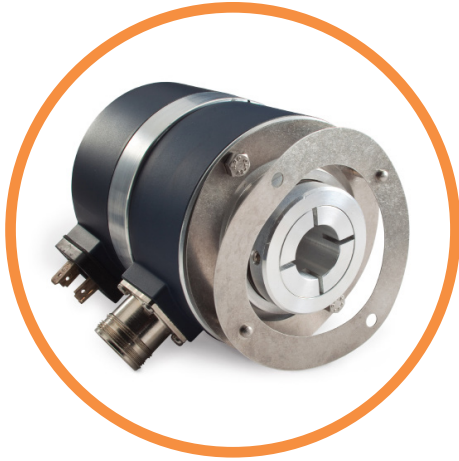


# | GHU9

## OVERSPEED SPEED SWITCH

### Introduction

Especially designed for heavy duty industry (steel and paper mills, lumber, cranes, engine etc...). Sturdy compact conception. Excellent resistance to shocks/vibrations and to extreme axial/radial loads. 20mm blind shaft (reduction hubs available).



### Features

The overspeed switch function on the 90mm range – a sturdy mechanical security module without external power supply:

- Radial commutation centrifugal switch without permanent contact
- High quality mechanics reliability
- Excellent repeatability
- Securised system, works without power supply
- Modular mounting possibility
- Commutation speed: standard calibration range between 800 and 4000 rpm (rotation per minute).

## CENTRIFUGAL SWITCH SPECIFICATIONS

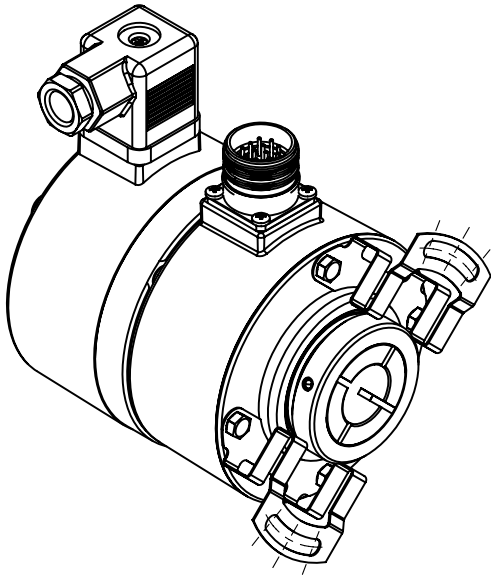
<b>Material</b>	<b>Cover:</b> Zinc Alloy
	<b>Body:</b> Aluminum
<b>Max. Speed</b>	1,5 . n <sub>s</sub>
<b>Weight</b>	1,10kg
<b>Operating Temperature</b>	-30 ... +130°C
<b>IP(EN 60529)</b>	IP 65 (Mounted)
<b>Switch Speed</b>	800 ... 4 000 rpm
<b>Principle</b>	Centrifugal
<b>Mechanical Life-Time</b>	500 000 Cycles
<b>Contact Type</b>	Opened or Closed
<b>Max Current</b>	6A / 240 Vac
<b>Contact Material</b>	Silver-Cadmium
<b>Maximum Breaking Sequence</b>	4/min
<b>Breaking Accuracy</b>	min <sup>-1</sup> - 5% ... +8%



## DIMENSIONS

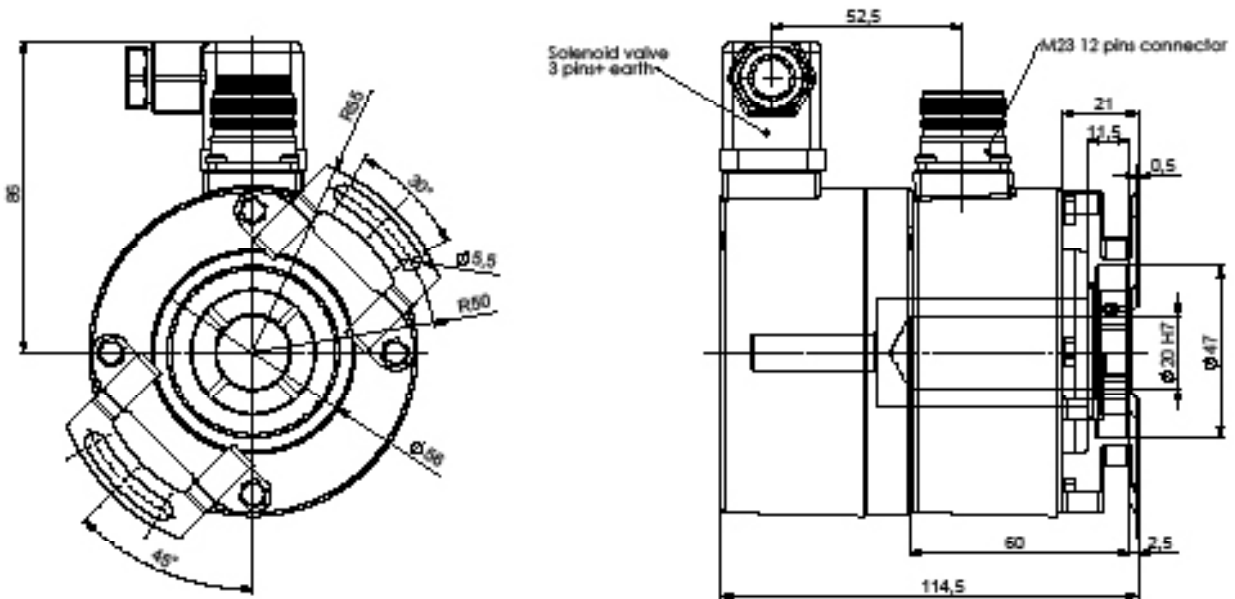
All dimensions are in millimeters.

### Blind Shaft GHU9\_20 with Overspeed Switch



The compactness of the assembly, which can be proposed by BEI SENSORS, allows the combination of overspeed switch and encoder presenting a particularly interesting cost / performances relation.

### Example: Incremental Encoder GHU9\_20 with Overspeed Switch



The commutation speed  $n_s$  is definitely calibrated in our factory.

Right or left rotation direction.

The switching speed  $n_s$  is defined for an acceleration =  $100 \text{ s}^{-2}$  (other, consult us).

Note:  $1 \text{ rad.s}^{-2} \leftrightarrow 9,55 \text{ rpm.s}^{-1}$

The hysteresis is about  $-3\%$  in counter clockwise direction compared with clockwise direction.

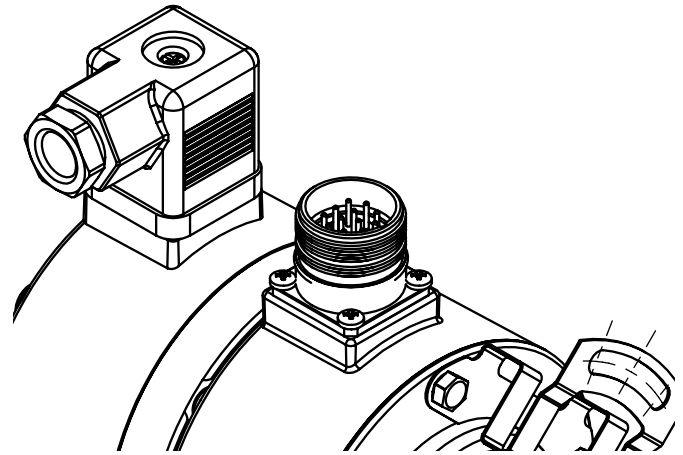
It is advised to choose the switching speed  $n_s$  in order that  $n_s > 1,15.n_n$  ( $n_n$ : working speed, nominal speed).

The centrifugal relay must be used only in the case of an increasing speed.

In decreasing speed, the centrifugal switch will open automatically at a slower speed of approximately 40% of the calibrated switching speed  $n_s$ .

In the case of a higher acceleration than  $100 \text{ s}^{-2}$ , the switching speed will be higher ( $n'_s$ , cf here-under drawing).

Shocks / impacts can create premature switching or transient opening. This is particularly the case when the switch's direction of action and the shock are the same. Rotating the mounting position ( $60^\circ$  division on flange) reduces the problem.

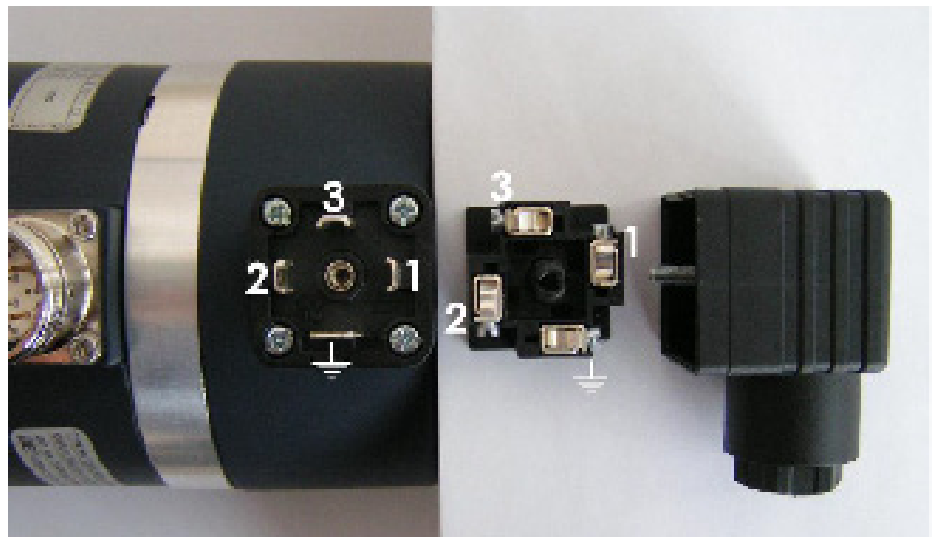


## STANDARD CONNECTION

With 4 pinout solenoid valve connector.

Contact 1 to 3 can be connected according to the desired configuration (rest, work or opposite).

The earth pin of the connector must be connected to the ground of the installation.





## AVAILABLE COMBINATIONS

(Consult us for special version: ex: flange / connection / specific speed...)

- Incremental Encoder + Overspeed Switch,
- Tacho-Encoder + Overspeed Switch,
- Absolute Encoder + Overspeed Switch,
- Incremental Encoder + Opto-Tacho + Overspeed Switch,
- Overspeed Switch + Overspeed sSwitch...

Standard Speeds (rpm): 1 000, 1 200, 1 500, 1 800, 3 000 (consult us for other speed).

Reference: consult us.

Note: The switch commutation speed is calibrated in our factory, no correction and no later modification is possible.



## AGENCY APPROVALS & CERTIFICATIONS



Made in France

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