Modular Junction Box MJB5 Plus with Gateway

Data Sheet



LINAK® WE IMPROVE YOUR LIFE

Contents

Introduction 3
MJB5 Plus versions 504-010 and 504-020 3
Features and options 3
Usage 3
MJB5 Plus Gateway usage 3
Ordering example 4
Approvals and certifications 5
Standard functionality 6
OpenBus™ standard configuration 6
Dimensions 9
Cable and accessory overview 10
Contacts 11

Introduction

The modular junction box MJB5 Plus is designed for use together with OpenBus™ control boxes.

The MJB5 Plus makes it possible to connect multiple hand controls and attendant controls. It can even be used for charging or to connect the Under Bed Light and 3rd party products.

The compact design and in-line cable management makes it easy to integrate in a wide range of healthcare applications like hospital beds, surgery tables and treatment chairs.

The MJB5 Plus offers IPX6 Washable DURA™ and is the perfect match for the OpenBus control box platform. IPX6 Washable DURA helps prolong the lifetime and makes the system ready for wash tunnels and high-pressure wash down.

MJB5 Plus versions 504-010 and 504-020

The MJB5 Plus is a simple gateway interface which can connect switch input notifications from the hospital or nursing home infrastructure such as service/nurse call systems.

Please note that notifications are only to be used as service information and not for emergency issues.



Features and options

2 connections:	Port 1, OpenBus connection / Port 5, Gateway
Colour:	Light Grey RAL 7035
Protection class:	IPX6, IPX6 Washable DURA™

Usage

Compatibility:	All OpenBus products
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
Latex free:	Yes
Approvals:	IEC60601-1 ANSI/AAMI ES60601-1 CAN/CSA-22.2 No 60601-1

MJB5 Plus Gateway usage

Contact rating:	Maximum continuous current: 1A Maximum switching voltage: 48VDC Maximum switching capacity: 24VA Contact resistance: <100 mΩ
Current consumption:	V bus 8V: 9 mA V permanent 40V: 14 mA

Ordering example

	MJB		
Special/Standard code no.	000	000 =	Port repeater box (without functionality)
		502 =	SMPS 4W (Switch Mode Power Supply)
		504 =	Gateway
		505 =	UBL (Internal) / Switch input (S1 + S2)
		506 =	UBL (External) / Switch input (S1 + S2)
		509 =	Analogue to OPENBUS™ Converter
No. of OPENBUS™ connections	4	1 =	For standard code: 502 (Ports: 1=OB, 2=third party) For standard code: 504 (Ports: 1=OB, 5=Third party)
		3 =	For standard code 000: 3 ports
		4 =	For standard code 000: 4 ports For standard code: 505, 506 & 509
		5 =	For standard code 000: 5 ports
Configuration Number	000	000 =	Port repeater box (without functionality)
		001-099 =	Standard configuration
		100-999 =	Special configuration
Not used	-	- =	Not used
Colour	1	1 =	Light grey (RAL 7035)
HardWare version	0	0 =	No Power request
		1 =	HW-variant with power request on all ports where it is possible
		2 =	HW-variant with power request on port 2 (Only for MJB509)
		3 =	HW-variant with power request on port 4 & 5 (Only for MJB509)
IP Degree	2	2 =	IPX6
		9 =	IPX6 Washable DURA™
Cable	3	3 =	No cable
	Chosen item number:		MJB0004000-1023

Modular plug cable for connection of OpenBus™ control box to MJB5 Plus has to be ordered separately. Please remember to order DURA cable and blind plug if IP degree IPX6 Washable DURA™ is required.

Approvals and certifications

For approval documentation, LINAK recommends specifying the product type instead of individual item numbers to ensure broader approval coverage and simplify future product changes.

Listed LINAK item for application approval: MJB

If this is not possible, we advise being as non-specific as possible when specifying LINAK products in your approval application:

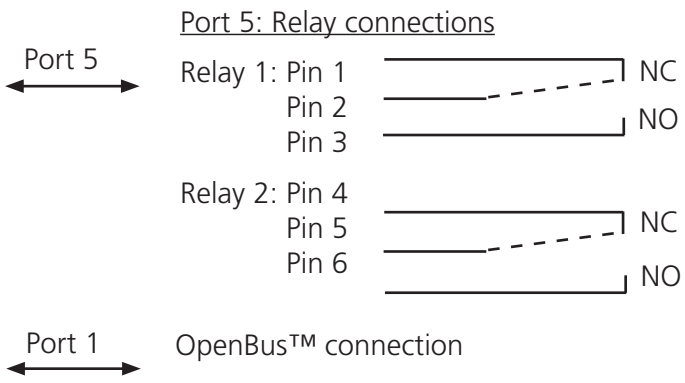
Listed LINAK item for application approval: MJBSSS****S**S*

" * " is not safety critical and we recommend including a non-specific signifier such as an asterisk.

" S " is safety critical and represents a listed critical component in the product and cannot be left out.

For more information, please refer to "Approvals and certifications" in LINAK Application Design Recommendations found under User Manual for any given product on LINAK.com





Standard functionality

The MJB5 Plus Gateway consists of two relays, which are connected through port 5 on the MJB5 Plus. This can be done with the special cable 0964140 (modular plug - open end).

There are as standard 2 configurations, 504-010 and 504-020, see description on the next pages.

Relay 1: NC (normally closed) = Pin 2 + Pin 1/NO (normally open) = Pin 2 + Pin 3

Relay 2: NC (normally closed) = Pin 5 + Pin 4/NO (normally open) = Pin 5 + Pin 6

OpenBus™ standard configuration

Versions 504-010 and 504-020

MJB 5 0 4 1 0 1 0 - 1 0 2 3

HardWare version:
0 Standard

Gateway
0 1 0 DN (Device Number) 150
Relay 1, Key 1 = A31 (ID2 - Nurse Call)
Relay 1, Key 2 = E31 (ID5 - Nurse Call)
Relay 1, Key 3 = H31 (ID1 - Nurse Call)
Relay 2, Key 1 = A29 (ID2 - Service Call)
Relay 2, Key 2 = E29 (ID5 - Service Call)
Relay 2, Key 3 = H29 (ID1 - Service Call)
Relay 1, Status 1 = A0 (ID2 - Nurse Call)
Relay 1, Status 2 = E0 (ID5 - Nurse Call)
Relay 2, Status 2 = E1 (ID5 - Service Call)
! Please note, Relay 1 changes state when powering up

Gateway
0 2 0 DN (Device Number) 150
Relay 1, Key 1 = A31 (ID2 - Nurse Call)
Relay 1, Key 2 = E31 (ID5 - Nurse Call)
Relay 1, Key 3 = H31 (ID1 - Nurse Call)
Relay 1, Key 4 = H29 (ID1 - Service Call)
Relay 1, Status 1 = A0 (ID2 - Nurse Call)
Relay 1, Status 2 = E0 (ID5 - Nurse Call)
Relay 2, Notification 1 // Out-of-bed notification (S2)
Relay 2, Notification 2 // Switch notification (S1)
! Please note, Relay 1 changes state when powering up

* Service Data Tool 2, can read out the special/standard code no. and configuration.

Relay 1

Relay 1 is NO when connected to mains and NC when no mains, this means the relay is "active", when connected to mains (closed loop). The closed loop principal is to ensure that a notification is sent if power is missing on the bed. When mains is disconnected (power is missing), the relay will go from NO to NC which will automatically result in a notification (status indicator) on the OpenBus.

Relay 1 can be activated via the patient control (Key1/Key4) or the attendant control (Key2 / Key3). When a key is activated, the relay will switch state from NO to NC for 2 seconds. After 2 seconds the relay will automatically change state from NC to NO.

The status of the relay is indicated on the OpenBus and can be used for switching on an LED.

Relay 1		
OpenBus control box power mode	**Notification level**	**Relay state**
Mains unplugged, *the control box* is in power-down or the OpenBus is not running (Clock/data is missing)	Notification	NC*
On mains or battery at "wake up"	Bed notification**	NC
	No notification	NO

Relay 2

Relay 2 is by default NC, with or without mains, (open loop).

Relay 2 can be activated via the patient control (Key 1) or the attendant control (Key 2 / Key 3).

When the relay is activated, it will switch from NC to NO for 2 seconds. After 2 seconds the relay will automatically change state from NO to NC.

The status of the relay is indicated on the OpenBus™ and can be used for switching on an LED.

By using the variant 504-020 will relay 2 be controlled by the MJB5 Plus variant 505/506 with switch input.

Notification 1 = Switch input S2 / notification 2 = Switch input S1

When using this combination, is it important to have the MJB5 Plus 505/506 connected to the system all the time. If it is not connected, the Gateway MJB5 Plus will see it as a notification and the relay will be activated. The Gateway MJB5 Plus is "scanning" the OpenBus system. every minute for a notification.

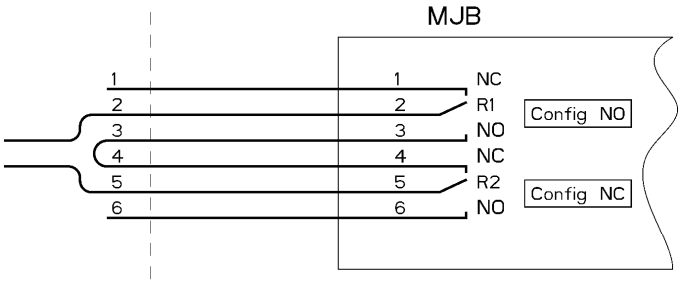
Relay 2		
CB or OpenBus control box power mode	**Notification level**	**Relay state**
Mains unplugged or *the control box* is in power-down	No notification	NC
On mains or battery at "wake up"	Bed notification**	NO
	No notification	NC

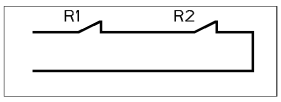
* When mains is unplugged or CB or the OpenBus control box is in power-down, the relay will shift to NC state and generate a notification.

** Notification generated by nurse call or bed notifications.

Example of closed loop

3rd party site LINAK site

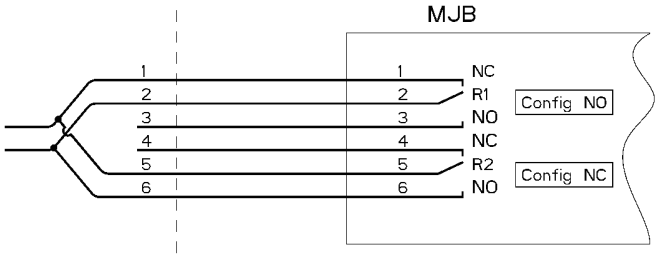


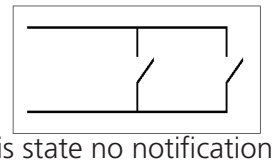


In this state no notification

Example of open loop

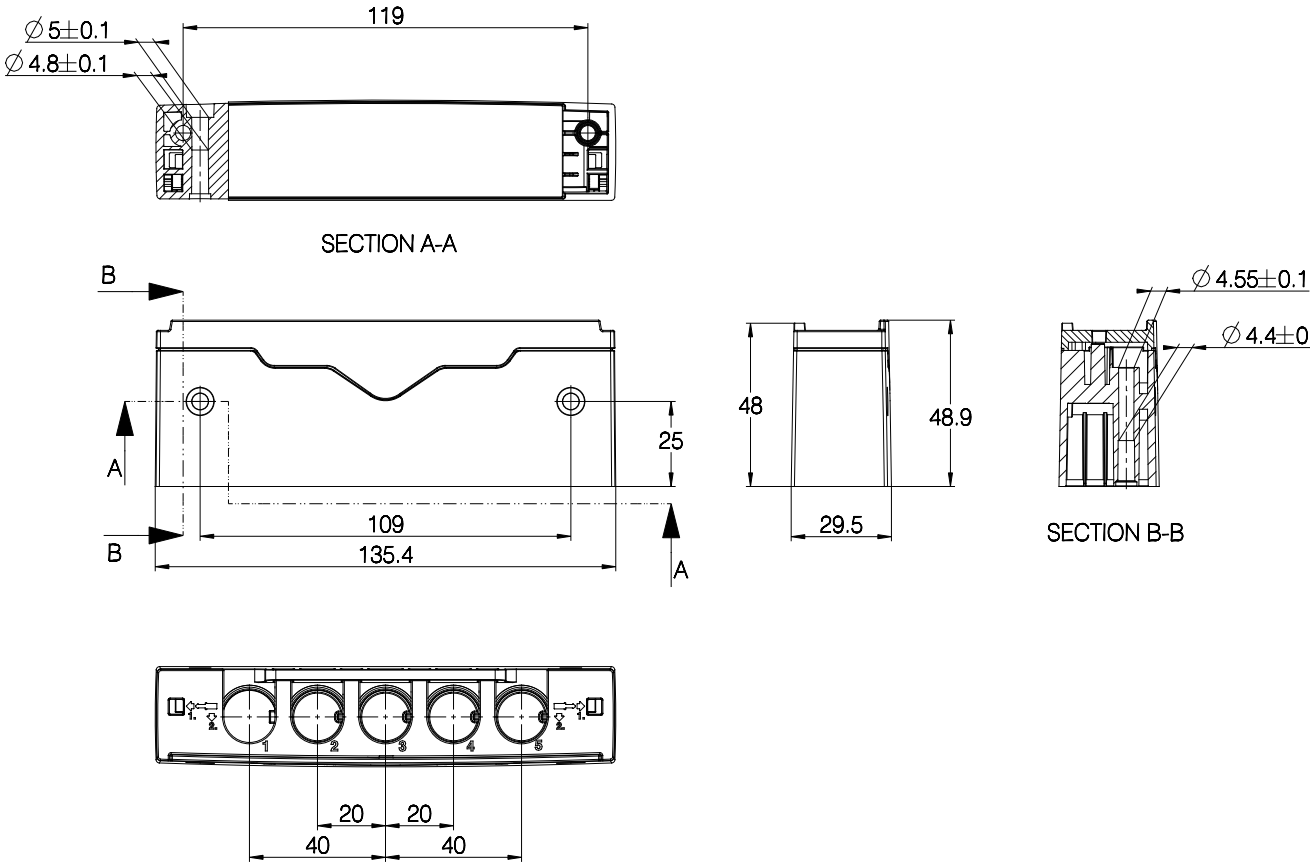
3rd party site LINAK site





In this state no notification

Dimensions



Drawing no.: 0835101

Cable and accessory overview

		MJB5 Plus version					
		000	502	504	505	506	509
Ordering number	Description	Port repeater	SMPS	Gateway	UBL (Int.)	UBL (Ext.)	AOC
0821147	MJB5 Plus locking mechanism	X	X	X	X	X	X
1015W1010-A	Mounting bracket exclusive screws	X	X	X	X	X	X
SA0002645	Special screws type WN1423 K60x16	X	X	X	X	X	X
0821008	Blind plug, RAL 7035 Light Grey, IPX6	X	X	X	X	X	X
0821120	Blind plug, RAL 7035 Light Grey, IPX6 Washable DURA™	X	X	X	X	X	X
0834000	USB cable, length 1000 mm (USB cable is not medically approved)		X				
0964399	Modular plug cable with open end, length 1500 mm				X	X	
0964461-xxxx	Modular plug to modular plug, 6-wire extension cable	X	X	X	X	X	X
0964140-1375	Gateway cable, xxxx mm, modular plug, open end			X			
0964135	Under Bed Light Cable, 2500 mm					X	
0965347	Modular plug cable with 10 open-end wires						X

Contacts

FACTORIES

Denmark - Headquarters
LINAK A/S
Phone: +45 73 15 15 15
Fax: +45 74 45 80 48
Fax (Sales): +45 73 15 16 13
Web: www.linak.com

China
LINAK (Shenzhen) Actuator Systems, Ltd.
Phone: +86 755 8610 6656
Phone: +86 755 8610 6990
Web: www.linak.cn

Slovakia
LINAK Slovakia s.r.o.
Phone: +421 51 7563 444
Web: www.linak.sk

Thailand
LINAK APAC Ltd.
Phone: +66 33 265 400
Web: www.linak.com

USA
LINAK U.S. Inc.
Americas Headquarters
Phone: +1 502 253 5595
Fax: +1 502 253 5596
Web: 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
Web: www.linak.com.au

Austria
LINAK Zweigniederlassung - Österreich (Wien)
Phone: +43 (1) 890 7446
Fax: +43 (1) 890 744615
E-mail: info@linak.de
Web: 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
Web: 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
Web: www.linak.com.br

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

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

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

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

India
LINAK A/S India Liaison Office
Phone: +91 120 4531797
Fax: +91 120 4786428
E-mail: info@linak.in
Web: 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 (Rep.of Ireland Mobile)
E-mail: sales@linak.co.uk
Web: 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
Web: www.linak.it

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

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

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

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

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

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

Slovakia
LINAK Slovakia S.R.O.
Phone: +421 51 7563 444
Web: 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
Web: www.linak.es

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

Switzerland
LINAK AG
Phone: +41 43 388 31 88
E-mail: info@linak.ch
Web: 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
Web: 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
Web: 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
Web: www.linak.co.uk

DISTRIBUTORS

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

Colombia
MEM Ltda
Phone: +[57] (1) 334-7666
Fax: +[57] (1) 282-1684
E-mail: servicioalcliente@memltda.com.co
Web: www.mem.net.co

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

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

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
Web: 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

LINAK® takes great care to provide accurate and up-to-date information about its products. However, it is the responsibility of the user to determine the suitability of LINAK products for any specific application. Due to ongoing product development, LINAK products are subject to continuous modifications and changes. LINAK reserves the right to make such modifications, updates, and changes without prior notice. For this reason, LINAK cannot guarantee the accuracy or current status of printed information about its products.

LINAK uses its best efforts to fulfil orders. However, for the reasons mentioned above, LINAK cannot guarantee availability of any particular product at any given time. LINAK reserves the right to discontinue the sale of any product displayed on its website or listed in its catalogues or in other written material created and produced by LINAK, LINAK subsidiaries, or LINAK affiliates.
All sales are subject to the applicable terms and conditions of sale and delivery available on LINAK websites.
LINAK and the LINAK logotype are registered trademarks of LINAK A/S. All rights reserved.

Copyright© LINAK • 2026-11 • UT-62-02-061 C

LINAK®
WE IMPROVE YOUR LIFE