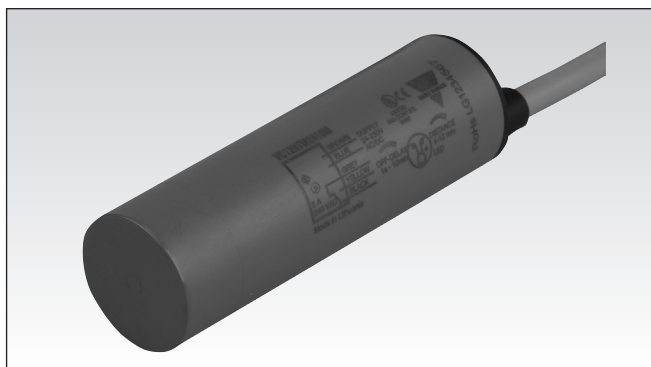


Proximity Sensors Capacitive Thermoplastic Polyester Types VC11RTM24, VC12RTM24, VC12RNM24

CARLO GAVAZZI



- Level sensor for solid, fluid or granulated substances
- Adjustable sensing distance: 4-12 mm
- Multi voltage supply: 20.4 to 255 VAC/DC
- SPDT relay output
- Time delay on operate or release
- Time delay options up to 10 minutes
- VC11/12RTM24: With adjustable time delay
- VC12RNM24: Without time delay
- Cable versions

Product Description

Capacitive sensor in thermoplastic polyester for mounting in a PG 36 screw gland. Available with adjustable sensing distance and with/without built-in time delay

(ON or OFF delay). The relay output ensures that the load can be driven directly. Excellent for use in the agricultural area (detection of grains, fluids etc.).

Ordering Key

VC11RTM2410M

Type _____
Time delay options _____
Voltage _____
Time delay _____

Type Selection

Supply voltage	Ordering no. With ON delay	Ordering no. With OFF delay	Ordering no. Without time delay
24- 230 V AC/DC	VC11RTM2410M	VC12RTM2410M	VC12RNM24

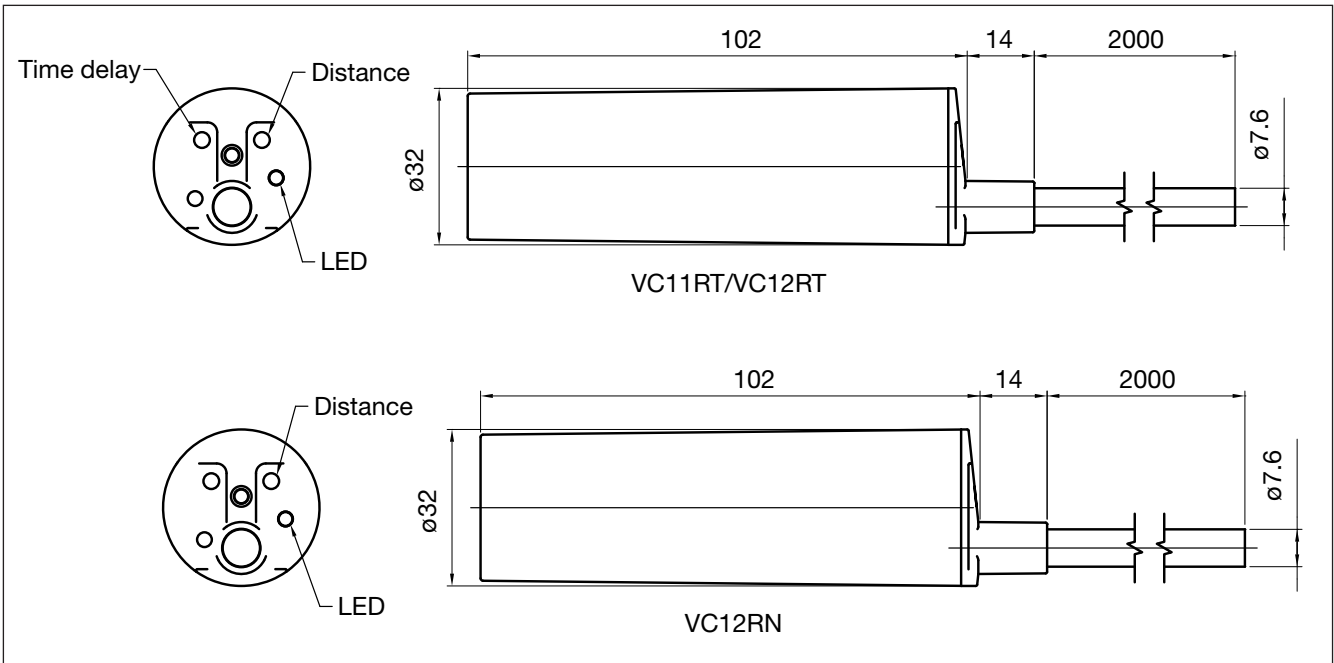
Specifications

Rated operating distance (S_n)	Up to 12 mm, reference target 30 x 30 mm ST37.1 mm thick, grounded	Operating frequency (f)	≤ 1 Hz
Sensing distance	4-12 mm, adjustable Factory set at 7 mm	Response time OFF-ON (t _{ON}) ON-OFF (t _{OFF})	≤ 500 ms ≤ 500 ms
Sensing distance adjustment	Multiturn, 15 turns adjustment steps	Power ON delay (t_v)	≤ 200 ms
Temperature drift	0.8 x S _r ≤ S _u ≤ 1.2 x S _r	Output function	SPDT relay
Hysteresis (H)	3 to 20%	Output switching function	N.O. and N.C.
Rated operational volt. (U_B) (ripple included)	20.4 to 255 VAC/DC	Indication Output ON Time Delay	Red LED LED flashing depends on time delay
Rated supply frequency	47 to 63 Hz	Output Time delay Delay on operate, adjustment VC11TRM2410M Delay on release, adjustment VC12RTM2410M No time delay VC12RNM24	Factory settings 0 sec. 1 sec. - 10 min. 1 sec. - 10 min. no delay
Rated operational power	0.5 to 2.5 VA	Time delay adjustment	Multiturn, 15 turns
Output AC12 2 A AC140 2 A DC12 2 A DC13 2 A Mechanical life typically Electrical lifetime	2 A Relay SPDT@240 VAC 15x10 ⁶ operations 1x10 ⁵ operations @ 2A/240VAC	Environment Installation category Pollution degree Degree of protection	III (IEC 60664/60664A; 60947-1) 3 (IEC 60664/60664A; 60947-1) IP 67 (IEC 60529; 60947-1) NEMA (1, 2, 5)
Minimum operational current (I_m)	10 mA@12 VDC (i.e. Minimum relay current)		
Protection	Reverse polarity and transients		

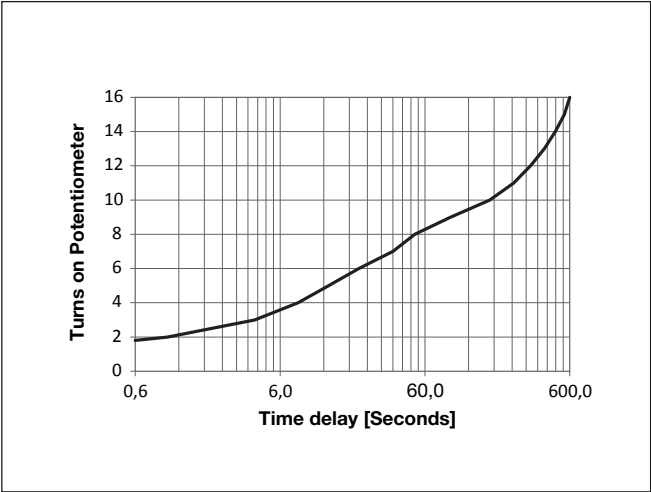
Specifications (cont.)

Ambient temperature Operating temperature	-20° to +70°C (-4° to +158°F)	Housing material Body	PBT, Polyester
Storage temperature	-40° to +85°C (-40° to +185°F)	Backpart	Arnitel
Vibration	10 to 150 Hz, 1.0 mm/15 G (IEC 60068-2-6)	Trimmer	LCP Vectra
Shock	30 g / 11ms, 3 pos, 3 neg per axis (IEC 60068-2-6, 60068-2-32)	Connection Cable	PVC, gray, 2 m 5 x 0.75 mm², Ø = 7.6 mm
Rated insulation voltage	≥ 250 VAC (rms)	Weight	≤ 320 g
		Approvals	cULus (UL508+CSA)
		CE-marking	Yes

Dimensions



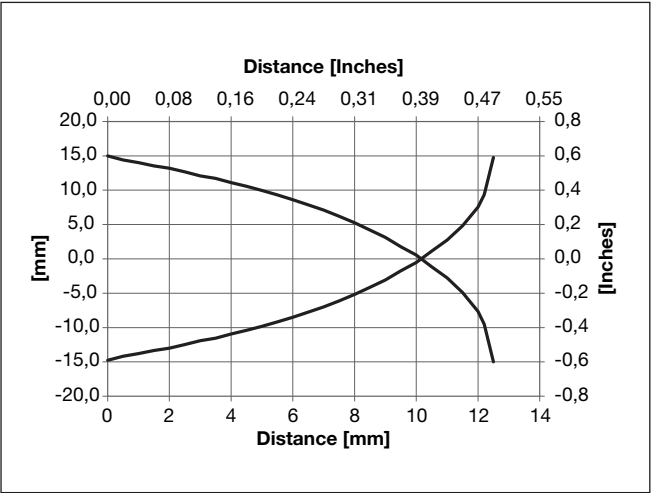
Trimmer VS Delaytime



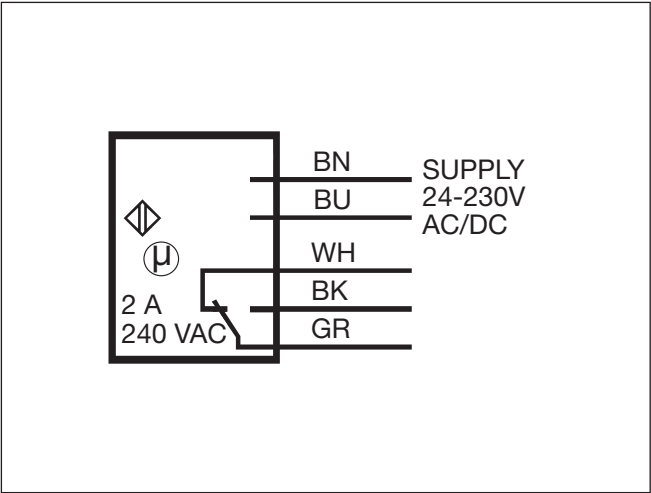
Trimmer VS Distance



Detection Diagram



Wiring Diagram



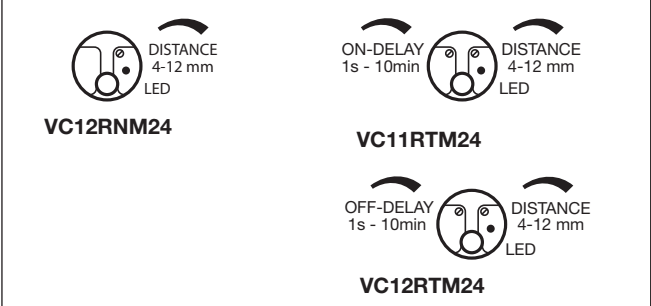
Mode of Operation

VC11RTM24 (See operation diagram). Power supply is applied to the sensor (BN and BU wires). When the target is not present, the relay operates (connection between BK and GY wires) and LED lights. When the target is detected the time measurement starts and LED flashes. After expiration of the set time (0-10 min.), the relay releases (connection between BK and YE wires) and LED turns off. The relay remains released as long as the target is detected.

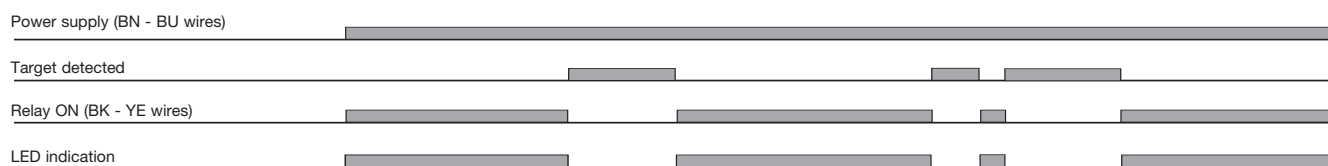
VC12RTM24 (See operation diagram). Power supply is applied to the sensor BN and BU wires) and time measurement starts. When the set time has expired (0-10 min.) the relay operates (connection between BK and YE wires) and remains connected until the target is detected. After activation of the sensor the relay releases (connection between BK and GY wires). As soon as the target is not present again the time measurements of the set time starts.

VC12RNM24 (See operation diagram). Power supply is applied to the sensor (BN and BU wires). The relay operates (connection between BK and YE wires) and remains ON until the target is detected. After activation of the sensor the relay releases (connection between BK and GY wires).

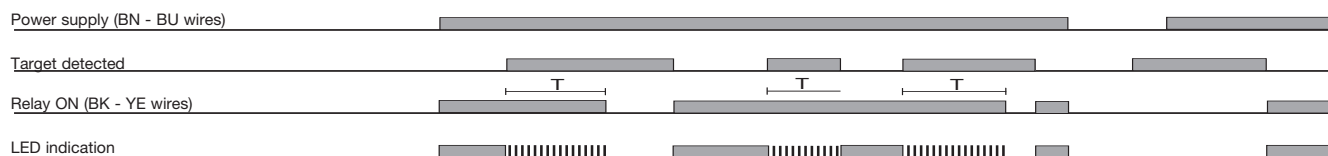
Adjustment



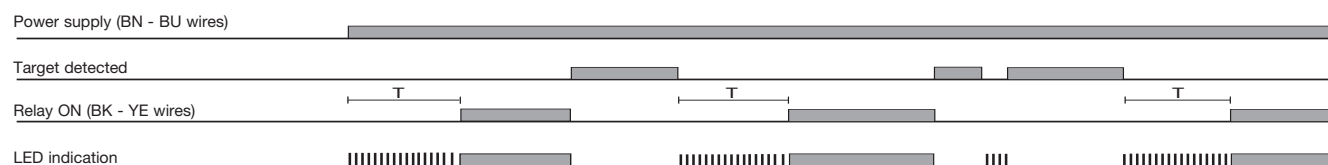
Operation Diagrams



VC12RNM24

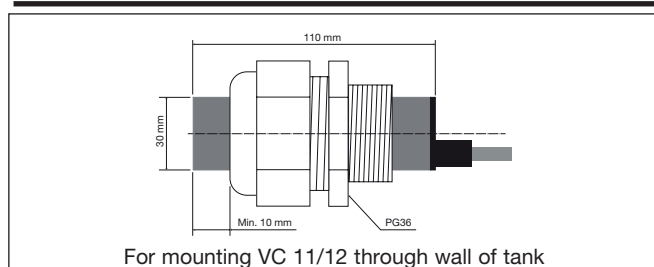


VC11RTM24



VC12RTM24

Installation Hint



Delivery Contents

- Capacitive switch: VC11/12
- Installation instruction
- Screwdriver
- **Packaging:** Plastic bag