

Ex-Proof Electromagnet With Cable or Terminal Box

DICTATOR explosion-proof electromagnets belong to group II of explosion-proof devices and are authorised for use in hazardous locations of classification zones 1 and 2 (according to the standard VDE 0165), with the exception of underground pits.

Explosion-proof magnets are produced with encapsulated protection (EEx m).

All explosion-proof magnets are equipped with diodes (spark extinction diodes) and polarity protection.

DICTATOR explosion-proof electromagnets have been tested according to EN 1155:2005 and also the directive 94/9/EG (ATEX).

They are registered under the type-examination certificate IBExU14ATEX1211X/PTB 03 ATEX 2174 X and the confirmation of the conformity to building class PTB 03 ATEX NO60-4 at the PTB Institute, Braunschweig/Germany. In addition they have been approved by the building authorities.



Technical Data

Electromagnet	EM GD 50 Ex... m	EM GD 70 Ex... m
Voltage $\pm 15\%$	24 VDC	24 VDC
Max. permitted ripple	20 %	20 %
Power consumption ($\pm 15\%$)	67 mA (1.6 W)	70 mA (1.7 W)
Force / Remanence	600 N / 0 N	1450 N / 0 N
Ex-protection cable design	⊕Ex II 2G EEx m II T6	⊕Ex II 2G EEx m II T6
Ex-protection terminal box	⊕Ex II 2G EEx em II T6	⊕Ex II 2G EEx em II T6
Protection / Duty cycle	IP 66 / 100 %	IP 66 / 100 %
Operating temperature	-20 to +40 °C	-20 to +40 °C
Finish	magnet zinc-plated, terminal box grey laquered	



Explosion-Proof Electromagnet with Connection Cable

The economic DICTATOR explosion-proof electromagnets with connection cable are recommended when a distributing box is available; either a normal one outside the hazardous location, or an explosion-proof box within the area. The magnets are provided with a 2 m connection cable or the length indicated with the part number. Other lengths can be supplied on request.

The magnet is fixed to a base plate. There are four holes provided in the base plate for easy and fast installation.

Installation

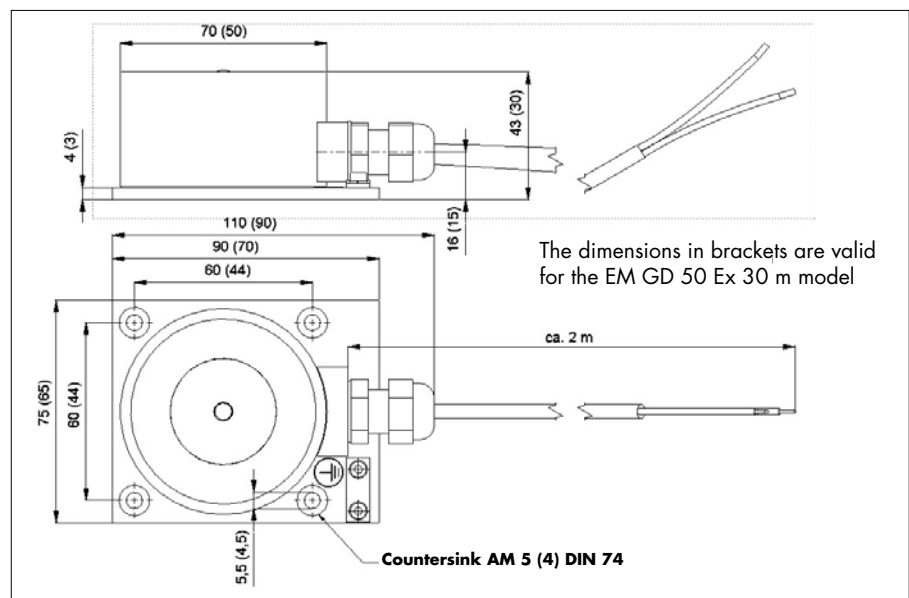
The DICTATOR explosion-proof magnet is fixed to the wall behind the door that needs to be kept open. The connection cable must be securely embedded and sufficiently protected from mechanical damage (e.g. by using a cable channel).

A counter plate needs to be fixed to the door as a counterpart to the magnet. A selection of counter plates can be found following the descriptions of the electromagnets. Make sure that the diameter of the counter plate is at least the same, or larger than that of the magnet.

Important: The encapsulated DICTATOR types "EMGD...Ex...m" can directly be connected to the DICTATOR power packs (see page 07.019.00). However each magnet must be protected by a fuse (G 200 mA type semi-timelag) of max. $3 \times I_B$ according to IEC 60127-2-1 (connected in series), which corresponds to its rated current. On the mounting plate of the magnet a terminal is provided to connect the equipotential bonding conductor of a minimum cross section of 4 mm² to assure the equipotential bonding.

Advice: According to fire protection regulations a hand switch must be installed beside the fire protection door to release it (explosion-proof hand switch, part no. 700232). Please observe the relevant regulations for hazardous areas when mounting and connecting the electromagnet.

Dimensions



Order Information

EMGD50Ex30m	EEx m II T6	connection cable 2 m	part no. 040154
EMGD70Ex43m	EEx m II T6	connection cable 2 m	part no. 040156
EMGD70Ex43m	EEx m II T6	connection cable 5 m	part no. 040156-5
EMGD70Ex43m	EEx m II T6	connection cable 10 m	part no. 040156-10
EMGD70Ex43m	EEx m II T6	connection cable 15 m	part no. 040156-15



Explosion-Proof Electromagnets with Terminal Box

DICTATOR EM GD...Ex...em electromagnets are provided with an explosion-proof terminal box with own binders. The magnets can therefore be connected directly and no further explosion-proof distributing boxes are required. The cable is inserted into the terminal box through a tested ATEX M20x1.5 conduit gland. The connection cable should have an outer diameter of 5 to 10 mm and a maximum wire cross section of 2.5 mm². The EM GD...Ex...em electromagnet has "Encapsulation (m)" protection and the terminal box has "Increased safety (e)" protection.

Installation

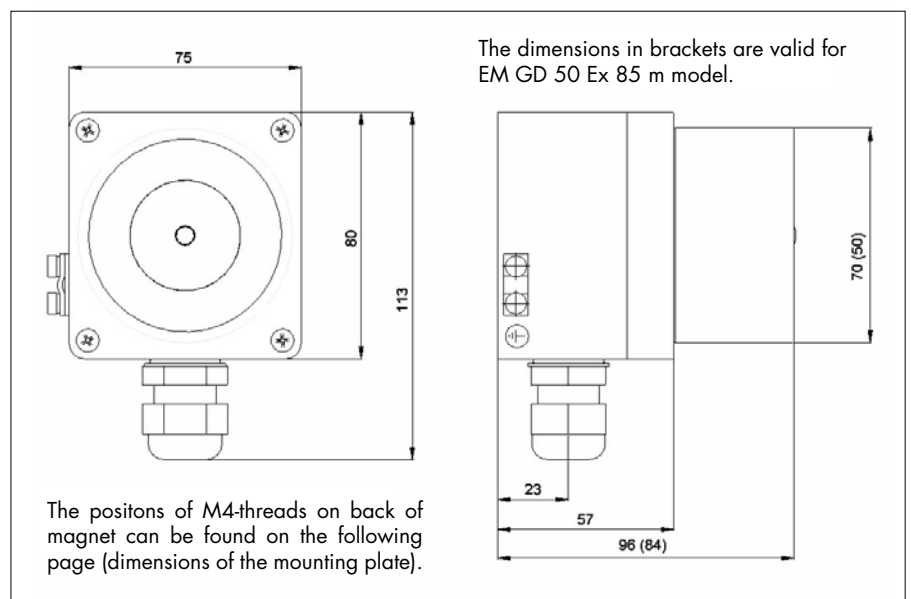
The DICTATOR explosion-proof magnet with terminal box is fixed to the wall behind the door that needs to be kept open. For a secure installation we recommend our mounting plate, part no. 205252 (see following page), to which the magnet is screwed with 2 M4 screws.

A counter plate needs to be fixed to the door as a counterpart to the magnet. A selection of DICTATOR counter plates can be found following the descriptions of the electromagnets. Make sure that the diameter of the counter plate is at least the same, or larger than that of the magnet.

Important: The encapsulated DICTATOR types "EMGD...Ex...m" can be connected directly to the DICTATOR power packs (see page 07.019.00). However each magnet must be protected by a fuse (G 200 mA type semi-timelag) of max. $3 \times I_B$ according to IEC 60127-2-1 (connected in series), which corresponds to its rated current. On the outside of the terminal box a terminal is provided to connect the equi-potential bonding conductor of a minimum cross section of 4 mm² to assure the equipotential bonding.

Advice: According to fire protection regulations a hand switch must be installed beside the fire protection door to release it (explosion-proof hand switch, part no. 700232). Please observe the relevant regulations for hazardous areas when mounting and connecting the electromagnet.

Dimensions



Order Information

EMGD50Ex85m electromagnet	EEx m/e II T6 protection	part no. 040157
EMGD70Ex99m electromagnet	EEx m/e II T6 protection	part no. 040159

Both models are supplied with connection box and a M 20 x 1.5 gland



Accessories: Mounting Plate, Fuse

We recommend you to use a mounting plate when installing magnets EM GD 50 Ex 85 and EM GD 70 Ex 99 on a porous surface to ensure they are securely fixed to the wall.

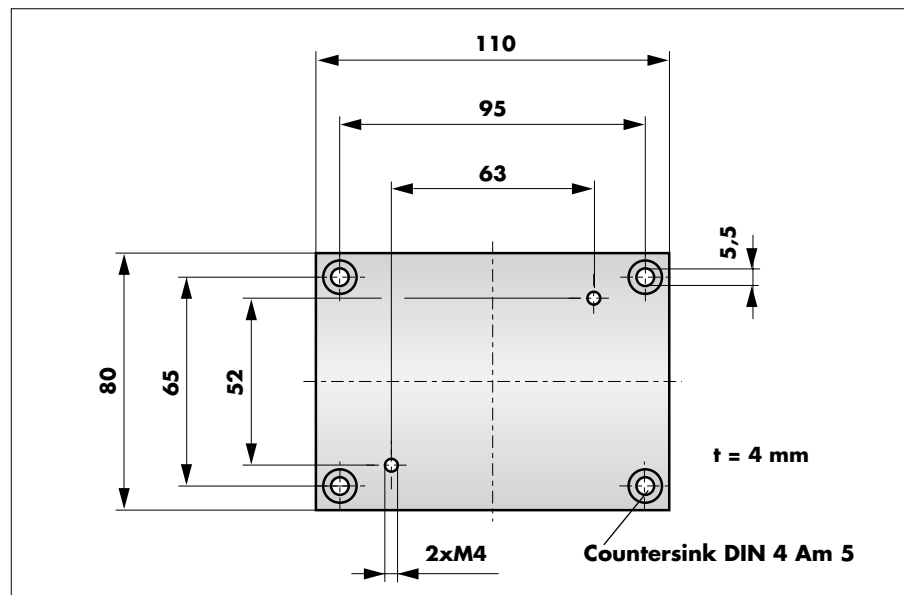
The magnet is screwed to the mounting plate and fixed to the wall with 4 screws.

Each magnet must be protected by a fuse of max. $3 \times I_B$ according to IEC 60127-2-1 (connected in series) (fuse G 200 mA type semi-timelag). DICTATOR furnishes the required fuses type 5x20, semi-timelag and the corresponding fuse carrier.

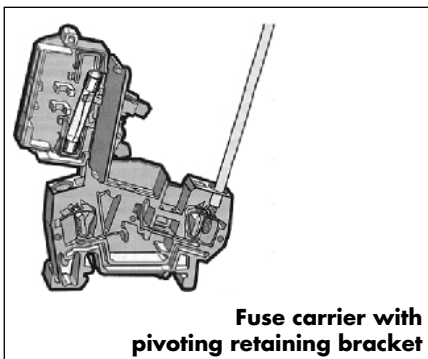
Mounting Plate

The DICTATOR mounting plate is screwed to the wall behind the door that has to be kept open by the magnet with 4 $\varnothing 5$ flat head screws. The magnet is then fixed to the mounting plate with two M4-screws.

Dimensions

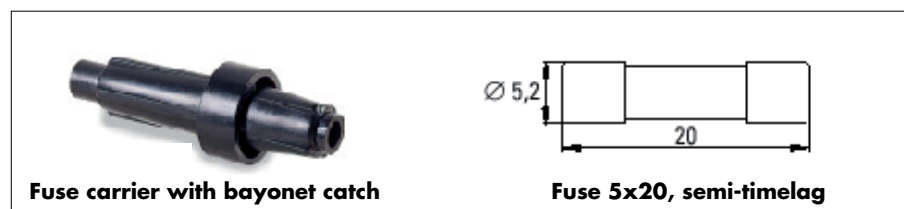


Fuse, Fuse Carrier



The fuse is placed with the fuse carrier directly into the feeding line to the ex-proof magnet. There are available two different types of fuse carriers.

- Fuse carrier for soldering directly into the feeding line, with bayonet catch
Dimensions of the fuse carrier: $L = 43.2 \text{ mm}$, $\varnothing = 14.2 \text{ mm}$
Suitable for cables with a cross section up to max. 4 mm
- Fuse carrier for mounting on top hat rails, with pivoting retaining bracket



Order Information

Mounting plate for explosion-proof magnets	part no. 205252
Fuse 5 x 20, semi-timelag, 200 mA	part no. 040586
Fuse carrier with bayonet catch	part no. 040587
Fuse carrier with pivoting retaining bracket	part no. 040588