

SD2EX-B2

7/8-14 UNF • Q_{max} 45 l/min (12 GPM) • p_{max} 350 bar (5100 PSI)



Technical Features

- › Valve and solenoid design prevents a surface temperature capable of igniting
- › Solenoid coil in acc. with directive 94/9/EC (ATEX) for explosion-hazard zones
- › Explosion protection for gas, dust and mining, Solutions for all zones
- › Encapsulation enclosure solenoid version
- › Hardened and precision working parts
- › High flow capacity and high transmitted hydraulic power
- › All ports may be fully pressurised
- › Wide range of manual overrides available
- › Coil interchangeability with all Argo-Hytos ATEX/IECEX product line
- › In the standard version, the valve is zinc coated for 520 h protection acc. to ISO 9227

Technical Data

Valve size / Cartridge cavity		7/8-14 UNF-2A / B2	
Max. flow	l/min (GPM)	45 (11.9)	
Max. operating pressure	bar (PSI)	350 (5080)	
Fluid temperature range	°C (°F)	-30 ... +70 (-22 ... +158)	
Max. switching frequency	1/h	15 000	
Weight with coil	kg (lbs)	1,59 (3.51)	
Technica Data - Explosion proof Solenoid			
Voltage type		AC 50 / 60 HZ	DC
Available voltages	V	110, 230	12, 24, 48, 110
Available nominal power	W	10	
Supply voltage tolerance	%	AC, DC ± 10	
Duty cycle		S1 (100%ED)	
Enclosure type of the Solenoid to EN 60529		IP 65	
Weight (solenoid only)	kg (lbs)	1,3 (2.87)	
Ambient temperature range			
Temperature class / Nominal power	T4 / 10 W	°C (°F)	-30 ... +70 (-22 ... +158)
	T5 / 10 W		-30 ... +55 (-22 ... +131)
	T6 / 10 W		-30 ... +45 (-22 ... +113)

ATEX/IECEX Classification

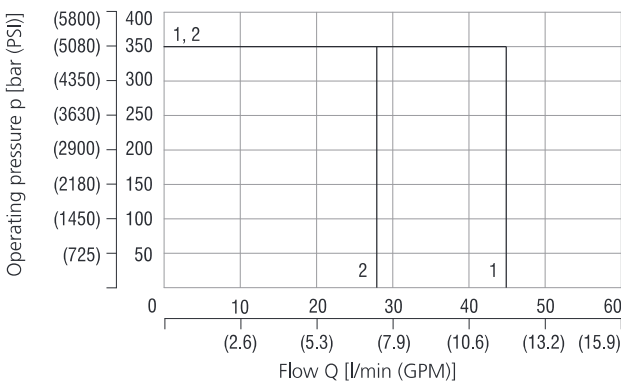
	EPS14ATEX1744 X
AC	Ex I M2 Ex mb I Mb
	Ex II 2G Ex mb IIB T4, T5, T6 Gb
	Ex II 2D Ex mb IIIC T135°C, T100°C, T85°C Db
DC	Ex I M2 Ex e mb I Mb
	Ex II 2G Ex e mb IIB T4, T5, T6 Gb
	Ex II 2D Ex tb IIIC T135°C, T100°C, T85°C Db
	IECEX EPS14.0064 X
AC	Ex mb I Mb
	Ex mb IIB T4, T5, T6 Gb
	Ex mb IIIC T135°C, T100°C, T85°C Db
DC	Ex e mb I Mb
	Ex e mb IIB T4, T5, T6 Gb
	Ex tb IIIC T135°C, T100°C, T85°C Db

	Data Sheet	Type
General information	GI_0060	products and operating conditions
Coil types	C_8007	74 EX 18
Bodies for valves	In-line mounted	SB_0018
	Sandwich mounted	SB-04(06)_0028
Cavity details / Form tools	SMT_0019	SMT-B2*
Spare parts	SP_8010	SMT-B2*

Characteristics measured at v = 32 mm²/s (156 SUS)

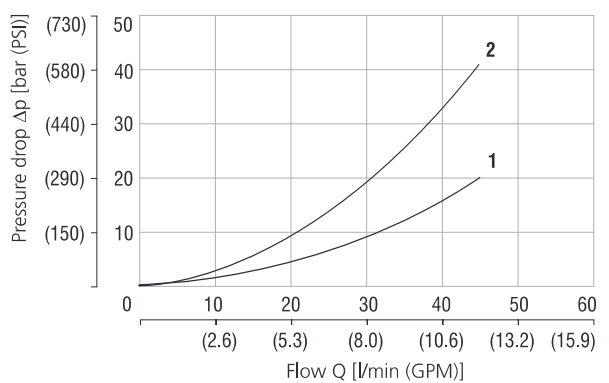
Operating limits

Ambient temperature 70 °C (158 °F), Voltage U_n -10% (24 VDC), Power P_n 10 W



	Connection	Direction
1	2I11	2→1
2	2I12	2→1

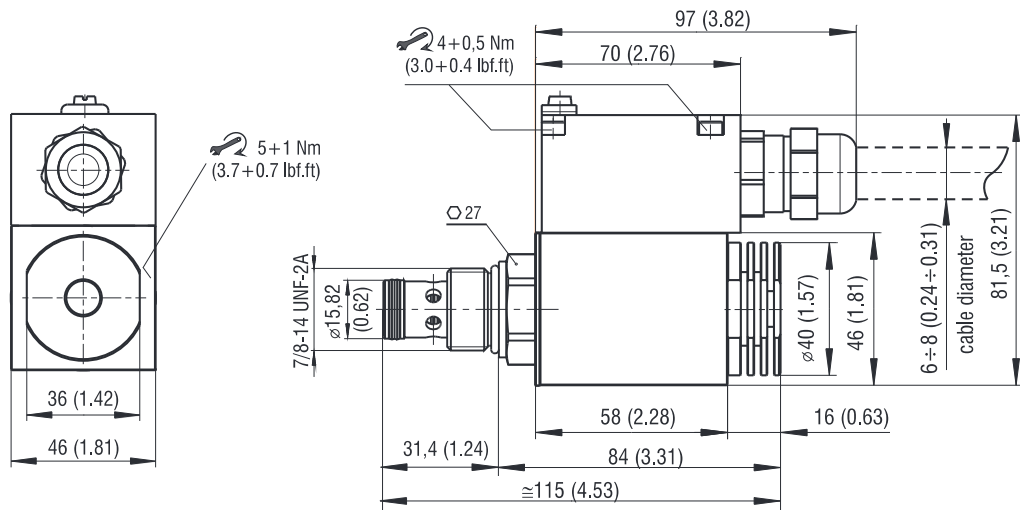
Pressure drop related to flow rate



	Connection	Direction
1	2I11	2→1
2	2I12	2→1

Operating limits in other than shown directions consult with our technical department.

Dimensions in millimeters (inches)



Manual Override in millimeters (inches)

No designation - standard	M9 - without manual override

In the case of solenoid malfunction or power failure, the spool of the valve can be shifted by manual override, provided the pressure in T - port does not exceed 25 bar (363 PSI).
For other manual overrides consult our technical department.


Ordering Code




SD2EX-B2 / <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/>	
Explosion-proof, 2/2 Directional Valve, Solenoid Operated, Spool Type, Direct-Acting 7/8-14 UNF	
High performance	H
Description	
	2I11
	2I12
DC voltage	
Connection box + Cable gland	
12 V DC / 0,75 A	01200
24 V DC / 0,39 A	02400
48 V DC / 0,19 A	04800
110 V DC / 0,094 A	11000
AC voltage 50/60 Hz	
Fix Installed cable	
110 V AC / 0,112 A	11050
230 V AC / 0,052 A	23050
Surface treatment	B 520 h salt spray test (ISO 9227)
Seals	No designation NBR
Manual override	No designation M9 standard without manual override
Cable length	No designation (only for DC) 3 (AC and DC Version) 3000 mm 8 (AC and DC Version) 8000 mm
Temperature class - Solenoid nominal power	A4 A6 Class T4 - 10W Class T6 (T5) - 10W

Besides the valve versions shown, which are the most frequently used, other special versions are available: consult our technical department for their identification, feasibility and operating limits.

Samples of Marking


Marking of Solenoid




74 EX18 046A A024
UN=24VDC Ig=0,34A R20=61,8Ω
IP65  0408

EPS14ATEX1744 X
 I M2 Ex e mb I Mb
 II 2G Ex e mb IIB T4 Gb
 II 2D Ex tb IIIC T135°C Db
IECEX EPS14.0064 X
Ex e mb I Mb
Ex e mb IIB T4 Gb
Ex tb IIIC T135°C Db

-40°C ≤ Tamb ≤ +70°C

1234/01
02/14

74 EX18 046A A024
UN=24VDC Ig=0,34A R20=61,8Ω
IP65  0408

EPS14ATEX1744 X
 I M2 Ex e mb I Mb
 II 2G Ex e mb IIB T6 Gb
 II 2D Ex tb IIIC T85°C Db
IECEX EPS14.0064 X
Ex e mb I Mb
Ex e mb IIB T6 Gb
Ex tb IIIC T85°C Db

-40°C ≤ Tamb ≤ +45°C

1234/01
02/14

Initial installation

- › The ambient temperature range shall not overstep the temperatures given in the chapter Technical Data - Explosion proof solenoid (page 1). The maximum temperature of the medium (generally hydraulic fluid) shall not exceed 70 °C (158 °F).
- › It is the users duty to ensure free and unhindered heat emission during operation. This means that the solenoid shall neither be covered nor stored immediately adjacent to heat sources (e.g. fan heaters) during operation.
- › Care is to be given that the solenoid is not subjected to direct sunlight during operation.

Installation notice - installation, mounting, demounting

- › Installing the type VDC for temperature class T4 a cable with an ambient operating temperature of at least +105 °C (+221°F) is to be used. For T5 and T6 a cable with an ambient operating temperature of at least +90 °C (+194°F) is sufficient. The fastening torque on the cable gland depends of the used cable and is to be determined by installing user.
- › When installing the VDC solenoid type, please note the fastening torque of the screws (4 Nm or 2.95 Lbf.ft) and of the Connection box (0,4 Nm or 0.30 Lbf.ft).
- › When installing the VDC solenoid type, an appropriate cable shoe M3 - 0,75 mm² (with an ambient operating temperature of at least +105 °C or +221°F) is to be used.
- › The user has to safeguard each solenoid with a fuse: IN ≤ 3xIG, with tigger characteristic "slow blow". The breaking capacity of the fuse link has to be stronger than the max short circuit current at the users operating area.
- › EX-secured components must be used during mounting in case the fuse and/or the interface are within the EX-range.
- › In addition, the solenoid may be connected to ground via the purpose-built ground clamp an the connector casing.

Safety notice - Please read carefully

- › In case the solenoid shows any signs of a defect, malfunctioning or external damage (including corrosion), the device must immediately be taken out of operation.
- › Any deposits on the surface of the device shall not obstruct heat emission.
- › To maintain legibility of the date plate, the solenoid must not be coated.

Caution

- › Always disconnect the solenoid from the power supply before any maintenance or other work on it.
- › Always exchange the complete solenoid. Do not try to repair the solenoid.
- › In no case shall any changes be made to the solenoid or the connecting cable.
- › Demount the solenoid only in secure areas (not in EX-areas). If this is not possible, the solenoid must cool for 10 minutes minimum.



