

# User Manual

## Explosion-safe Door Magnet Type AR-030



II 3 G Ex ec IIC T6 Gc  
II 3 D Ex tc IIIC T80°C Dc



STANDARDS COMMITTEE MEMBER





## 1. **Safety Instructions**

The AR-030 Door Magnet is an explosion-safe product suitable for use in hazardous areas with explosion hazard from flammable gasses, vapors and mist, classified as zone 2 of zone 22.

This manual must be read and understood for safe use of the Door Magnet. All warnings and instructions must be followed.

- Installation must be carried out by personnel trained and qualified in explosion safety taking the instructions mentioned on the equipment and in this manual into consideration. Local regulations that apply to the installation must be followed.
- Only connect this equipment to the correct voltage and mains frequency for which it is designed.
- Isolate electrical power to the Door Magnet split unit before electrical installation.
- The plastic cover can be electrostatically charged. Only use a damp cloth to clean the cover. Do not use solvents.
- Either decommission the Door Magnet or do not use it when it is damaged.
- During installation of the Door Magnet national safety regulations must be observed.
- Only use the Door Magnet unit under the environmental conditions for which it is specified. Deviating environmental conditions can contribute to damage to the equipment and may lead to possible danger to the life of the user.
- Do not use the Door Magnet split unit at temperatures deviating from the specified ambient temperature range.
- Follow all instructions written on the equipment and as mentioned in this manual.
- Repairs may only be carried out by the manufacturer or by a person appointed by the manufacturer.
- Modifications to the equipment or changes to the design are not permitted.
- The product may only be used for the function for which it is designed and shall be maintained in a good and clean condition.

If these instructions are not followed the explosion safety of the equipment cannot be guaranteed. The equipment could then endanger the life of the user and could cause the ignition of an explosive atmosphere. Consequently, Artidor as the manufacturer will waive any responsibility.

## 2. **Description**

The explosion-safe AR-030 Door Magnet is a universally-applicable door magnet for floor or wall mounting.

The magnetic head can easily be positioned horizontally or vertically. The Door Magnet is manufactured from impact-resistant plastic with a vandal-proof release button and a factory sealed cable. The explosion safety to gas is arranged by the appliance of protection degree against ignition 'increased safety'. The explosion safety to dust is arranged by the appliance of protection degree against ignition 'protected by enclosure'.

The print and switch have been coated to protect them even under harsh conditions.

### 3. Characteristics

The characteristics can be summarized as follows:

- Very solid
- Manufactured from impact-resistant plastic, galvanized magnet
- Provided with a factory sealed cable
- Double isolated and therefore an earth connection is unnecessary
- Fabricated based on European Guideline 2014/34/EU (ATEX 114)
- Explosion-safe according category II 3GD and therefore suitable for use in zone 2 and 22
- Protection rating Ex ec IIC T6 Gc, Ex tc IIIC T80°C Dc
- Ingress protection level: IP65
- Surface mount on floor, ceiling or wall

### 4. CE - Marking

The door magnet complies to the European Directives for EMC and ATEX and implicit to the Low Voltage Directive. With regard to explosion safety the door magnet has been designed and manufactured on the basis of the essential health and safety requirements of European Directive 2014/34/EU (ATEX 114) relating to Group II Category 3GD. Harmonized European construction standards have been applied fulfilling the essential requirements of the directives. For more details refer to section 6 "Technical data" and to the EU Declaration of Conformity as shown on the last page of this manual.

### 5. Application

The explosion-safe AR-030 door magnet has been designed for and are suitable for use in hazardous classified areas due to flammable gases, vapors, mist, fibers and dust. Because they are explosion-safe and certified on the basis of Group II Category 3GD of the ATEX Directive they are suitable for use in the following types of zones in explosion hazardous areas:

- for combustible gases, vapors and mist: zone 2
- for combustible fibers and dust: zone 22

Applied parts are all made of corrosion-resistant materials, and therefore suitable for use in corrosive environments.

### 6. Technical data

Explosion safety category:	II 3GD
Protection against ignition:	Ex ec IIC T6 Gc, Ex tc IIIC T80°C Dc
Conformity:	2014/34/EU (ATEX 114) and 2014/30/EU (EMC)
Standards applied:	EN 60079-0:2018, EN 60079-7:2015 / A1:2018 and EN 60079-31:2014
Ambient temperature:	-25 °C to +50 °C
Material:	Impact-resistant plastic housing and nickel plated magnet
Dimensions magnet (L x W x H):	Ø 50 mm
Mounting spacing:	Floor / ceiling mounting: 150 mm, wall mounting: 175 mm

Mounting:	Ø 4.5 mm mounting holes (4x), mutual distance 55 x 55 mm
Holding force:	490 N
Supply voltage:	24 V AC/DC ± 10%
Power:	100 mA AC / 63 mA DC
Sealed against moisture and dust:	IP65 according to EN 60529
Position:	Adjustable (360°)
Activation time:	100%
Electrical connections:	Cable, color coded, 3 x 1 mm <sup>2</sup> , length 5 meters
Weight:	770 grams

## 7. Marking and warning on the equipment

The marking label as shown below will be attached to the AR-030 Door Magnet.



## 8. Installation instructions

- Installation of explosion-safe equipment such as this product must be carried out by personnel specially trained and qualified to do this, following the relevant requirements of the installation standard EN 60079-14.
- For the installation and use of this product the relevant safety regulations and also the generally recognized latest state of the technology apply.
- During assembly, care must be taken that the framework, screws and surface are strong enough to take the weight and the holding force of the door magnet.
- Isolate power from the electrical supply cable prior to installation.
- The door magnet is double isolated and therefore an earth connection is not necessary.
- Install the connection cable and make sure that it is protected from mechanical and chemical influences.
- Connect the end of the cable in a proper way to an external connection box and ensure this is done professionally. The connection box is not supplied. Use a connection box that it is suitably protected for the (explosion hazard) classification of the surroundings in which it will be used.
- The connection cable has two wires. Both of them can be connected to the positive (+) or neutral (-) connection. The door magnet is secured against voltage reversal and can be used with direct and alternating current.

**9. Maintenance**

For the maintenance of the AR-030 door magnet the requirements as stated in EN 60079-17 apply.

If the door magnet or the connection cable is damaged or no longer in good condition it must be repaired immediately.

The power supply to the door magnet must be switched off and may only be restored after the maintenance has been carried out and approved.

The door magnet must be cleaned if it is very dirty.

The advised maintenance cycle for this twilight switch depends on its specific use and must therefore be agreed upon with the user for the expected use.

**10. Repair**

Because of the molding of the electronics, none of the parts can be replaced.

If repairs are carried out in an incompetent manner, the explosion-safety of the door magnet can no longer be guaranteed. Therefore it is preferred that the door magnet is returned to the manufacturer for repair.

**11. Removal / Re-use**

The equipment can be completely processed as electronic waste. For processing regarding disposal or reuse of the product and its packaging, national disposal and environmental laws and legislation must be taken into consideration.

# EU Declaration of Conformity

We

ARTIDOR Explosion Safety B.V.  
Emopad 38, 5663 PB Geldrop, The Netherlands

herewith declare that the  
Explosion-safe Door magnet type series

## AR-030

labelled with the distinctive community mark including the code of the  
protection degree against ignition and temperature class:

  II 3 G Ex ec IIC T6 Gc, II 3 D Ex tc IIIC T80°C Dc

produced under the ARTIDOR Quality Assurance system in accordance with  
ISO 9001:2015 and annex VIII of Directive 2014/34/EU

is in conformity with the relevant Union harmonization legislation:

2014/30/EU  
Concerning electromagnetic compatibility

2014/34/EU  
Concerning equipment and protective systems intended  
for use in potentially explosive atmospheres,

and that the following standards regarding explosion safety have been applied:

EN 60079-0:2018  
EN 60079-7:2015 / A1:2018  
EN 60079-31:2014

This declaration of conformity is issued under the sole responsibility of the manufacturer

Geldrop, 1 April 2020

Signed



M. Moolenaar  
Managing Director and EX Authorized Person