



RCL40/41/43

Inductive cylinder sensor 50-1500mm

- Non-contact technology
- Regal design and dimensions
- Long life time

RCL40/41/43-series are linear position sensors for designed to be mounted inside hydraulic and pneumatic cylinders.

A robust sensor for very demanding applications and environments, even water hydraulics. The inductive sensor has a non-contact technology which offers extreme long lifetime. The technology can also handle a large temperature range.

The system is composed of a sensor and an control box. The quick and stable analogue electronics offer voltage and current output.

Sensors

Sensors are available in three different versions:

- RCL40 with ~40 cm wires for mounting with cylinder connector.
- RCL41 with PUR cable output for a direct connection to the electronics via cable gland on the cylinder. Options of 5 or 10 m cable.
- RCL41P with sealed PUR cable output for a direct connection to the electronics via cable gland on the cylinder. Options of 5 or 10 m cable. Submersible to 50 mH₂O.

The sensors are manufactured in steps of 50 mm from 50 to 1500 mm stroke length.

Controller

There are two different options of control box:

- RCL41, DIN-module with alarm for failure in the sensor.*
- RCL43, Aluminium boxed electronics with alarm for failure in the sensor.*

* Sensor failure gives output < 4 mA.

The control box is calibrated for each length. Both options of control box can be used with each version of sensor.



SPECIFICATION

Power supply	9 - 30 VDC
Output	
Voltage output	0 - 5 V
Current output	4 - 20 mA
Linearity	±0.3%, max ±0.5%
Response time	6 ms
Max. cable length sensor - electronics	50 m
Effective stroke	50 - 1500 mm
Temperature	
Sensor rod	-40°C...+155°C
Electronics	-25°C...+85°C
Temperature coefficient	Max 0.03 %/°C
Material	
Sensor header	Stainless steel
Sensor rod	Stainless steel AISI 316
Sensor tube	Aluminium
Flange sensor tube	POM
Working pressure	350 bar
Vibration	IEC 60068-2-6 (10-150 Hz, 0.35 mm/5 g, 90 min. per axis)
Shock	IEC 60068-2-27 (1000 g half sine, 1 ms, 2 shocks per axel)
Electromagnetic immunity	EN 50082-2
Electromagnetic emission	EN 50081-2

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ORDER INFORMATION SENSOR ROD

RCL -CH - /

1 Model

Wire output	40
Cable output	41
Sealed cable outout	41P

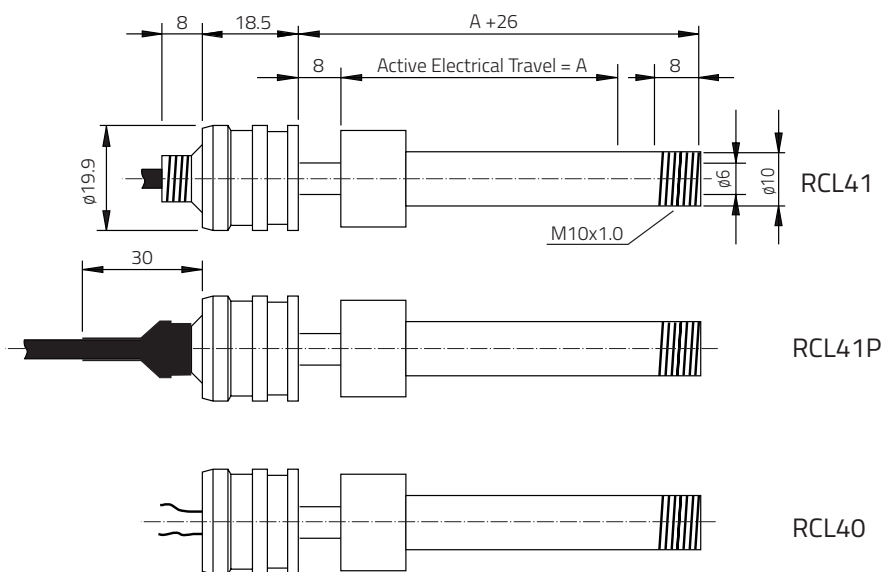
2 Stroke length

50 mm to...	0050
1500 mm (in 50 mm steps)	1500

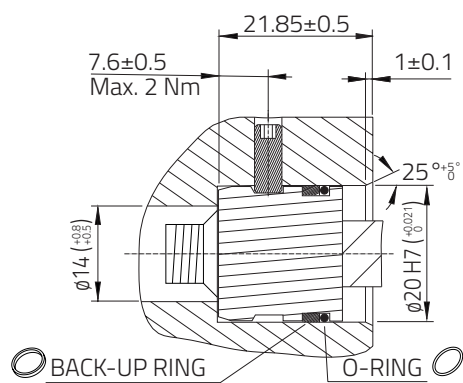
3 Cable length

RCL40	Blank
RCL40 and 41P 5m	5
RCL40 and 41P 10m	10
Ex. RCL41-0100/5	

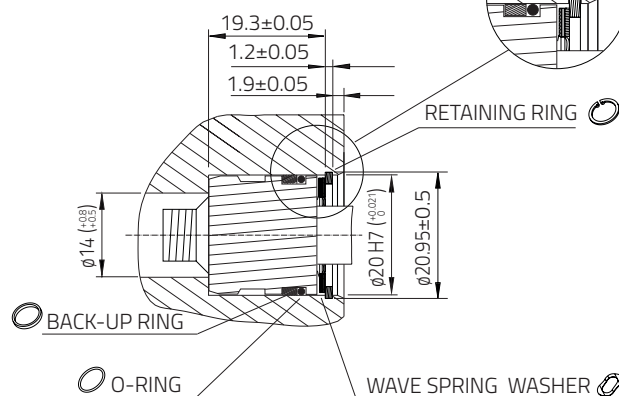
Dimensions sensor rod



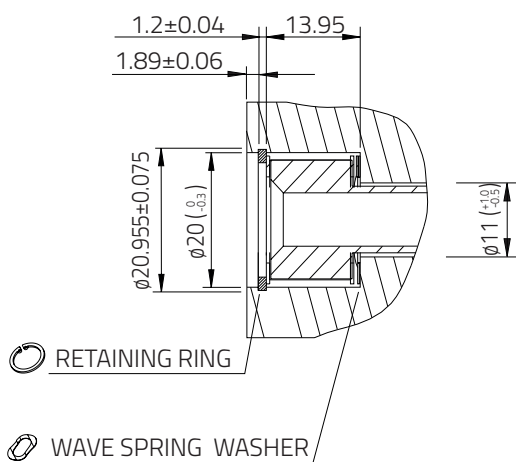
Installation set screw



Installation retaining ring



Installation sensor tube



Connectors

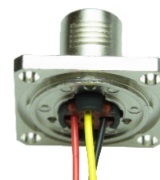
6140 (M12)

Pressure and hermetically sealed connector. The wires from the sensor is soldered to the connector and then mounted on the cylinder.



6160 (M12)

Solder free connector, the connector is ordered together with the sensor and pins are mounted on the wires from factory. The connector is easily assembled when the sensor is installed in the cylinder.

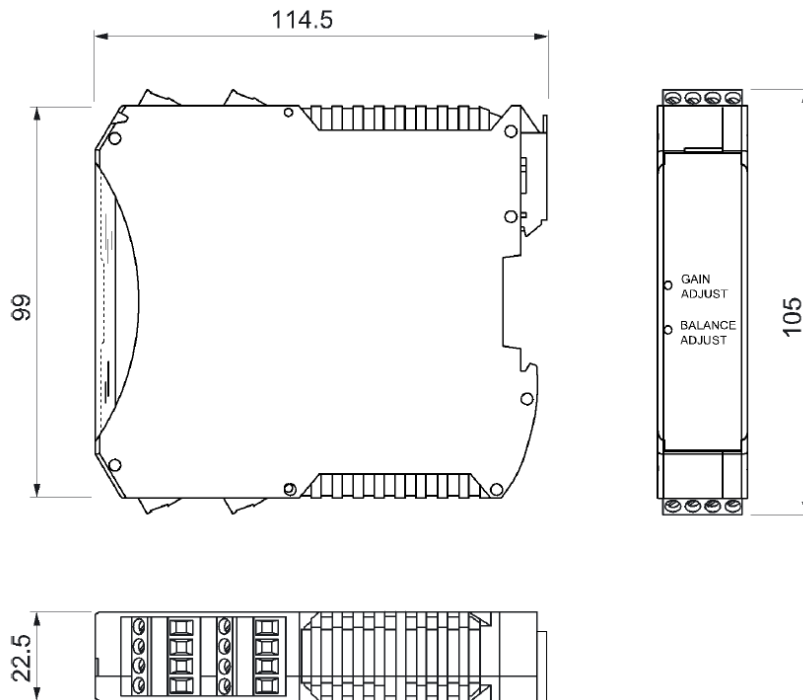


See separate data sheet for further details

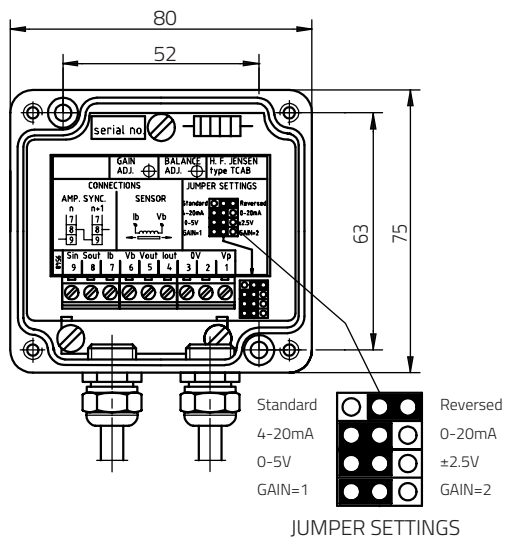
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RCL41, DIN Control box



RCL43, Aluminium control box



ORDER INFORMATION CONTROL BOX

RCL -

1 Model

DIN module 41

Aluminium box 43

2 Stroke length

50 mm to... 0050

1500 mm (in 50 mm steps) 1500

Ex. RCL43-0100

CONNECTIONS

Terminal	Functions	
1	±24 VDC	
2/3	GND (0 V)	
4	Output 4-20 mA or 0-20 mA	
5	Output 0-5 V or -2,5...+2,5 V	
6	RCL40-sensor Black (Vb)	RCL41-sensor White (Vb)
7	Red (Ib)	Brown (Ib)