Rotary 320 Series

DIGITAL ROTARY PADDLE LEVEL LIMIT SENSOR WITH
8 ADJUSTABLE TORQUE POSITIONS

Applications
Orion Rotate is used with all powdery and granulated bulk materials of coarse grade, for level monitoring (detection) in all types of containers and silos. It has 8 different adjustable torque settings, which are adjusted using the three position DIP switch.

A Selection of Fields of Application

- In Building Materials Industry; plaster, lime, fine sand, dolomite, calcite, perlite plaster, cement, rock, coal, pulverised coal dust, etc.
- In Food Industry; fodder, seed, flour, salt, sugar etc.
- In Plastics Industry; plastic granules etc.

Function

When the rotary paddle part at the end of this motor -driven level switch becomes handicapped in its rotation, by granular material level; the caused reaction torque is detected by an optical sensor, which in turn gives a signal output. The torques can be set as required, depending on the specific weight of material used.

TECHNICAL DATA

ELECTRICAL SPECIFICATIONS

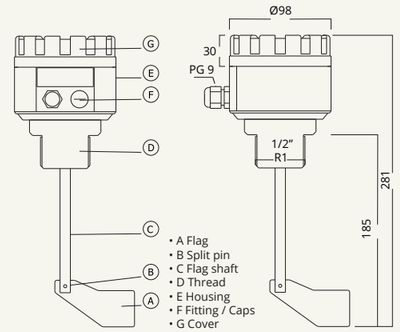
Connection Terminals	Max. 2mmÇ (AWG 14) cable entry
Sleeve	PG9
Power Supply (24V)	24V AC/DC ±30% max. 2.7W
Power Supply (220V)	85 - 270 V AC/DC max. 3.1 W
Signal Output	1 inverter relay AC max. 250V, 1A, 250 VA resistive load
Signal Delay	Max. 1.6 secs.
Protection Class	IP67/IP68 Opt. L: IP67, Opt. A: IP68

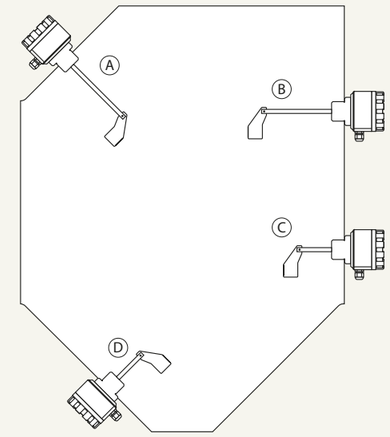
MECHANICAL SPECIFICATIONS

Housing	Option L: PC-ABS,
	Option A: Aluminum machining processing
Probe	IP66 EN60529
Bearing	Dust-tight double ball bearing
Sealing	Radially rotating shaft seal of NBR (or, optionally EPM material
Screw Material	Delrin® POM-C EN 10204
Screw Size	R1½. DIN 259 whit worth threads
Rotary Shaft	Stainless Steel SS316
Housing Color	RAL 6014
Overall weight	1.16 kg

WORKING CONDITIONS

Ambient Temprature	-20°C.. +80°C
Process Tempature	-5°C.. +100°C
Min. Detection Intensity	250 g/l (with standard vane)
Max Output Torque	550 gcm
Shaft Rotating Speed	8 rpm
Max. Particle Size	12 mm (without the use of a shield)
Max. Mechanical Load	500 N laterally
Max. Mechanical Torque	Free rotating shaft
Max. Traction Force	1 kN
Max. Process Pressure	0.5 bars
Vibration Comformity	5-500Hz 3G RMS random vibration acc. to IEC-60068-2-64





MECHANICAL INSTALLATION

- Should be kept away from the point of material entry.
- Should be mounted vertical to the surface.
- Arrangements should be made to prevent the measuring vane's friction with the surface or any material clogging in between.
- It is better to have the cable entry in downward position, to prevent water intrusion.
- Where extremely heavy materials are processed, a shield should be provided to protect the shaft, thus reduce the amount of force exerted on the shaft.
- The device should be operated with its rear cover entirely closed, for watertightness.
- Mounting to the vibratory silos should not be made.
- For overflow checks at mounting spot A.
- For detecting maximum level at mounting spot B.
- For detecting minimum level at mounting spot C.
- For detecting no material level at mounting spot D.

ORDERING CODES

The 4 versions currently available for sales are
ROT 320L-24, ROT 320A-24 24V AC/DC supply type
ROT 320L-220, ROT 320A-220 85-270V AC supply type.

COMPLIANCE TO APPLICABLE NORMS CE COMPLIANCE

Legal Compliance (CE conformance)

EN 61000-6-4:2001	Generic emission standard. Industrial environments.
EN 61000-6-2:2005	Generic emission standard. Industrial environment.
EN 61010-1:2001	Safety requirements for electrical equipment for measurement, control, and laboratory use.