

Controller IRG 1-MS



Translation of operating and installation instructions

Copyright by Afag GmbH

This operation instruction applies to:

Type		Order number
Controller IRG 1-MS	230 V / 50 Hz	50391018
	115 V / 60 Hz	

Version of Documentation:

BA_IRG1-MS_R02.1_EN.docx

Release:

R02.1

Date:

07/01/2021

Table of contents:

1	Safety instructions	4
1.1	<i>Notes on symbols and instructions</i>	4
1.2	<i>Basic safety information</i>	5
1.3	<i>Specified use</i>	5
2	Description of the device.....	6
2.1	<i>General</i>	6
2.2	<i>Technical data</i>	7
3	Assembly instructions	8
3.1	<i>Installing the unit.....</i>	8
3.2	<i>Connection possibilities</i>	8
4	Maintenance instructions	9
4.1	<i>Replacing the fuse</i>	9
5	Accessories	9
5.1	<i>Fixture.....</i>	9
5.2	<i>Address for orders.....</i>	10
6	Disposal	10

1 Safety instructions



1.1 Notes on symbols and instructions


Symbols: Assembly and commissioning must be carried out by qualified personnel only and according to these operating instructions.

Please observe the meaning of the following symbols and notes. They are grouped into risk levels and classified according to ISO 3864-2.

 DANGER	
	<p>Indicates an immediate threatening danger.</p> <p>Non-compliance with this information can result in death or serious personal injuries (invalidity).</p>

 WARNING	
	<p>Indicates a possible dangerous situation.</p> <p>Non-compliance with this information can result in death or serious personal injuries (invalidity).</p>

 CAUTION	
	<p>Indicates a possibly dangerous situation.</p> <p>Non-compliance with this information can result in damage to property or light to medium personal injuries.</p>

NOTE	
	<p>Indicates general notes, useful operator tips and operating recommendations which don't affect safety and health of the personnel.</p>

1.2 Basic safety information

This description contains the necessary information for the correct application of the product described below. It is intended for use by technically qualified personnel.


Qualified personnel are persons who, because of their training, experience and position as well as their knowledge of appropriate standards, regulations, health and safety requirements and working conditions, are authorised to be responsible for the safety of the equipment, at all times, whilst carrying out their normal duties and are therefore aware of, and can report, possible hazards (Definition of qualified employees according to IEC 364).

 DANGER	
	Hazardous Voltage! Failure to observe can kill, cause serious injury or damage.

- Isolate from mains before installation or dismantling work, as well as for fuse changes or post installation modifications.
- Observe the prescribed accident prevention and safety rules for the specific application.
- Before putting into operation check if the rated voltage for the unit conforms with the local supply voltage.
- Emergency stop devices must be provided for all applications. Operation of the emergency stop must inhibit any further uncontrolled operation.
- Electrical connections must be covered.
- The earth connection must be checked for correct function, after installation.

1.3 Specified use

The units described herein are electrical controllers for installation in industrial plants. They are designed for power adjustment on vibratory feed equipment.

NOTE	
	Any other use is inappropriate and will result in the warranty becoming null and void.

See also our General Terms of Business.

2 Description of the device

2.1 General

Control module for 1-phase capacitor motors

The module can be switched on or off from a higher-level system e.g. "SMART-Box" or PLC via an enable input (M8) with a 24V, DC signal.

For test purposes, the enable can be bypassed internally by a switch. The status of the output is indicated by an LED on the front panel.

NOTE



Miniature magnets can also be operated safely at the IRG 1-S controller!

CAUTION



In the case of applications that require the oscillation conveyor to be switched ON and OFF constantly (e.g. dust switching, hopper control system, etc.), the prescribed controller input must be used. If the load circuit is disconnected with a switch or a relay the controller may be damaged.

If the controller is switched on, never insert or remove the plug at the vibration conveyor being operated. This can damage the appliance.

NOTE



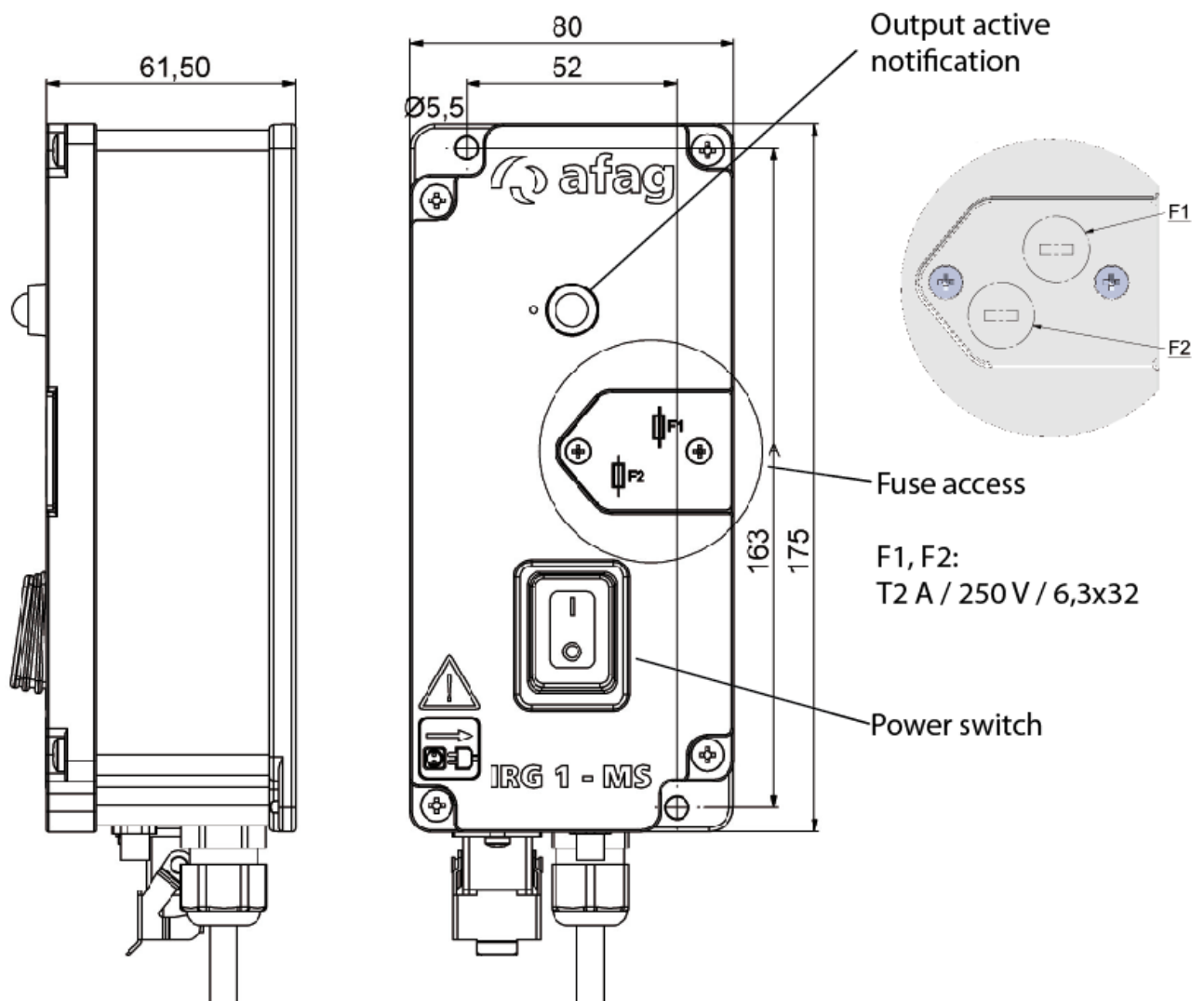
Repair work must be carried out by qualified personnel only. We recommend that repairs are carried out on our premises.

2.2 Technical data

Table 1: *Technical data*

Type	Unit	IRG 1-MS
Supply voltage	VAC	230 / 115
Frequency	Hz	50 / 60 +/- 10 %
Enable input	VDC	24
Motor output	VAC ; A	230 / 115 ; 1
Type of protection	---	IP54

Figure 1: *IRG 1-MS*



Fixing dimensions: 163 x 52 mm

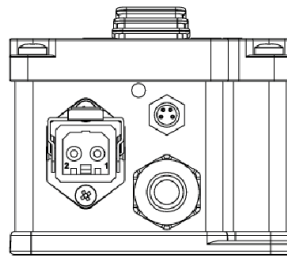
3 Assembly instructions

3.1 Installing the unit


There are two holes on the underside for mounting the controller. The holes are separated from the interior of the housing. (See Figure 1)

3.2 Connection possibilities

Figure 2: Connection possibilities



Output socket
STAK 20



1 = U1 Motor
2 = U2 Motor
PE = PE

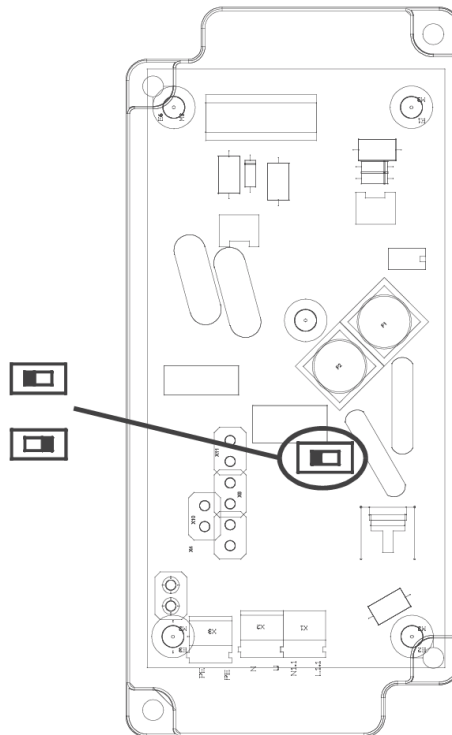
Enable connector
M8 - 4pol.



1 = NC
2 = NC
3 = GND
4 = Enable input +24 VDC

External enable active:
(factory setting)

External enable inactive:
i.e. Output (motor)
always active



 **CAUTION**



Jumpers may only be inserted for the respective application, otherwise this may lead to a malfunction of or damage to the p.c.b.

4 Maintenance instructions

4.1 Replacing the fuse

Procedure:

1. Always pull the plug out before opening the controller.
2. Unscrew the housing cover screws.
3. Replace the defective fuse.
4. Close the housing again.

5 Accessories

5.1 Fixture

Table 2: *Order data*

Type	Designation	Order number
Fixture	for 1 IRG	50450178
	for 2 IRG	50450179
	for 1 IRG extended	50450145
	for 2 IRG extended	50450147

5.2 Address for orders

Germany:

Afag GmbH
Wernher-von-Braun-Straße 1
D – 92224 Amberg
Tel.: ++49 (0) 96 21 / 65 0 27-0
Fax: ++49 (0) 96 21 / 65 0 27-490

Switzerland:

Afag Automation AG
Luzernstrasse 32
CH – 6144 Zell
Tel.: ++41 (0) 62 / 959 86 86
Fax: ++41 (0) 62 / 959 87 87

Sales

sales@afag.com

www.afag.com

6 Disposal

Devices that are no longer in use should not be disposed of as complete units but dismantled into separate materials and recycled. Non-recyclable components must be disposed of correctly.