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ANSI/ISA-96.02.01-2016

Guidelines for the Specification of Electric Valve Actuators

Approved 17 March 2016

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ANSI/ISA-96.02.01-2016
Guidelines for the Specification of Electric Valve Actuators

ISBN: 978-1-941546-90-1

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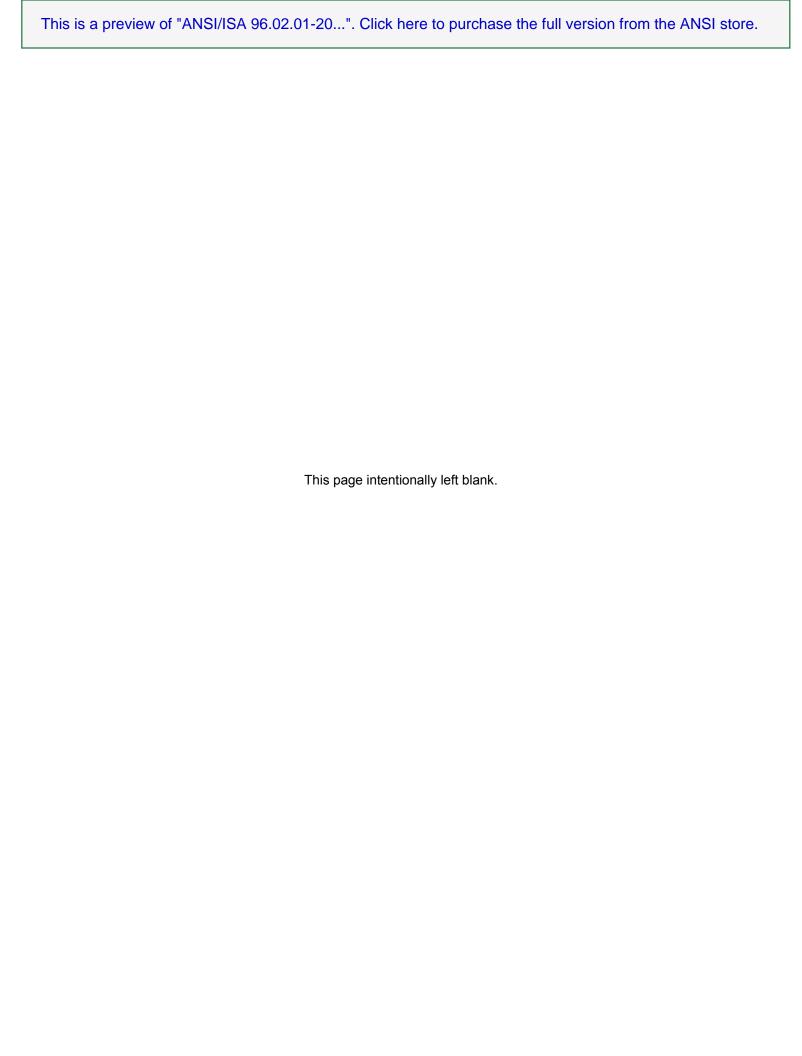
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1 Scope

This standard covers the development of specifications, minimum design requirements and sizing criteria for electric actuators.

This standard is not intended to address the range of compact, light duty low torque electric actuators typically rated for less than 5.65 Nm (50 in-lbs), and it is not intended for electrically powered actuators that use hydraulic fluid for power transmission (refer to ANSI/ISA-96.06.01).

2 Purpose

The purpose of this standard is to provide a guide to assist the user in specifying electric valve actuators.

3 Design types

3.1 Actuator design categories

3.1.1 intrusive:

this version requires opening of the electrical enclosure for commissioning or troubleshooting activities such as setting of mechanical travel limit and torque switches, adjusting position feedback, and internal signal monitoring.

3.1.2 non-intrusive:

this version does not require opening of the electrical enclosure for commissioning or troubleshooting activities. Microprocessor-based controls, including status and diagnostics, are accessible externally to the actuator.

3.2 Actuator motion

3.2.1 part-turn:

an actuator which transmits torque to the valve for less than one revolution. It does not have to be capable of withstanding thrust. A combination of a multi-turn actuator plus a part-turn gearbox may be considered a part-turn actuator.

3.2.2 multi-turn:

an actuator which transmits torque to the valve/gearbox for at least one revolution. It may be capable of withstanding thrust. A combination of a multi-turn actuator plus a multi-turn gearbox may be considered a multi-turn actuator.

3.2.3 linear:

an actuator which transmits thrust to the valve for a defined linear stroke. A combination of a multi-turn actuator plus a linear drive may be considered a linear actuator.

4 User defined requirements

These items are required to properly specify an electric valve actuator. If these items are not explicitly covered in the specification and/or purchasing documents for the actuator, the actuator manufacturer's standards will apply.