-plugging:
Removing or adding any OpenBus™ cables is not allowed when the CB is powered by mains supply!
If needed anyway, follow the below procedure:
 1. Remove mains and wait 5 sec.
 2. Mount or dismount the required cables
 If this procedure is NOT followed, it may result in a damaged OpenBus™ driver circuit. The risk of a damaged circuit increases if the accessory has a high start current (in rush current).
- There can be a risk of conflict with other OpenBus™ accessories, like HB, ACP, etc. when using the OpenBus™ UBL2, it is therefore recommended to make a system/bit overview.
- Always use locking mechanism and O-ring
- Sockets not used must be fitted with blind plugs to ensure IP degree
- The UBL2 must be mounted on a plane surface and casing must not be subject to impact or any kind of stress.

16. WET Sheet (MEDLINE® CARELINE®)



LINAK
WE IMPROVE YOUR LIFE

WET SHEET
ITEM: WET100090060-180

Recommended wash at temp. of 60°. Acceptable wash at temp. of 85°. However this will reduce the lifetime.

Tumble dry normal at medium heat.

Line dry is recommended.

Date: 2015-06-25

W/O# 12345670001

The WET Sheet is an OpenBus™ product and is a part of the WET Detection solution. The WET Detection solution consists of the WET Sheet, the MJB8 and a WET Sheet cable.



Recommendations

- The WET Sheet is a wearing part which is not covered by the standard LINAK warranty. The WET Sheet warranty is valid until the product has been put into use.
- The WET Sheet is not a stand-alone article and must be included as part of an application e.g. the MJB8.
- The WET Detection will not detect liquid without conductivity e.g. demineralised water.
- The WET Sheet is not intended for outdoor use.
- The WET Sheet is not a life-supporting unit.
- Mechanical pressure on the WET Sheet can destroy the thread and connectors.
- It is recommended to change the WET Sheet cable after 500 connections.
- The sheet and connector must be placed properly to minimise the risk of bedsores.
- The WET Sheet connector is not to be exposed to direct moisture etc. urine or sweat. Place the connector away from the user e.g. on the side of the bed.
- To ensure the right WET Detection functionality do not use layers on top of the WET Sheet, e.g. a turning sheet.
- The recommended temperature for washing is 60 °C. Washing at 85 °C is acceptable, however, this will reduce the lifetime.
- Tumble drying at medium heat, however, line drying is recommended.
- The typical number of washing cycles is up to 50, but will depend on the washing conditions.
- The WET Sheet should be washed before use.

17. QLCI2 (MEDLINE® CARELINE®)



LINAK
Designed in Denmark
DK - 6430 Nordborg

Item : QLCI20000A129
Date : 2019.05.22
IPX6 Washable
S.W.: 02021068V1-1

NOT TO BE OPENED BY UNAUTHORIZED PERSONNEL
NE PAS OUVRIR PAR DU PERSONNEL NON AUTORISÉ

W/O# 01234567-0001 MADE IN DENMARK



LINAK
Designed in Denmark
DK - 6430 Nordborg

Item : QLCI20000B129
Date : 2019.05.22
IPX6 Washable
S.W.: 02021068V1-1

NOT TO BE OPENED BY UNAUTHORIZED PERSONNEL
NE PAS OUVRIR PAR DU PERSONNEL NON AUTORISÉ

W/O# 01234567-0001 MADE IN DENMARK

The Quad Load Cell Interface 2 (QLCI2) for the hospital and care segment is a scale system accessory with weighing capabilities and Out of Bed functionality.

The housing, makes the QLCI2 easy to mount by unique slide-on brackets and has an IPX6 Washable DURA™ ingress protection. The QLCI2 supports the LINAK OpenBus™ system offering a high level of customisation.

LINAK A/S delivers the OpenBus™ system only and is not responsible for any products (i.e. products from 3rd party suppliers) other than LINAK products or the compatibility of such products with the LINAK OpenBus™ system.

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 (3000 m)
- Height above sea level: Max. 3000 meters
- Approvals: IEC60601-1
ANSI/AAMI ES60601-1
CAN/CSA-22.2 No 60601-1
EN 45501 / OIML R76
EU type examination according to 2014/31/U
- Compatibility: All OpenBus control boxes
- Flammability rating: UL V0
- Latex free: Yes

Approvals

An OEM application approval according to EN45501

Typically the LINAK Weighing Solution will be classified as a "non-automatic weight" system.

If a LINAK Weighing Solution system is applied to a bed AND classified as such, the system MUST be "first-time" verified and sealed.

The verification and sealing is typically carried out in one of two ways:

1. Verification by the Bed manufacturer himself.

It prescribes that the manufacturer is certified to carry out the verification.

The certification can be obtained through a Notified Body that performs auditing and approval of the procedures and the quality system in the manufacturing company.

An example from Denmark:

'DS Certificering' is the only Notified Body in Denmark, certified to carry out approvals of quality systems for manufacturing and calibration of 'non-automatic weight' systems. Within Europe it is however possible to use any other Notified Body from one of the EU member states.

When certified the Bed manufacturer obtains a type approval certificate to prove they are certified to manufacture and calibrate their own "non-automatic weight" system.

2. Verification by "first-time" verification Bodies.

In Denmark there are three Notified Bodies available for the verification and sealing of the application:

Force Technology, Dansk Kalibreringsteknik and Trescal.

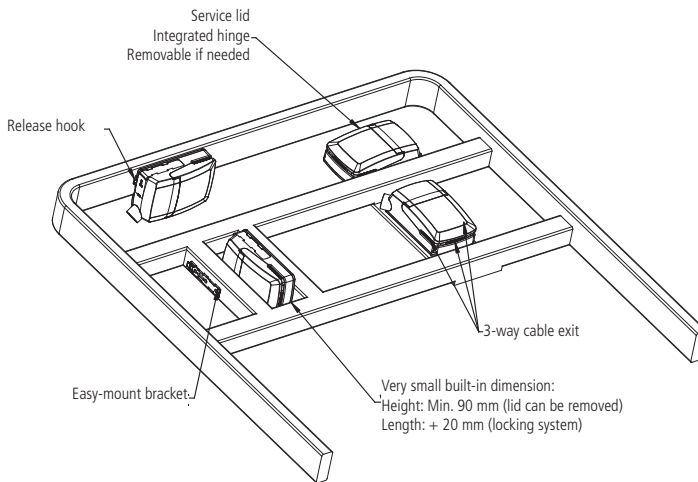
Again any other Notified Body from an EU member state can be used.

"First-time" verification can take place at either the manufacturer or at the destination of use.

Requirements in both situations:

- The Type Approval Certificate number MUST be marked at the label on the weight unit.
- The Type Approval Certificate must be issued according to and including reference to the Directive for "non-automatic weights" 2009/23/EC (new non-modified version of 90/384/EEC).

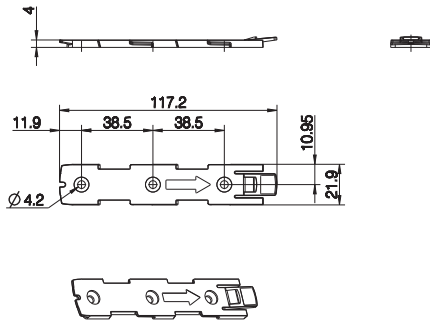
Mounted on frame:



Drawing No.: 1013W4008

Mounting bracket (frame flat) -

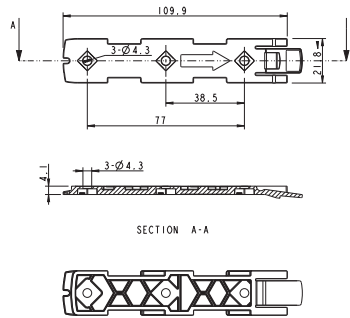
Article No. 1015W1001:



Drawing No.: 1015W4001

Mounting bracket (frame flat) w/M4 nuts -

Article No. 1015W9009:



Drawing No.: 1015W1009

It is recommended to mount the QLCI2 in a position that allows water to escape.

Recommended torque: 0.6 Nm +/-0.1

The bracket can be mounted to the bed frame or any other application by means of 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.



Warnings:

- In general the load cells are not living up to 2 MOPP, which is okay as long as all other parts comply with 2 MOPP and the load cells are electrically connected to the bed frame. This is to make the bed one electrical unit.



Recommendations

- Shielded load cell cables will be damaged if exposed to sharp bends. Therefore, if bended, cables should have a minimum bending radius of 60 mm.
- It is not allowed to bend load cell cables repeatedly, so mount cables on non-moving parts, like the bed frame.
- Load cell cables should not exceed a length of 2700 mm.
- In Europe weight systems are subject to important legal restrictions. The LINAK Weighing System system will be approved in accordance with EN45501.
The used load cells must be OIML approved as well (this is not included in the LINAK approval).
- Do not mount the QLCI2 directly on actuators.
- Load cell cables are not to be mated more than 40 times.

Calibration and use

- When calibrating, the application and components should be allowed to acclimate to ensure that they have the same temperature as the surrounding environment.
- For optimal performance the QLCI2 should be calibrated with a load similar to the in-use weight. For instance an application for lighter loads would benefit from having the bed calibrated with a lighter calibration load than an application for heavy use.
- The application will be most precise when calibrated with a load slightly above the in-use weight.
- Calibrate the application on a stable base.
- While performing a zero or auto-compensation and the handheld control is not placed on the application, the weight of the attendant control is not a part of the total weight. It leads to an incorrect measurement on the scale display, when the handheld control is placed on the application.
- When using auto-compensation or zeroing, do not touch the application or exert other external impacts on the application as this can result in incorrect measurements.
- Be aware that while the handheld control is not placed on the application and if its cable is pulled, it can lead to incorrect measurement on the scale display.

Mounting of cables and cable lock:

The QLC12 have a uniquely designed cable lid. The lid also works as an integrated cable lock when closed.

1. Mount load cell cable plugs in QLC12
2. Calibrate the system
3. Mount blind plug in calibration port
4. Close lid until lock snaps into place
5. Place calibration void label

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.

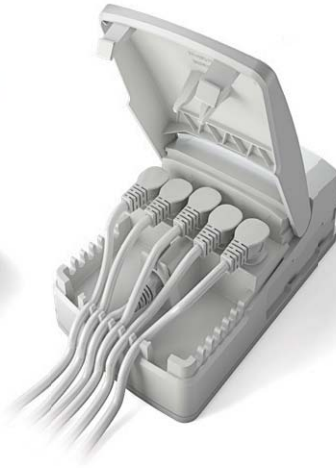
1

Mount load cell cables



2

Calibrate the system



3

Mount blind plug



4

Close lid until it snaps



5

Place void label



Only 1 label is required. The label can be placed anywhere along the opening of the lid on the QLC12 box.

9. Repair and disposal

Repair

Only an authorised LINAK® service centre should repair the LINAK actuator systems. Systems to be repaired under warranty must be sent to an authorised LINAK service centre.

In order to avoid the risk of malfunction, all actuator repairs must only be carried out by an authorised LINAK Service shop or repairers, as special tools and parts must be used.

If a system is opened by unauthorised personnel there is a risk that it may malfunction at a later date.

Disposal of LINAK systems or components

LINAK systems or components may be disposed of, possibly by dividing them into different waste groups for recycling or combustion.

We recommend that our product is disassembled as much as possible at the disposal and that you try to recycle it. LINAK systems or components should be disposed of in accordance with the environmental regulations applicable in the respective country.

FACTORIES

China

LINAK (Shenzhen) Actuator Systems, Ltd.
Phone: +86 755 8610 6656
Phone: +86 755 8610 6990
E-mail: sales@linak.cn
www.linak.cn

Denmark - Headquarters

LINAK A/S - Group Headquarters

Phone: +45 73 15 15 15
Fax: +45 74 45 80 48
Fax (Sales): +45 73 15 16 13
E-mail: info@linak.com
www.linak.com

USA

LINAK U.S. Inc.

North and South American Headquarters
Phone: +1 502 253 5595
Fax: +1 502 253 5596
E-mail: info@linak-us.com
www.linak-us.com
www.linak-latinamerica.com

SUBSIDIARIES

Australia

LINAK Australia Pty. Ltd
Phone: +61 3 8796 9777
Fax: +61 3 8796 9778
E-mail: sales@linak.com.au
www.linak.com.au

Austria

LINAK Repräsentanz - Österreich (Wien)
Phone: +43 (1) 890 7446
Fax: +43 (1) 890 744615
E-mail: info@linak.de
www.linak.at - www.linak.hu

Belgium

LINAK Actuator-Systems NV/SA
(Belgium & Luxembourg)
Phone: +32 (0)9 230 01 09
E-mail: beinfo@linak.be
www.linak.be - www.fr.linak.be

Brazil

LINAK Do Brasil Comércio De Atuadores Ltda.
Phone: +55 (11) 2832 7070
Fax: +55 (11) 2832 7060
E-mail: info@linak.com.br
www.linak.com.br

Canada

LINAK Canada Inc.
Phone: +1 502 253 5595
Fax: +1 416 255 7720
E-mail: info@linak.ca
www.linak-us.com

Czech Republic

LINAK C&S s.r.o.
Phone: +42 058 174 1814
Fax: +42 058 170 2452
E-mail: info@linak.cz
www.linak.cz - www.linak.sk

Denmark - International

LINAK International
Phone: +45 73 15 15 15
E-mail: info@linak.com
www.linak.com

Denmark - Sales

LINAK DANMARK A/S
Phone: +45 86 80 36 11
Fax: +45 86 82 90 51
E-mail: linak@linak-silkeborg.dk
www.linak.dk

Finland

LINAK OY
Phone: +358 10 841 8700
E-mail: linak@linak.fi
www.linak.fi

France

LINAK FRANCE E.U.R.L
Phone: +33 (0) 2 41 36 34 34
Fax: +33 (0) 2 41 36 35 00
E-mail: linak@linak.fr
www.linak.fr

Germany

LINAK GmbH
Phone: +49 6043 9655 0
Fax: +49 6043 9655 60
E-mail: info@linak.de
www.linak.de

India

LINAK A/S India Liaison Office
Phone: +91 120 4531797
Fax: +91 120 4786428
E-mail: info@linak.in
www.linak.in

Ireland

LINAK UK Limited (Ireland)
Phone: +44 (0)121 544 2211
Fax: +44 (0)121 544 2552
+44 (0)796 855 1606 (UK Mobile)
+35 387 634 6554
(Republic of Ireland Mobile)
E-mail: sales@linak.co.uk
www.linak.co.uk

Italy

LINAK ITALIA S.r.l.
Phone: +39 02 48 46 33 66
Fax: +39 02 48 46 82 52
E-mail: info@linak.it
www.linak.it

Japan

LINAK K.K.
Phone: 81-45-533-0802
Fax: 81-45-533-0803
E-mail: linak@linak.jp
www.linak.jp

Malaysia

LINAK Actuators Sdn. Bhd.
Phone: +60 4 210 6500
Fax: +60 4 226 8901
E-mail: info@linak-asia.com
www.linak.my

Netherlands

LINAK Actuator-Systems B.V.
Phone: +31 76 5 42 44 40 /
+31 76 200 11 10
E-mail: info@linak.nl
www.linak.nl

New Zealand

LINAK New Zealand Ltd
Phone: +64 9580 2071
Fax: +64 9580 2072
E-mail: nzsales@linak.com.au
www.linak.com.au

Norway

LINAK Norge AS
Phone: +47 32 82 90 90
E-mail: info@linak.no
www.linak.no

Poland

LINAK Polska
LINAK Danmark A/S (Spółka Akcyjna)
Phone: +48 22 295 09 70 /
+48 22 295 09 71
E-mail: info@linak.pl
www.linak.pl

Republic of Korea

LINAK Korea Ltd.
Phone: +82 2 6231 1515
Fax: +82 2 6231 1516
E-mail: info@linak.kr
www.linak.kr

Russia

LINAK LLC
Phone: +7 495 780 3161
Fax: +7 495 687 1426
E-mail: info@linak.ru
www.linak.ru

Slovakia

LINAK SLOVAKIA S.R.O.
Phone: +421 51 7563 444
www.linak.sk

Spain

LINAK Actuadores, S.L.U
Phone: +34 93 588 27 77
Fax: +34 93 588 27 85
E-mail: esma@linak.es
www.linak.es

Sweden

LINAK Scandinavia AB
Phone: +46 8 732 20 00
Fax: +46 8 732 20 50
E-mail: info@linak.se
www.linak.se

Switzerland

LINAK AG
Phone: +41 43 388 31 88
Fax: +41 43 388 31 87
E-mail: info@linak.ch
www.linak.ch - www.fr.linak.ch
www.it.linak.ch

Taiwan

LINAK (Shenzhen) Actuator systems Ltd.
Taiwan Representative office
Phone: +886 2 272 90068
Fax: +886 2 272 90096
E-mail: sales@linak.com.tw
www.linak.com.tw

Turkey

LINAK İth. İhr. San. ve Tic. A.Ş.
Phone: +90 312 4726338
Fax: +90 312 4726635
E-mail: info@linak.com.tr
www.linak.com.tr

United Kingdom

LINAK UK Limited
Phone: +44 (0)121 544 2211
Fax: +44 (0)121 544 2552
E-mail: sales@linak.co.uk
www.linak.co.uk

DISTRIBUTORS

Argentina

NOVOTEC ARGENTINA SRL
Phone: 011-4303-8989 / 8900
Fax: 011-4032-0184
E-mail: info@novotecargentina.com
www.novotecargentina.com

Colombia

MEM Ltda
Phone: +5[7] (1) 334-7666
Fax: +5[7] (1) 282-1684
E-mail: servioalcliente@memtda.com.co
www.mem.net.co

India

Mechatronics Control Equipments India Pvt Ltd
Phone: +91-44-28558484, 85
E-mail: bala@mechatronicscontrol.com
www.mechatronicscontrol.com

Indonesia

PT. HIMALAYA EVEREST JAYA
Phone: +6 221 544 8956, +6 221 544 8965
Fax: +6 221 619 1925
Fax (Sales): +6 221 619 4658
E-mail: hejplastic-div@centrin.net.id
www.hej.co.id

Israel

NetivTech LTD
Phone: +972 55-2266-535
Fax: +972 2-9900-560
Email: info@NetivTech.com
www.netivtech.com

Russia

ODO FAM
Phone: +7 812 3319333
Fax: +7 812 3271454
E-mail: purchase@fam-drive.ru
www.fam-drive.ru

Singapore

Servo Dynamics Pte Ltd
Phone: +65 6844 0288
Fax: +65 6844 0070
E-mail: servodynamics@servo.com.sg

South Africa

Industrial Specialised Applications CC
Phone: +27 011 466 0346
E-mail: gartht@isagroup.co.za
www.isaza.co.za

United Arab Emirates

Mechatronics
Phone: +971 4 267 4311
Fax: +971 4 267 4312
E-mail: mechtron@emirates.net.ae

Terms of use

The user is responsible for determining the suitability of LINAK products for specific application. LINAK takes great care in providing accurate and up-to-date information on its products.

However, due to continuous development in order to improve its products, LINAK products are subject to frequent modifications and changes without prior notice. Therefore, LINAK cannot guarantee the correct and actual status of said information on its products.

While LINAK uses its best efforts to fulfill orders, LINAK cannot, for the same reasons as mentioned above, guarantee the availability of any particular product. Therefore, LINAK reserves the right to discontinue the sale of any product displayed on its website or listed in its catalogues or other written material drawn up by LINAK.

All sales are subject to the Standard Terms of Sale and Delivery for LINAK. For a copy hereof, please contact LINAK.