

## Type examination certificate

for the explosion protection “Simple electrical apparatus” according to chapter 5.7 of EN 60079-11:2012. According to ENTR/G/3/DE D(2003) of the European Commission, it does not come under Directive 2014/34/EU for equipment to be used in potentially explosive atmospheres.

Type examination certificate number **SILZ 21 EX 002 X**

Product: **Magnetic switch** Type: **RCM-EX...**

Manufacturer: Reed Electronics AG, Gewebering 2, CH-6105 Schachen, Switzerland

The electronics engineer Dipl.-Ing. (FH) Wilfried Silz with 33 years of experience in examining explosion-protected devices – especially with intrinsic safety “Ex i” – certifies that these products comply with the following harmonized standards:

**EN IEC 60079-0:2018 EN 60079-11:2012**

These standards were communicated by the European Commission as part of the implementation of Directive 2014/34/EU.

The results of the examinations are recorded in the confidential test report SILZ 21B002.

The products are voluntarily marked with the following data:

**Ex ia IIC T6...T4 Ga Ex ia IIIC T135°C Da Ex ib IIIC T135°C Db**

### Description of the products

The magnetic switches have a wide range of applications in potentially explosive areas. An external magnet switches the build-in reed contact when it approaches. Resistors can also be build-in.

### Technical data

Ambient temperature range  $T_a$  from  $-20\text{ °C}$  to  $+80\text{ °C}$  optionally up to  $125\text{ °C}$

#### Intrinsic safety data

Ex ia IIC T6...T4 Ga, Ex ia IIIC T135°C Da und Ex ib IIIC T135°C Db

Maximum applied voltage	$U_i = 30\text{ V}$
Maximum fed current	$I_i = 300\text{ mA}$
only with Ex ia IIIC T135°C <u>Da</u>	$I_i = 250\text{ mA}$
Maximum fed power is only limited if resistors are build in	$P_i$ acc. to tables
Internal capacity is negligible	$C_i = 0$
Internal inductivity is negligible	$L_i = 0$
Cable capacity: Conductor - Conductor	$C_c = 100\text{ pF/m}$
Cable inductivity: Conductor - Conductor	$L_c = 1\text{ µH/m}$

The connections are safely insulated from earth.

Intrinsic safety data Ex ia IIC T6 Gadepending on the ambient temperature  $T_a$ , which is limited to 68 °C:

$T_a$	to 32 °C	40 °C	50 °C	60 °C	68 °C
$P_i$	0.4 W	0.33 W	0.25 W	0.16 W	0.1 W

## Intrinsic safety data

Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da and Ex ib IIIC T135°C Db  
depending on the ambient temperature  $T_a$ , which is limited to 80 °C  
(optionally up to 125 °C):

$T_a$	to 70 °C	80 °C	90 °C	100 °C	110 °C	120 °C	125 °C
$P_i$	0.4 W	0.353 W	0.306 W	0.259 W	0.212 W	0.165 W	0.1 W

**In addition to EN 60079-14, the following must be observed for the safe use of the products:**

1. The metal housing requires an earth contact to dissipate electrostatic charges.
2. In the case of an aluminium housing, ignitable sparks are possible due to impact.  
This must be considered when installing in zone 0.

SILZ – Engineering office: Buchtalstraße 11, D-72461 Albstadt, June 1, 2021

Dipl.-Ing. (FH) Wilfried Silz



Original only valid with hologram