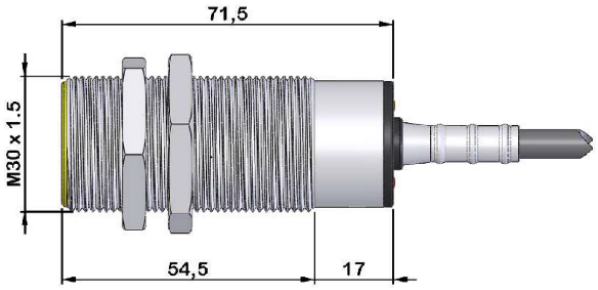
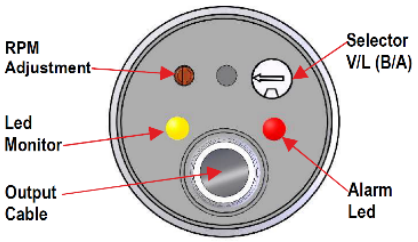
INDUCTIVE ROTATION CONTROL SENSOR

Acceleration: **SGM-CRT30-A-R10LV** (over speed alarm, A = acceleration)
Deceleration: **SGM-CRT30-D-R10LV** (low speed alarm, D = deceleration)



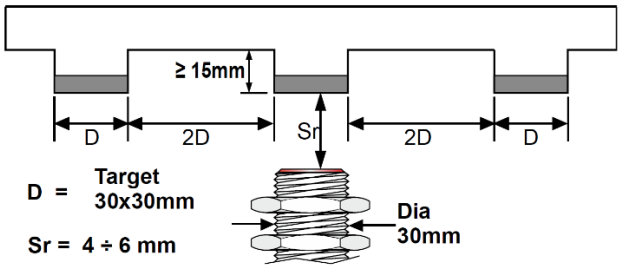


SGM-CRT30 inductive detection sensor controls the speed increase/decrease, established according to operational needs and signals the alarm state through a changeover contact of the relay.
The recommended distance (Sr) to the metal target is between 4 and 6 mm.

Technical data		
Working distance Sr	mm	10mm +/- 10% (with metal actuator 30 x 30 x 1 mm)
Continuous voltage (res. ripple < 10%)	V DC	18 ÷ 50
Alternate voltage 50 ÷ 60 Hz	V AC	18 ÷ 240
Max. no-load supply current	mA	<20
Delayed alarm activation time	Sec	14
Reset function		User selectable B or A function Factory preset: A
Detectable rotations range	RPM	L: 5 ÷ 150 or V: 120 ÷ 3000 RPM continuously adjustable and selectable by the user Factory preset: L
Response time Tr	Sec	5 imp./min. Tr = 12 3000 imp./min. Tr = 0.2
Output relay with 1 pole changeover		DC: Imax= 1A, Vmax=220V, Pmax=60W AC: Imax=1A, Vmax=250V, Pmax=60V/A Relay ON in normal operating conditions
Led		Yellow: target detection Red: alarm (output state)
Operating temperature range	°C	-20°C ÷ +70°C
Storage temperature range	°C	-20°C ÷ +85°C
IP rating		IP65
Housing		M30x1,5 Nickel plated brass
Cable		3m PVC cable 6.3mm 5x0,35mm Conductors

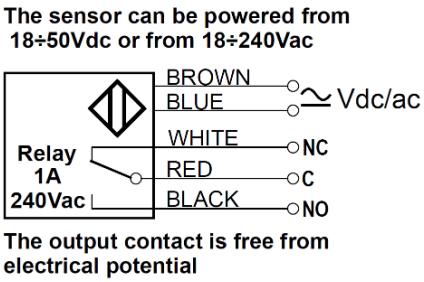
Mechanical installation

For optimal operation, the sensor must be installed according to the dimensions indicated.



Electrical connection

The sensor can be powered at 18…50VDC or 18…240VAC.
Potential-free changeover relay output.



Available functions

Function		Available values	Factory setting
V/L	High or Low RPM	**L:** 6…150 RPM **V:** 120…3000 RPM	L
B/A	Reset of output	**B**: Automatic reset **A**: Manual reset	A

Reset function A / B:
When the sensor detects too low (model D) or high (model A) RPM, reset of the relay can be set as:

Function A (Manual reset):
To re-activate the sensor, switch off power and then turn it on again.

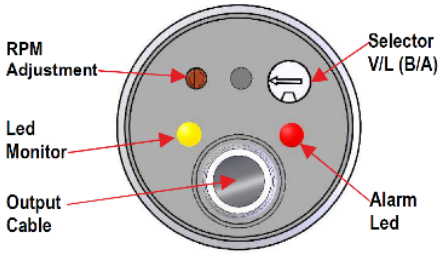
Function B (Automatic reset):
The sensor re-activates itself automatically as soon as the number of rotations exceeds/falls below the alarm switch point.

LED status description

LED		Status	Meanings
Output	Red	ON	Active output
		Flashing	Output activation delay at switch-on
Rotation	Yellow	ON	Detected metal
		OFF	No rotation detected

Settings

The rotary selector has a dual function: it can either set the rotation speed reading range (V/L setting) or it can select the operating mode (B/A) in the event of an alarm, see diagrams below for deceleration and acceleration.



V/L settings

When the sensors is active, rotate the selector completely counterclockwise for the range from 120 to 3000 RPM (V), or completely clockwise for the range from 6 to 150 (L) RPM.

B/A settings

Setting to:	Step 1	Step 2	Step 3	Step 4	Step 5
A Manual reset	Switch on the sensor		Switch off the sensor		Switch on the sensor again
	→	→	>2 Sec.	→	→
B Automatic reset	Switch on the sensor		Switch off the sensor		Switch on the sensor again

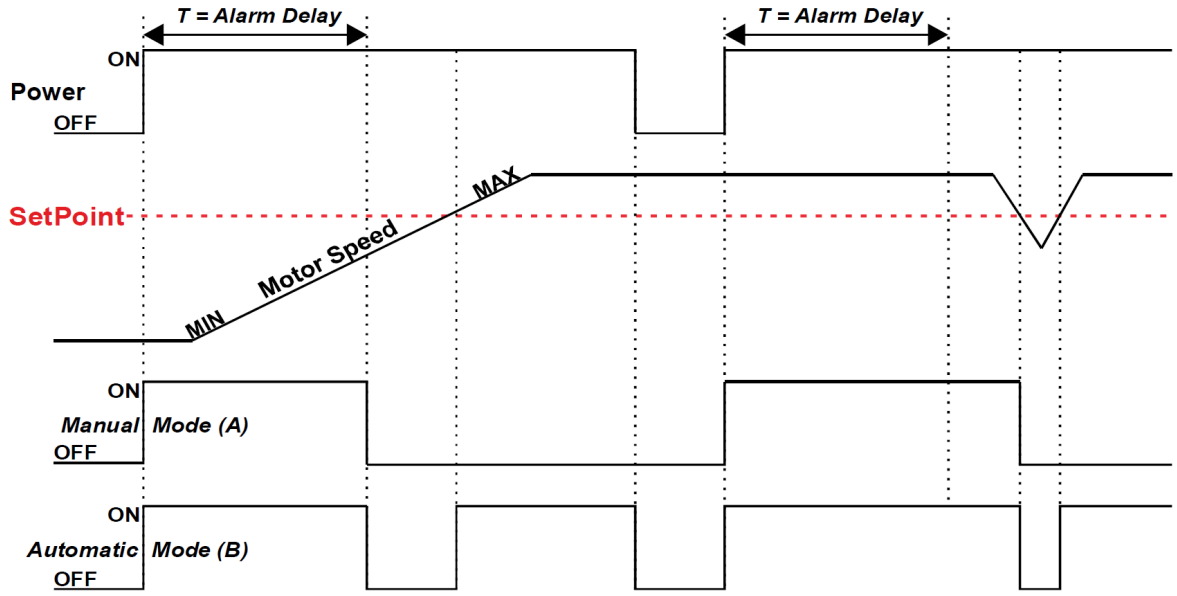
Depending on what function B or A is set, remember to turn back to correct V/L setting after output reset has been set.

Setting alarm switch point with the RPM adjustment potentiometer

- Set to Automatic reset (B) before starting the switch point adjustment.
- Select correct V/L setting.
- Ensure that the speed of the device to be monitored is correct and stable. The sensor indicates rotation by flashing the yellow LED.
- Rotate the RPM adjustment potentiometer clockwise to increase the RPM setpoint for an alarm. For an alarm at lower RPM, turn the potentiometer counterclockwise. Alarm is indicated by the red LED turns on. It is advised to repeat the setting twice to achieve precise adjustment.

For more precise and rapid readings (especially at lower speeds), it is possible to increase the number of pulses generated by the actuator. Observe the maximal frequency of 3000 RPM (50 Hz).

Deceleration:



Acceleration: