dormakaba

ED250
Low energy/power operated pedestrian operator

Low energy power operated door
A door with a power mechanism that opens the door upon receipt of a knowing act activating signal, does not generate more kinetic energy than specified in ANSI A156.19, and includes provisions to reduce the chance of user injury or entrapment. In an A156.19 application, this is achieved utilizing the folllowing design factors:

- Reduced dynamic door panel contact forces
- Reduced static door panel contact forces
- Time delays
- Low opening and closing speeds
- Force limitations
- Signage

Description
The ED50 low energy swing door operator is the perfect solution for barrier-free access applications, offering a true manual door closer experience. Simple and easy to install, the ED50 provides many features and functions to make existing doors easily accessible.

This medium-duty swing door operator can automate new or existing swing doors with a push plate, wave plate, or other "knowing act" device. The ED50 combines advanced automatic power assist, minimal push forces (as low as ANSI size 1) and reliable closing. Outswing or inswing doors can be adapted for barrier-free access with push, pull, or deep reveal arms suited to a wide variety of door hanging options.

Standards of compliance
The ED250 operator is set to low energy (A156.19) conformance from the factory.

Upon installation, the ED250 can be configured to meet ANSI/BHMA A156.19, U.S. Standard for Power Assist and Low Energy Power Operated Doors, or ANSI/BHMA A156.10, U.S. Standard for Power Operated Pedestrian Doors (*additional equipment required).

Power operated pedestrian door (Full Power or Full Energy)
A door with a power mechanism that opens the door upon receipt of a signal from an activating device or sensor, does not generate more kinetic energy than specified in ANSI A156.10, and includes provisions to reduce the chance of user injury or entrapment. In an A156.10 application, this is achieved utilizing specific variants of the following design factors based on the type of door opening and traffic pattern:

- Guide rails
- Activation sensors
- Presence sensors
- Control Mats
- Safety Zones
- Time Delays
- Closing speed
- Closing Force

Operator Types and Configurations
- 4" x 6" Narrow Header
  - Surface applied
  - Overhead concealed
- 2-3/4" x 5-1/8" Fine Cover
  - Surface applied
- Single, Paired and Dual Egress Openings

Configuration			
Header dimensions (H × D × L)	4" x 6" x length as required (Narrow) 2-3/4" x 5-1/8" x length as required (Fine)		
Operator weight	26.5 lb		
Internal power supply available for accessories	24 volts DC ± 5% 1.5 Amps		
Maximum door opening angle	110° (door stop recommended)		
Maximun wire size	16 AWG		
Maximum door weight* Based on prevailing conditions at the opening.	800 lb at maximum door width of 48" Low Energy [ANSI A156.19] For Full Energy [ANSI A156.10] applications with door weights above 200 lbs. contact Technical Support.		
Door width	Minimum 28" Maximum 52"		
Door width for fire protection	28" to 55"		
Axle extensions	13/16" (20 mm) 1-3/16" (30 mm) 2-3/8" (60 mm) 3-9/16" (90 mm)		
Reveal depth for pull arm with track	1-3/16" (30 mm)		
Max. reveal depth for pull arm with CPD lever & track	2-1/4"		
Reveal depth for standard push arm	0 to 9-3/4"		
Reveal depth for deep push arm	8" minimum to 19-3/4"		
Required operating conditions			
Ambient temperature	5°F – 122°F		
Power supply	115 volts AC ± 10%, 50/60 Hz Maximum 6.6 Amps, (SELV)		
Branch circuit protection (provided by others)	15 Amps maximum, dedicated branch circuit		
Protection class	NEMA 1		
Power wiring:black, white, bare copper (ground)	12 AWG		
Operating noise	Maximum 50 db(A)		
Inputs			
Activation inputs	**X4***	Interior, exterior	Normally open contact
Safety sensors	**X5**	Swing, approach sides, normally closed contact	
Night/bank (intercom system)	**X10** 57, 57a	8 to 24 volts DC/volts AC + 5%	
Night/bank (key switch)	**X1** 35, 3	**d2** parameter	Configure for Normally Open or Normally Closed
Deactivation of drive function	**X6** 4, 4a	**d1** parameter	Configure for Normally Open or Normally Closed
Outputs			
Door status	**X7** 97, 98, 99	**Sr** parameter Door closed Door open Door closed, locked	Common Normally Open Normally Closed

Operating specifications		
Automatic closing torque, lbf-ft [2]	Minimum 14.8 lb f	Maximum 110.6 lb f
Manual closing torque, lbf-ft [2]	Minimum 9.6 lb f	Maximum 27.3 lb f
Maximum opening speed, degrees per second [1]	60 °/s	
Maximum closing speed, degrees per second [1]	60 °/s	
Door closer modes		
Automatic mode	Designed for automatic access following pulse generation by a motion detector or pushbutton.	
Manual mode	Designed for doors primarily accessed manually.	
Power assist	Available only in door closer mode (**hd=1**), manual opening. Drive support is automatically adjusted to operator size.	
Integrated functions		
Hold open time		
Automatic opening	**dd** parameter	0 to 30 seconds
Night/bank	**dn** parameter	0 to 30 seconds
Manual opening	**do** parameter	0 to 30 seconds
Door blocking behavior	**hd** parameter	Automatic, manual door modes
Electric strike delayed opening for locking mechanism	**Ud** parameter	0 to 4 seconds
Locking device feedback	**X3** 43, 3	Motor lock
Wind load control, maximum	**Fo, Fc** parameters	33.7 lb f 150 N
Voltage independent braking circuit	Adjustable with potentiometer	
LED status indicators Service manual	Green Red Yellow	24 Vdc power Error codes Service interval
Program & Exit Only switches	Auto, Close, Open, Exit Only; Off, On	
User interface	4-button keypad,2-digit display	
Slot for DORMA upgrade cards	Extension of range of functions	
TMP, temperature management program Service manual	Overload protection	
IDC, initial drive control	Driving phase optimization	
Cycle counter	**CC** parameter	0 to 1,000,000
Power assist function	**hA**, **hF**, **hS** parameters	Drive support for manual opening door
Push & go function	**PG** parameter	Auto opening of door at 4° open

NOTES

[1] Speeds automatically limited depending on door weight, set during learn cycle.

[2] In push version of slide channel with track installation type, forces are reduced by approximately 33%.