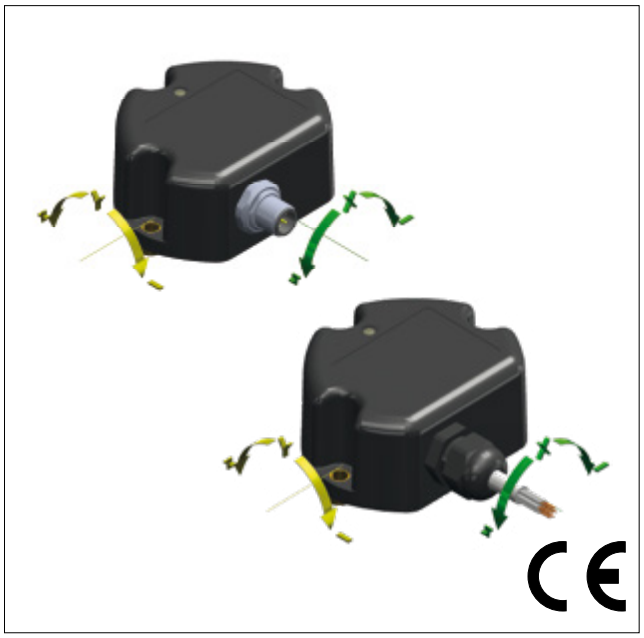
GEFRAN

GIG-RELAY

DUAL AXIS GENERAL TILT SENSOR

Relay output (XY)



Code 85205B **Edition** 03-2019

SUMMARY

1. NOTICE

Please observe all proper safety rules and regulation for electrical devices when installing this inclinometer.
In addition, the following recommendations are made:

a) Do not apply power to the inclinometer during installation

b) Avoid applying any mechanical pressure or stress to the housing

c) Do not exceed the maximum fastening torque for mounting screws and make use of conical spring washer

d) Hand tighten mating connector. DO NOT use pliers as damage may occur.

e) Should the inclinometer fail to operate properly, consult this manual for possible solutions.

f) Do not attempt to open the inclinometer, as damage may occur.
For other troubleshooting measures, please contact our service team.

2. INTRODUCTION

The GIG M12 (8 pole) or cable output (8 wires) 2-axis (digital switching points from ±1.5° to ±60°) inclination sensor with two relays output interface enables angle levelling and position detection in many applications.

The sensor is based on state-of-the-art MEMS capacitive technology whereby the sensor has a very compact and flat design and is therefore particularly well-suited for tight installation spaces.

Due to high protection class IP67, the sensor is perfectly suited for use under damp or polluted conditions.
Both tilt switches can be specified for a variety of applications. In addition, the two relays output can be combined.

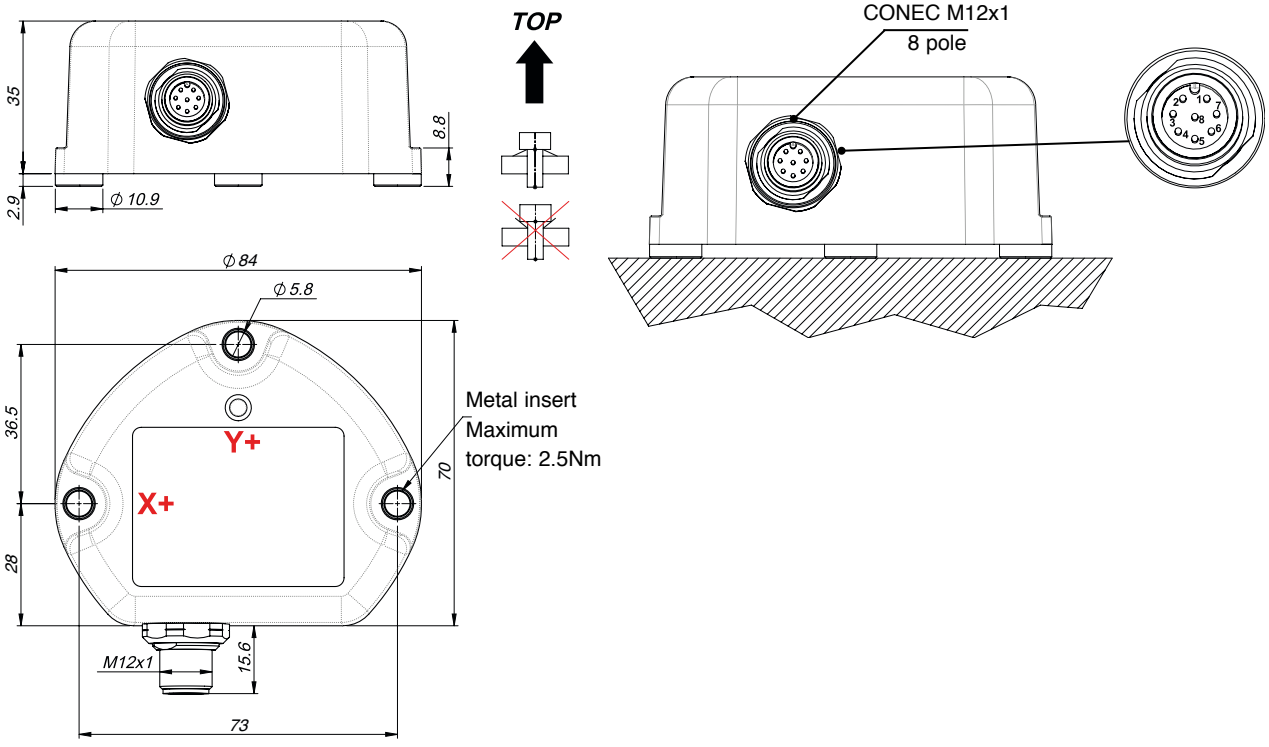
Depending on the requirements, a turn-on and turn-off delay can be defined at the switching output.

3. ELECTRICAL CONNECTIONS

For the connections refer to the table below:

	Meaning
1	+ Supply [+ 10 … + 36 Vdc]
2	NC (should not be connected)
3	NC (should not be connected)
4	Ground
5	**Relay 1** NO/NC (depending on order selection)
6	**Relay 1** COM
7	**Relay 2** NO/NC (depending on order selection)
8	**Relay 2** COM

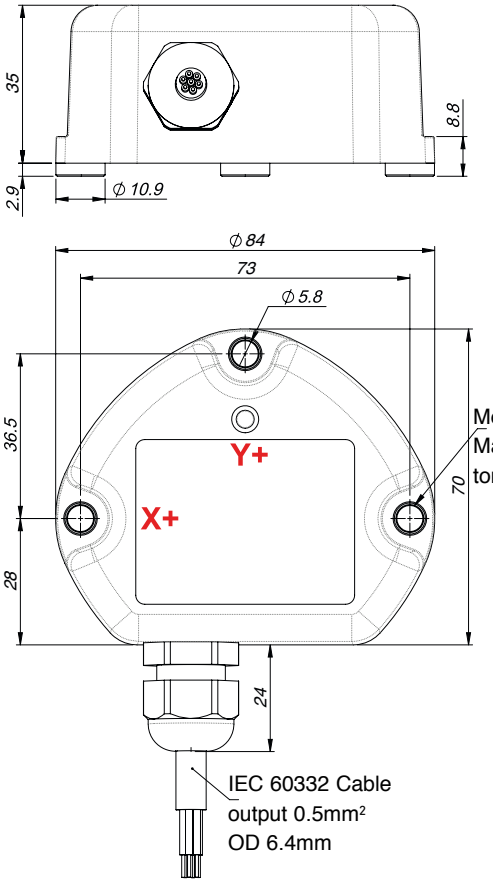
Important Note:
use conical spring washer M5 DIN6796 A2 (3 pcs)

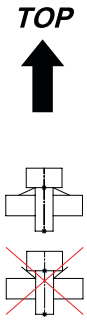


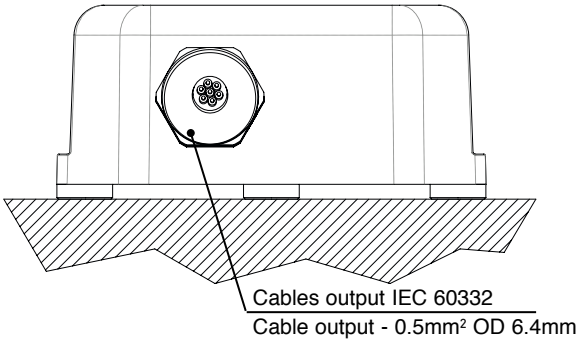
For the connections refer to the table below:

	Meaning
WHITE	+ Supply [+ 10 … + 36 Vdc]
BROWN	NC (should not be connected)
GREEN	NC (should not be connected)
YELLOW	Ground
GREY	**Relay 1** NO/NC (depending on order selection)
PINK	**Relay 1** COM
BLUE	**Relay 2** NO/NC (depending on order selection)
RED	**Relay 2** COM

Important Note:
use conical spring washer M5 DIN6796 A2 (3 pcs)





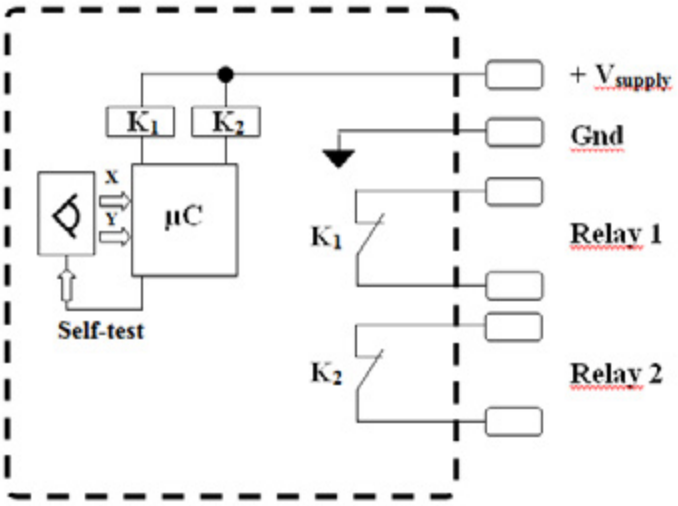


4. RELAYS: FUNCTIONAL DIAGRAM AND CONTACTS RATING

Important Note:

The two relays output Relays 1 and Relays 2 can be combined and programmed. The contact form is selectable N.O.(normally open) or N.C.(normally close) during order phase.

Due to safety reason the selected contact configuration is valid in case of switched-on operating voltage in the zero position (with K1 and K2 coils active).



Contact Rating:

Relay 1 and Relay 2	
Max. switching voltage	120VDC, 125VAC
Rated current @ 85°C	1.25A
Switching power	30W, 62.5VA
Contact material	AgPd, gold plated
Initial contact resistance	100mΩ at 10mA, 20mV
Electrical endurance: at 24VDC / 1.25A	min. $3x10^5$ ops

5. AUTOZERO FUNCTION (additional function)

To activate **the Autozero function** make sure that:
- sensor is powered
- fixing surface is free of dust or grease
- sensor is fixed on the horizontal plane with suitable screws

ATTENTION!
The Autozero function can be defined **within a maximum range of +/- 4.5°** from the original zero position (factory set).

Hold the **magnetic pen** ① (accessory to order-PKIT312) to the **ZERO POINT** ◎ ZERO indicated on the product label ②.
Hold the position for **at least 3-5 seconds** so that the operation is successful.

①

②

GEFRAN spa
via Sebina, 74 - 25050 PROVAGLIO D'ISEO (BS) - ITALIA
tel. 0309888.1 - fax. 0309839063 Internet: http://www.gefran.com