GKN LAND SYSTEMS

Stromag
SIME Brakes

# SIDEOS One

## Technical data and dimensions

Programmable and secure module for speed monitoring, fitted with an efficient auto control system (DC>99%) which secures the overall operation of the overspeed detection system.

**Conform to the machine security standards** :
NF EN ISO 13489-1
Performance level PL=d to PL=e
Category : 2 to 4
MTTFd = high DC = high

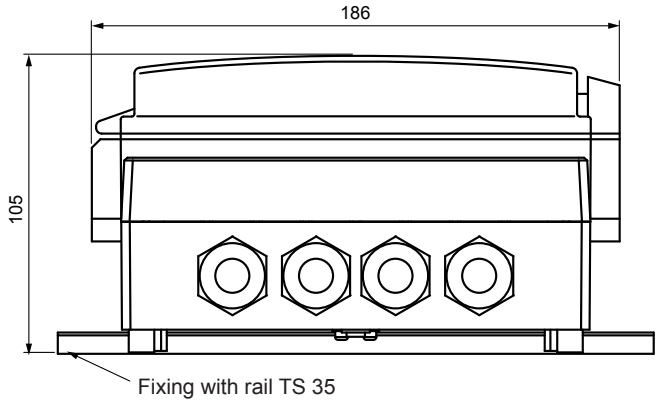
**Operating conditions** :
- Ambient temperature : -20°C to +60°C
- IP65 protected electrical casing

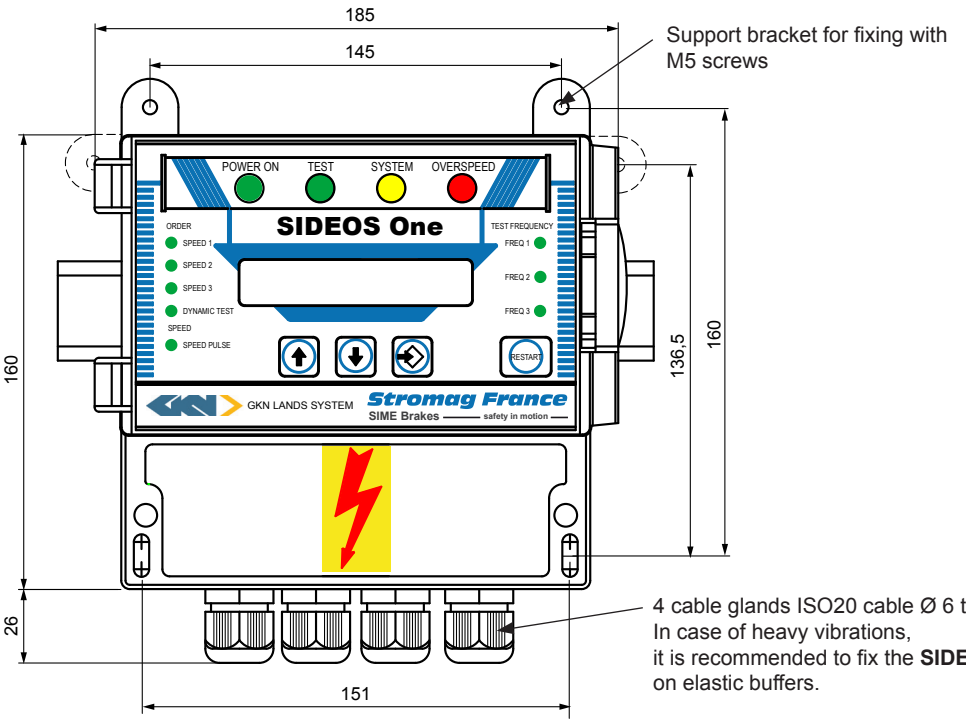
**Electrical data :**
- 1 available version
  AC : 115/230 V AC ± 10% 50/60Hz
- Other voltages : consult us

**EC marking of conformity** :
- 2006/42/EC directive Machine
- 2006/95/EC Low voltage directive (standard NF EN 60204-1)
- 2004/108/EC EMC directive (standards NF EN 61000-6-2, NF EN 61000-6-4)

**Options :**
- Steel casing IP66 IK10
- Anti-condensation kit

The **SIDEOS One** can be installed in a control enclosure on an DIN rail of 35mm, or fixed with M5 screws, see the drawing below.




When required by the application, GKN Stromag France provides steel casing which allows **SIDEOS One** and other functions integration according to your requirements.

Due to continuous development and improvement, all dimensions and characteristics are subject to change without notice.

| | | | | | | |
|---|---|---|---|---|---|---|
| Installation and maintenance | Leaflets | No. M10054-01 | Limit switch 51 - Stromag | | | 12/09/13 1/3 |
| Encoder and limit switch 51 questionnaire | | No. Q01390-01 | | Catalog | No. D142 | |
| Dimensions limit switch 51 | | No. T10003-01 | | Installation and maintenance | No. 151-00004 | **T10054-01-E** |
| | | | | EMC | No. 900-00001 | |

# SIDEOS One

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The **SIDEOS One** module (fig.1) is a secure and programmable monitoring system of the speed.

It monitors :
- the speed,
- the stop,
- the rotation direction,
- the kinematic linkage,
- the signals of the incremental encoder,
- the external speed signal 0-20mA ,
- the control contacts indicating the speed to monitor,
- the control contacts indicating the rotation direction to monitor,
- the system fault and overspeed outputs,
- the internal signals (Autotest – Dynamic Test – Cross monitoring).

It secures the overall operation of the speed monitoring system by means of :
- a detection of all the external failures (DC≥ 99%),
- a redundant internal design and a cross-monitoring of the internal system operation,
- a dynamic test of the overspeed function, every 360 tops of the encoder (DYNAMIC TEST),
- a secure cut-off and wiring of the supply of the output contactors,
- an autotest (TEST) allowing the detection of all the internal faults which can occure on the monitoring system (diagnostic coverage > 99%),
- a secure restart control (RESTART).

It allows to obtain, when installation is correct, a speed monitoring system secure up to the category 4 with the performance level of PL= e according to the standard ISO/IEC 13849-1.

It simplifies the intégration of a secure overspeed detection system in the machine control.

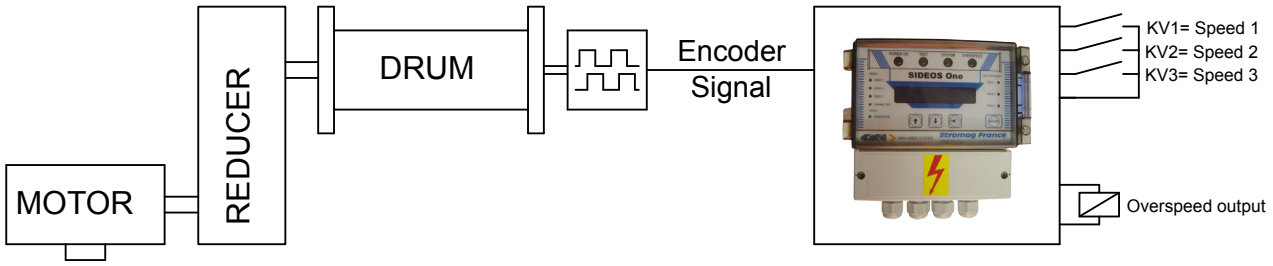
It provides :
- a speed signal (0 - 20mA)
- an alphanumeric display to visualize :
  - the speed,
  - the active overspeed threshold,
  - a diagnosis support,
  - a history of the last faults.

Fig. 1

# SIDEOS One

## Technical data and dimensions

### 1 - Speed monitoring : OVERSPEED

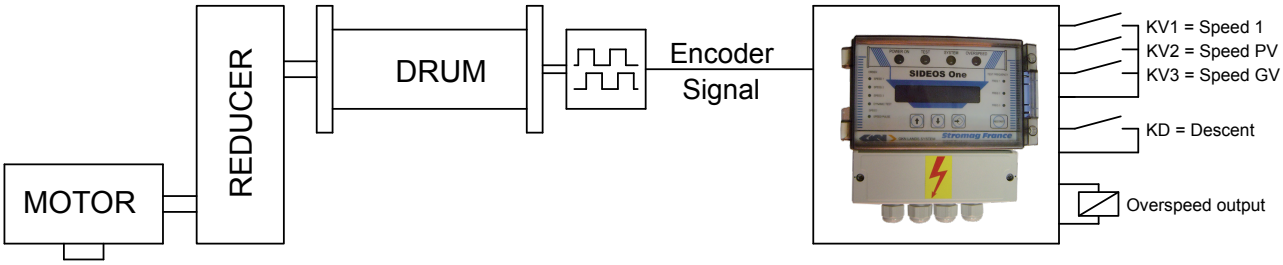



The **SIDEOS One** monitors up to 3 thresholds of installation overspeed and triggers the overpeed output if the speed detected on the encoder input is higher than the active overspeed threshold (speed contact KV closed).

### 2 - Stop monitoring : STATIC SLIPPING

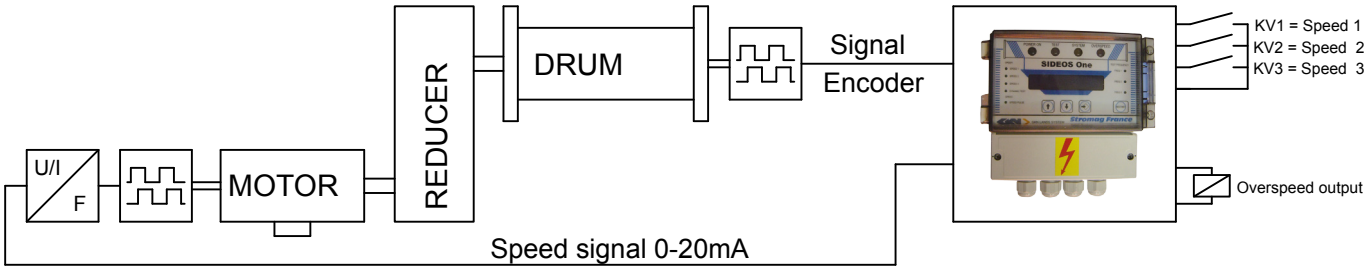
The **SIDEOS One** monitors the stop of the installation and triggers the overspeed output if a speed is detected on the encoder input when the contact KV1 is closed.

### 3 - Monitoring of the rotation direction : DYNAMIC SLIPPING




The **SIDEOS One** monitors the rotation direction of the installation and triggers the overspeed output if the rotation direction detected on the encoder input is different from the rotation direction indicated to the **SIDEOS One**.

### 4 - Monitoring of the kinematic linkage : DIFFERENTIAL SPEED




The **SIDEOS One** monitors the kinematic linkage of the installation and triggers the overspeed output in case of detection of the linkage breaking motor GV / drum PV, if the speed indicated on the speed signal input GV (15mA at nominal speed) is different from the speed signal from the encoder PV (15mA at nominal speed).