

## 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

- **02 SYSTEM**

*Patented:*  
*UltraSensor technology is protected by international patents.*  
**Patented:**  
US 20080284415 A1

## ULTRASENSOR DMG:

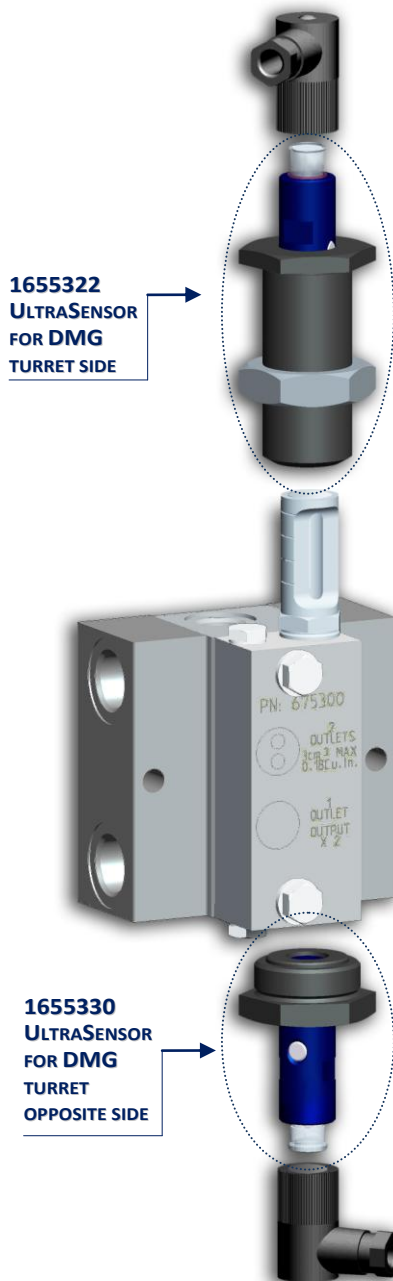
### *ULTRA ULTRA SMALL, ULTRA FAST, ULTRA RELIABLE*

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

Ultrasensor DM will work with standard **DMG** 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

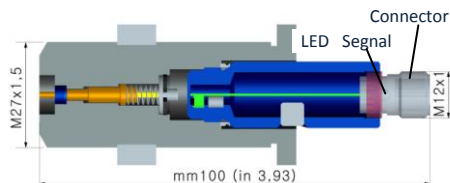
CONNECTOR →



**165532**  
**ULTRASENSOR**  
**FOR DMG**  
**TURRET SIDE**

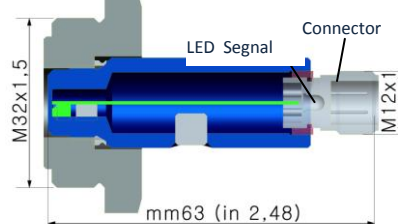
**165530**  
**ULTRASENSOR**  
**FOR DMG**  
**TURRET**  
**OPPOSITE SIDE**

### **165532 - 1655347** **ULTRASENSOR FOR DMG** **TURRET SIDE**



**CONNECTOR NOT INCLUDED**

### **1655330 - 1655346** **ULTRASENSOR FOR DMG** **TURRET OPPOSITE SIDE**



**CONNECTOR NOT INCLUDED**

## CONTACTS

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## TECHNICAL INFORMATION

TECHNICAL CARATTERISTICS	
Material	AISI 316 - Nickel-plated brass
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 signal	NPN 2A N.O - PNP 0,7A N.O.
Max allowable pressure on the front sensor surface	400 bar

## 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 Flux 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.

CONNECTIONS		
<p><i>M12 connector - (Top view)</i></p>	<b>PIN</b>	<b>Function</b>
	1	Vdc in 8÷28V
	2	NPN out
	3	GND
	4	PNP out
<p><i>NPN and PNP connection options are standard within the same sensor.</i></p>		

## ORDERING INFORMATION

Part. No.	Description
1655322	Ultraseensor for DMG – TURRET SIDE - Nickel-plated brass
1655347	Ultraseensor for DMG Nickel-plated brass - SS 316
1655330	Ultraseensor for DMG – TURRET OPPOSITE SIDE - Nickel-plated brass
1655346	Ultraseensor for DM TURRET OPPOSITE SIDE - SS 316
0039999	Connector

Part. No.	ACCESSORIES
0039815	M12 female connector +CABLE L 5 mt