

ABB V18345-2010421001 Manual

Brand	ABB
Product Series	Sheet27
Product Type	TZIDC Electro-Pneumatic Positioner

Description

V18345-2010421001 | ABB | TZIDC Electro-Pneumatic Positioner

Manufacturer : ABB

Product No. : V18345-2010421001

Product type : TZIDC Electro-Pneumatic Positioner

V18345 : TZIDC = intelligent, configurable with indicator and operator panel

Case / Mounting : 2 = 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 as above, but with mechanical position indicator

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

Explosion protection : 0 = without

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 : 1 = Plug-in module analog position feedback (sign. range 4 ... 20 mA)

Optional mechanical kit for digital position feedback : 0 = without

Design (varnish / coding) : 1 = Standard

Output signal (two-wire technology) Nominal range : 4 ... 20 mA

Digital input : Control voltage 0 ... 5 V DC logical switching state "0" 11 ... 30 V DC logical switching state "1"

Digital output (control circuit to DIN 19234/NAMUR) Supply voltage : 5 ... 11 V DC

Supply pressure : 1.4 ... 6 bar (20 ... 90 psi)

Air consumption : < 0.03 kg/h / 0.015 scfm (independent of supply pressure)

Housing Material/Protections : Aluminum, protection class IP 65 / NEMA 4X

Surface/color : Electrostatic dipping varnish with epoxy resin, stove-hardened. Case varnished black, RAL 9005, matte, housing cover Pantone 420.

Pneumatic connections : Threads G 1/4 or 1/4-18 NPT

Weight : 1.7 Kg

Options

Module for analog position feedback1

Range 4...20 mA (configurable split ranges)

Two_x0001_wire circuitry, power supply 24 V DC (10...30 V DC)

48 V DC (20...48 V DC,

no explosion protection)

Action direct or reverse (configurable)

Characteristic deviation < 1 %

Note: Without a signal from the positioner (e.g. no energy or initializ_x0001_ing) the module sets the output to > 20 mA (alarm level)

Module for digital position feedback1

2 switches for digital position feedback (position adjustable within the range of 0...100%, ranges cannot overlap)

Current circuits to DIN 19234/NAMUR

Supply voltage 5...11 V DC

Signal current < 1.0 mA Logical "0"

Signal current > 2.0 mA Logical "1"

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

Module for the shutdown function2

Supply voltage 24 V DC (20...30 V DC)

(el. isolated from input signal)

Safe position is activated when voltage < 5 V

AK approval AK 4 to DIN V 19250

Test report No. 101/S01/148

Explosion protection see certificates (operating instr.)

SIL see page 8

A separate 24 V DC signal is normally applied to the shutdown module, which connects through the signal from the microprocessor to the I/P module. When the 24 V DC signal is interrupted, the I/P module executes the respective safety function, depending on the mechanical construction.

Fail-safe:

The positioner output 1 is depressurized, and the valve is moved to the safe position. In case of a double-acting actuator the second output is additionally pressurized.

Fail-freeze:

The pneumatic output 1 is closed, and the valve "freezes" in its current position. In case of a double-acting actuator both outputs are closed.

The shutdown module works independently of the mother board, i.e. all information from the final control element is available in the supervisory process control system at any time.

Digital position feedback with proximity switches

Two proximity switches for independent position signaling

Switching points adjustable between 0 and 100 %

Current circuits to DIN 19234/NAMUR

Supply voltage 5...11 V DC

Signal current < 1 mA Logical "0"

Signal current > 2 mA Logical "1"