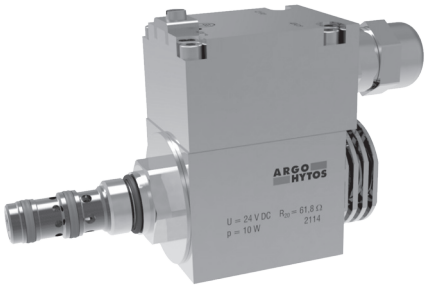
SD1EX-A3

3/4-16 UNF • Q_{max} 30 l/min (8 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
- High flow capacity and transmitted hydraulic power up to 350 bar
- Hardened and precision working parts
- All ports may be fully pressurised
- In the standard version, the valve is zinc-coated for 720 h protection acc. ISO 9227

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

Technical Data

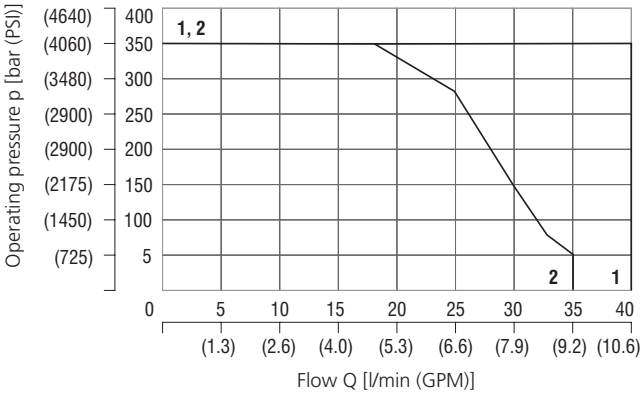
Valve size / Cartridge cavity			3/4-16 UNF-2A / A3	
Max. flow		l/min (GPM)	30 (7.9)	
Max. operating pressure		bar (PSI)	350 (5080)	
Pressure drop		bar (PSI)	see Δp-Q characteristics	
Fluid temperature range		°C (°F)	-30 ... +70 (-22 ... +158)	
Max. switching frequency		1/h	15 000	
Weight with coil		kg (lbs)	1,51 (3.33)	
Technica Data - Explosion proof Solenoid				
Voltage type			DC	AC 50 / 60 HZ
Available voltages		V	24, 48, 110	110, 230
Available nominal power		W	10	
Supply voltage tolerance		%	DC, AC ± 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)	

Accessories		Data Sheet	Type
Coil types		C_8007	74 EX 18
Bodies for valves	In-line mounted	SB_0018	SB-A3*
	Sandwich mounted	SB-04(06)_0028	SB-*A3*
Cavity details / Form tools		SMT_0019	SMT-A3*
Spare parts		SP_8010	

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

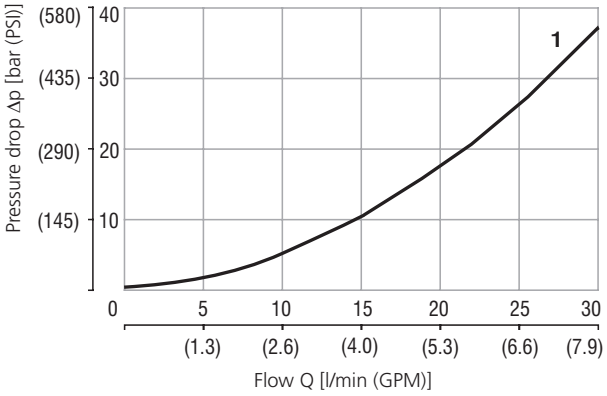
Ambient temperature 70 °C (158 °F), Voltage U_n -10% (24 VDC), Power P_n 10 W

Operating limits



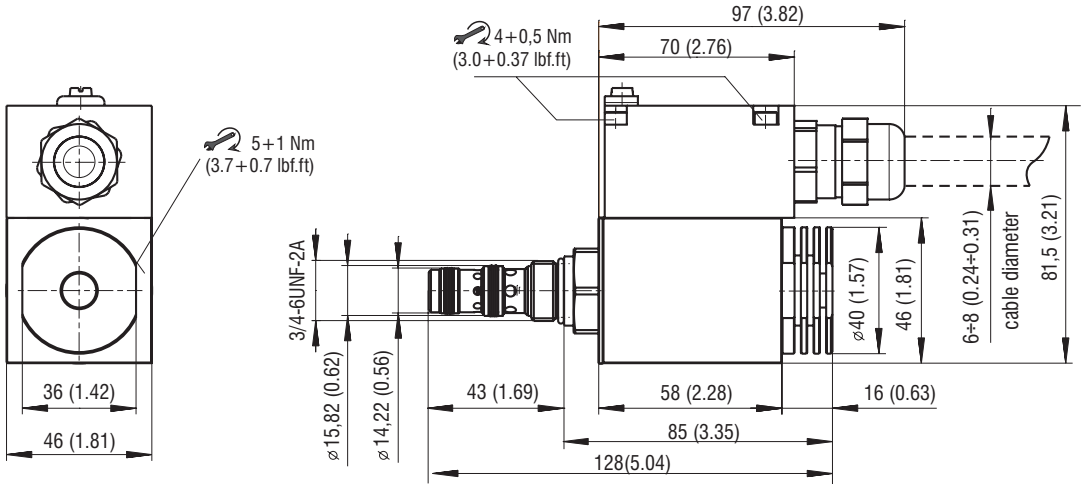
Direction	2→3	3→2	2→1	1→2
	1	2	2	2

Pressure drop Δp related to flow rate



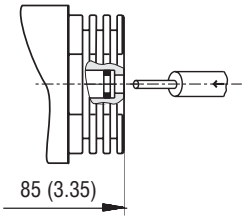
	Connection	Direction
1	2S7	1→2, 2→1, 2→3, 3→2

Dimensions in millimeters (inches)



Manual Override in millimeters (inches)

No designation
- standard



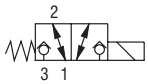
Ordering Code

SD1EX-A3 / ☐ ☐ ☐ ☐ ☐ ☐ ☐ - ☐

Explosion-proof 3/2 Poppet, Directional Control Valve, Solenoid-Operated 3/4-16 UNF

High performance **H**

Description



2S7

DC voltage
Connection box + Cable gland

24 VDC	**02400**
48 VDC	**04800**
110 VDC	**11000**
AC voltage 50/60 Hz	
Fix Installed cable	
110 VAC	**11050**
230 VAC	**23050**

Temperature class - Solenoid nominal power

A4	Class T4 - 10W
A6	Class T4(T5) - 10W

Cable lenght

No designation	(only for DC)	without cable
3	(only for AC)	3 m
8	(only for AC)	8 m

Manual override

No designation	standard

Seals

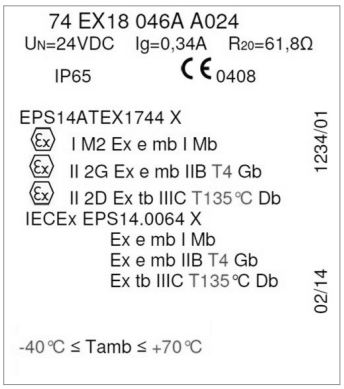
No designation	NBR

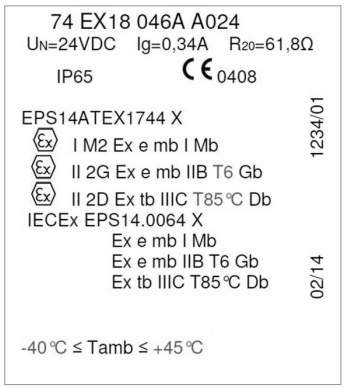
Surface treatment

B	720 h salt spray test (ISO 9227)

Samples of Marking

Marking of Solenoid





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 not stored immediately adjecent 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 a 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 nust 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.