



(1) **EU-Type Examination Certificate**

- (2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 2014/34/EU**
- (3) Certificate number: **SEV 16 ATEX 0127 X**
- (4) Product: Solenoid coil Type M*Z45-***-***
- (5) Manufacturer: Wandfluh Hydraulik + Elektronik AG
- (6) Address: Helkenstrasse 13, 3714 Frutigen, Switzerland
- (7) The equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- (8) Eurofins, notified body No. 1258, in accordance with article 17 of Directive 2014/34/EU of the European parliament and of the council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in confidential report no 21CH-00734.X02
- (9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN IEC 60079-0:2018
EN 60079-11:2012
EN 50303:2000

Except in respect of those requirements listed at item 18 of the schedule.

- (10) If the sign «X» is placed after the certificate number, it indicates that the product is subjected to special conditions for safe use specified in the schedule to this certificate. The sign “U” is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.
- (11) This EU type examination certificate relates only to design and construction of the specified product. Further requirements of this directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- (12) The marking of the product shall include the following:

 I M1 Ex ia I Ma
II 2G Ex ia IIC T6 Ga
II 2G Ex ia IIC T5 Ga

Eurofins Electric & Electronic Product Testing AG
Notified Body ATEX

Martin Plüss
Product Certification

(13)

Appendix

(14)

EU-Type Examination Certificate no. SEV 16 ATEX 0127 X

(15) **Description of product**

The solenoid coils serve for actuation of hydraulic valves. At type M*Z45-*** the coil will be mounted on to the axial armature tube. The solenoid coils consist of a coil and a printed circuit board which are totally encapsulated inside a metal enclosure. The Group I version has optionally a connection box with terminals (type MKZ45-***) or with a connector (type MBZ45-***).

Classification of installation and use:	stationary
Ingress protection:	IP54
Rated ambient temperature range (°C):	-60 °C ≤ Tamb ≤ 60 °C (refer to table below)
Rated ambient temperature range (°C) for Ex Components:	N/A

Rated ambient temperature range:

Group and Temperature class	Permissible ambient temperature range		
	Type M238	Type 224	Standard type
Group I	-60 °C to +60 °C	-40 °C to +60 °C	-25 °C to +60 °C
Group IIC T5	-60 °C to +60 °C	-40 °C to +60 °C	-25 °C to +60 °C
Group IIC T6	-60 °C to +45 °C	-40 °C to +45 °C	-25 °C to +45 °C

Ratings:

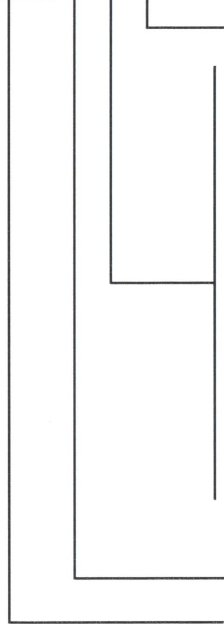
Supply and signal circuit in type of protection intrinsic safety Ex ia I respective Ex ia IIC, only for connection to a certified intrinsically safe circuit.
Maximum values:

Group I	Group IIC
$U_i \leq 30 \text{ V}$	$U_i \leq 30 \text{ V}$
$I_i \leq 3.25 \text{ A}$	$I_i \leq 0.8 \text{ A}$
$P_i \leq 7 \text{ W}$	$P_i \leq 3 \text{ W}$
$C_i = 0$	$C_i = 0$
$L_i = 0$	$L_i = 0$

Part number code:

Instead of the *** in the complete denomination letters or numerals will be inserted which characterize modifications:

Type M*Z45-***-***#



Change Index	Consecutive number	#2
Country specific certificate	None Inmetro Australia Nepsi Tbd (add if applicable)	Blank /IM /AUS /NP /tbd
Special version	None Mining (new Standard) -25 °C (Standard) -40 °C ambient -60 °C ambient Tbd (add if applicable)	Blank M233 Blank M224 M238 tbd
Corrosion protection	Zinc Nickel (Standard) AISI 316L	Blank -K9
Resistance	Ohm	-nnn
Electrical connection	Junction box Bajonett DIN-connector Deutsch-connector AMP Junior Timer	K B D G J

(16) **Report number** 21CH-00734.X02

(17) **Special conditions for safe use: Schedule of limitations**

For Group I types MBZ45-***, MDZ45-***, MGZ45-*** and MJZ45-*** the connector of the solenoid must be installed protected against impact.

(18) **Essential health and safety requirements**

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
None	

(19) **Drawings and Documents**

See test report "Manufacturer's Documents"