

LEDEEN DiM Series Electric Actuator

Electric actuation for valve automation in hazardous locations

TECHNOLOGY



LEDEEN DiM Series Electric Actuator

TYPICAL APPLICATION

For on/off or modulating control of any multi-turn, partial turn, or linear valve in oil and gas applications.

BENEFITS

- Developed and built for use in the oil and gas industry, based on field-proven technology
- Partial-turn, multi-turn, and linear configurations available for use with any valve type
- Easy system integration with open communication interfaces
- Reduced-maintenance design
- Constant self-monitoring for reduced errors



STANDARD FEATURES

Enclosed Motor

- Sturdy asynchronous design
- Special coil layout for improved safety at startup
- Totally enclosed, not ventilated (TENV) motor according to Protection Class IP68
- Integrated temperature monitoring

Handwheel

- Operation at any time without changeover mechanism
- Safe stop during motor operation
- Redundant to motor operation
- Easily adaptable (extension, square end, etc.)

Transmission

- Low-wear, planetary gearbox for long life
- Safe startup across all temperatures
- Flexible mounting position
- No routine lubrication maintenance required
- Sturdy metal casing
- High-speed range for closing time adjustment

Controls/Sensors

- Quick, non-intrusive settings
- Graphic LCD with clear, easy-to-read information
- Reliable, durable position measurement by an absolute value encoder
- Only one enclosed electric compartment
- Electronic compartment protected against condensate by heating
- Data backup and documentation with PC interface

Electrical Connection

- Plug-and-play connector for power and control lines
- Cable entries according to international preface standards (M, NPT, G, etc.)
- Adjustable solutions for bus systems

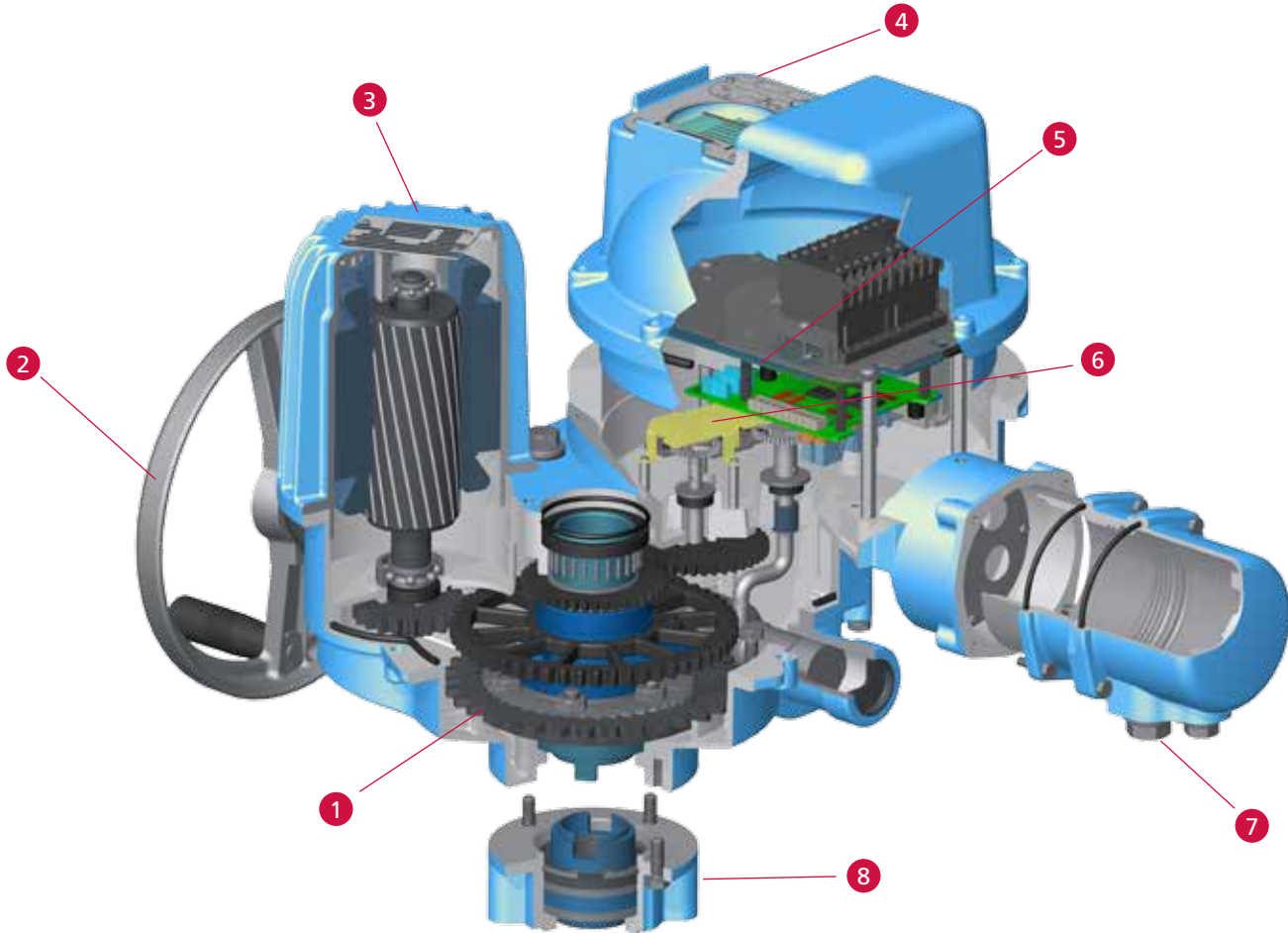
Valve Connection

- Connections available for all types of valves
- Easily interchangeable
- Connections according to international standards

STANDARD PRODUCT CHARACTERISTICS

SERIES	TYPE	TEMPERATURE RANGE	EXPLOSION-PROOF ATEX
DiM	NT	-25° C to 60° C (-13° F to 140° F)	Directive 94/9/EC- EN 60079-0:2012, EN 60079-1:2007, EN 60079-7:2007, EN 60079-31:2014 Marking: II 2 G Ex d e IIC T4 or Ex d e IIB T3
DiM	LT	-55° C to 40° C (-67° F to 104° F)	

BASIC DESIGN

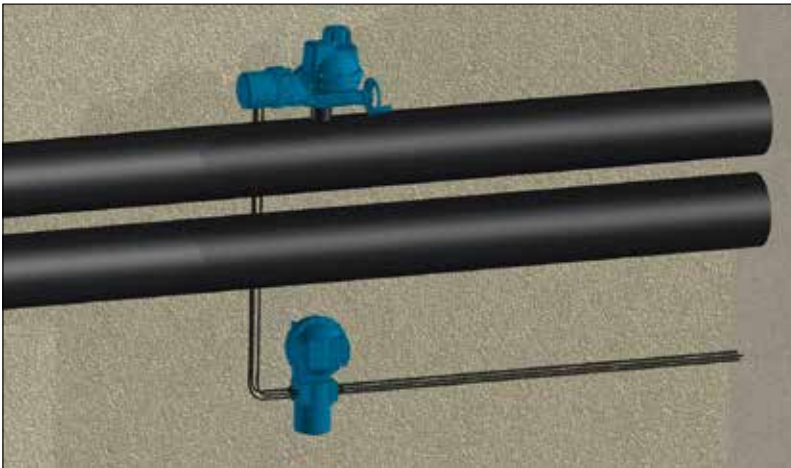


Item	Description
1	Redundant planetary gear design
2	Handwheel for emergency operation
3	TENV motor
4	Local control station
5	Control unit
6	Sensors (torque, position, and motor protection)
7	Plug-and-play connectors
8	Output drive valve adaption

CONTROLS

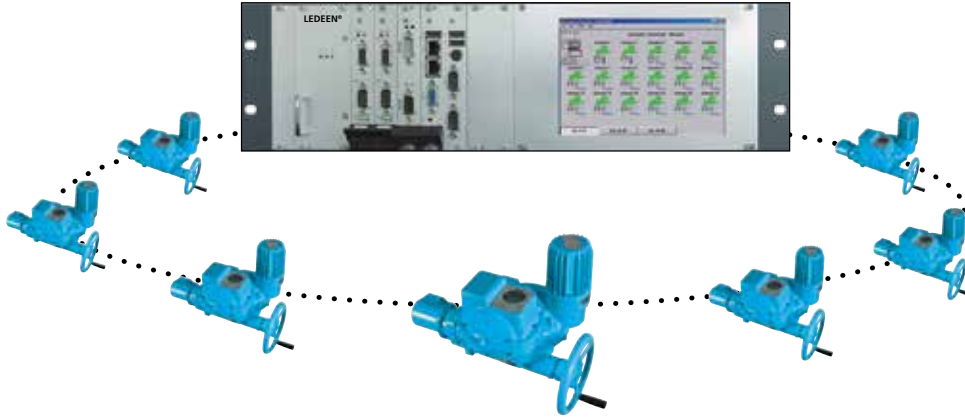
All local controls can be set via sturdy push buttons or the magnetic pen system. If the actuator is not directly accessible, it can be controlled and programmed via a Bluetooth device such as a PDA, including software upgrades and firmware updates. It also is possible to permanently place the control unit separated from the actuator itself for further independence.

- Large, multilingual backlit graphic display with clear text and icons instead of codes or numbers (no handbook to interpret the codes required)
- Simple, non-intrusive setting
- Firmware updates, diagnoses, and maintenance functions
- Separation of the control unit from the actuator is relatively effortless
- Handling is simplified due to big, sturdy push buttons or magnetic pen systems



SYSTEM INTEGRATION

The integration of the LEDEEN electric actuators into a control system is possible via a multitude of fieldbus connections or via a free-configurable, hard-wired interface. All fieldbus devices can be delivered with the common redundancies, to help enhance system safety and reliability.



SIMA MASTER STATION

System Integration

Cameron’s SIMA master station solution integrates field devices, like actuators, into an automation environment and supports a variety of protocols such as PROFIBUS DP and Modbus RTU.

Data Concentrator

In addition to the essential feedback information, Cameron’s LEDEEN® DiM series electric actuators provide a wide variety of data that can be used by the SIMA master station to quickly and easily diagnose the system with reduced stressing.

Commissioning Tool

SIMA also functions as a standalone automation system, allowing the actuator to be operated and commissioned autonomously from a higher automation system. Actuator and communication parameter settings can be performed and tested.

Redundant Security

To allow for enhanced safety operations, the SIMA master station has been designed as a highly redundant unit with both the master unit and the cables being redundant in case of a failure.

LEDEEN electric actuators can be integrated into various bus topologies, including:

PROFIBUS®
DP V0 -V1 -V2

PROFISAFE®

FOUNDATION™ fieldbus

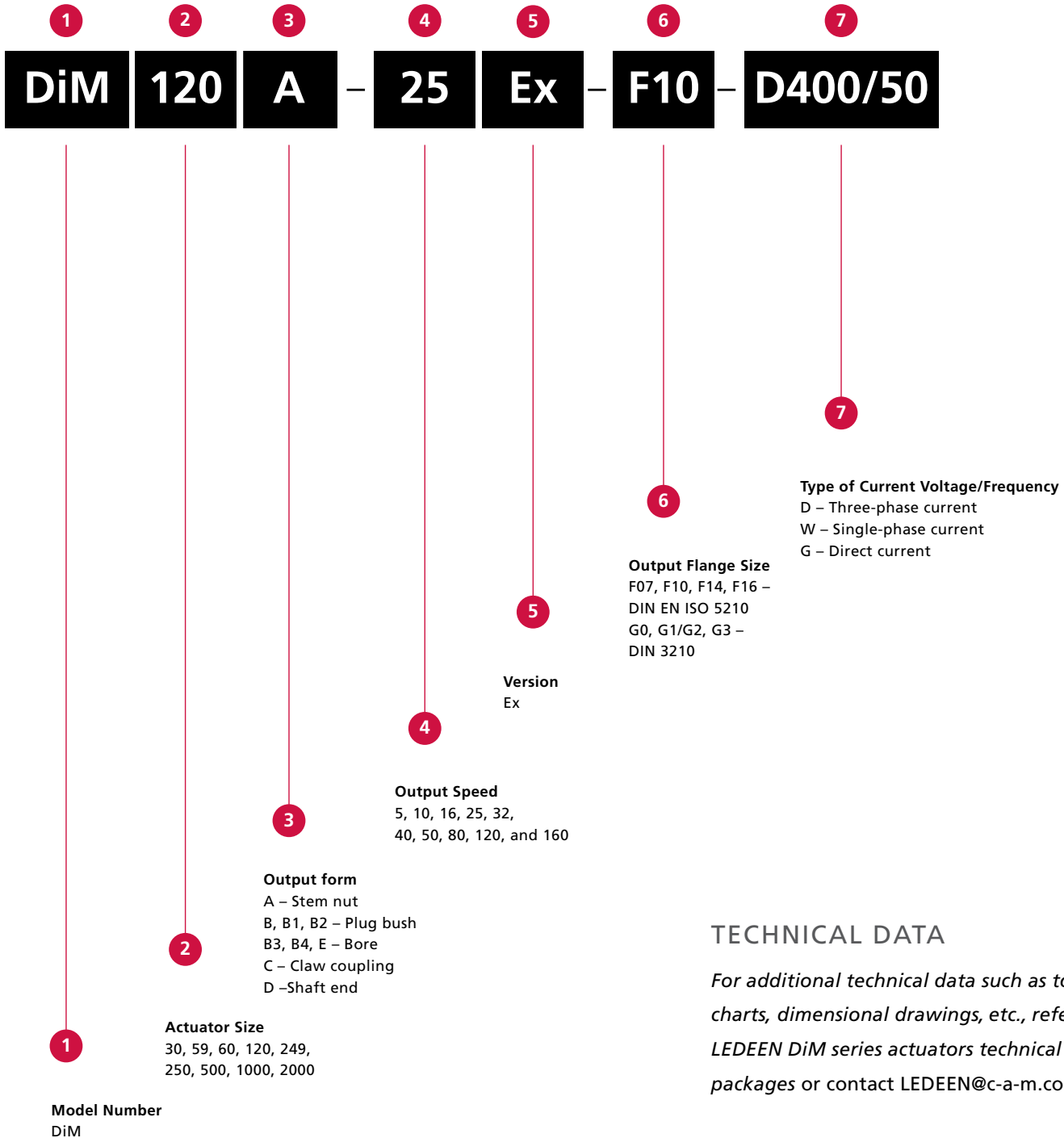
Modbus® RTU Loop

DeviceNet™

HART protocol

MODEL NUMBER DESIGNATION

The below multi-turn model number designation may not include all aspects. Functional Safety and SIL Functional Safety options are available as well. For critical applications, LEDEEN electric actuators can be equipped with emergency shutdown (ESD) and/or safe-stop functions.



TECHNICAL DATA

For additional technical data such as torque charts, dimensional drawings, etc., refer to the LEDEEN DiM series actuators technical data packages or contact LEDEEN@c-a-m.com.

Note: All references herein to "explosion-proof" are per ATEX directives 94/9/ECEN 60079-0:2012, EN 60079-1:2007, EN 60079-7:2007, EN 60079-31:2014.

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HSE Policy Statement

At Cameron, we are committed ethically, financially and personally to a working environment where no one gets hurt and nothing gets harmed.