



## CHARACTERISTICS

- **ULTRA SMALL:**  
SMALLEST SENSOR ON THE MARKET TODAY.  
SMALL SIZE MEANS EASIER INSTALLATION ON TRICKY MACHINERY.
- **ULTRA FAST:**  
NO MECHANICAL MOVING PARTS MEANS THE SENSOR CAN READ ANY PRACTICAL CYCLE SPEED.
- **ULTRA RELIABLE:**  
COMPLETELY SOLID STATE OPERATION FOR HIGH RELIABILITY AND DURABILITY.
- **IP 67 PROTECTION.**
- **FULLY POTTED SOLID STATE DEVICE:**  
MEANS CIRCUIT IS ISOLATED FROM THE ENVIRONMENT.
- **360° LED MONITORING:**  
ALLOWS YOU TO SEE SIGNAL STATUS FROM ANY ANGLE.
- **NPN AND PNP:**  
BOTH INCLUDED AS STANDARD.
- **M12 CONNECTOR:**  
AUTOMOTIVE SPECIFICATIONS PROVIDES ROBUST WIRING SOLUTIONS.

## APPLICATIONS

- **ONLY SMX, SMP & SMO SYSTEM.**

*Patented:  
UltraSensor technology is  
protected by international  
patents.*

*Patented:  
US 20080284415 A1*

## ULTRASENSOR:

### ULTRA SMALL, ULTRA FAST, ULTRA RELIABLE

The *UltraSensor* has been designed as a next generation replacement of Proximity and Micro switch systems for monitoring spool movement in progressive divider elements.

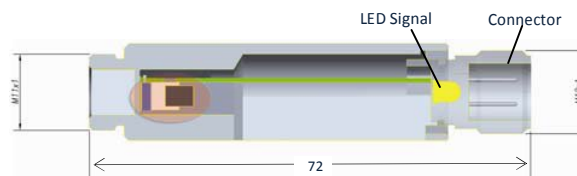
A single model will work with all standard SMX and SMP divider blocks as a screw-on accessory without requiring special arrangement or modification to the spool.

The patented concept works by monitoring magnetic flux variations through a hall-effect sensor as the spool enters the sensing range. There are no moving parts which means the solid state device is completely wear free.

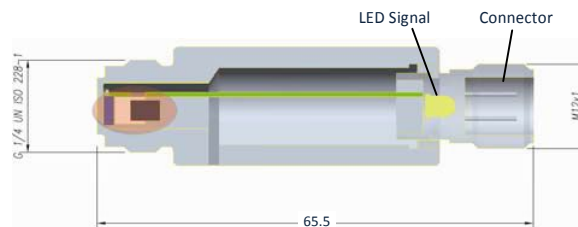
**NPN and PNP connection options are standard within the same sensor.**



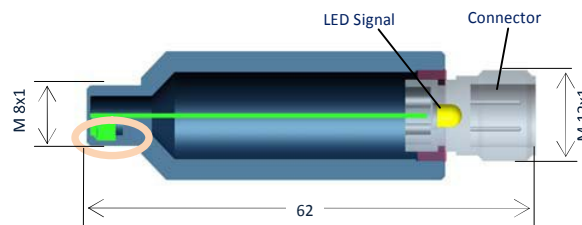
#### 1655306 SENSOR FOR SMP



#### 1655305 SENSOR FOR SMX



#### 1655308 SENSOR FOR SMO



## CONTACTS

[www.allube.co.uk](http://www.allube.co.uk)

## TECHNICAL INFORMATION

### TECHNICAL CHARACTERISTICS

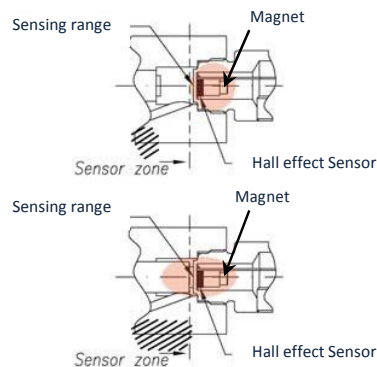
Material	AISI 316
Max. cycle per minute	1000
Voltage	8 ÷ 28 V DC
Short circuit protection	si
Protection degree	IP 67
Operating temperature	-10 °C ÷ +60 °C (-4 °F ÷ +158 °F)
Connector	M12x1
Output signals	NPN 2A N.O - PNP 0,7A N.O.
Max allowable pressure on the front sensor surface	400 bar

## MOUNTING INFORMATION

### CLAMPING TORQUE

SMX/SMO	14 Nm +5%
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## OPERATING PRINCIPLE



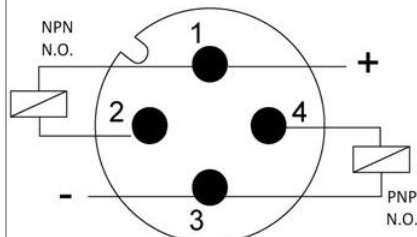
Normally, the magnetic field is balanced around the hall sensor.

With the spool in the sensing range, the flux density is modified allowing the hall effect sensor to detect the presence of the spool

The use of a Magnetic Flex variation allows an extended sensing zone which avoids problems on systems with low flow rates and backpressure where the spool can often stop or bounce on the sensing surface.

### CONNECTION

#### M12 connection top view



PIN	FUNCTION
1	Vdc in 8÷28V
2	NPN out
3	GND
4	PNP out

## ORDERING INFORMATION

Part. No.	Description
1655306	Sensor for SMP
1655305	Sensor for SMX
1655308	Sensor for SMO
39999	Connector

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**DECLARATION OF COMPLIANCE WITH STANDARDS**  
**DIRECTIVE 2006/42/EC**  
**Annex II A**

Dropsa S.p.A., registered office in Milan, Via Besana,5

CERTIFIES:

Thet "ULTRASENSOR" (1655305/6) has been constructed in conformity with the DIRECTIVES OF THE COUNCIL OF THE EUROPEAN COMMUNITY on the standardization of the legislations of member states:

*EMC (ElectroMagnetic Compatibility) Directive 2004/108/EC.*

Vimodrone (MI), Gennaio 2010

Il responsabile tecnico:  
Ing. Maurizio Greco

L'amministratore delegato:  
Sig.ra Milena Divisi

