

**Explosion proof, electromagnetic holder for hazardous areas zone 1, 2, 21, 22 / 24 V- / 650 N, 1300 N, 2000N - tested acc. to ATEX** **List 6.0 EX-MAG**



### APPLICATION

**EXM-...** Electrical, explosionproof magnets for fire dampers, fire doors and safety doors. When the supply voltage is cut off, the magnet loses his force and the safety operation is working. The magnets are certified in accordance with protection class II2G Ex mb II T6 zone 1, 2 (gas, mist, vapour). II2D Ex tD A21 IP65 T80°C, for use in zone 21, 22 (dust).

### TECHNICAL DATA

Type	EXM-650	EXM-1300	EXM-2000	
Supply voltage	24 VDC ± 10%	24 VDC ± 10%	24 VDC ± 10%	
Surge	max. 20%	max. 20%	max. 20%	
Power consumption	~1 W	~1,5 W	~3,7 W	
Current	45 mA	65 mA	160 mA	
Force	650 N	1300 N	2000 N	
Cable	ca. 1m	ca. 1m	ca. 1m	PVC
Maintenance	free	free	free	
Ambient temperature	-20... 55 °C	-20... 55 °C	-20... 55 °C	
Storage temperature	-20... 80 °C	-20... 80 °C	-20... 80 °C	
Housing material	steel/plastic	steel/plastic	steel/plastic	Polycarbonate
Weight	~650 g	~1950 g	~1950 g	

Indication CE Nr. 0158  
 Permission PTB-tested acc. to directive 94/9/EC (ATEX)  
 PTB 02 ATEX 2121X



Explosionproof  II2G Ex mb II T6, CENELEC EN 60079-0 / EN 60079-18  
 II2D Ex tD A21 IP65 T80°C, CENELEC EN 61241-0 / EN 61241-1  
 Connectable lines: 4mm<sup>2</sup> multiple-wire, 6mm<sup>2</sup> single-wire  
 IP 65

External PE-connector  
 Prot. in acc. with EN 60529  
 Operating mode 100%ED

**Attention**  
 Exceeding the admissible supply voltage or the max. admissible AC-ripple will destroy the internal fuse irreparably (Ex-Regulations).  
 The magnet power is reduced by increasing the AC-ripple (AC-ripple from 0 to max. 20%).

**Included**  
 Ex m magnet with 1m cable.

**Installation area**  
 hazardous areas zone 1, 2, 21, 22

 II2G Ex mb II T6  
 Zone 1, 2  
 II2D Ex tD A21 IP65 T80°C  
 Zone 21, 22



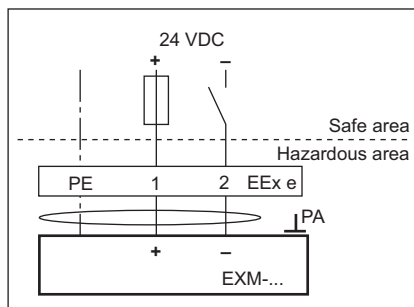
### ACCESSORIES

- |                       |   |
|-----------------------|---|
| <b>GH 6</b>           | Anchor for EXM-650                          |
| <b>GH 13/20</b>       | Anchor for EXM-1300, EXM-2000               |
| <b>ExBox-3P</b>       | II2GD EEx e terminal box                    |
| <b>EXC-K4/S</b>       | II2GD EEx e terminal box with integral fuse |
| <b>EXC-T1</b>         | II2G EEx d Push button for manual release   |
| <b>N1 supply unit</b> | 120...230 VAC, 24 VDC, max. 0,5 A           |

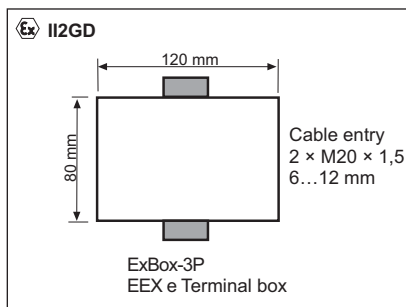
### ATTENTION!

- Every single magnet has to be connected with an external normal-lag fuse according to its rated current (**max. 3 x I<sub>nominal</sub>**).
- We recommend a stabilised power supply. The max. AC-ripple must not exceed 20%.
- The cable must be installed in a fixed position and protected against mechanical damage.
- For installation, use and maintenance the official standards and rules must be applied.
- The temperature class T6 is in accordance with the magnet.
- The force of the magnet can deviate depending on different types of material, dimension and surface of the anchor.
- A possible remedy would be a thin, non-magnetic foil.

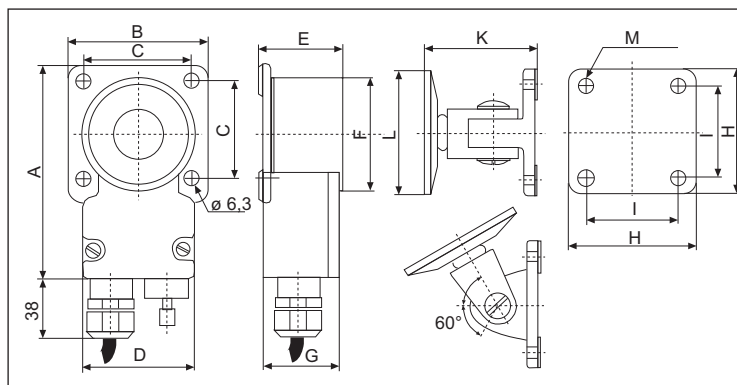
### ELECTRICAL CONNECTION



### ACCESSORIES



### DIMENSIONS



Dim. in mm	EXM-650	EXM-1300	EXM-2000
A	113	138	138
B	66	86	86
C	52	70	70
D	54	64	64
E	42	58	58
F	∅ 54	∅ 81	∅ 81
G	38	45	45
H	60	80	80
I	44	60	60
K	50	62	62
L	∅ 56	∅ 86	∅ 86
M	∅ 6,3	∅ 8,0	∅ 8,0

# Installation Instructions

## 1. General Terms

Each piece of equipment may only be used for the respective purpose. By use of the equipment, other than for the specified purpose, no guarantee can be given.

The magnets are delivered in 3 grades of 650 N, 1300 N and 2000 N.

During the mounting please be aware that the anchor plate and the magnet must be in alignment. The material for the installation is not included.

Improper installation will lead to breakdowns and a reduction in the force.

It is strictly important to protect this equipment from knocks and vibrations, that are stronger than the nominal force of the magnets (even for a short time).

### Important Note!

It is mandatory that only especially trained personnel should use this equipment. Installation, operation and servicing of the equipment may also only be carried out by specialist on this field, who are experienced with the dangers and have also read and understood the instructions.

Proper transportation, storage, installation (within the specialised area) and maintenance, are absolutely necessary for precise and exact usage.

Should the equipment show damage that leaves the assumption that safe use is not possible the equipment must not remain in operation and must be decommissioned.

If the explosion proof equipment is operated in aggressive surroundings (e.g. in the chemical industry or off shore, on shore) it should be cleared that the casing or parts of such are suitable for the surrounding conditions. In case of ambiguities or for information that hasn't been provided please contact your dealer or our centre.

Customers may not open the magnet (loss of explosion protection and lapse of guarantee claims).

The assembly may be carried out only by skilled electrical personnel in accordance to EN 60079-14 / VDE 0165 and such skilled personnel, who comply with the guidelines prevalent in the respective country.


The regulations on electrical apparatus in explosion proof areas (ExVO) must be adhered to ! In addition to this, the rules and regulations which may possibly vary in other countries outside the EU.

The magnet itself is maintenance free. The servicing is only related to the inspection of the casing for damage and the functioning of the equipment which should be inspected e.g. 1-2 times a year (Ex-protection guarantee)

The ATEX 118a as well as the ExVO are applicable within the EU in general, whereas national guidelines and regulations are to be observed in other places. For non EU zones, the corresponding national guidelines and regulations are applicable.

## 2. Type Designation

The type designation structure for different types can be found in the diagram. (example)

Schischek GmbH D-90579 Langenzenn		<b>SCHISCHEK</b> EXPLOSIONSSCHUTZ	
<b>Type EXM-1300</b>			
U : 24 V DC +/- 10%	Ta	-20 ... + 55 °C	
I : 65 mA	IP	IP65	
P : ca. 1,5 W	Ser.-Nr.		
F : 1300 N	Made in Germany	2007	
Besondere Bedingungen beachten! Pay attention to special conditions for installation!			
		II 2G Ex mb II T6 II 2D Ex tD A21 IP65 T80°C	PTB 02 ATEX 2121X www.schischek.com

## 3. Electrical Connection

Electrical installation must be performed according to the rules and regulations of the respective country. The connection must be executed as in the following wiring diagram.

During the electrical installation and the start up of explosion proof equipment the rules and regulations for installation of electrical equipment in explosive hazardous areas of the respective countries must be followed. Differences are also nationally possible.

Electrical connections inside the Ex-area are only allowed to be installed by means of Ex e connection clamps.

During this procedure you must take into account that the cable glands must be tighten completely by the contractor. The terminal box must not be opened when the voltage is on!

Electric wires must be secured and must be so laid out that they are sufficiently protected against damages.

The electrical connections of the magnet must always be made with the current switched off.

The operating voltage of the magnet is indicated on the name plate. Please compare with supply voltage.

The Schischek Company does not accept damaged magnets because of excess voltage as case of guarantee demands.

## 4. Commissioning

Before the equipment is switched on it must be tested that the voltage is 24 VDC +/- 10%. The magnet should show no sign of mechanical damage (ex-protection). The commissioning starts with the inspection of the installation of the magnet and the anchor-plate, the wiring and the following function-control. Furthermore, all the ex-relevant components, that are found between the magnet and the switch-gear in the hazardous area, should be examined to ensure no damage has been done and that the installation is correct.

## 5. Decommissioning

Before switching off, consider the effects on the system as well as on the following devices. Disconnect the main connection before starting mechanical dismantling. The terminal box must be free of voltage.

## 6. Maintenance

The magnet should never be opened by the operator (loss of the Ex-protection). Please exchange damaged terminal boxes or magnets for new ones immediately, or have them overhauled at Schischek GmbH.

## 7. Checklists in the event of Operational Difficulties

<b>Problem</b>	<b>Possible cause</b>	<b>Solution</b>
Magnet does not provide enough force.	<ul style="list-style-type: none"><li>- Mains failure</li><li>- Incorrect mains voltage</li><li>- Magnet connected incorrectly</li> <li>- Magnet and anchor plate are not in alignment</li><li>- Wrong choice of magnet (force insufficient)</li></ul>	<p>Check mains, establish mains again Magnet must be repaired by manufacturer. If the magnet has now been connected correctly and still does not function, the magnet has to be repaired by manufacturer. Check mounting of both parts</p> <p>Choose stronger magnet</p>
Magnet function is occasionally interrupted	<ul style="list-style-type: none"><li>- Loose contact in the feed lines</li><li>- Loose contact inside the magnet</li><li>- Increase of temperature</li></ul>	<p>Check and secure connections. Magnet must be repaired by manufacturer Check ambient-temperature</p>

## Erklärung der EG-Konformität

Wir, die  
(Name des Herstellers)  
(Anschrift)

## Declaration of EC-Conformity

We, the  
(manufacturer name)  
(address)

## Attestation de conformité CE

Nous, la  
(nom de fournisseur)  
(adresse)

**Schischek GmbH  
Mühlsteig 45 Gewerbegebiet V  
D-90579 Langenzenn**

erklären in alleiniger Verantwortung  
gemäß den Bestimmungen  
der Richtlinien :

declare under our sole responsibility,  
following the provisions  
of directives :

déclarons sous notre seule  
responsabilité conformément aux  
dispositions de directives :

**89/336/EWG  
94/9/EG**

**89/336/EEC  
94/9/EC**

**89/336/CEE  
94/9/CE**

dass das Produkt :

that the product :

que le produit :

**EXM-650 EXM-1300 EXM-2000**

auf das sich diese Erklärung bezieht,  
mit den folgenden Normen oder den  
normativen Dokumenten übereinstimmt :

to which this declaration refers,  
conforms with the following  
standards or normative documents:

auquel se réfère cette déclaration,  
est conforme aux normes ou  
autres documents normatifs :

**EN 50081-1 EN 50082-1  
EN 60079-0 EN 60079-18 EN 61241-0 EN 61241-1**

Kennzeichnung :

Marking :

Marquage :



**II2G Ex mb II T6**

**II2D Ex tD A21 IP65 T80°C**

**PTB 02 ATEX 2121X**

Geschäftsführer :  
(Ort und Datum)  
(Name und Unterschrift)

Manager:  
(Place and date of issue)  
(Name and signature)

Directeur gérant:  
(Lieu et date)  
(Nom et signature)

**Langenzenn, 26.11.2007**

**Roland Graf**

Die Erklärung bescheinigt die Übereinstimmung mit den genannten Richtlinien, sie beinhaltet jedoch keine Zusicherung von Eigenschaften im Sinne des Produkthaftungs-Gesetzes. Die Sicherheitshinweise der mitgelieferten Produktdokumentation sind zu beachten. Bei einer mit dem Hersteller nicht abgestimmten Änderung des Gerätes und/ oder bei Nichtbeachtung der Sicherheitshinweise verliert diese Erklärung ihre Gültigkeit.

The declaration certifies the conformity with the directives mentioned, it does not, however contain any warranty of qualities as defined in the act on produkt liability. The safety instructions contained in the product documentation accompanying the product have to be observed. If apparatus is modified without having obtained the manufacturer's prior consent and/or if instructions are not followed, this declaration will become void.

La déclaration certifie la conformité avec les dispositions nommées, elle ne comporte cependant aucune garantie de caractéristiques dans le sens de la loi sur la responsabilité du producteur pour vice de la marchandise. Les instructions en matière de sécurité dans la documentation du produit, livrées avec le produit, sont à observer. En cas de modification de l'appareil n'ayant pas eu l'accord du fabricant et/ou cas de non-respect des instructions de sécurité, cette déclaration perd sa vigueur.