### **GRUNDFOS INSTRUCTIONS**

### **Grundfos GO Remote**

Grundfos MI 202, MI 204 and MI 301
Installation and operating instructions



### English (GB) Installation and operating instructions

Original installation and operating instructions.

### **CONTENTS**

		Page
1.	Symbols used in this document	3
2.	Radio frequency	3
2.1	<del></del>	4
2.2	USA and Canada	4
3.	Definitions and abbreviations	7
4.	Product introduction	8
4.1	MI 202 and MI 204	9
4.2	MI 301	10
4.3		13
4.4		14
5.	Connecting to a Grundfos product	15
5.1		16
5.2	Radio - Connect IR - Connect	20 22
5.4		24
5.5		25
5.6	Help	27
6.	Maintenance	28
6.1	Cleaning	28
6.2	Battery	28
6.3	Software installation and update	29
7.	Fault finding	30
7.1	Grundfos GO app on Apple iOS	30
	Communication	31
7.3	=== == == :	32
7.4		33
8.	Technical data	34
9.	Disposal	35



### Warning

Prior to installation, read these installation and operating instructions. Installation and operation must comply with local regulations and accepted codes of good practice.

### 1. Symbols used in this document



### Warning

If these safety instructions are not observed, it may result in personal injury.



If these safety instructions are not observed, it may result in malfunction or damage to the equipment.



Notes or instructions that make the job easier and ensure safe operation.

### 2. Radio frequency



The product must be used as described in these installation and operating instructions and may not be co-located or used in conjunction with any other antenna or transmitter.



### Warning

Do not operate the product near medical devices. This also applies to personal devices, such as hearing aids and pacemakers.

### 2.1 EU

### Grundfos MI 202 and MI 204 - class 1 device



The radio part of this device is a class 1 device and can be used anywhere in the EU member states without restrictions.

### Intended use

This product is intended for remote control of Grundfos products.

### Grundfos MI 301 - class 2 device



BE	BG	CZ	DK	DE	EE	ΙE	EL	ES	FR	IT
CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO
SI	SL	FI	SE	UK	IS	LI	NO	СН		

The radio part of this device is a class 2 device and restrictions apply to its use within EU member states.

The radio part of this product can be operated in the EU without restrictions indoor, but cannot be operated outdoors in France in the whole of the band until further notice.

### Intended use

This product is intended for remote control of Grundfos products.

### 2.2 USA and Canada

This device complies with part 15 of the FCC rules and RSS-210 of IC rules. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Users are cautioned that changes or modifications not expressly approved by Grundfos could void the user's authority to operate the equipment.

### 2.2.1 USA

This product contains FCC ID:



This device complies with part 15 of the FCC rules.

Users are cautioned that changes or modifications not expressly approved by Grundfos could void the user's authority to operate the equipment.

### Class B product

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 quarantee 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 made to this equipment not expressly approved by Grundfos may void the FCC authorisation to operate this equipment.

### Radio frequency radiation exposure information

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

### 2.2.2 Canada

This product contains IC ID:

IC ID: 10447A	A-MI202M01	4114
10447 <i>A</i>	N-MI204M01	3917
10447 <i>A</i>	A-MI301M01	TM05391

Complies with the Canadian ICES-003 Class B specifications. "Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada." This device complies with RSS 210 of Industry Canada. This Class B device meets all the requirements of the Canadian interference-causing equipment regulations. "Cet appareil numérique de la Classe B respecte toutes les exigences du Réglement sur le matériel brouilleur du Canada."

### 3. Definitions and abbreviations

	Description
IR	Infrared
SAR	Specific absorption rate
ВТ	Bluetooth
Radio	Radio communication

### 4. Product introduction

The Grundfos GO app can be used to establish wireless connection to Grundfos products. It is available from Apple App Store and Google Play.

The Grundfos GO app must be used in conjunction with one of these MI (mobile interface) devices:

- Grundfos MI 202
- Grundfos MI 204
- · Grundfos MI 301.

The mobile interfaces are modules with built-in IR and radio communication.

Note

The Grundfos product must support either IR communication or radio communication. See section 4.4 Supported Grundfos products.

### 4.1 MI 202 and MI 204

The MI 202 and MI 204 are add-on modules for Apple devices. For Apple iPod touch 4 and iPhone 4 and 4S, use the MI 202. For Apple products with Lightning connector, e.g. iPhone 5 and iPhone 6, use the MI 204.



Note

"Made for iPod, iPhone" means that an electronic accessory has been designed to connect specifically to iPod or iPhone and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod may affect wireless performance.

### Procedure

Connect the MI 202/204 gently to the socket of the Apple device. Make sure that this is done at a correct angle and that the MI 202/204 is completely connected to the Apple device. The MI 202/204 can easily be removed from the Apple device when not in use; just pull it out gently.

### Scope of delivery

- Grundfos MI 202/204
- quick guide
- · charger cable.



Fig. 1 MI 202 and MI 204



### 4.2 MI 301

The MI 301 is a module that connects to an Android or iOS-based smart device via Bluetooth. The MI 301 has a rechargeable Li-ion battery and must be charged separately.



"Made for iPod, iPhone" means that an electronic accessory has been designed to connect specifically to iPod or iPhone and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod may affect wireless performance.

### Scope of delivery

- Grundfos MI 301
- · battery charger (optional)
- · quick guide.

Note



Fig. 2 MI 301

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### Bluetooth connection

The MI 301 is paired with an Android or iOS-based smart device using the Bluetooth connection.

Follow the instructions below to pair the devices.



Some smart devices may indicate a PIN code when connecting to the MI 301. Ignore this as no code is needed.

### 4.2.1 Android smart devices

- Make sure that the Android device and the MI 301 are fully charged and not more than one metre apart.
- Switch on the MI 301 by pressing its power button. The indicator light will flash every five seconds, indicating that the MI 301 is charged and ready.
- Start the Grundfos GO app on the smart device. Press [List] or [Connect]. Bluetooth will be enabled automatically on the smart device, and it will ask if you want to pair with the MI 301. Press [OK] to pair.



A dialog box "No Grundfos MI 301 connected" might appear when pressing [List]. Wait a few seconds until the pairing starts, and the dialog box will automatically disappear.

4. Next time the specific MI 301 device is used with the Android device, the devices will automatically connect to each other when the app is running and the MI 301 is switched on and is within Bluetooth range.

Alternatively, pairing can be done via the main menu. Select "Settings" > "Remote" > "Pair with MI".

### 4.2.2 iOS smart devices

- Make sure that the smart device and the MI 301 are fully charged and not more than one metre apart.
- Switch on the MI 301 by pressing its power button. The indicator light will flash every five seconds, indicating that the MI 301 is charged and ready.
- 3. Turn on Bluetooth in the Apple device. Find the MI 301 in the list of available devices and pair the devices.
- 4. Start the Grundfos GO app on the smart device. It will show "Mobile interface connected" at the bottom of the display.

The green indicator light shows the status of the MI 301.

Indicator light	Description
Flashing every five seconds	The MI 301 is switched on and ready to use.
Flashing every second · ※ · ※ · ※ ·	The battery needs charging.
Permanently on	The battery is charging.

### 4.3 Supported devices

Note The smart devices listed below have been tested and are supported by Grundfos GO.

Make	Model	MI 202	MI 204	MI 301
	iPod touch 4G	•		•
	iPod touch 5G		•	•
A I .	iPhone 4, 4S	•		•
Apple	iPhone 5, 5S, 5C		•	•
	iPhone 6, 6 Plus		•	•
	iPad, iPad Mini		•	•
	Nexus 7			•
Asus	Transformer TF101			•
	Transformer TF300			•
	Galaxy Nexus			•
Google	Nexus 4			•
	Nexus 10			•
	Desire S			•
HTC	One S			•
	Sensation			•
Motorola	Xoom2			•
MOTOLOIA	Moto X (XT1053)			•
	Galaxy S II			•
Samsung	Galaxy S III			•
	Galaxy tab 2 7.0			•
	Xperia Arc			•
Conv	Xperia Arc S			•
Sony	Xperia Tipo			•
	Xperia V		•	•

**Note:** Similar Android and iOS-based devices may work as well, but have not been tested by Grundfos.

### 4.4 Supported Grundfos products

Find the right communication type in the list below, and see section 5.1 Radio - List, 5.2 Radio - Connect or 5.3 IR - Connect to establish connection.

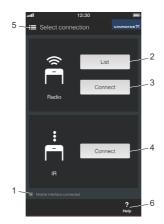
Post of	Comm	unication
Product	IR	Radio
MAGNA3 circulator		•
UPE and MAGNA circulators	•	
CME, CHIE, MTRE multistage pumps	•	•*
CRE, CRNE, CRIE multistage pumps	•	•*
TPE single-stage pump	•	•*
NBE, NKE single-stage pumps	•	•*
MP 204 motor protector	•	
Grundfos Hydro Multi-E booster system	•	•*
Grundfos AUTO <sub>ADAPT</sub> sewage system	•	•**
IO 351 module	•	
CU 3 motor protector	•	
CU 300, 301 controllers	•	
CIU 273 SQFlex	•	
CU 362 Dedicated Controls wastewater controller		•**

<sup>\*</sup> Only MGE motors, model H or later.

<sup>\*\*</sup> Only with add-on CIM 060 module.

### 5. Connecting to a Grundfos product

The function "Connect" under "Remote" in the menu allows you to connect to a Grundfos product.



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Fig. 3 Connecting to a Grundfos product

Action	Pos.	More information
Check that your mobile interface has been connected.	1	7. Fault finding
Select your preferred connection method:		
Radio - List: Search for radio-enabled Grundfos products within range.	2	5.1 Radio - List
Radio - Connect: Connect directly to a specific Grundfos product via radio.	3	5.2 Radio - Connect
IR - Connect: Connect directly to a specific Grundfos product via infrared signal.	4	5.3 IR - Connect
Press or slide to open or close the menu.	5	
Press [Help] for on-screen guidance.	6	5.5 Creating a PDF report

### 5.1 Radio - List

"Radio - Connect" and "Radio - List" are methods for radio communication between the Grundfos GO and a Grundfos product. See also section 5.2 Radio - Connect. Check section 4.4 Supported Grundfos products to see if your Grundfos product is supported.

Use "Radio - List" for products that are difficult to access physically or for a quick status overview. You must unlock the Grundfos product when you connect to it for the first time. A padlock shows whether the product is locked or unlocked.

The Grundfos product is locked.

The Grundfos product is unlocked.

Follow this procedure to unlock and connect to a product:

Step	Description	Display		
		und 12:30 I■ Select connection		
			List	
1	Press [List].	Press [List].	Radio	Connect
			Connect	
		IR		
		Mancle of Andrew comment and     Mancle of Andrew Comment	? Help	

Step	Description	Display
2	All products within radio range are listed. It may take some time to scan for all products.	12:50
3	The list shows the product name, pump status, signal strength and whether the product is locked or unlocked.	12:00
4	Use the wink command to identify the product you have selected. When you press the button, an indicator light will flash on the product. See section 5.4 Signalling communication with remote control.  Press the button again to stop the wink.	© 1230 ×

## Step Description Display MAGNA3 32-120 Press the product name to connect to the 5 product. Ŏ⊕ MAGNA3 64-40 0 Pump connection Press the button on the product y If the product is locked, press [OK] or a 6 dedicated connection button on the product. Cancel ≡ Dashboard Connection has been established, and the 7 Grundfos GO shows the product dashboard.

8 Press [Disconnect] to leave the product and connect to another one.

### 5.2 Radio - Connect

"Radio - Connect" and "Radio - List" are methods for radio communication between the Grundfos GO and a Grundfos product. See also section 5.1 Radio - List. Check section 4.4 Supported Grundfos products to see if your Grundfos product supports radio communication.

Use "Radio - Connect" for quick and direct access to the product. Follow this procedure to establish connection:

## Step Description Display 1 Press [Connect] next to "Radio".

The indicator light in the centre of the Grundfos Eye is flashing on all supported products within range. Press [OK] or a dedicated connection button on the product you want to connect to.



## Display Step Description ■ Dashboard 6,6 Connection has been established, and the 3 Grundfos GO shows the product dashboard. Press [Disconnect] to leave the product and connect to another one.

### 5.3 IR - Connect

"IR - Connect" is a method of infra-red communication with the Grundfos product.

Step	Description	Display
1	When using the Grundfos GO with the MI 202 or MI 204, turn the MI device 180 degrees and point the dongle at the product.	
2	Press [Connect] next to "IR".	## Solicit connection  List  Connect  Flactio  Connect  In  ## Name Transport or Part of the Part of t
3	The MI device is connecting to the Grundfos product via IR.	Point mobile interface at product  ©  Cancel

### Step Description Display

Loading data.

Hold the MI device steady until all data have been read. An indicator light on the product flashes when the product is communicating via IR.



Connection has been established, and the Grundfos GO shows the product dashboard. See section 5.4 Signalling communication with remote control



6 Press [Disconnect] to leave the product and connect to another one.



### 5.4 Signalling communication with remote control

The centre indicator light in the Grundfos Eye will indicate communication with the Grundfos GO. See fig. 4, pos. 1.



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Fig. 4 Grundfos Eye

The table below describes the desired function of the centre indicator light.

Case	Description	Signalling by the centre indicator light
Wink	The product in question is highlighted in the Grundfos GO display. To inform the user of the location of the highlighted pump, the centre indicator light will flash quickly.	Four quick flashes followed by a one-second break to signal "I am here".
Push me	The product in question is selected/opened in the Grundfos GO menu. The product will signal "Push me" to ask the user to select the product/allow the product to exchange data with the Grundfos GO. The indicator light will flash continuously until a pop-up window asks the user to press [OK] to allow communication with the Grundfos GO.	Flashing continuously with 50 % duty cycle.
I am connected	The indicator light is signalling that the product is connected to Grundfos GO. The indicator light is permanently on as long as the product is selected in the Grundfos GO.	Indicator light permanently on.

### 5.5 Creating a PDF report

You can create a full PDF report of the product status at a given time and send it by email.

### Step Description Display

### On an Apple device:

At the bottom of the product dashboard, press [Reports].



1

### On an Android device:

When in the product dashboard, press the menu button of your device and select "New report".



# Follow the instructions on the screens and press ">" until the report is created. You can add personal notes and pictures to the report.

The print option is only available on Apple devices and with printers supporting Apple AirPrint.

To send the report by email or to print it on a

local printer, press [Export].\*

To send a report by email, an email account must be connected to the device.

E-mail Print

The report is automatically saved in Grundfos GO. It can be accessed from the Grundfos GO main menu: Under "Remote", select "Browse reports".

3

### 5.6 Help

Help texts are available for some icons and buttons.



Press this icon at the bottom of the display.



When you press this icon, all objects with further help are highlighted and have a question mark.



When you press a question mark, the description will be displayed. Press [OK] to close the description.



Close help by pressing [X] at the bottom right corner of the screen.

### 6. Maintenance

### 6.1 Cleaning

Clean the Grundfos GO with a dry, soft cloth.

### 6.2 Battery

The rechargeable Li-ion battery of the MI 301 module complies with the battery directive (2006/66/EC). It does not contain mercury, lead and cadmium.

### Power saving, MI 202 and MI 204

We recommend that you switch off the device when you are not using it to preserve battery charge. Switch off Apple devices by pressing the power button for several seconds and then sliding the bar in the display. To switch it on, press the power button until the Apple logo appears.

### Power saving, MI 301

The MI 301 will automatically switch off after 120 seconds when not used. To switch it off manually, press the power button for five seconds and release the button. To switch it on, press the power button.

### 6.2.1 Charging

### MI 202 and MI 204

These products are powered by the Apple device. By using a micro USB connector, it is possible to charge the Apple device through the MI 202/204.

### MI 301

This product has a rechargeable battery. If the battery needs charging, the indicator light on the MI 301 will flash every second. It can be charged by means of the micro USB cable and the charger. Full charging time is four hours. When charging, the indicator light will be on.

### 6.3 Software installation and update

If you have installed Grundfos GO on a smart device, you will be notified when software updates are available through either Apple App Store or Google Play.

### **Apple App Store**

The Grundfos GO app for Apple iOS devices can be downloaded or updated from the Apple App Store, free of charge.

Go to Apple App Store. Search for "Grundfos GO".



### Google Play

The Grundfos GO app can be downloaded or updated from Google Play, free of charge. Go to Google Play: https://play.google.com/store/apps. Search for "Grundfos GO".



### 7. Fault finding

### 7.1 Grundfos GO app on Apple iOS

The app does not start when you press the icon. The app freezes.

The app exits without warning.

Close the app.

Press the home button twice very quickly to see running apps.

### iOS 6 and earlier:

Press and hold any icon in the bar until a red minus appears on the icons.

Press the red minus on the Grundfos GO

The app needs to be restarted.

Press the red minus on the Grundfos GO app icon to close the app. Start the app again by means of its icon.

### iOS 7 and later:

Swipe the Grundfos GO app preview window upwards until it disappears. Start the app again by means of its icon.

### The app is not available on my device.

The app needs to be installed.

Go to Apple App Store and download the Grundfos GO app for free. Search for "Grundfos GO".

### 7.2 Communication

The device cannot connect via IR.		
The product is too far away.	Stand closer to the product.	
Incorrect transmission angle.	Communicate at the correct angle of ± 12 °.	
Low battery in MI 301 dongle.	Fully charge the MI 301. Low battery level affects Bluetooth connection.	
Bad connection to IR dongle.	Remove and insert the MI 202/204 into the iPod/iPhone. MI 301: Make sure that Bluetooth is turned on, and the MI 301 is paired with the smart device.	
App problem.	The app needs to be restarted. Follow the instructions in section 7.1 Grundfos GO app on Apple iOS.	
No IR on pump.	See section 4.4 Supported Grundfos products.	
The device cannot connect via radio.		
The product is too far away.	Stand closer to the product, if possible.	
App problem.	The app needs to be restarted. Follow the instructions in section 7.1 Grundfos GO app on Apple iOS.	
The product has no radio connection.	See section 4.4 Supported Grundfos products. If the Grundfos product supports IR communication, see section 5.1 Radio - List.	

### 7.3 MI 202 and MI 204

The Apple device does not turn on when you press the power button for a few seconds.		
Low battery.	Charge the battery for two to four hours.	
The Apple device is faulty.	Contact Apple's customer service.	
When started, the Grundfos GO app shows "Mobile interface disconnected".		
The MI 202/204 is not connected correctly.	Remove and insert the MI 202/204 in the Apple device. Make sure that it is completely plugged in. If you use a cover for the Apple device, try removing it first.	
The MI 202/204 is faulty.	Contact your local Grundfos company.	
iOS problem	Disconnect and connect the Grundfos MI 202/204.	
Cannot start the Grundfos GO app.		
Too many other apps are running on the Apple device.	Switch off the Apple device by pressing the power button for several seconds until the power-off slider appears. Slide the slider to switch off the device. Switch it on again by pressing the power button for a few seconds until the Apple logo appears.	

### 7.4 MI 301

The connection between the smart device and the MI 301 is lost. The display shows "Mobile interface disconnected".		
Outside Bluetooth range.	Move the smart device closer to the MI 301. If this does not solve the problem, it may be necessary to pair the devices again in menu "GO settings".	
Low battery.	Charge the battery for two to four hours. Low battery level affects Bluetooth connection.	
The MI 301 is not shown in the list when you search for MI 301 devices on Bluetooth.		
Outside Bluetooth range.	Move the smart device closer to the MI 301.	
Low battery.	Charge the battery for two to four hours.	
The MI 301 is switched off.	Switch on the MI 301 using the power button. The indicator light will flash every five seconds.	

### 8. Technical data

### Common data

IR communication	
Transmission angle	± 12 °
Range	Min. 2 metres
Radio communication	
Band	IEEE 802.15.4, 2400 - 2483.5 MHz
Range	Up to 30 metres in free environment (no angle restrictions)
Operating time (30 mA consumption, 100 % battery)	Min. 8 hours
Environment	
Relative air humidity	Max. 95 %
Operating temperature	-10 °C - +50 °C -4 °F - +122 °F
Storage temperature	-20 °C - +70 °C -4 °F - +158 °F
Grundfos MI 202/204	
Voltage supply	Via Apple smart device
Current consumption	Max. 30 mA
Enclosure class	IP40
Grundfos MI 301	
Voltage supply	Li-ion battery 3.7 V, 560 mAh, 2.1 Wh
Current consumption	Max. 30 mA
Charging time	4 hours
Enclosure class	IP40

### 9. Disposal

This product or parts of it must be disposed of in an environmentally sound way:

- 1. Use the public or private waste collection service.
- If this is not possible, contact the nearest Grundfos company or service workshop.

The waste battery should be disposed of through the national collective schemes. If in doubt, contact your local Grundfos company.

### MI 301



This product should not be disposed of with other household waste, but must be collected separately.

Subject to alterations.

### Declaration of conformity

### **ANATEL - National Telecommunications Agency (Brazil)**

Este equipamento opera em caráter secundário, isto é, não tem direito à proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

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MI 202 / MI 204



1503-14-7763



(01)07898994219927

MI 301



1505-14-7763



(01)07898994219934

### Argentina

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213

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Hungary

### nungary

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