

PRODUCT OVERVIEW

Safety door switches are used to detect the opening and closing status of doors, and are used in equipment, assembly lines, and specific job A device that meets specific safety requirements for the premises and is a standard accessory in CNC machine tools.



FEATURES IN BRIEF

- ◆ 1. Dual choice of metal head and plastic or metal housing to ensure overall strength and improve reliability
- ◆ 2. Cable outlet direction adjustable, metal head allows four directions of adjustment, providing five kinds of plug options
- ◆ 3. Provide manual unlocking and allow manual unlocking in case of emergencies
- ◆ 4. Quick and easy installation, high flexibility and compatibility
- ◆ 5. Hazards and risks to personnel can be reduced



FEATURE DESCRIPTION

- ◆ Metal switch head for 4-way adjustment
- ◆ Five plug types optional
- ◆ With manual unlocking mechanism
- ◆ Outlet method in 3 directions optional

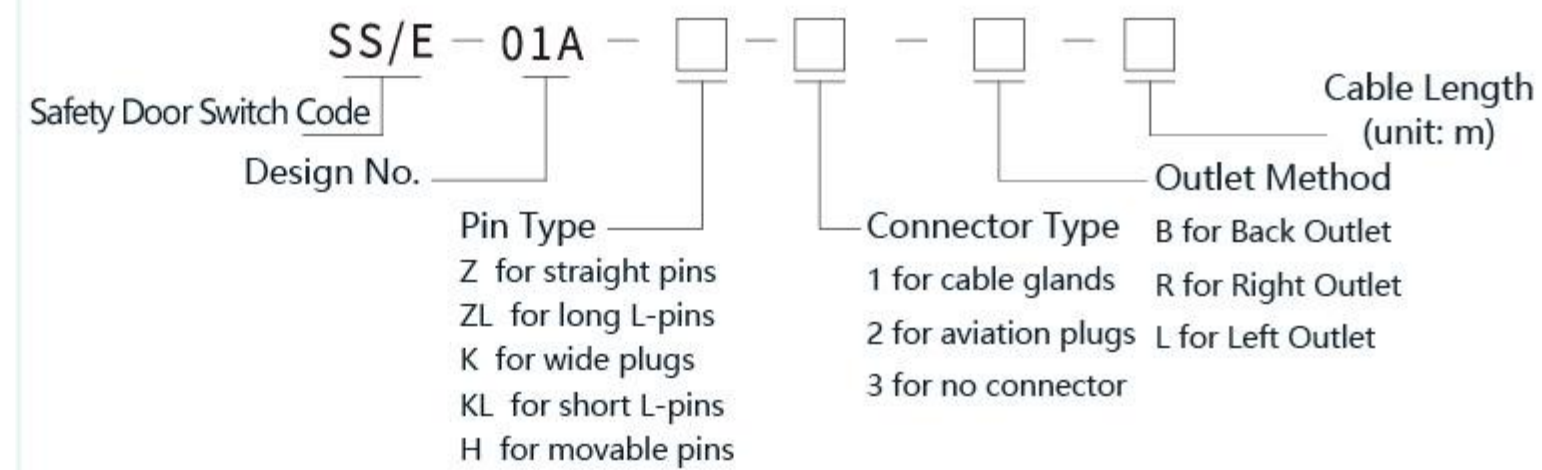


LOCKING METHOD



Power-to-unlock

MODEL DESCRIPTION



OPERATING STATES AND CIRCUIT DIAGRAM

	State 1	State 2	State 3	State 4	Manual unlock state
Action State	<ul style="list-style-type: none"> • Door Closed • Equipment running • Coil power off 	<ul style="list-style-type: none"> • Door Closed • Equipment stops • Coil power on 	<ul style="list-style-type: none"> • Door Opened • Equipment stops • Coil power off after 2S delay 	<ul style="list-style-type: none"> • Door Opened • Equipment stops • Coil power off 	<ul style="list-style-type: none"> • Equipment stops • Coil power off
Safety door status diagram					
Contact Status Diagram					

CONTACT CAPACITY

Rated Voltage		30V	250V
Rated Current	AC		
	Resistive load(AC-12)	—	4A
	Inductive load(AC-15)	—	2A
DC	Resistive load(DC-12)	2A	0.8A
	Inductive loads(DC-13)	1A	0.4A

SOLENOID COIL

Rated voltage	DC24V	+10%	-15%
Rated current	0.4A		
Insulation class	Level B		

PERFORMANCE SPECIFICATIONS

Production standard	T/SDMTGM0007-2020
Operating environment	Better than pollution level 3
Ambient temperature	-5~40°C
Relative humidity	45~80%
Protection class	IP67 (without induction port)
Mechanical service life	Not less than 1 million times
Electrical service life	Not less than 100,000 cycles(AC-12 250V 4A)
	Not less than 1 million times(24V AC/DC 100mA)
Tensile strength	2000N

PLUG

Coding	Z	ZL	K	KL	H
Name	Straight pin	Long L-pin	Wide Pin	Short L-pin	Movable pin
Sizes					
Contour					

OUTLET CONNECTOR TYPE

Connector Type	Photo	Connector Type	Wiring Diagram
1. Cable waterproof connector		Internal Terminals 	Internal Terminal Designation: [Diagram] External Terminal Designation: [Diagram]
2. Aviation plug		Internal Terminals 	Internal Terminal Designation: [Diagram] External Terminal Designation: [Diagram]
3. No connector		Internal Terminals 	Internal Terminal Designation: [Diagram]

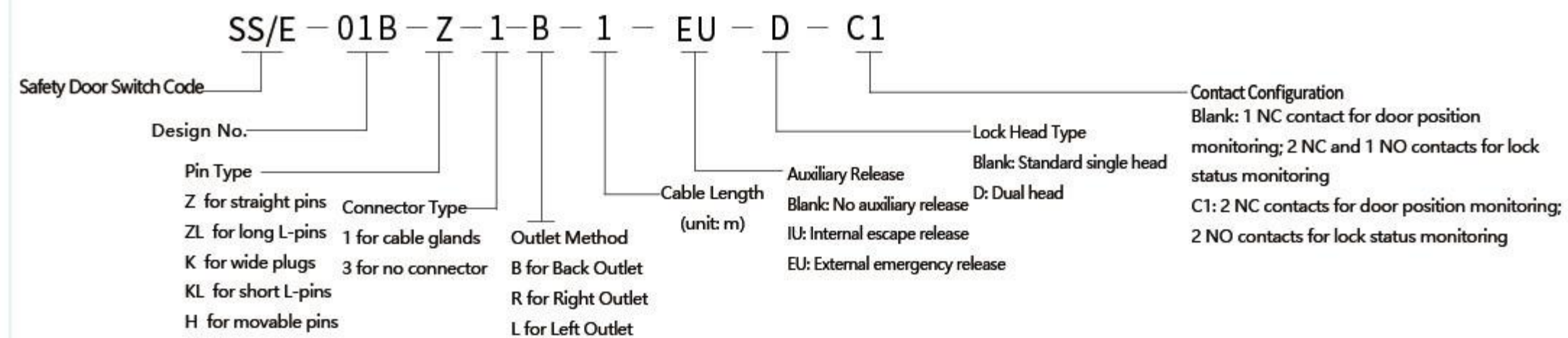
FEATURE DESCRIPTION

- ◆ Metal switch head for 4-way adjustment
- ◆ Five plug types optional
- ◆ With manual unlocking mechanism
- ◆ Increase the number of contact groups to 4 groups
- ◆ Outlet method in 3 directions optional



LOCKING METHOD Power-to-unlock

MODEL DESCRIPTION



PERFORMANCE SPECIFICATIONS

Production standard	T/SDMTGM0007-2020
Operating environment	Better than pollution level 3
Ambient temperature	-5~40°C
Relative humidity	45~80%
Protection class	IP67 (without induction port)
Mechanical service life	Not less than 1 million times
Electrical service life	Not less than 100,000 cycles(AC-12 250V 4A)
	Not less than 1 million times(24V AC/DC 100mA)
Tensile strength	2500N

SOLENOID COIL

Rated voltage	DC24V	+10%	-15%
Rated current	0.31A		
Insulation class	Level B		

EMERGENCY RELEASE



OPERATING STATES AND CIRCUIT DIAGRAM

	State 1	State 2	State 3	State 4	Manual unlock state
Action State	<ul style="list-style-type: none"> Door Closed Equipment running Coil power off 	<ul style="list-style-type: none"> Door Closed Equipment can't start Coil power on 	<ul style="list-style-type: none"> Door Opened Equipment can't start Coil power off after 2S delay 	<ul style="list-style-type: none"> Door Opened Equipment can't start Coil power off 	<ul style="list-style-type: none"> Equipment stops Coil power off
Safety door status diagram					
Standard					
C1					

PLUG

Coding	Z	ZL	K	KL	H
Name	Straight pin	Long L-pin	Wide Pin	Short L-pin	Movable pin
Sizes					
Contour					

OUTLET CONNECTOR TYPE

Connector Type	Photo	Connector Type	Wiring Diagram	
			Standard	C1
1. Cable waterproof connector		Internal Terminals		
3. No connector		Internal Terminals		

FEATURE DESCRIPTION

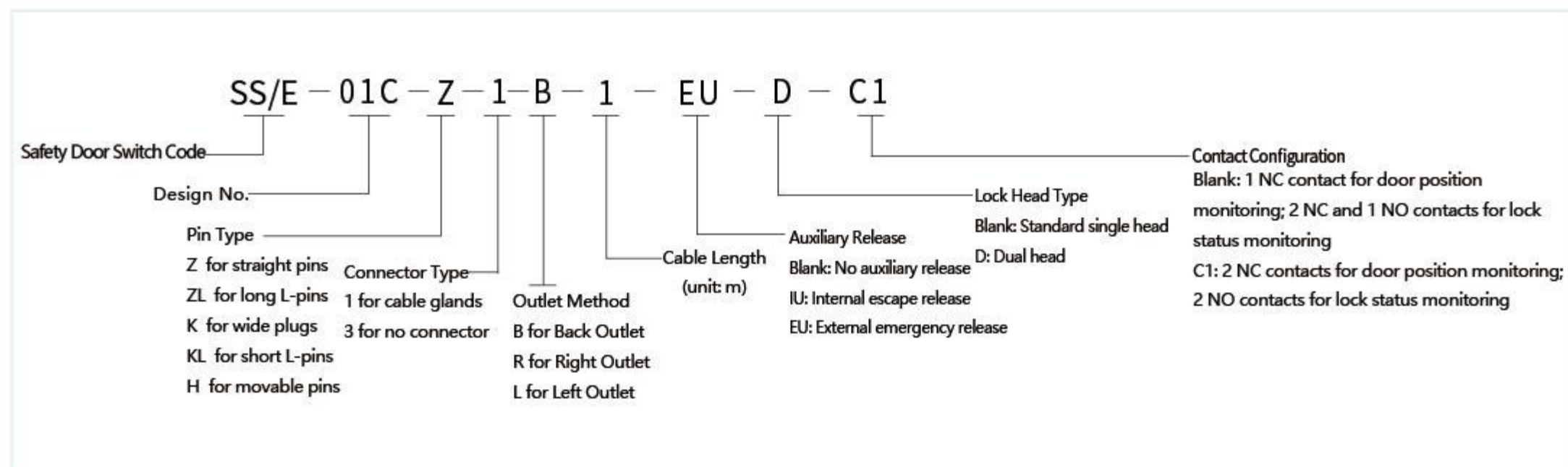
- ◆ Metal switch head for 4-way adjustment
- ◆ Five plug types optional
- ◆ With manual unlocking mechanism
- ◆ Increase the number of contact groups to 4 groups
- ◆ Outlet method in 3 directions optional



LOCKING METHOD

Power-to-lock

MODEL DESCRIPTION



PERFORMANCE SPECIFICATIONS

Production standard	T/SDMTGM0007-2020
Operating environment	Better than pollution level 3
Ambient temperature	-5~45°C
Relative humidity	45~80%
Protection class	IP67 (without induction port)
Mechanical service life	Not less than 1 million times
Electrical service life	Not less than 100,000 cycles(AC-12 250V 4A)
	Not less than 1 million times(24V AC/DC 100mA)
Tensile strength	2500N

SOLENOID COIL

Rated voltage	DC24V	+10%	-15%
Rated current	0.31A		
Insulation class	Level B		

EMERGENCY RELEASE



OPERATING STATES AND CIRCUIT DIAGRAM

	State 1	State 2	State 3	Manual unlock state
Action State	<ul style="list-style-type: none"> Door Closed Equipment running Coil power on 	<ul style="list-style-type: none"> Door Closed Equipment can't start Coil power off 	<ul style="list-style-type: none"> Door Opened Equipment can't start Coil power off 	<ul style="list-style-type: none"> Equipment stops Coil power off
Safety door status diagram				
Standard				
C1				

PLUG

Coding	Z	ZL	K	KL	H
Name	Straight pin	Long L-pin	Wide Pin	Short L-pin	Movable pin
Sizes					
Contour					

OUTLET CONNECTOR TYPE

Connector Type	Photo	Connector Type	
		Internal Terminals	Wiring Diagram
1. Cable waterproof connector			
3. No connector			

FEATURE DESCRIPTION

- ◆ Square shape structure
- ◆ Metal switch head for 4-way adjustment
- ◆ Spring force for unlocking by solenoid coil excitation
- ◆ Assisted unlocking mechanism as standard
- ◆ Independent circuits of indicator lights can respond to a variety of uses

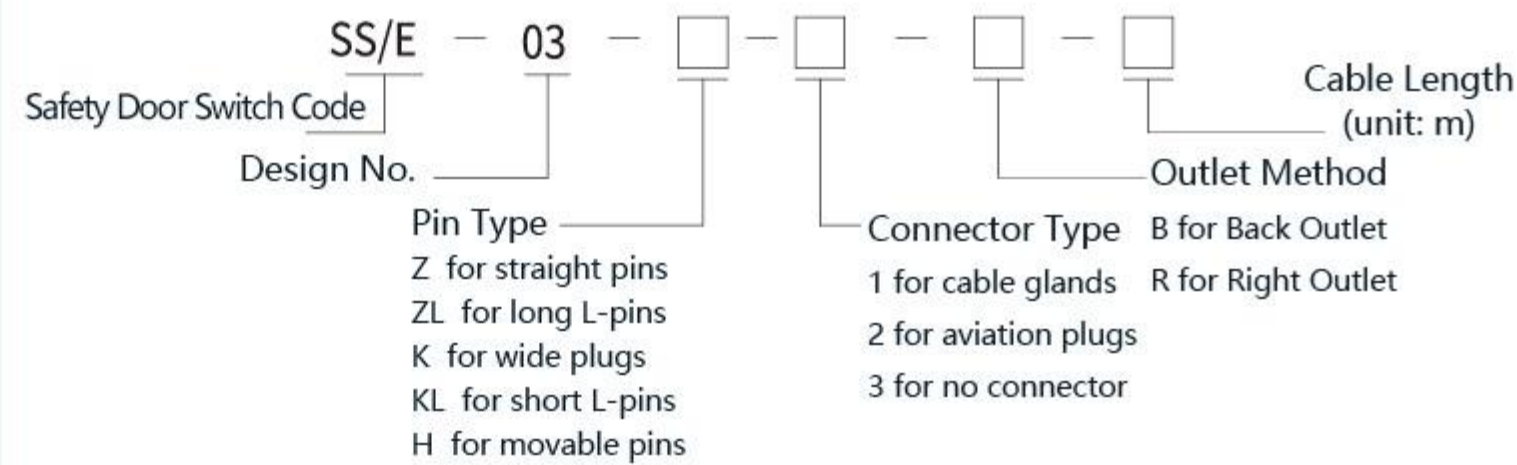


LOCKING METHOD



Power-to-unlock

MODEL DESCRIPTION



OPERATING STATES AND CIRCUIT DIAGRAM

	State 1	State 2	State 3	State 4	Manual unlock state
Action State	<ul style="list-style-type: none"> • Door Closed • Equipment started • Coil power off 	<ul style="list-style-type: none"> • Door Closed • Equipment can't start • Coil power on 	<ul style="list-style-type: none"> • Door Opened • Equipment can't start • Coil power off after 2S delay 	<ul style="list-style-type: none"> • Door Opened • Equipment can't start • Coil power off 	<ul style="list-style-type: none"> • Equipment stops • Coil power off
Safety door status diagram					
Wiring diagram					

CONTACT CAPACITY

Rated Voltage		30V	250V
Rated Current	AC		
	Resistive load(AC-12)	—	4A
	Inductive load(AC-15)	—	2A
DC	Resistive load(DC-12)	2A	0.8A
	Inductive loads(DC-13)	1A	0.4A

SOLENOID COIL

Rated voltage	DC24V	+10%	-15%
Rated current	0.4A		
Insulation class	Level B		

PERFORMANCE SPECIFICATIONS

Production standard	T/SDMTGM0007-2020
Operating environment	Better than pollution level 3
Ambient temperature	-5~40°C
Relative humidity	45~80%
Protection class	IP67 (without induction port)
Mechanical service life	Not less than 1 million times
Electrical service life	Not less than 100,000 cycles(AC-12 250V 4A)
	Not less than 1 million times(24V AC/DC 100mA)
Tensile strength	2700N

PLUG

Coding	Z	ZL	K	KL	H
Name	Straight pin	Long L-pin	Wide Pin	Short L-pin	Movable pin
Sizes					
Contour					

OUTLET CONNECTOR TYPE

Connector Type	Photo	Connector Type Internal Terminals	Wiring Diagram
1. Cable waterproof connector			
2. Aviation plug			
3. No connector			

FEATURE DESCRIPTION

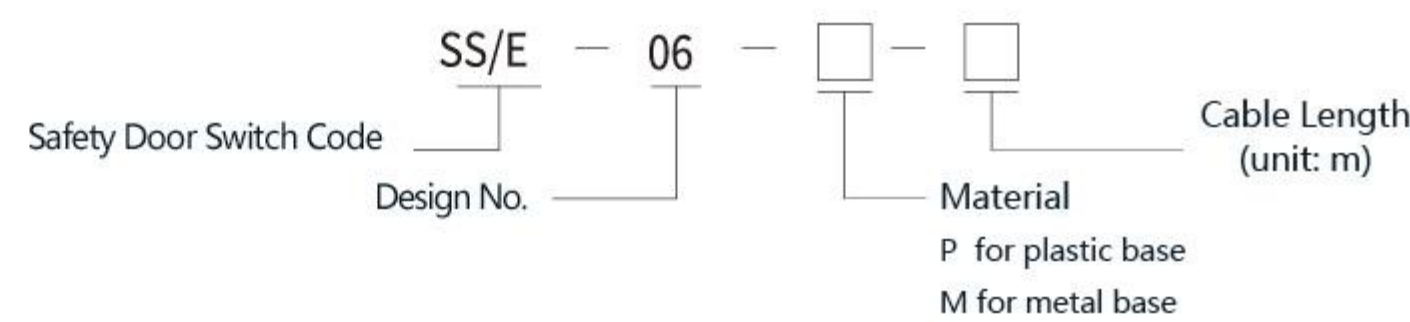
- ◆ Attractive force of suction cup electromagnet is used as locking force
- ◆ Detecting the opening and closing of Safety doors by switching signals
- ◆ The suction plate is equipped with a position compensation function to ensure reliable locking
- ◆ The base is available in plastic or metal
- ◆ Clamping force of 600N



LOCKING METHOD MODEL DESCRIPTION



Power-to-lock: When the safety door switch is de-energized, the safety door switch unlocks and the machine or Equipment stops running.



CONTACT CAPACITY

Rated voltage	DC24V ^{+10%} / _{-15%}
Rated current	2mA

CONTACT CAPACITY

Production standard	T/SDMTGM0007-2020
Operating environment	Better than pollution level 3
Ambient temperature	-5~40°C
Relative humidity	45~80%
Protection class	IP50
Mechanical service life	Not less than 1 million times
Electrical service life	Not less than 100,000 cycles(AC-12 250V 4A) Not less than 1 million times(24V AC/DC 100mA)
Tensile strength	600N

SOLENOID COIL

Rated voltage	DC24V ^{+10%} / _{-15%}
Rated current	0.25A
Insulation class	Level B

OUTLET CONNECTOR TYPE	Connector Type	Photo	Connector Type	Wiring form
	1.Cable waterproof connector			<p>5 pole connector terminal number</p>

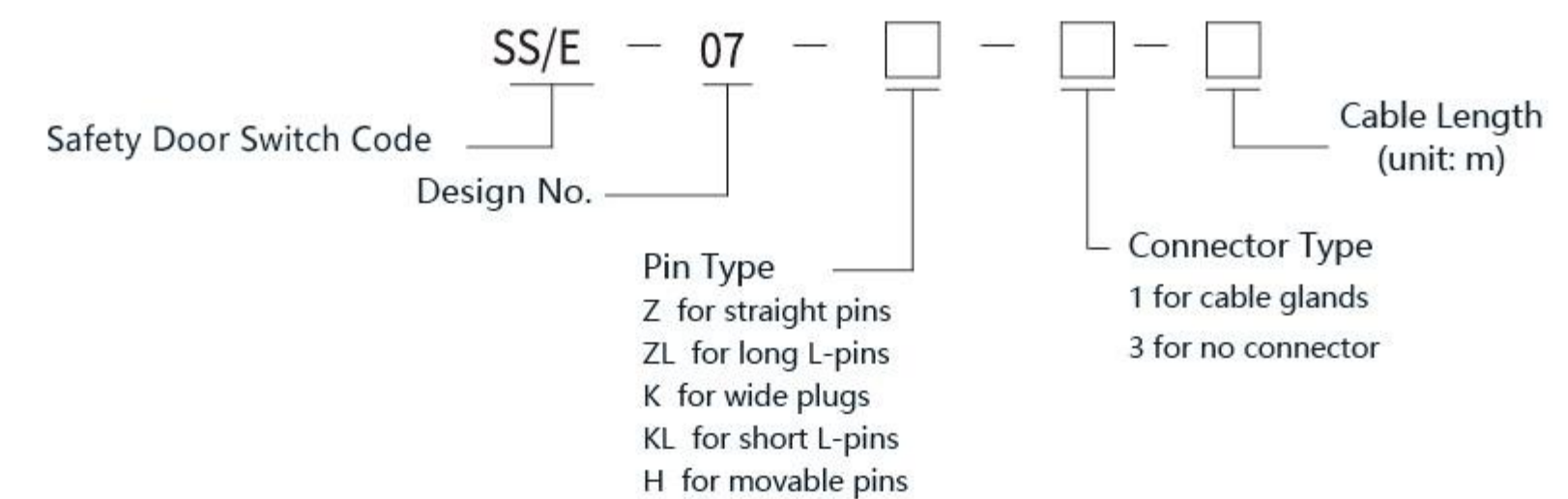
FUNCTIONAL DESCRIPTION CHARACTERISTICS

There is no locking function for the Safety door, and the contact switch signal is used to detect whether the Safety door is closed or not, to determine whether the equipment can be opened.



- ◆ Small body for narrow installation space.
- ◆ Metal switch head for 4-direction adjustment.
- ◆ Built-in 3 sets of contacts, can complete a variety of wiring methods.
- ◆ The standardized contacts ensure high reliability of contact.

MODEL DESCRIPTION



OPERATING STATES AND CIRCUIT DIAGRAM

	State 1	State 2
Action State	<ul style="list-style-type: none"> ● Door Closed ● Equipment running 	<ul style="list-style-type: none"> ● Door Closed ● Equipment stops
Safety door status diagram		
Wiring diagram		

PERFORMANCE SPECIFICATIONS

Production standard	T/SDMTGM0007-2020
Operating environment	Better than pollution level 3
Ambient temperature	-5~40°C
Relative humidity	45~80%
Protection class	IP67 (without induction port)
Mechanical service life	Not less than 1 million times
Electrical service life	Not less than 100,000 cycles(AC-12 250V 4A) Not less than 1 million times(24V AC/DC 100mA)
Tensile strength	None

FUNCTIONAL DESCRIPTION

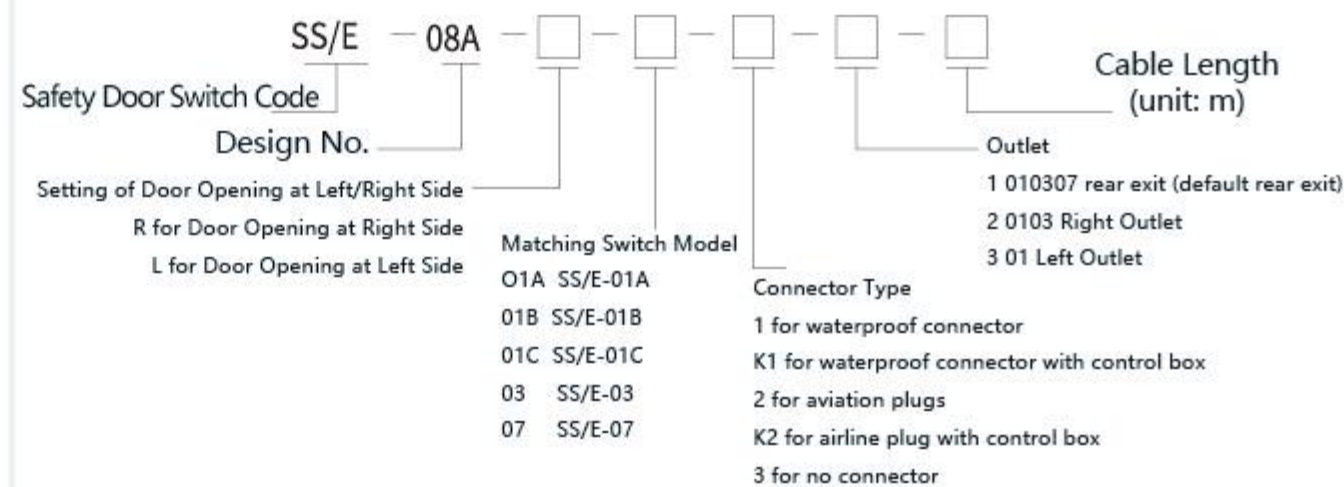
This safety door switch protects people and equipment. It can be used on its own (door lock function only) or in conjunction with a wide range of safety door switches, making it easy to realize the optimal solution for different scenarios. When the door opens, the mechanism and the safety door switch synchronize their movements to issue a stop command, reducing the risk factor. The risk factor determines the level of the safety control factor, and different matching safety door switches are selected according to the different levels.



CHARACTERISTICS

- ◆ Aluminum alloy frame with high overall strength and reliability;
- ◆ The screw connection method is easy to assemble and is more lenient to the installation conditions;
- ◆ Outstanding color matching, highly recognizable in the installation environment;
- ◆ There are two directions of left and right opening, choose as needed;
- ◆ Matching control box independent control function module.

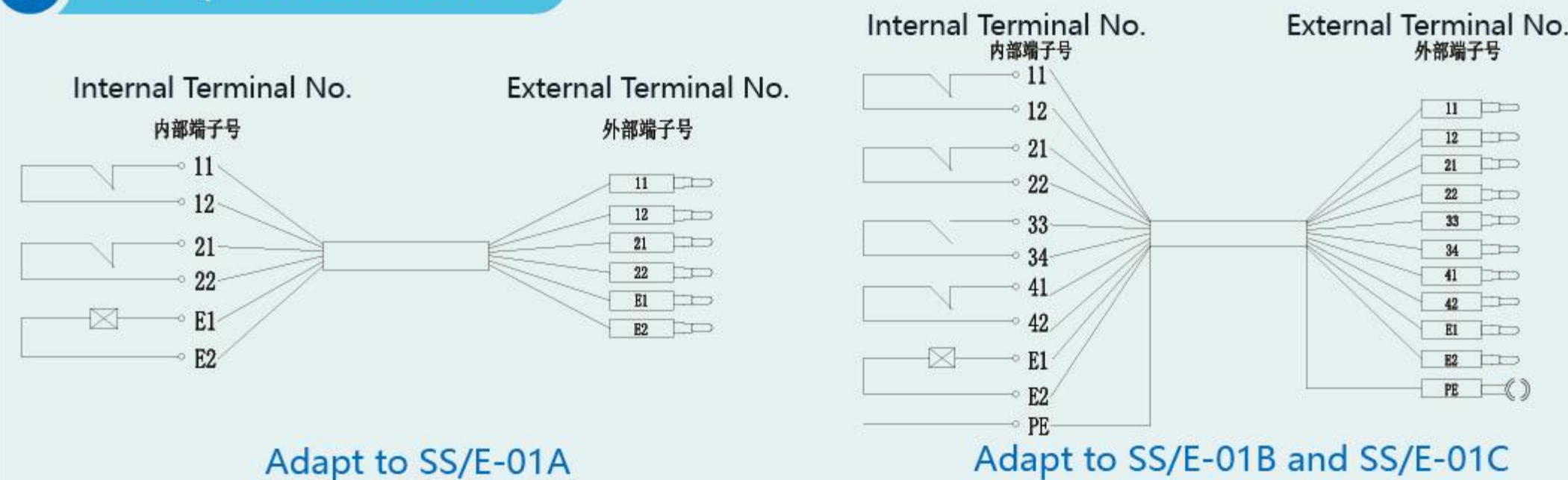
MODEL DESCRIPTION



Note: The definition of left/right opening is only for SS/E-03, other matching safety door switch models can be used for left/right opening, and this definition cannot be selected when selecting the model.

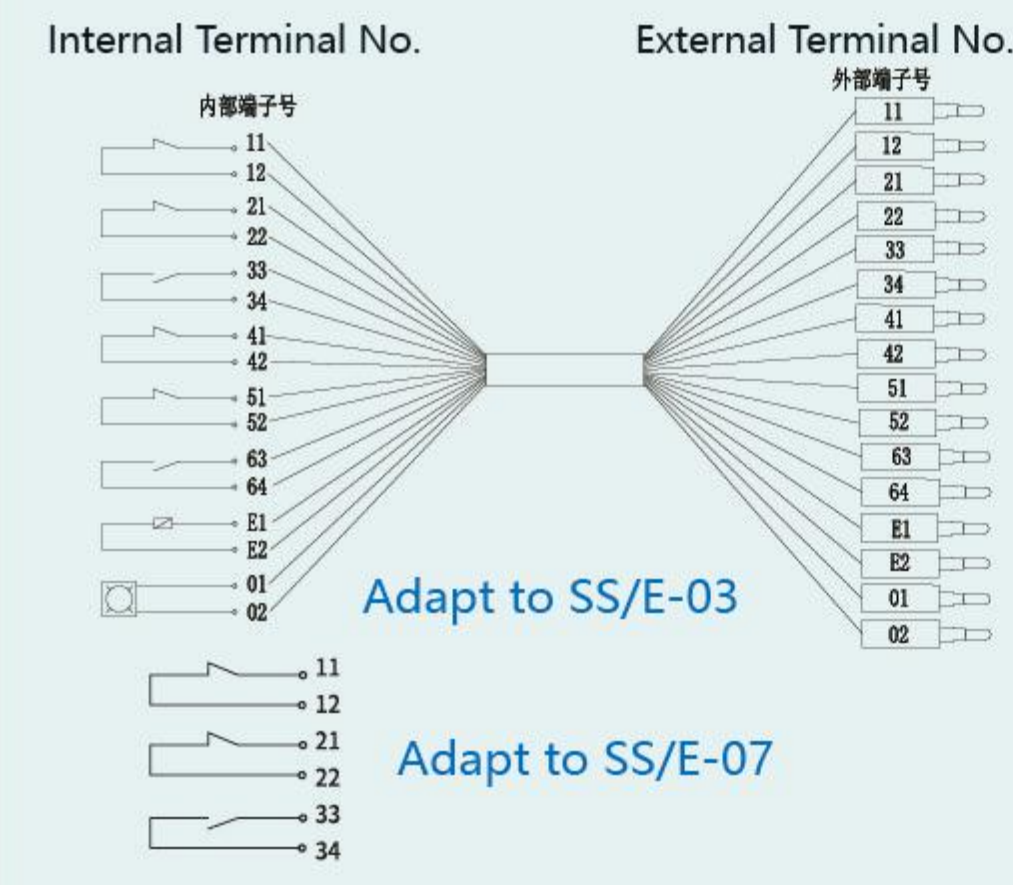
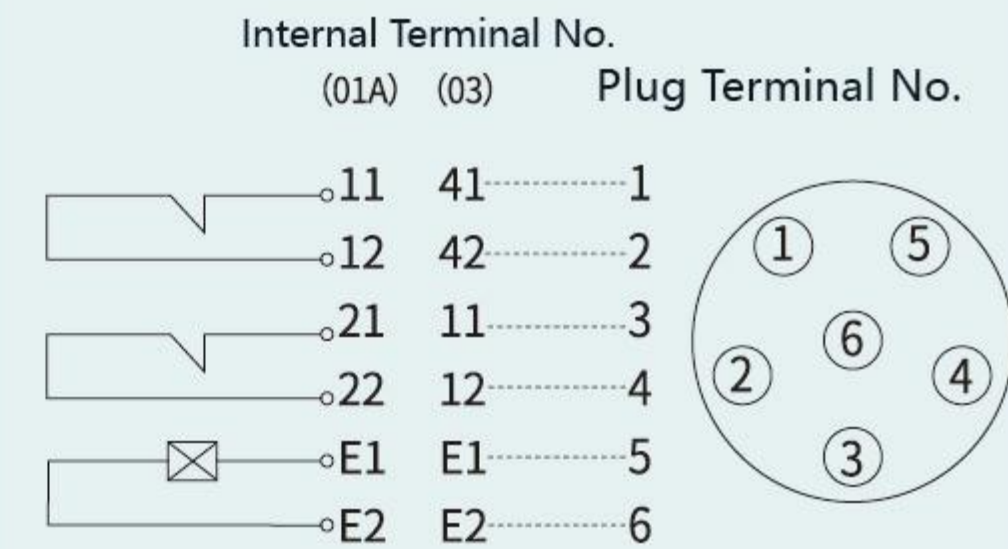
OPTIONAL CONTROL BOX WIRING DIAGRAM

01 Waterproof Connector



02 Aviation Plug

Matching Switch Type 01A, 03



CONTACT CAPACITY

Rated Voltage		30V	250V
Rated Current	AC	Resistive load(AC-12)	4A
		Inductive load(AC-15)	2A
	DC	Resistive load(DC-12)	0.8A
		Inductive loads(DC-13)	0.4A

SOLENOID COIL

Rated voltage	DC24V ^{+10%} / _{-15%}
Rated current	0.4A
Insulation class	Level B

PERFORMANCE SPECIFICATIONS

Production standard	Safety door switches*
Operating environment	Better than pollution level 3
Ambient temperature	-5~40°C
Relative humidity	45~80%
Protection class	IP67 (without induction port)
Mechanical service life	Not less than 1 million times
Electrical service life	Not less than 100,000 cycles(AC-12 250V 4A)
	Not less than 1 million times(24V AC/DC 100mA)
Tensile strength	SS/E-01A: 2000N SS/E-01B: 2500N SS/E-01C: 2500N SS/E-03: 2700N

Note: * It indicates that the standard is a group standard, standard number: T/SDMTGM0007-2020.

INDIVIDUAL CONTROL BOX DESCRIPTION

SS/E-01A Example Description

