

Technical Features

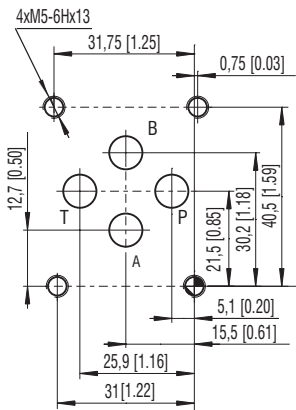
- › Valve and solenoid design prevents a surface temperature capable of igniting
- › Solenoid coil in acc. with directive 94/9/EC (ATEX) for explosion-hazard zones
- › High flow capacity and transmitted hydraulic power up to 350 bar
- › 4/3 and 4/2 directional spool valve
- › Variety of optional spools connections
- › In the standard version, the valve housing and steel parts are zinc-coated for 720 h protection acc. ISO 9227
- › Mounting surface according to ISO 4401, DIN 24340 (CETOP RP121H) standards

ATEX/IECEx Classification

The valves equipped with explosion-proof solenoids are available with following certifications and protection modes:

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

ISO 4401-03 (CETOP 03)



Ports P, A, B, T - max Ø7,5 mm [0.29 in]

Technical Data

Valve size		06 (D03)	
Max. flow	l/min (GPM)	see p-Q characteristics	
Max. operating pressure at ports P, A, B	bar (PSI)	standard 350 (5080)	
Max. operating pressure at ports T	bar (PSI)	210 (3050)	
Pressure drop	bar (PSI)	see Δp-Q characteristics	
Fluid temperature range for NBR seals	°C (°F)	-30 ... +70 (-22 ... +158)	
Supply voltage tolerance	%	DC: ± 10	AC: ± 10
Max. switching frequency	1/h	15 000	
Switching time ON at v=32 mm ² /s (156 SUS)	ms	DC: 30 ... 50	AC: 30 ... 40
Switching time OFF at v=32 mm ² /s (156 SUS)	ms	DC: 10 ... 50	AC: 30 ... 70
Weight	valve with 1 solenoid	2,52 (5.56)	
	valve with 2 solenoids	3,97 (8.75)	
Technical 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: ± 10	AC: ± 10
Duty cycle		(100%ED)	
Enclosure type of the Solenoid to EN 60529		IP 65	
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 / Connectors	C_8007	74 EX 18	
Mounting surface	SMT_0019	Size 06	
Subplates	Subplates_0002		
Spare parts	SP_8010		

Ordering Code

RPEX3-06

Explosion-proof,
Directional Control
Valve, Solenoid-Operated

Valve size

Number of valve positions

two positions **2**
three positions **3**

Spool symbols

see the table Spool Symbols

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**

Surface treatment
B 720 h salt spray test (ISO 9227)

No designation

Seals
NBR

No designation

Manual override
standard

No designation (only for DC)

3 (for DC or AC)
8 (for DC or AC)

Cable length
without cable

3 m
8 m

Temperature class - Solenoid nominal power

A4
A6

Class T4 - 10 W
Class T6 (T5) - 10 W

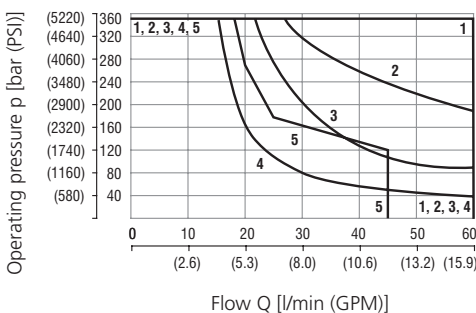
Spool Symbols

Type	Symbol	Interposition	Type	Symbol	Interposition	Type	Symbol	Interposition
Z11			Y11			B71		
C11			R30					
H11			X30					

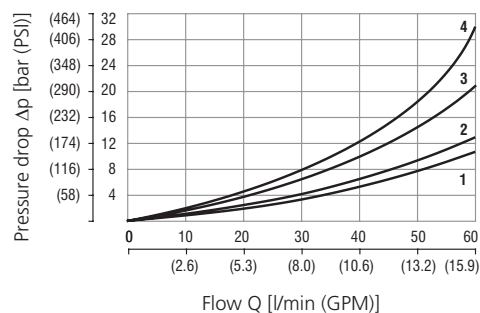
Characteristics measured at $v = 32 \text{ mm}^2/\text{s}$ (156 SUS)

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

Operating limits



Pressure drops Δp -Q



Z11	2	C11	5
Y11	3	R30	1
H11	4	X30	1
B71	4		

	P→A	P→B	A→T	B→T	P→T		P→A	P→B	A→T	B→T	P→T
Z11	1	1	2	2		Y11	1	1	1	1	
C11	3	3	3	4	2	R30	1	1	2	2	
H11	1	1	1	2	2	X30	1	1	2	2	
B71	1			1							

Samples of Marking

Marking of Solenoid

74 EX18 046A A024
 $U_N=24VDC$ $I_g=0,34A$ $R_{20}=61,8\Omega$
 IP65 **CE** 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

1234/01
 02/14

$-40^\circ C \leq T_{amb} \leq +70^\circ C$

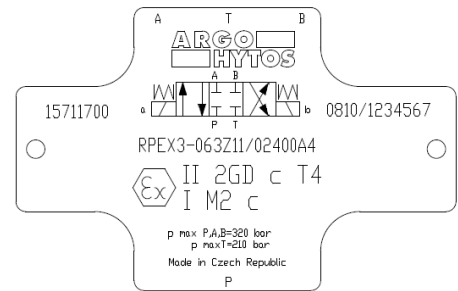
74 EX18 046A A024
 $U_N=24VDC$ $I_g=0,34A$ $R_{20}=61,8\Omega$
 IP65 **CE** 0408

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

1234/01
 02/14

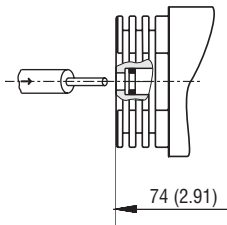
$-40^\circ C \leq T_{amb} \leq +45^\circ C$

Marking of Body



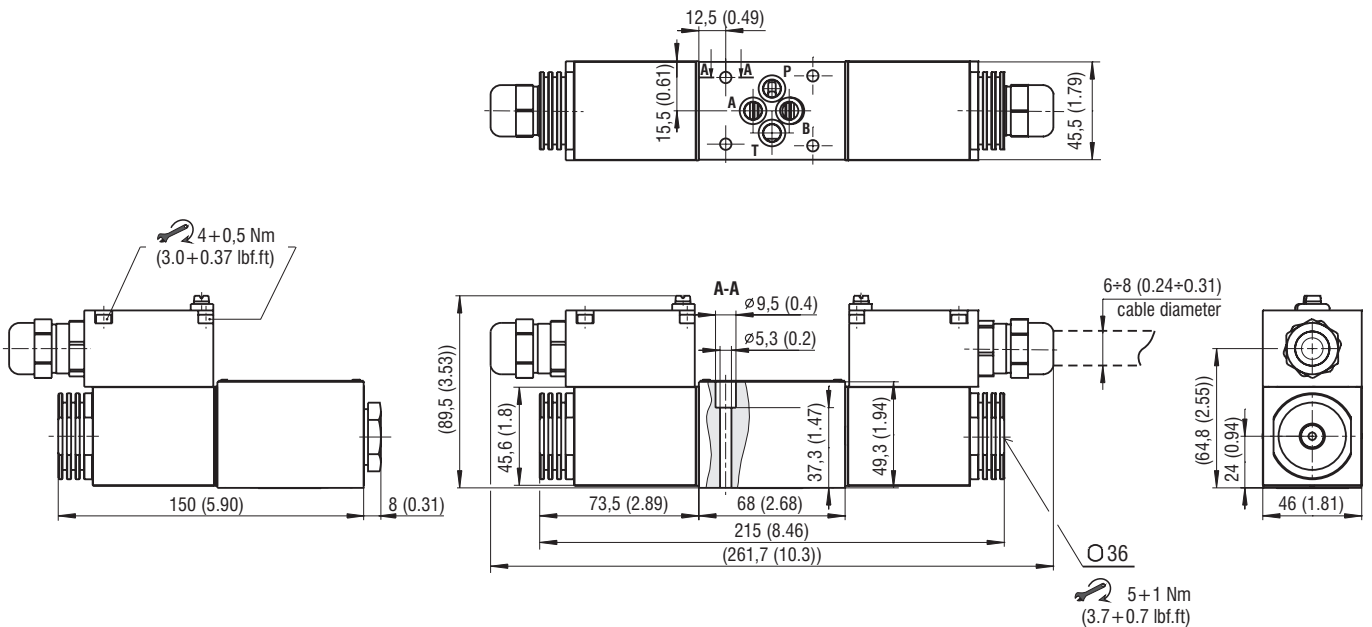
Manual Override in millimeters (inches)

No designation
 - standard



Standard model of the manual override.
 Standard retaining nut of the solenoid.

Dimensions in millimeters (inches)



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.

