ABB Service Manual

V18345-1021420001

1. Description

ABB Part Number: V18345-1021420001

3. Product Information

ABB Part Number: V18345-1021420001

Model: V18345 Electro-Pneumatic Positioner

Manufacturer: ABB

Condition: New & Original in Factory Packing

Factory Warranty: 12 Months

Model and Suffix Codes

Model V18345 TZIDC Electro-Pneumatic Positioner, intelligent, configurable, with indicator and operator panel

Case/Mounting 1 0 = Case made of aluminium, varnished, for mounting to linear actuators acc. DIN / IEC 534 / NAMUR or to rotary actuators acc. VDI / VDE 3845

Input / Communication Port: 2= Input 4 ... 20 mA, two-wire, with connector plug for LKS adapter and FSK module for HART communication

Explosion Protection: 1= ATEX II 2 G Ex ib IIC T6 resp. T4 Gb

Output / Safe Position (in case of an electrical power failure) :4 = Double acting, fail safe[1]

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: 00= Without

Option Modules for Analog or Digital Position Feedback: 1= Plug-in module for analog position feedback, signal range 4 ... 20 mA, two-wire

Input

Output signal (two-wire technology)

Nominal range 4 ... 20 mA

Split range configuration

between 20 ... 100 %

of the nominal range

Max. 25 mA

Min. 3.6 mA

Starting at 3,8 mA

Load voltage at 20 mA 9,7 V

Impedance at 20 mA 485 Ω

Digital input

Control voltage 0 ... 5 V DC logical switching

state "0"

11 ... 30 V DC logical switching

state "1"

Current max. 4 mA

5.2 Output

Compressed air output

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

Air capacity 5.0 kg/h = 3.9 Nm^3/h = 2.3 sfcm

at 1.4 bar (20 psi) supply pressure

13 kg/h = 10 Nm^3/h = 6,0 sfcm

at 6 bar (90 psi) supply pressure

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 %

Digital output (control circuit to DIN 19234/NAMUR)

Supply voltage 5 ... 11 V DC

Current > 0.35 mA ... < 1.2 mA Switching state logical "0"

Current > 2.1 mA Switching state logical "1"

Effective direction (configurable) normally logical "0" or logical "1"

5.3 Travel

Rotation angle

Used range 25 ... 120 (rotary actuators,

optional 270°)

25 ... 60 ° (linear actuators)

Travel limit Min. and max. limits, freely

configurable between

0 ... 100 % of total travel (min.

range > 20 %)

Travel time prolongation Range of 0 ... 200 seconds,
separately for each direction
Dead band time limit Range 0 ... 200 seconds
(monitoring parameter for
control until the deviation
reaches the tolerance band)