ABB Service Manual

V18345-1010221001

1. Description

V18345-1010221001

2. Specifications

Specification	Value
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	

3. Product Information

V18345-1010221001 | ABB | Valve Positioner

Manufacturer : ABB

Product No. : V18345-1010221001

Product Type : Valve Positioner

TZIDC-120 Intelligent Positioner : V18345 = Intelligent, configurable with indicator and operator panel

Optional mechanical kit for digital position feedback : 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 = Always 0

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

Explosion protection : 0 = without

Output / safe position (in case of an electrical power failure) : 2 = Single acting, fail freeze

Connections : 2 = Cable: Thread 1/2-14 NPT; Air pipe: Thread 1/4-18 NPT

Option modules for analog or digital position feedback : 1 = Plug-in module analog position feedback (sign. range 4 ... 20 mA)

Optional mechanical kit for digital position feedback : 0 = without

0 = Always 0

Design (varnish / coding) : 1 = Standard

Technical data

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 %