dormakaba

ED50
Low energy 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 156.19, and includes provisions to reduce the chance of user injury or entrapment. In an A156.19 application, this is achieved utilizing the following 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 ED50 operator is set to low energy (A156.19) conformance from the factory.

Upon installation, the ED50 can be configured to meet ANSI/BHMA A156.19, U.S. Standard for Power Assist and Low Energy Power Operated Doors.

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 A		
Maximum door opening angle	110° (door stop recommended)		
Maximum wire size	16 AWG		
Maximum door weight* Based on prevailing conditions at the opening.	220 lb at 48" door width		
Door width	Minimum 28" Maximum 48"		
Axle extensions	13/16" (20 mm) 1-3/16" (30 mm) 2-3/8" (60 mm)		
Reveal depth for pull arm	1-3/16" (30 mm)		
Reveal depth for CPD pull arm with CPD lever	2-1/4"		
Reveal depth for standard push arm	0 to 9-3/4"		
Reveal depth for deep push arm	8" to 19-3/4"		
Required operating conditions			
Ambient temperature	5°F to 122°F		
Power supply	115 volts AC ± 10%, 50/60 Hz Maximum 6.6 Amps, (SELV)		
Branch circuit protection (provided by others)	Maximum 15 Amps, dedicated branch circuit		
Protection class	NEMA 1		
Power wiring: black, white, bare copper (ground)	Maximum 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

Door closer modes			
Automatic mode	Door opens automatically following pulse generation by a knowing act device or by push/pull.		
Manual mode	Designed for doors primarily accessed manually.		
Power assist	Available only in door closer mode, manual opening drive support is automatically adjusted to operator size.		
Integrated functions			
Opening force N (lbf)	**Fo** parameter	Minimum 20 lbf (4.5)	Maximum 60 lbf (13.5.5)
Manual closing force N (lbf)	**Fc** parameter	Minimum 20 lbf (4.5)	Maximum 60 lbf (13.5.5)
Maximum opening speed, degrees per second	27 °/s	May be limited by door weight after learning cycle.	
Maximum closing speed, degrees per second	27 °/s		
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	
Door status **X7** 97, 98, 99	**Sr** parameter Door closed Door open Door closed, locked	Common Normally Open Normally Closed	
Locking device feedback **X3** 43,3	Motor lock		
Wind load control, maximum	**Fo, Fc** parameters	22.5 lb f 100 N	
Voltage independent braking circuit	Adjustable with potentiometer		
LED status indicators Service manual	Green Red Yellow	24 Vdc power Error codes Service interval	
Program and Exit Only switches	Auto, Close, Open, Exit Only; Off, On		
User interface	4-button keypad, 2-digit display		
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	