ABB Service Manual

V18345-1027420001

1. Description

V18345-1027420001

3. Product Information

V18345-1027420001 | ABB | Electro-Pneumatic Positioner

Manufacturer : ABB

Product No. : V18345-1027420001

Product Type : Electro-Pneumatic Positioner

Case / Mounting : 1 = Case made of aluminium, varnished,protection IP 65 (NEMA 4X) for mounting to linear actuators acc. to DIN/IEC 534 / NAMUR or to rotary actuators acc. to VDI/VDE 3845 also ready for integral mounting

0

Input / communication port : 1 = Input 4...20 mA, two-wire with connector plug for LKS adapter

Explosion protection : 7 = GOST Russia Ex II 2 G EEx ib II C T6

Output / safe position (in case of an electrical power failure) : 4

Double acting

Fail safe

Connections : 2

Cable : Thread 1/2-14 NPT

Air pipe : Thread 1/4-18 NPT

Option modules for analog or digital position feedback : 0 = Without

Optional mechanical kit for digital position feedback : 0 = Without

0

Design (varnish / coding) : 1 = Standard

Dimensions (D x W x H) : 16.85 cm x 9.29 cm x 8.95 cm

Weight : 1.70 Kg

Input

Signal

Two_x0001_wire technology

Nominal range 4...20 mA

Split range configuration between 20% and 100% of the

nominal range

Max. 25 mA / 30 V

Min. 3.4 mA (without analog pos. feedback)

3.5 mA (with analog pos. feedback)

Start from 3.8 mA

Load voltage at 20 mA 8.7 V DC without explosion protection

9.7 V DC for intrinsically safe device

Impedance at 20 mA 435 ohms without explosion protection

485 ohms for intrinsically safe device

Digital input

Control voltage 24 V DC (12...30 V DC)

0...10 V DC: Logical “0“

12...30 V DC: Logical “1“

Current max. 4 mA

Digital output (control circuit to DIN 19234/NAMUR)

Supply voltage. 5...11 V DC

Current < 1.0 mA Logical “0“

Current > 2.0 mA Logical “1“

Effective direction: normally logical “0“ or logical “1“

(configurable)

Output

Range

0...6 bar (0...90 psi)

Air capacity

at supply pressure of 1.4 bar (20 psi)

5.0 kg/h = 3.9 Nm3/h = 2.3 scfm

at supply pressure of 6 bar (90 psi)

13 kg/h = 10 Nm3/h = 6.0 scfm (Booster on request)

Output function

for single or double acting actuators,

air is vented from actuator or actuator is blocked in case of electrical

power failure

Shut-off values

end position 0 % = 0...45 %

end position 100 % = 55...100 %

Travel

Angle of rotation

Used range 25...120 ° (rotary actuators, optionally 270 °)

25...60 ° (linear actuators)

Travel limit

Min. and max. limits,

freely configurable within 0...100 % of total travel (min. range > 20 %)

Travel time prolongation

Range of 0...200 seconds, separately for each direction

Positioning time limit

Range 0...200 seconds (monitoring parameter for control until the

deviation reaches the tolerance band)