

V18345-2010421001

TZIDC Digital Electro-Pneumatic Positioner

ABB V18345-2010421001 is a TZIDC positioner that converts a 4-20 mA setpoint into double-acting fail-safe pneumatic actuator movement.

| IDENTITY      | VERIFIED VALUE                                                                   |
|---------------|----------------------------------------------------------------------------------|
| Manufacturer  | ABB                                                                              |
| System family | ABB TZIDC digital valve-positioning system                                       |
| Part number   | V18345-2010421001                                                                |
| Product role  | Converts a 4-20 mA two-wire setpoint into controlled pneumatic actuator movement |
| Lifecycle     | Installed product record                                                         |

DOCUMENT SCOPE

Exact-article identity, technical data, host role, installation checks, applications, precautions and engineering verification.

MODEL-SPECIFIC ENGINEERING NOTE

Match the NAMUR or VDI/VDE 3845 mounting, 4-20 mA polarity, NPT air connections and analog feedback loop. Run Auto Adjust and prove controlled fail-safe travel.

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# Technical Specifications

Technical values below are limited to the named ABB product record and directly applicable manufacturer documentation.

| PARAMETER                | VALUE                                             | PARAMETER            | VALUE                         |
|--------------------------|---------------------------------------------------|----------------------|-------------------------------|
| Base model               | TZIDC / V18345                                    | Input signal         | 4 to 20 mA, two-wire          |
| Case and mounting        | Aluminium case with mechanical position indicator | Local communication  | Connector for ABB LCI adapter |
| Linear-actuator mounting | DIN / IEC 534 / NAMUR                             | Explosion protection | Without                       |
| Rotary-actuator mounting | VDI / VDE 3845                                    | Pneumatic output     | Double acting, fail safe      |

## Verified Product Record

| DATA GROUP                 | VERIFIED VALUE                                                                                                                                                   |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Installed host / carrier   | ABB TZIDC digital valve-positioning system                                                                                                                       |
| Primary system role        | Converts a 4-20 mA two-wire setpoint into controlled pneumatic actuator movement                                                                                 |
| Connection boundary        | Match the NAMUR or VDI/VDE 3845 mounting, 4-20 mA polarity, NPT air connections and analog feedback loop. Run Auto Adjust and prove controlled fail-safe travel. |
| Controlled acceptance duty | Linear valve positioning                                                                                                                                         |

### ENGINEERING BOUNDARY

Confirm the complete order code, actuator mounting, 4-20 mA input and feedback, double-acting fail-safe air routing, NPT connections, supply pressure and Auto Adjust result.

## Pre-Installation Checks

- 1

Confirm the complete order code and actuator duty.
- 2

Secure the valve and process in the maintenance state.
- 3

Isolate both signal loops and the air supply.
- 4

Record polarity, feedback and pneumatic connections.

## Documented Service Record

| RECORD ITEM        | REQUIRED ENTRY                             |
|--------------------|--------------------------------------------|
| As-found article   | V18345-2010421001                          |
| Installed host     | ABB TZIDC digital valve-positioning system |
| Connection record  | Capture before removal                     |
| Controlled release | Diagnostics and functional proof           |

# System Role and Architecture

ABB V18345-2010421001 is a TZIDC positioner that converts a 4-20 mA setpoint into double-acting fail-safe pneumatic actuator movement.

**FUNCTION 1**  
  
Converts a 4-20 mA two-wire setpoint into controlled pneumatic actuator movement

**FUNCTION 2**  
  
Supports linear and rotary actuator mounting with a mechanical position indicator

**FUNCTION 3**  
  
Provides double-acting fail-safe output behavior when electrical power is lost

**FUNCTION 4**  
  
Returns actuator position through a separate 4-20 mA two-wire analog-feedback module

## Matched System Components

| NO. | DOCUMENTED COMPONENT / ROLE                                                                                                                                      |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | ABB TZIDC digital valve-positioning system                                                                                                                       |
| 2   | Aluminium case with mechanical position indicator                                                                                                                |
| 3   | Linear valve positioning                                                                                                                                         |
| 4   | Match the NAMUR or VDI/VDE 3845 mounting, 4-20 mA polarity, NPT air connections and analog feedback loop. Run Auto Adjust and prove controlled fail-safe travel. |

## System Integration Record

| INTEGRATION ITEM       | DOCUMENTED ROLE                                                                                                                     |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Host identity          | ABB TZIDC digital valve-positioning system                                                                                          |
| Interface role         | Converts a 4-20 mA two-wire setpoint into controlled pneumatic actuator movement                                                    |
| Field / power context  | Installed on the documented linear or rotary actuator with clean instrument air, 4-20 mA input and a separate analog-feedback loop. |
| Commissioning evidence | Prove signal tracking, feedback and fail-safe travel.                                                                               |

## Installation and Connection Checks

- 1

Inspect mounting, linkage, tubing and grounding.
- 2

Restore travel direction, limits and Auto Adjust.
- 3

Review LCD position, deviation and diagnostics.
- 4

Prove signal tracking, feedback and fail-safe travel.

## MANUFACTURER SOURCE RECORD

TZIDC Digital Positioner Data Sheet  
ABB Measurement & Analytics DS/TZIDC-EN Rev. I

# Applications and Engineering Context

## Linear valve positioning

Positions a NAMUR-mounted linear actuator.

## Rotary actuator modulation

Controls a VDI/VDE 3845 rotary actuator.

## Double-acting fail-safe duty

Applies the documented safe-position response.

## Analog position feedback

Returns actuator position through 4-20 mA.

### TECHNICAL NOTE

Match the NAMUR or VDI/VDE 3845 mounting, 4-20 mA polarity, NPT air connections and analog feedback loop. Run Auto Adjust and prove controlled fail-safe travel.

## Model-Specific Acceptance Evidence

| CHECK              | ACCEPTANCE CONDITION                                                             |
|--------------------|----------------------------------------------------------------------------------|
| Identity           | V18345-2010421001 recorded                                                       |
| Host / carrier     | ABB TZIDC digital valve-positioning system                                       |
| Physical interface | Converts a 4-20 mA two-wire setpoint into controlled pneumatic actuator movement |
| Configuration      | Review LCD position, deviation and diagnostics.                                  |
| Functional proof   | Prove signal tracking, feedback and fail-safe travel.                            |

## IMPORTANT NOTICE

Confirm the complete order code, actuator mounting, 4-20 mA input and feedback, double-acting fail-safe air routing, NPT connections, supply pressure and Auto Adjust result.

## Controlled Release Summary

| RELEASE ITEM     | MODEL-SPECIFIC CONDITION                              |
|------------------|-------------------------------------------------------|
| Article identity | V18345-2010421001                                     |
| Approved role    | Linear valve positioning                              |
| Final validation | Prove signal tracking, feedback and fail-safe travel. |

# Engineering Precautions

- 1

Confirm the complete order code and actuator duty.
- 2

Secure the valve and process in the maintenance state.
- 3

Isolate both signal loops and the air supply.
- 4

Record polarity, feedback and pneumatic connections.
- 5

Inspect mounting, linkage, tubing and grounding.
- 6

Restore travel direction, limits and Auto Adjust.
- 7

Review LCD position, deviation and diagnostics.
- 8

Prove signal tracking, feedback and fail-safe travel.

## Related Products on Apter Power

| MODEL                       | SYSTEM ROLE              | APTER POWER PAGE                                      |
|-----------------------------|--------------------------|-------------------------------------------------------|
| PM590-ETH-1SAP150000R0271   | Apter Power product page | <a href="#">View PM590-ETH-1SAP150000R0271 page</a>   |
| 3HAC043569-004              | Apter Power product page | <a href="#">View 3HAC043569-004 page</a>              |
| 3HAC5954-1                  | Apter Power product page | <a href="#">View 3HAC5954-1 page</a>                  |
| 3BHE022293R0101-PCD232A     | Apter Power product page | <a href="#">View 3BHE022293R0101-PCD232A page</a>     |
| DSQC332                     | Apter Power product page | <a href="#">View DSQC332 page</a>                     |
| RPBA-01-3ABD64606859        | Apter Power product page | <a href="#">View RPBA-01-3ABD64606859 page</a>        |
| RDCO-02C-3ABD64606956       | Apter Power product page | <a href="#">View RDCO-02C-3ABD64606956 page</a>       |
| 3BHE022294R0101-GFD233-A101 | Apter Power product page | <a href="#">View 3BHE022294R0101-GFD233-A101 page</a> |

## MANUFACTURER SOURCE RECORD

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