

# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAA00001VT**  
Revision No:  
**4**

## This is to certify:

That the **Electric Actuator**

with type designation(s)  
**TZIDC & TZIDC-200 & EDP300**

Issued to

**ABB AG**  
**Minden, Nordrhein-Westfalen, Germany**

is found to comply with  
**DNV rules for classification – Ships, offshore units, and high speed and light craft**

## Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

### Location classes:

Temperature	D*
Humidity	B
Vibration	B*
EMC	B
Enclosure	B*

\* see Application/Limitation

Issued at **Hamburg** on **2023-03-03**

This Certificate is valid until **2028-03-02**.

DNV local unit: **Hamburg**

Approval Engineer: **Heinz Scheffler**



for **DNV**

Digitally Signed By: Papanuskas, Joannis  
Location: DNV GL SE Hamburg, Germany

.....  
**Joannis Papanuskas**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



## Product description

### **TZIDC / TZIDC-200:**

Are electronically configurable positioners with communication capabilities designed for mounting on pneumatic linear or rotary actuators.

#### Input TZIDC/ -200

- Input: 4 ... 20 mA two-wire technology HART

#### Output

- Range: 0 ... 5.5 bar (0 ... 80 psi)
- 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 %
- Used rotation angle range
  - 25 ... 120° rotary actuators, optionally 270°
  - 25 ... 60° linear actuators
  - Travel time: Setting range 0 ... 200 seconds, separately for each direction

#### Position Feedback:

Digital position feedback with proximity switches

Digital position feedback with 24 V microswitches

Analog position feedback with 4 ... 20 mA, 24 VDC supply

#### Air Supply

- Supply pressure: 1,6 ... 5,5 bar (23 ... 80 psi)

#### Options:

- TZIDC is available with the Equipment Protection by Intrinsic Safety "i"
- TZIDC-200 is available with a Flameproof Enclosures "d"

### **EDP300:**

The PositionMaster EDP300 is an electronically configurable positioner with communication capabilities designed for mounting to pneumatic linear or part-turn actuators.

#### Input EDP300

- Input: 4 ... 20 mA two-wire technology HART

#### Output

- Range: 0 ... 8 bar (0 ... 116 psi)
- 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 %
- Used rotation angle range
  - 25 ... 270°
  - 25 ... 60° linear actuators
  - Travel time: Setting range 0 ... 200 seconds, separately for each direction

#### Position Feedback:

- Digital position feedback with proximity switches
- Digital position feedback with 24 V microswitches
- Analog position feedback with 4 ... 20 mA, 24 VDC supply

#### Air Supply

- Supply air, pressure 1.6 ... 8 bar (23 ... 116psi)

### EDP300 control unit with EDP300 remote sensor:

In this version, the components are supplied in two housings, which together form one harmonized unit.

- Control Unit contains the electronics and pneumatics and is mounted separately from the actuator.
- Remote Sensor contains the position sensor and is mounted on the linear and rotary actuator.

### Application/Limitation

Location classes:

- Temperature: + 85° C ... -25° C; +100° C ... -40° C for EDP300 Remote Sensor
- Vibration: 10 g for EDP300 Remote Sensor
- Enclosure Option: IP66

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case.

Reference is made to DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Protection by Intrinsic Safety “I” and Flameproof Enclosures “d” are not covered by this certificate.

Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use as listed in valid Ex certificate issued by a notified/recognized Certification Body.

### Type Approval documentation

#### Test Reports:

- E170689E2; U090335E1; U170689E1; U170689E2; E230263E1; IIM-TI-02-2023-P
- Testreport Min\_Pressure\_ABB\_24102017

#### Documents:

- Documents overview: List of controlled documents for DNV-Approval TAA000001VT dated 21-02-2023
- Datasheets / Operating Instructions: DB1024400DE; Mon-EXIOS-4c-1013-deu; DS\_EDP300\_EN\_D; DS\_TZIDC\_200\_EN\_E; DS\_TZIDC\_EN\_F; OI\_EDP300\_EN\_D; OI\_TZIDC\_200\_EN\_D; OI\_TZIDC\_EN\_D

### Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021

### Marking of product

The products to be marked with:

- Model name
- Manufacturer name
- Serial number

### Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE