AMCAL
INDUSTRIAL PUMP SOLUTIONS

GRUNDFOS
DATA BOOKLET

LC 232, LC 242

50/60 Hz





GRUNDFOS

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Product introduction

The level-control unit is designed to control one or two pumps. The product can be configured for two purposes: dewatering in groundwater supply or filling a tank.

The control unit switches the pump on and off according to the liquid level measured by level switches or a pressure sensor. When the start level is reached, the pump starts, and when the liquid level is lowered to the stop level, the pump is stopped by the control unit. An alarm is indicated in case of, for example, high water level in the tank or sensor failure.

The control unit is available in two variants.

- LC 232 provides a compact solution with integrated motor protection.
- LC 242 is a cabinet solution allowing you to customise your setup.

Basic settings are configured via the operating panel, and advanced settings are configured with Grundfos GO Remote. The control unit can be fitted with a range of Grundfos communication modules to gain access to monitoring systems such as SCADA.

Applications

The product can be used for the following applications:

- groundwater supply
- irrigation systems
- small waterworks
- mining and construction sites
- commercial buildings
- municipal systems.

Features

The control unit features, among others, the following functions:

- support of up to two pumps
- manual and automatic control of the pump
- Bluetooth pairing with Grundfos GO Remote
- operating indication, such as power on and pump running
- alarm and warning indication, such as power phase missing and high water level
- motor and phase failure protection
- setting stop delays matching the actual operating conditions
- automatic alternation of pumps
- user-configurable logging
- limit exceeded.

Product data

Type key for LC 232

Example	LC 232	2x	1-9	DOL	PI
Pos.	1	2	3	4	5

Pos.	Description
1	Type: • LC 232: wall-mounted version
2	Number of pumps supported
3	Current range of pump [A]
4	Starting method: • DOL: Direct-on-line
5	Panel type: • PI: Plastic enclosure

Type key for LC 242

Example	LC 242	2x	9-26	DOL	30	150	3 × 400	PI	OPT
Pos.	1	2	3	4	5	6	7	8	9

Pos.	Description
1	Type: • LC 242: panel version
2	Number of pumps supported
3	Current range of pumps [A]
4	Starting method: • DOL: direct-on-line • SD: star-delta • SST: soft starter
5	Operating capacitor [µF]
6	Starting capacitor [µF]
7	Supply voltage [V]
8	Panel type: • MI: Metal • PI: Plastic
9	OPT: Options. • BB: Battery backup • CT: Current transformer • D: Fault light system • E: Main disconnect switch • F: Circuit breaker per pump • H: ON/OFF/AUTO switch • I: RCD per panel • J: RCD per pump • K: Ex barrier analog 4-20 mA • L: Ex barrier digital • M: IO 241 • N: DIN-mount electrode relay for two electrodes and REF (CLD4MA2DM24)

Type key for CU 242

Example	CU 242	1
Pos.	1	2

Pos.	Description
1	Type • CU 242
2	Number of pumps supported

Product range, single pump unit

1 × 110-240/3 × 200-460, 50/60 Hz

Controller type	Rated current [A]	Starting method	Start/run capacitor [µF]	Cabinet material	Option	Product number
LC 232	1 - 12	DOL	-	Plastic	-	99920061

1 x 230, 50/60 Hz, N, PE

Controller type	Rated current [A]	Starting method	Start/run capacitor [µF]	Cabinet material	Option	Product number
LC 242	1.9 - 6.3	DOL	-	Plastic	OPT: E	99897100
LC 242	1.9 - 6.3	DOL	-	Plastic	OPT: E, F	99897114

3 × 230/400, 50/60 Hz, N, PE

Controller type	Rated current [A]	Starting method	Cabinet material	Option	Product number
LC 242	0.8 - 2.7	DOL	Plastic	OPT: CT	99877269
LC 242	0.8 - 2.7	DOL	Plastic	OPT: CT, M	99877271
LC 242	1.9 - 6.3	DOL	Plastic	OPT: CT	99877277
LC 242	1.9 - 6.3	DOL	Plastic	OPT: CT, M	99877280
LC 242	5.7 - 12	DOL	Plastic	OPT: CT	99877286
LC 242	5.7 - 12	DOL	Plastic	OPT: CT, M	99877288
LC 242	9 - 26	DOL	Plastic	OPT: CT	99877294
LC 242	9 - 26	DOL	Plastic	OPT: CT, M	99877296
LC 242	10 - 30	SD	Metal	OPT: CT	99877302
LC 242	16 - 44	SD	Metal	OPT: CT	99877310
LC 242	8 - 12	SST	Metal	OPT: CT	99877326
LC 242	10 - 16	SST	Metal	OPT: CT	99877334
LC 242	16 - 20	SST	Metal	OPT: CT	99877342
LC 242	20 - 25	SST	Metal	OPT: CT	99877350
LC 242	25 - 30	SST	Metal	OPT: CT	99877358
LC 242	30 - 42	SST	Metal	OPT: CT	99877367
LC 242	0.8 - 2.7	DOL	Plastic	OPT: E	99897097
LC 242	0.8 - 2.7	DOL	Plastic	OPT: E, F	99897111
LC 242	1.9 - 6.3	DOL	Plastic	OPT: E	99897099
LC 242	1.9 - 6.3	DOL	Plastic	OPT: E, F	99897113
LC 242	5.7 - 12	DOL	Plastic	OPT: E	99897105
LC 242	5.7 - 12	DOL	Plastic	OPT: E, F	99897119
LC 242	9 - 26	DOL	Plastic	OPT: E	99897109
LC 242	9 - 26	DOL	Plastic	OPT: E, F	99897123
LC 242	10 - 30	SD	Metal	OPT: E	99897125
LC 242	10 - 30	SD	Metal	OPT: E, F	99897131
LC 242	16 - 44	SD	Metal	OPT: E	99897127
LC 242	16 - 44	SD	Metal	OPT: E, F	99897133
LC 242	8 - 12	SST	Metal	OPT: E	99897137
LC 242	10 - 16	SST	Metal	OPT: E	99897139
LC 242	16 - 20	SST	Metal	OPT: E	99897141
LC 242	20 - 25	SST	Metal	OPT: E	99897143
LC 242	25 - 30	SST	Metal	OPT: E	99897145
LC 242	30 - 42	SST	Metal	OPT: E	99897147

3 × 400, 50/60 Hz, PE

Controller type	Rated current [A]	Starting method	Cabinet material	Option	Product number
LC 242	0.8 - 2.7	DOL	Plastic	OPT: CT	99877270
LC 242	0.8 - 2.7	DOL	Plastic	OPT: CT, M	99877272
LC 242	1.9 - 6.3	DOL	Plastic	OPT: CT	99877278
LC 242	1.9 - 6.3	DOL	Plastic	OPT: CT, M	99877281
LC 242	5.7 - 12	DOL	Plastic	OPT: CT	99877287
LC 242	5.7 - 12	DOL	Plastic	OPT: CT, M	99877289
LC 242	9 - 26	DOL	Plastic	OPT: CT	99877295
LC 242	9 - 26	DOL	Plastic	OPT: CT, M	99877297
LC 242	10 - 30	SD	Metal	OPT: CT	99877303
LC 242	16 - 44	SD	Metal	OPT: CT	99877311
LC 242	8 - 12	SST	Metal	OPT: CT	99877327
LC 242	10 - 16	SST	Metal	OPT: CT	99877335
LC 242	16 - 20	SST	Metal	OPT: CT	99877343
LC 242	20 - 25	SST	Metal	OPT: CT	99877351
LC 242	25 - 30	SST	Metal	OPT: CT	99877359
LC 242	30 - 42	SST	Metal	OPT: CT	99877368

Product range, dual pump unit

1 × 110-240/3 × 200-460, 50/60 Hz

Controller type	Rated current [A]	Starting method	Start/run capacitor [µF]	Cabinet material	Option	Product number
LC 232	1 - 9	DOL	-	Plastic	-	99920070

1 x 230, 50/60 Hz, N, PE

Controller type	Rated current [A]	Starting method	Start/run capacitor [µF]	Cabinet material	Option	Product number
LC 242	1.9 - 6.3	DOL	-	Plastic	OPT: E	99897103
LC 242	1.9 - 6.3	DOL	-	Plastic	OPT: E, F	99897117

3 × 230/400, 50/60 Hz, N, PE

Controller type	Rated current [A]	Starting method	Cabinet material	Option	Product number
LC 242	0.8 - 2.7	DOL	Plastic	OPT: CT	99877273
LC 242	1.9 - 6.3	DOL	Plastic	OPT: CT	99877282
LC 242	5.7 - 12	DOL	Plastic	OPT: CT	99877290
LC 242	9 - 26	DOL	Plastic	OPT: CT	99877298
LC 242	10 - 30	SD	Metal	OPT: CT	99877306
LC 242	16 - 44	SD	Metal	OPT: CT	99877314
LC 242	8 - 12	SST	Metal	OPT: CT	99877330
LC 242	10 - 16	SST	Metal	OPT: CT	99877338
LC 242	16 - 20	SST	Metal	OPT: CT	99877346
LC 242	20 - 25	SST	Metal	OPT: CT	99877354
LC 242	25 - 30	SST	Metal	OPT: CT	99877363
LC 242	30 - 42	SST	Metal	OPT: CT	99877371
LC 242	0.8 - 2.7	DOL	Plastic	OPT: E	99897098
LC 242	1.9 - 6.3	DOL	Plastic	OPT: E	99897102
LC 242	5.7 - 12	DOL	Plastic	OPT: E	99897107
LC 242	9 - 26	DOL	Plastic	OPT: E	99897110
LC 242	0.8 - 2.7	DOL	Plastic	OPT: E, F	99897112
LC 242	1.9 - 6.3	DOL	Plastic	OPT: E, F	99897116
LC 242	5.7 - 12	DOL	Plastic	OPT: E, F	99897121
LC 242	9 - 26	DOL	Metal	OPT: E, F	99897124
LC 242	10 - 30	SD	Metal	OPT: E	99897126
LC 242	16 - 44	SD	Metal	OPT: E	99897128
LC 242	10 - 30	SD	Metal	OPT: E, F	99897132
LC 242	16 - 44	SD	Metal	OPT: E, F	99897134
LC 242	8 - 12	SST	Metal	OPT: E	99897138
LC 242	10 - 16	SST	Metal	OPT: E	99897140
LC 242	16 - 20	SST	Metal	OPT: E	99897142
LC 242	20 - 25	SST	Metal	OPT: E	99897144
LC 242	25 - 30	SST	Metal	OPT: E	99897146
LC 242	30 - 42	SST	Metal	OPT: E	99897148

3 × 400, 50/60 Hz, PE

Controller type	Rated current [A]	Starting method	Cabinet material	Option	Product number
LC 242	0.8 - 2.7	DOL	Plastic	OPT: CT	99877274
LC 242	1.9 - 6.3	DOL	Plastic	OPT: CT	99877283
LC 242	5.7 - 12	DOL	Plastic	OPT: CT	99877291
LC 242	9 - 26	DOL	Plastic	OPT: CT	99877299

Controller type	Rated current [A]	Starting method	Cabinet material	Option	Product number
LC 242	10 - 30	SD	Metal	OPT: CT	99877307
LC 242	16 - 44	SD	Metal	OPT: CT	99877315
LC 242	8 - 12	SST	Metal	OPT: CT	99877331
LC 242	10 - 16	SST	Metal	OPT: CT	99877339
LC 242	16 - 20	SST	Metal	OPT: CT	99877347
LC 242	20 - 25	SST	Metal	OPT: CT	99877355
LC 242	25 - 30	SST	Metal	OPT: CT	99877364
LC 242	30 - 42	SST	Metal	OPT: CT	99877372

Construction

Control unit, LC 232

LC 232 is a compact solution with certified motor protection and current measurement.

It is available in two versions:

- single pump
- dual pump.



Single pump version



Dual pump version

Control cabinet, LC 242

LC 242 is a control cabinet solution, and it can be customised to meet specific demands. It offers motor protection via an electronic DIN rail.

It is available in two versions:

- single pump
- dual pump.



Single pump version



Dual pump version

CU 242

The level-control unit switches the pump on and off according to the liquid level measured by level switches or a pressure sensor. When the start level is reached, the pump starts, and when the liquid level is lowered to the stop level, the pump is stopped by the control unit. An alarm is indicated if, for example, the water level is too high in the tank or the sensor fails.



Single pump version



Dual pump version

Model	Product number
Single pump	99622683
Dual pump	99622679

IO 242

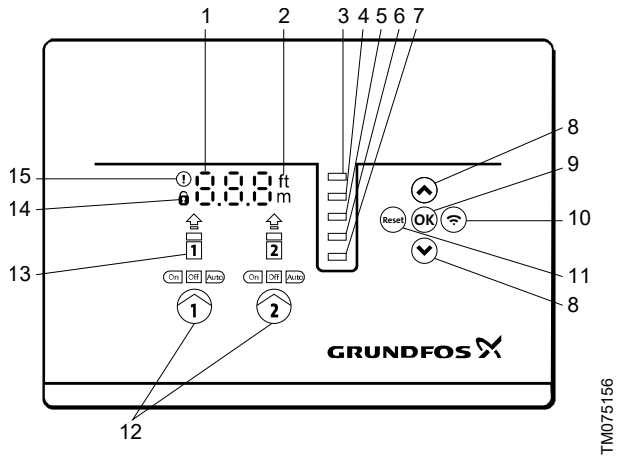
The IO 242 pump module is used together with other Grundfos controllers and modules, for example Grundfos CU 24X. The pump module provides analog and digital input signals for CU 24X. It also provides digital outputs used for external switch gear. When combined with a CU 24X control unit, it is possible to control one or two pumps, monitor the running conditions of the pumps and enable all connections to the sensors in pump motors or in the pit or tank.



Model	Product number
Pump module	99369842

Functions

Operating panel



The operating panel enables manual setting and monitoring of the system. This display is intuitive and you are guided step-by-step by the startup wizard during the first setup.

The display is available in a single pump version and a dual pump version.

Pos.	Description
1	Display
2	Units
3	High level
4	Start level, pump 2, if available
5	Start level
6	Stop level, pump 1 and pump 2, if available
7	Dry-running level
8	**Up**/**Down** buttons: • Press these buttons to navigate between submenus or change the value settings.
9	**OK** button: • Press this button to save changed values.
10	Connect button: • Press this button to connect the control unit to Grundfos GO Remote via Bluetooth.
11	**Reset** button: • Press this button during startup to reset settings and start over or to reset an alarm or warning.
12	Operating mode for the pump: • On: The pump has been switched on manually. • Off: The pump has been switched off manually. • Auto: The pump is running automatically based on settings.
13	Display. It shows the pump status.
14	Lock symbol. If the symbol is lit, the control unit is locked from making changes.
15	Alarm and warning symbol: • Red: alarm • Yellow: warning.

Description of selected functions

Grundfos GO Remote support

With Grundfos GO Remote, you can monitor the product, change settings, collect data and make reports. A user-friendly interface provides you with all the information and help you need, as well as live pump data monitoring and easy-to-follow tips and guides.

You can use Grundfos GO Remote for the following functions:

- reading operating data
- reading warning and alarm indicators
- setting the control mode and the application (dewatering or filling)
- setting the time (real-time clock)
- setting the user-configurable log
- storing and recalling configuration.

Alarm and warning logs

The control unit can remember up to 20 alarms and warnings. The operating panel shows the alarm or warning code in the display. Using Grundfos GO Remote, you can see the alarm or warning including a short text describing the error.

Pump alternation

The control unit supports pump alternation which allows two pumps to start and stop alternately. The pump with the lowest number of running hours is always started first. The function ensures that the running hours of the pumps are the same. It is possible to set a time delay before the next pump is started.

Security settings

The control unit can be protected from unauthorised use. You can lock the operating panel so that it cannot be operated by others. You can also set PIN-code protection on Grundfos GO Remote.

Delays

The control unit supports a stop delay function. A stop delay is the time between the stop level being reached and the pump stopping.The function prevents the pump from starting and stopping too frequently and reduces water hammer in long pipes.

The control unit also supports another delay. The after-run delay, high level, is a delay that keeps the pump running after the high-level float switch is deactivated. If the analog level sensor is defective, the water level in the pit or tank is only controlled by the high-level float switch. To avoid too many starts and stops, the delay should be set to a time that allows the pump to drain the pit or tank to a degree without reaching the dry-run level.

Motor protection

The product incorporates current- and temperature-dependent motor protection. If the pump runs without water, becomes blocked or otherwise overloaded, it cuts out. When the motor has cooled sufficiently, it restarts automatically.

- For overheating, the control unit offers thermal protection for the connected motors. Two types of thermal-protection sensors can be connected to the control unit: a PTC sensor (analog) and a thermal switch (digital).
- For motor overload, LC 23X is protected by internal software-based motor protection. LC 24X is protected by an electronic motor-protection relay.

Installation

Mechanical installation

Location

Install the product in a location that meets the following requirements:

- Place the product in a flood-safe place.
- Make sure that the ambient temperature is within the limits.
- Install the product as close as possible to the connected pumps, sensors, and accessories.
- The product must be protected from direct sunlight.
- The product must be easily accessible.
- We recommend that you install the product in a protective shed or enclosure to avoid direct sunlight and rain.

Electrical installation

The electrical connection and protection must be carried out in accordance with local regulations. Also observe the following requirements:

- Ensure that the product is suitable for the power supply to which it is to be connected.
- The power cables and pump cables must be connected correctly according to the relevant electrical diagram.
- The product must always be earthed correctly.
- The PTC and moisture sensors are connected correctly.
- I_{nom} and I_{start} match the panel.

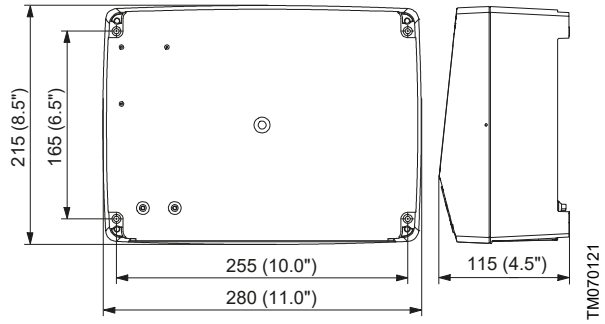
Technical data for LC 232

Inputs and outputs

The following inputs and outputs are available for LC 23X.

- 2 × DIO. Configurable digital input and output
- 2 × DI. Digital input
- 2 × CIO. Configurable input and output
- 1 (2) × configurable relay outputs
- 1 (2) × combined PTC and moisture switch input.

Dimensions

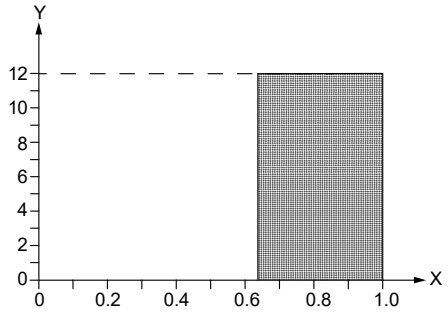


Dimensions of LC 23X

Operating conditions

Ambient temperature	Min. -25 °C (-13 °F) Max. 45 °C (113 °F)
Storage temperature	Min. -30 °C (-22 °F) Max. 60 °C (140 °F)
Altitude	Maximum 2000 m (6562 ft)
Pollution degree	Category 3
Mains supply	1 × 110-240 V ± 10 %, PE 3 × 200-250 V ± 10 %, PE 3 × 250-460 V ± 10 %, N, PE
Frequency	50/60 Hz
Motor protection	Software class B Action type 2

Minimum power factor



Pos.	Description
Y	Full load current [A]
X	Power factor, cos phi
Shaded area	Allowed use (0.64 - 1.0 cos phi)

The minimum power factor must be within the shaded area on the graph.

Technical data for LC 242

Inputs and outputs

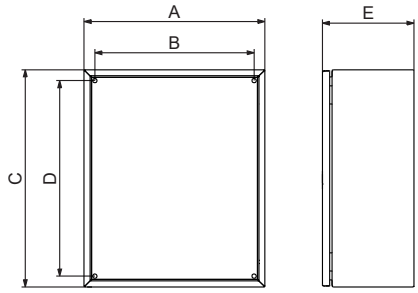
The following inputs and outputs are available:

- 4 × DI. Digital input
- 1 × ADI. Configurable analog or digital input
- 2 × REL. Configurable output relay
- 1 (2) × combined PTC and moisture switch input.

The following inputs and outputs are available for IO 241, if this optional module is included:

- 2 × DIO. Digital input or output
- 2 × DI. Digital input
- 4 × CIO. Configurable input or output
- 2 × REL. Configurable output relay.

Dimensions



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Type	Dimensions [mm] [inch]				
	A	B	C	D	E
Plastic cabinet	278 (10.9)	254 (10)	378 (14.9)	354 (13.9)	130 (5.12)
Plastic cabinet	278 (10.9)	254 (10)	558 (21.9)	534 (21)	130 (5.12)
Plastic cabinet	378 (14.9)	354 (13.9)	558 (21.9)	534 (21)	180 (7)
Metal cabinet	500 (19.7)	455 (17.9)	600 (23.6)	525 (20.7)	250 (9.8)
Metal cabinet	500 (19.7)	455 (17.9)	700 (27.6)	625 (23.6)	250 (9.8)

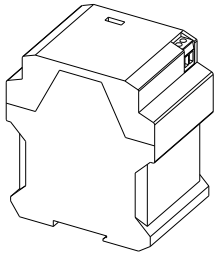
Operating conditions

Ambient temperature, Soft starter	Min. -5 °C (23 °F) Max. 40 °C (104 °F)
Ambient temperature, Direct-on-line	Min. -20 °C (-4 °F) Max. 45 °C (113 °F)
Ambient temperature, Star-delta	Min. -20 °C (-4 °F) Max. 40 °C (104 °F)
Enclosure class	IP54
Mains supply	1 × 230 V ± 10 %, PE 3 × 230/400 V ± 10 %, N, PE 3 × 400 V ± 10 %, PE
Frequency	50/60 Hz
EMC classification	Environment B

Optional equipment for LC 24X

Below optional equipment may be part of standard range or is available as part of FPV and ETO.

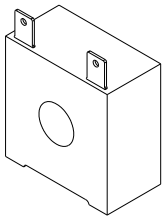
Option BB: backup battery



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Battery backup to ensure that the CU and IO controller continue to monitor the system when there is no power supply (mains dropout).

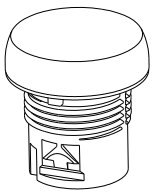
Option CT: current transformer



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The current transformer is used to measure the current drawn by the motor. The actual current can be seen in Grundfos GO Remote along with the accumulated energy usage. You need one current transformer per pump.

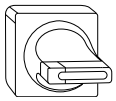
Option D: fault light system



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The fault light is on if a fault occurs in the system.

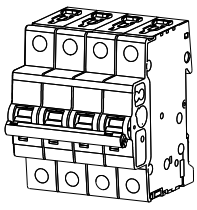
Option E: mains disconnect switch



TM076297

Mains switch to disconnect the power supply.

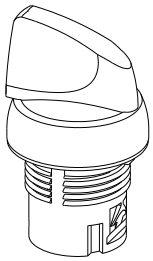
Option F: circuit breaker per pump



TM076291

To ensure two different tripping mechanisms: the delayed thermal tripping mechanism for overload protection and the electromechanical tripping mechanism for short-circuit protection.

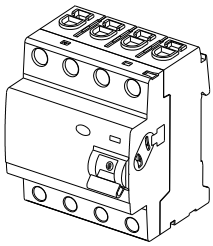
Option H: ON/OFF/AUTO switch



TM072791

Manual switch to set the product in ON, OFF or AUTO mode.

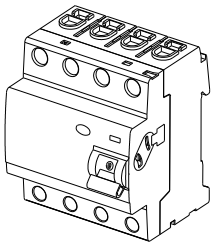
Option I: RCD per panel



TM076289

Residual Current Devices (RCDs) for the complete panel to protect people and installations against fault current to earth.

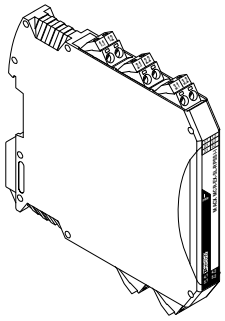
Option J: RCD per pump



TM076289

Residual Current Devices (RCDs) for each pump to protect people and installations against fault current to earth.

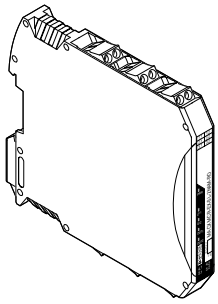
Option K: Ex barrier, analog



TM072482

An isolating amplifier for safe operation of proximity sensors and switches installed in the Ex area.

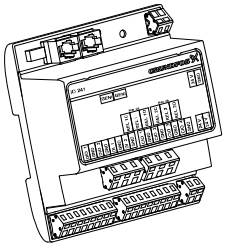
Option L: Ex barrier, digital



TM072481

An isolating amplifier for safe operation of proximity sensors and switches installed in the Ex area.

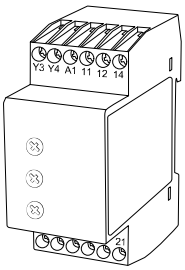
Option M: IO 241



TM072268

The IO 241 module is an optional module for gaining extra input and output signals. It can be connected to the Grundfos IO 242 pump module and Grundfos control unit CU 24X.

Option N: DIN-mount electrode relay for two electrodes and REF (CLD4MA2DM24)



TM072792

Conductive level controller for liquids. It has two outputs that can be used as digital signals.

Accessories

Grundfos GO Remote

The product is designed for Bluetooth communication with Grundfos GO Remote.

Grundfos GO Remote enables you to set functions and gives you access to status overviews, technical product information and current operating parameters.

Additional accessories

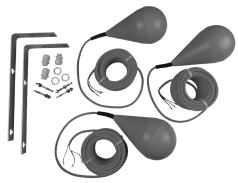
Analog level sensors

Product	Description	Product number
	Level Transmitter, S, 0-3 m c10 m P V BO	99488544
	Level Transmitter, S, 0-5 m c10 m P V BO	99488545
	Level Transmitter, S, 0-5 m c25 m P V BO	99488546
	Level Transmitter 404393 0-5 m c25 m F C BC EX1	99488548
	Level Transmitter, S, 0-10 m c25 m P V BO	99488552
	Level Transmitter, S, 0-2 m c10 m P V BO	99488553
	Level Transmitter, E, 0-10 m c100 m E E BC DWA	99488564
	Level Transmitter, E, 0-50 m c60 m E E BC DWA	99488565
	Level Transmitter, E, 0-50 m c100 m E E BC DWA	99488566
	Level Transmitter, E, 0-100 m c125 m E E BC DWA	99488567
	Level Transmitter, E, 0-160 m c200 m E E BC DWA	99488568
	Level Transmitter, E, 0-5 m c25 m F V BO	99488549
	Level Transmitter, E, 0-100m c200 [1] m PPE EPDM. For drinking water.	On request
	Level Transmitter, W, 0-5 m c25 m P V BO	99488550
	Level Transmitter, junction box	99488577
	Level Transmitter, cable hanger	99488578

1) Various lengths possible

Level switches

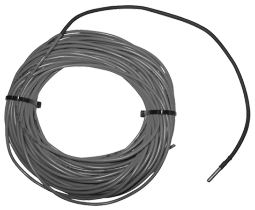
Product	Description	Product number
	LVV110 Dry-running switch	98347579
	Level switch MS1, 10 m cable	96003332
	Level switch MS1, 20 m cable	96003695
	Level switch MS1, 30 m cable	91073205
	Level switch M2, 10 m cable	91427146
	Level switch MS1 ACS, 10 m cable	99023672

Product	Description	Product number
	10 m cable incl. mounting bracket, set of 2 pieces	62500013
	10 m cable incl. mounting bracket, set of 3 pieces	62500014
	10 m cable incl. mounting bracket, set of 4 pieces	62500015
	Weight of 300 g for cable stabilising	96003337

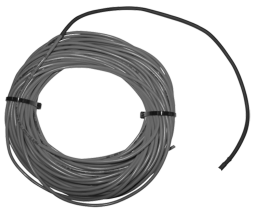
Pt100 sensor

Product	Description	Product number
	Pt100 sensor including 20 m cable with pins	96913237
	Pt100 sensor including 40 m cable with pins	96913253
	Pt100 sensor including 60 m cable with pins	96913256
	Pt100 sensor including 80 m cable with pins	96913260
	Pt100 sensor including 100 m cable with pins	96913263

Pt1000 sensor

Product	Description	Product number
	Pt1000 sensor including 20 m cable with pins	96804042
	Pt1000 sensor including 40 m cable with pins	96804044
	Pt1000 sensor including 60 m cable with pins	96804064
	Pt1000 sensor including 80 m cable with pins	96804065
	Pt1000 sensor including 100 m cable with pins	96804067

Electrode

Product	Description	Product number
	Electrode (2 pcs)	115041
	Cable for electrode (need to be ordered in metre)	00ID8240

Alarms

Product	Description	Product number
	Signal lamp, 1 × 230 VAC for outdoor mounting	62500020

Communication equipment

Product			Product number
	CIM 050	GENIbus	96824631
	CIM 150	PROFIBUS DP	96824793
	CIM 200	Modbus RTU	96824796
	CIM 260	3G/4G	99439302 (EU) 99439306 (US)
	CIM 280 [2]	Grundfos Utility Connect	99895383 (EU) 99895386 (US)
	CIM 300	BACnet	96893770
	CIM 500	Modbus TCP	98301408
		PROFINET IO	
		GRM IP	
		BACnet IP	
	Antenna 2G/3G/4G	ø111 × 46 mm, 1.5 m cable	99518079
	Antenna 2G/3G/4G	ø138 × 55 mm, 1.5 m cable, vandal proof	99229807
	Backup battery for CIM 260/280		99499908

2) Not supported

IO extension

Product	Description	Product number
	IO 241 module	99332827

External main switch

Product	Description	Product number
	For supply cable, 25 A	96002511
	For supply cable, 40 A	96002512

Cable gland, for LC 232 only

Product	Description	Product number
	M20 split cable gland kit	99587021
	M25 metal cable gland for 21 mm cable	99587019

Starter box

Product	Description			Product number
		CS [µF]	CR [µF]	
	Motor starter - CSIR - 0.37 kW	65	-	98582272
	Motor starter - CSIR - 0.55 kW	98	-	98582277
	Motor starter - CSIR - 0.75 kW	119	-	98582295
	Motor starter - CSCR - 1.1 kW	143	40	98582296
	Motor starter - CSCR - 1.5 kW	160	50	98582381
	Motor starter - CSCR - 2.2 kW	268	60	98582401

Grundfos Product Center

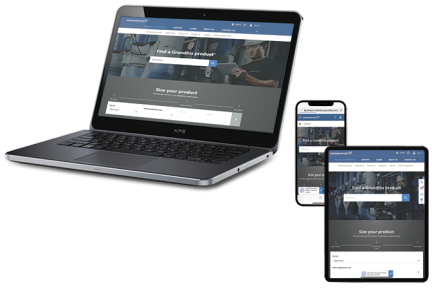
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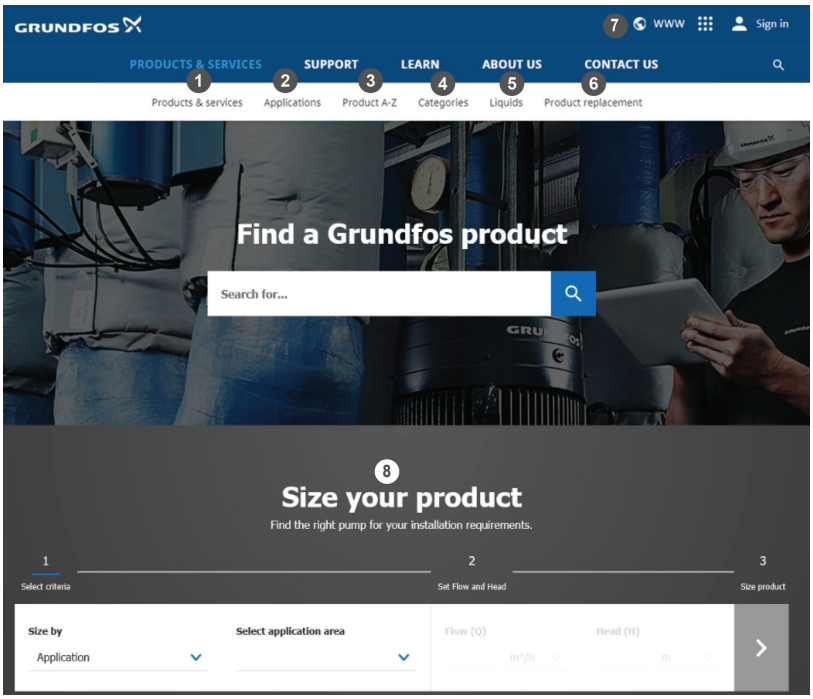
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Downloads

On the product pages, you can download installation and operating instructions, data booklets, service instructions, etc., in PDF format.





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6	**Product replacement** enables you to find a suitable replacement.
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8	**Sizing** enables you to size a product based on your application and operating conditions.

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