# Sensor Magnets



## Design & supply of magnets and magnetic assemblies for position, displacement, proximity and speed applications

Eclipse Magnetics designs, produces and supplies magnets and magnetic assembly solutions for the varied application requirements for a very diverse range of sensing designs for all industries.

#### Magnetic Sensor Solutions Design, improve, optimise, supply, support

Eclipse Magnetics understands the needs of magnetic sensing customers to design commercially viable magnetic solutions that have reduced weight, compact design, flawless performance, no false triggers, longer service life, reduced cost and higher efficiency.

Sensors are used in a wide range of industries and applications especially electronic circuits. Electromagnets and magnets can both be used to achieve contactless magnetic sensing applications (minimising wear or tear), working through non-magnetic materials as required. Ferromagnetic materials can also pull or shield magnetic fields for optimal application effects.

Whether the application is for detecting fluid levels, detecting rotor position, measuring distance or movement or speed or angle or proximity, triggering switches, or maintaining critical system security, Eclipse Magnetics will help you get a contactless magnetic solution.

We can help you to use different magnets to those perhaps recommended for particular Reed Switches, Hall Effect Devices and Search Coils to allow you to achieve your application requirements, such as triggering the sensor from further away.

We offer methods to improve DoM angle by novel production and 100% inspection. From samples to reliable performance mass production we are a trusted magnet supplier.

We like to use mutual NDA. We design to meet requirements for field strength versus distance profiles, temperature variation, slide by, slide through, rotation, magnetic shielding (e.g. vanes), etc.

Our magnetic solutions include weight reduction, miniaturisation, improved field pathways, cost reduction and even reduction of rare earth material use.

Our China Joint Venture also allows us to supply our solutions with PPAP and C of C.

With an unrivalled expertise in designing value adding magnetic solutions Eclipse Magnetics is a trusted partner for reliable long-term contract manufacturing supply. This includes holding stock in UK for guaranteed fast call off supply.

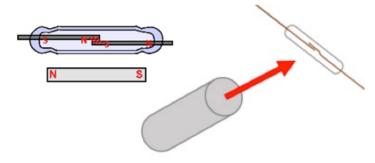
#### Application examples include:-

- Electric motor rotor position
- Seat belt sensor
- Fuel level gauge
- Safety locks
- Engine valve timings
- Contactless temperature estimation
- Contactless position sensing
- Speed sensing

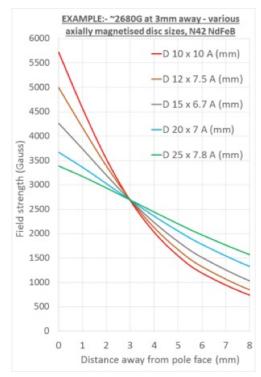


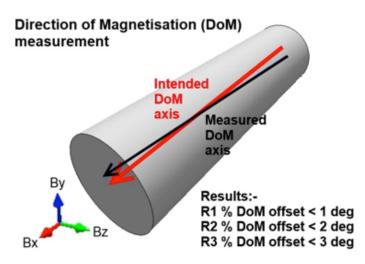
#### **Reed Switch Sensor Magnets**

We can look to assist you in matching magnets to Reed Switches. Reed Switches are rated in Ampere-turns which cannot easily be linked to a Gauss or Tesla value (because each electromagnet test coil used for the rating has a specific design). We can work with you to work out the required field strength to trigger the Reed Switch and then we can re-design a magnet to meet your application requirements (so, for example, the Reed Switch can be activated further away).



We can custom design magnets to give specific field strengths at specific positions for nearly any temperature. We can match custom magnets to existing Hall Effect devices and can design magnets to activate Reed Switches.



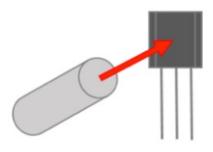


We can measure DoM angle for more accurate sensor magnets for more critical applications.

We can even pack magnets into DoM angle tolerances for specific critical applications.

#### Hall Effect Sensor Magnets

These have a Gauss or Tesla value to trigger and release. They are sometimes better than Reed Switches for use in custom applications.



Gauss meters use Hall Effect devices to measure magnetic field strengths. We can produce magnets to meet field strengths at specific distances.



#### Please contact us to arrange a visit, request a quotation or to get technical support and design help.

### www.eclipsemagnetics.com www.magnets2buy.com

Eclipse Magnetics Ltd, Atlas Way, Sheffield, S4 7QQ, England
T +44 (0)114 225 0600 F +44 (0)114 225 0610 E info@eclipsemagnetics.com
W www.eclipsemagnetics.com
While every effort has been made to ensure the accuracy of the information in this publication please note that specifications may change without notice.



