DS-EN System

DS-60/75/150
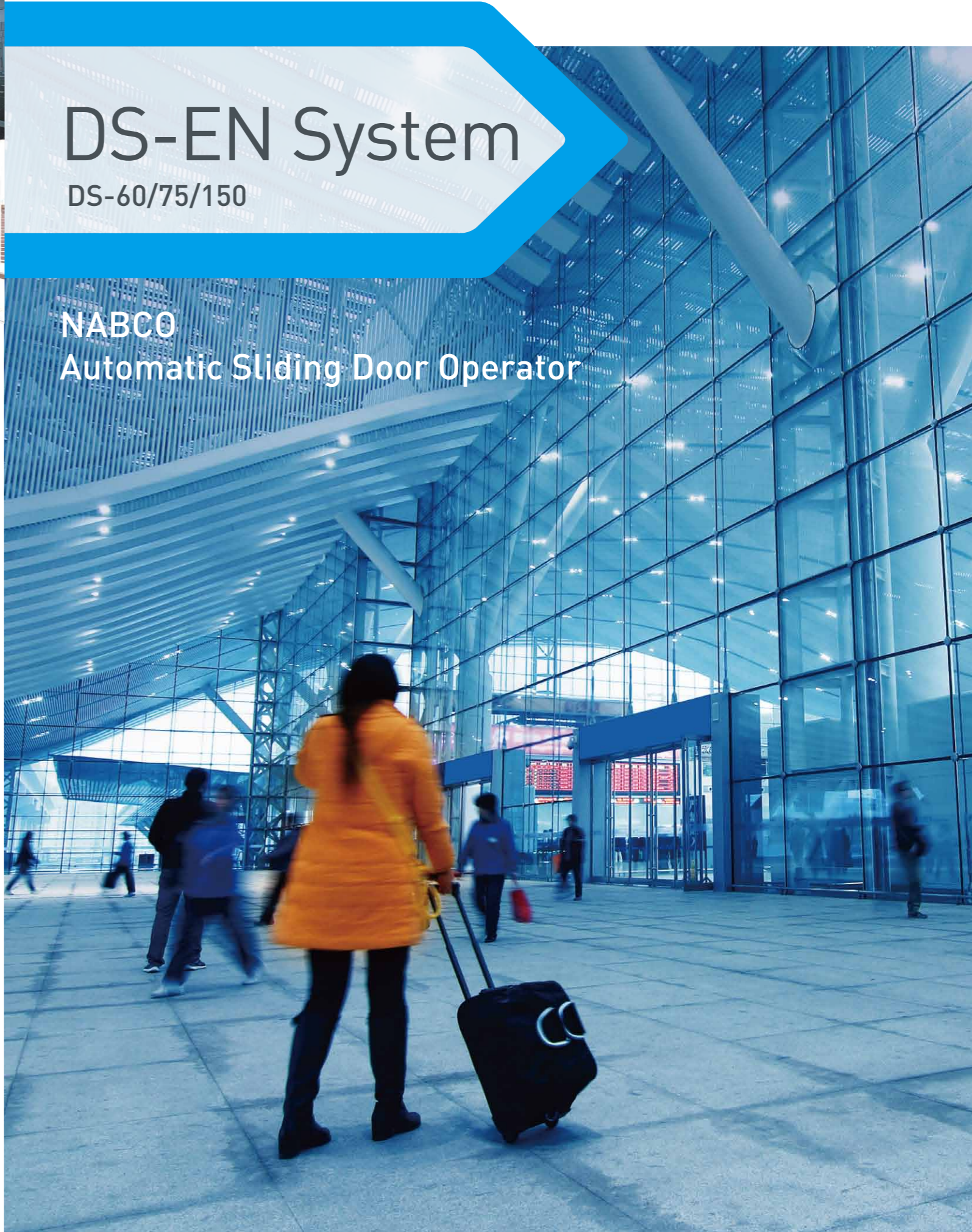
NABCO
Automatic Sliding Door Operator

Pioneering Automatic Door Technology Since 1956

About NABCO

NABCO has been pioneering the creation and development of automatic doors since 1956.

Japan's leading name in the industry, the NABCO brand is characterized by uncompromising quality, reliability and service.

It has earned a reputation as a premium supplier of automatic doors and pedestrian flow solutions.

The choice of the world's most celebrated architectural sites, NABCO provides premium entrance systems for commercial and professional applications on a global scale.

Member of the Nabtesco Group

NABCO is a member of Nabtesco Corporation, specialists in motion control technology and services for high precision, challenging and mission critical systems for a wide variety of industrial sectors, including land, air, marine, transportation, energy and more.

Nabtesco Corporation

Accessibility Innovations Company

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For further details, contact:

Pedestrian Flow Solutions

Whatever the location or challenge, NABCO can bring its extensive

engineering knowledge and technological expertise to bear

in the ideal pedestrian flow solution.

For any conventional or unique professional application,

we work to create the ideal environment that ensures safety,

convenience, energy-savings and optimum hygiene,

and to provide a dedicated maintenance and ongoing support service.

DS-EN feature introduction

The DS-EN automatic door operators represent NABCO's latest models. While retaining high quality and high functionality in which NABCO has long taken pride, the DS-EN series is more simple and user friendly from viewpoint of installers and end-users.

Benefits

● **Excellent durability and compact design**
  - ✓ Equipped with a brushless motor featuring a hypoid gear
  - ✓ Equipped with a stainless steel rail track
  - ✓ Cleared 1 million cycles endurance test

● **Selection of operator model suitable for door weight**
  - ✓ Three models available depending on door weight.

● **Ease of installation**
  - ✓ Easy wiring
  - ✓ Reduced number of components

● **User-friendly program switch**
  - ✓ Five selectable operation modes.
    Auto   One Way   Night   Hold Open   Manual
  - ✓ Improved visibility with a color LCD screen
  - ✓ Multiple languages adaptability for operation mode
  - ✓ Easy identification of malfunctioning parts and operation history

Applications

● **The DS-EN series can be used for indoor and outdoor entrances of hospitals, airports, malls, offices, etc.**
  - ✓ Can be used for entrances subject to heavy traffic to allow pedestrians to pass through in safety and comfort
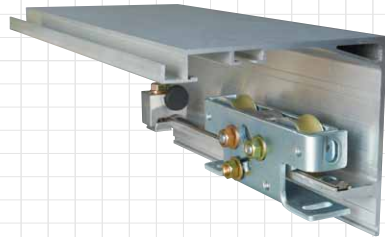
Directives & Standards

- ✓ CE
- ✓ EN 16005
  (EN ISO 13849-1 / EN 60335-1/-2-103 / EN 61000-6-2,-3)
- ✓ JIS

DS-EN Details

Door hanger

High durability and less noise are achieved by adopting aluminum rollers with urethane rubber coating

Controller

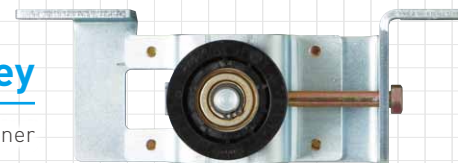Microcomputer equipped original software Various setting available

Door stopper

Geared motor

Brushless DC motor Mono-composition of precise hypoid reduction gear

Electric Lock

Aluminum rail base

Ensuring accurate assembly of equipment
Equipped with durable stainless steel rail track

Idler pulley

with spring tensioner

Timing belt

with low noise

Power supply

Cover bracket

Specification

Door Operator Type	DS-60		DS-75		DS-150	
	Single	Bi parting	Single	Bi parting	Single	Bi parting
Applicable Door Mass×Door Qty (kg)	75	60×2	100	85×2	120	120×2
Applicable Door Area DW×DH (m2)	2.2	1.8	2.8	2.6	3.3	3.0
Applicable Door Width DW (mm)	650~1250					
Ratio of Door Height / Width (DW/DH)	4.0					
Operator box height×width H×W (mm)	130×160					
Power Supply	230VAC+6/-10% 50/60Hz					
Power Consumption (W)	max. 200 [W]		max. 290 [W]		max. 330 [W]	
Opening Speed (cm/s)	10~70					
Closing Speed (cm/s)	10~70					
Hold Open Time (s)	0~50					
Maximum Endurance Wind Speed (m/s)	15					
CAN BUS (NET System)	✓					
Signal output	✓ (two)					
12V output for external accessory	✓ (700mA)					
Door status output	✓					
Output of error with description	✓					
Interlocking system	✓					
Output for electric lock	✓					
Manual lock release mechanism	✓					
Connection for safety sensors	✓					
Adjustment of door open/close controll via advanced program switch with full color display	✓					

Dimension

power source

power on/off switch

width of mullion
opening width

50 or more

DS (door stroke)

DS DW

DS DW

DS (door stroke)

50 or more

width of sash

(mm)

160

130

h=130

70

90

10~12

DT

DH

H

FL

(mm)
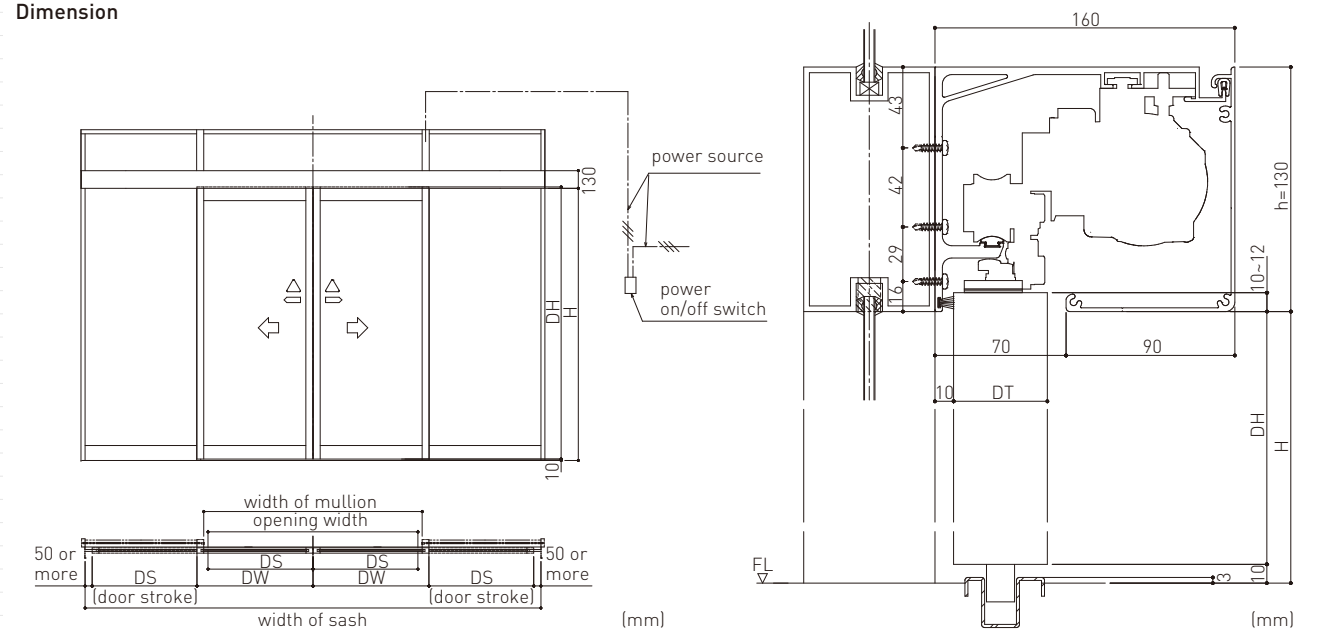
APS-N20
Program Switch

The program switch incorporates a color LCD offering excellent visibility for switching the automatic door mode, changing the parameter set values, and performing other tasks. Two types of pass codes are programmable to provide different levels of pass to different users. In addition, the color LCD screen allows the installer to check information related to malfunctioning parts and operation history, making maintenance and troubleshooting easier.

Dimension

88
35
28
88
19

(mm)
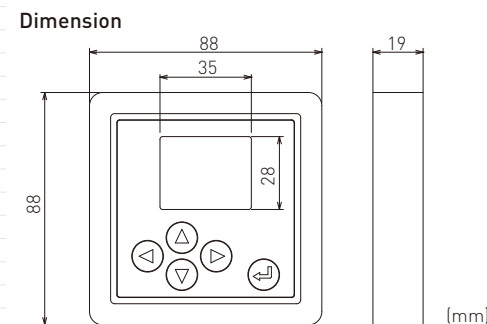
Operation mode

Five modes of automatic door operation can be selected by the end-users (Auto, Hold Open, Manual, One Way, and Night). Furthermore, the position of the door opening can be configured at two levels (full open and partial open).

Door Mode

ВЫХОД

Parameter change

This function allows the installer to change parameters such as Door Opening/Closing Speed, Hold Open Time.

SPEED&TIME
OP.SPEED   50
CL.SPEED   20
OP.TIMER   5
=>FULL OP. Y
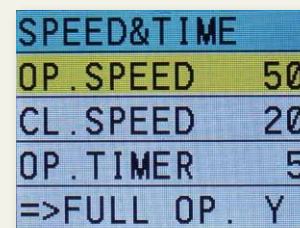
Error and operation history

These functions allow the installer to check information such as malfunctioning parts in case of error and operation history such as opening and closing cycles.

ERROR   3/4
NO LOAD
THERMAL
ENCODER
MOTOR
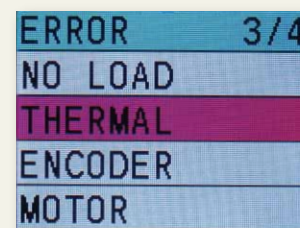
EL-03U/L
Electric Lock

This electric lock enhances the usability of the door together with the APS-N20. When "One Way" or "Night" mode is selected as the operation mode, the electric lock allows the end-user to easily lock the door. Two types of electric locks—EL-03U(Unlock at power off) and EL-03L(Lock at power off)—are available.
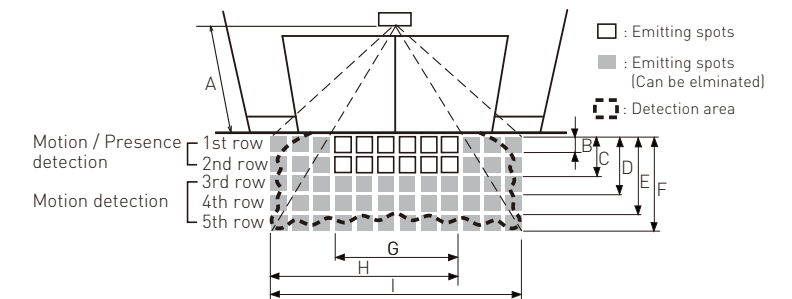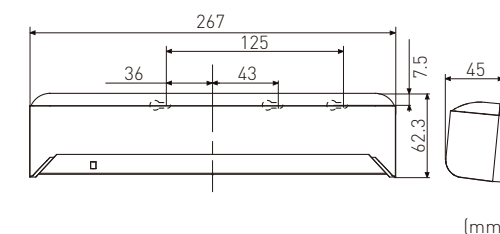
Dimension

(56)
48.4
142
(1250)
(mm)
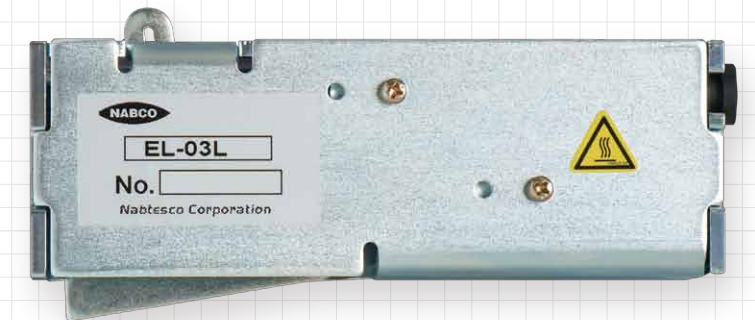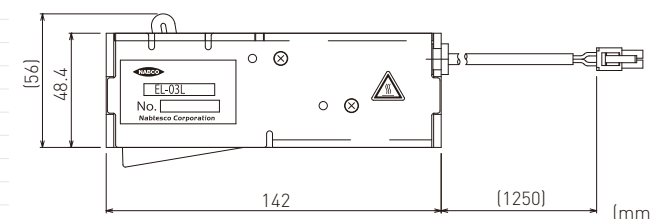
OA-220CN T
Sensor

OA-220CN T is an active infrared transom sensor that combines both safety and activation. Three colors of sensor covers (Silver, White, Black) are available.

Dimension

267
125
36
43
7.5
45
62.3

(mm)

□ : Emitting spots
▣ : Emitting spots (Can be elminated)
⬚ : Detection area

Motion / Presence detection
Motion detection
1st row
2nd row
3rd row
4th row
5th row

A B C D E F G H I

Specification

Detection method	Active Infrared Reflection
Detection object	Motion / Presence
Mounting height	Max. 3.0m
Detection area	W 2.78m×D 1.9m (at mounting height 2.2m)
Current consumption	less than 4W

Detection area size (reference value) (m)

A	2.20	2.50	2.70	3.00
B	0.14	0.16	0.18	0.20
C	0.42	0.48	0.52	0.58
D	0.82	0.93	1.00	1.10
E	1.35	1.54	1.66	1.85
F	1.90	2.17	2.34	2.60
G	1.33	1.51	1.63	1.81
H	2.05	2.32	2.51	2.79
I	2.78	3.15	3.40	3.79