

NON-HAZARDOUS AREA

SPDT reed switch has 3 wires
 SPST reed switch has 2 wires

Normally closed
 Normally Open
 Common

$U_i \Rightarrow U_o$
 $I_i \Rightarrow I_o$
 $P_i \Rightarrow P_o$
 $L_i + L_{cable} \leq L_o$
 $C_i + C_{cable} \leq C_o$

Reed Switch Specifications:

	SPDT	SPST
Switching voltage:	170 VDC	200 VDC
Breakdown voltage:	200 VDC	250 VDC
DC Resistive:	3 Watts	10 Watts
AC Resistive:	3 Watts	10 Watts
Switching current:	0.25 A	0.5 A
Carrying Current:	1.5 A	1.2 A

Recommendations:

- Customer should always use a barrier to limit the energy supplied to the device.
- Customer should always provide full details on their application to Malema.
- The device should always be grounded.
- Wiring method should be in accordance with electrical code requirements of the country of end use based on class/group classification.
- Do not Parallel Associate Apparatus unless Permitted by associated apparatus approval.

**MALEMA FLOW SENSORS
 CONFIDENTIAL**

UNAUTHORIZED USE, MANUFACTURE OR REPRODUCTION IN WHOLE OR IN PART IS PROHIBITED. DRAWINGS AND ALL OTHER DISCLOSURES ARE PROPERTY OF MALEMA ENGINEERING CORPORATION.

HAZARDOUS AREA

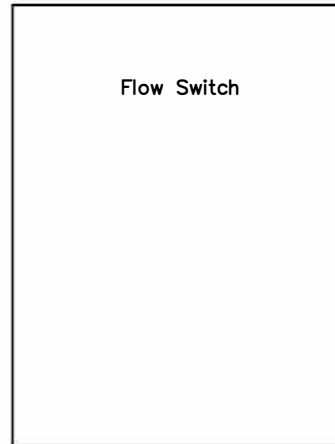
SPDT and SPST reed switch
 Hermetically Sealed

(Zone 0, Group IIC)
 (Zone 20, Group IIIC)

WIRE OR CABLE LENGTH SHOULD NOT EXCEED ENTITY PARAMETERS CRITERIA.
 AWG 24 to 18, 1180 UL

CUSTOMER INSTALLS APPROPRIATE CABLE GLAND AND CONDUIT. See note 1

M-50X Series, M-60X Series, M-100X Series and M-200X Series



CABLE GLAND CONNECTION

Please refer to Malema's Data Sheets for additional details on Body type, Connection size and type.

Atex Certificate:

No:
 DEMKO 19 ATEX 2278X
 DEMKO 19 ATEX 2270X

UL Certificate:

No:
 NOIV8.E153446
 NKPZ8.E138467

ENTITY PARAMETERS

Maximum voltage (U_i)	30 V
Maximum allowable current (I_i)	0.5 A
Total capacitance of Circuit Allowable (C_i)	40 pF
Total inductance of Circuit Allowable (L_i)	4 μ H
Total Power of Circuit Allowable (P_i)	0.7 W

Epoxy: Duralco 4461

ATEX Certificate: DEMKO 19 ATEX 2270X -40°C ≤ T-Amb. ≤ +145°C

IECEX Certificate: No. UL13.0065X -40°C ≤ T-Amb. ≤ +145°C

Intrinsically Safe
 Ex ia IIC T6...T3 Ga
 Ex ia IIIC T80°C...T150°C Da

Intrinsically Safe
 Ex ia IIC T6...T3 Ga
 Ex ia IIIC T80°C...T150°C Da

UL Ratings:

Class I, Groups A-B-C-D

UL Ratings:

Class II, Groups E-F-G

UL Ratings:

Class I, Groups C-D

Except M-200X series

ALL

Only M-200X series

Note 1: Where the cable capacitance and inductance per foot are not known, the following values shall be used: $C_{cable} = 60$ pF/ft., $L_{cable} = 0.2$ μ H/ft."

Conditions of safe use

To ensure suitability for Group III, these switches must be used with a cable fitting having an IECEX/ATEX certification with a minimum IP5X rating.

Warning - Enclosure contains aluminum. Care must be taken to avoid ignition due to impacts or friction.

Only the SS316, Brass 360, Monel K500, and Hasteloy C276 are IEC certified.

Applicable Standards:

IEC 60079-0 6th, IEC 60079-11 6th
 EN 60079-11 and EN 60079-0

PART NAME	SCALE	SHEET
EX-PROOF FLOW SWITCHES	--	1 OF 1

PART NO. & DWG NO.	REV	MATERIAL
EXPLOSION PROOF SWITCHES	005	NA

DRN.	DATE	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES IN
RD	03/14/23	.X ±.03
CHK'D	DATE	.XX ±.01
KJ	03/14/23	.XXX ±.005
APP'D	DATE	ANGLES ± 1°
US	03/14/23	



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