Bytorent · 佰多恩

Non-contract Safety Switch

Shield-EN series

Bytorent
Shield-EN
General Code

Bytorent
Shield - EN
Power: 24V DC +15%/-50%
Distance: 0-15mm±2mm

SIL3
PLe
Made in China
Torent Tech co., Ltd.

SHENZHEN TORENT TECHNOLOGY CO., LTD.

About This Document

Product Described

Shield EN Series Non-contact Switch

Version

V2.3_2025.3.20_EN

Legal Information

This document is protected by copyright. All rights are reserved by Shenzhen Torent Technology Co., Ltd. Reproduction of this document, in whole or in part, is permitted only within the scope of copyright law. Modification, abridgment, or translation of this document is not allowed without the explicit written permission of Shenzhen Torent Technology Co., Ltd.

All trademarks mentioned in this document are the property of their respective owners.

Original Document

This document is an original document of Shenzhen Torent Technology Co., Ltd.

SAFETY NOTES

Installation must be performed according to the following steps and must be carried out by personnel with appropriate qualifications.

This device is designed to be part of a safety-related control system for machinery. Before installation, a risk assessment must be conducted to determine whether the specifications of this device are suitable for all foreseeable operations and environmental characteristics of the machine on which it will be installed. During the machine's lifespan, regular inspections must be performed to ensure that the anticipated characteristics remain valid.

Torent assumes no liability for failures of this device if the procedures outlined in this followed, or if the device is used beyond the specifications recommended in this manual.

The device must be protected from exposure to shocks and/or vibrations exceeding those specified in IEC 60068, Part 2-6/7.

Compliance with the recommended inspection and maintenance instructions is a condition of the warranty.

Integrated and Connection

⚠️ **Danger**	If the product is incorrectly integrated, it will not provide the intended protection. ➢ Design product integration (project planning) according to machine requirements. ➢ Integrate the product according to the project planning.

Mechanical and Electrical Installation

⚠️ **Danger**	Voltage and/or accidental machine startup can cause death or serious injury. ➢ Ensure the machine is de-energized and remains de-energized during mechanical and electrical installation. ➢ Ensure extremely hazardous conditions are removed and remain removed.

Maintenance and Modifications

⚠️ **Danger**	Improper operation on the product or products that have been modified may not provide the intended protection. ➢ Do not repair, open, tamper with, or otherwise modify the product except as described in this document.

Bytorent · 佰多恩

Shield–EN non-contact safety switch

❖ Compliant up to the standard PLe (ISO13849-1) and SiL3 standard (IEC 62061)

❖ Proven dual-channel safety monitoring circuit design

❖ Support up to 2 sets of 1A capacity safety contacts and 2 sets of 300mA transistor PNP synchronous output

❖ Passive magnetic encoding type, active magnetic encoding type, RFID universal encoding type, RFID independent encoding type, etc.

❖ Supports actuator tool-less self-pairing configuration

❖ Bright LED indication, clearly shows the current status

❖ Integrated cables for easy installation and wiring

❖ The full series of EN products have IP69K protection level, suitable for various harsh environments

❖ Ultra-small size, suitable for tight space installation

Suitable for monitoring:

‣ **Safety gate**
‣ **Security window**
‣ **Safe action parts**

Safety output:

‣ **3NO, 1NO+1NC, 2PNP, 2NO+2PNP multi-type output available**

Applicable industry scenarios

‣ **Injection molding machine, CNC machine tool**
‣ **Press/hydraulic press, Glass machinery, Filling machinery, Packaging machinery**
‣ **Sorting machinery, Woodworking machinery, Papermaking machinery**
‣ **Intelligent forklift, AGV, Robot, Elevator**
‣ **Wind power, SIS system, etc**

- Shield-EN series non-contact safety switch is specially designed and developed for compact application, it can be used to monitor various safety doors, safety windows and motion safety components.

- The product is designed according to ISO13849 and GB/T16855 and other related standards, and meets the requirements of functional safety standards

- 4 types model: Passive magnetic type, active magnetic type, RFID general code type, RFID unique code type.

- Bright LED indication, clearly shows the current status Integrated cables for easy installation and wiring

- Support parallel serial use, active models in series use scenarios do not reduce safety level

- Support up to 2 sets of 1A capacity safety contacts and 2 sets of 300mA transistor PNP signal synchronous output at the same time

- IP69K protection level, meeting the harsh environmental usage requirements of beverage filling and other scenarios
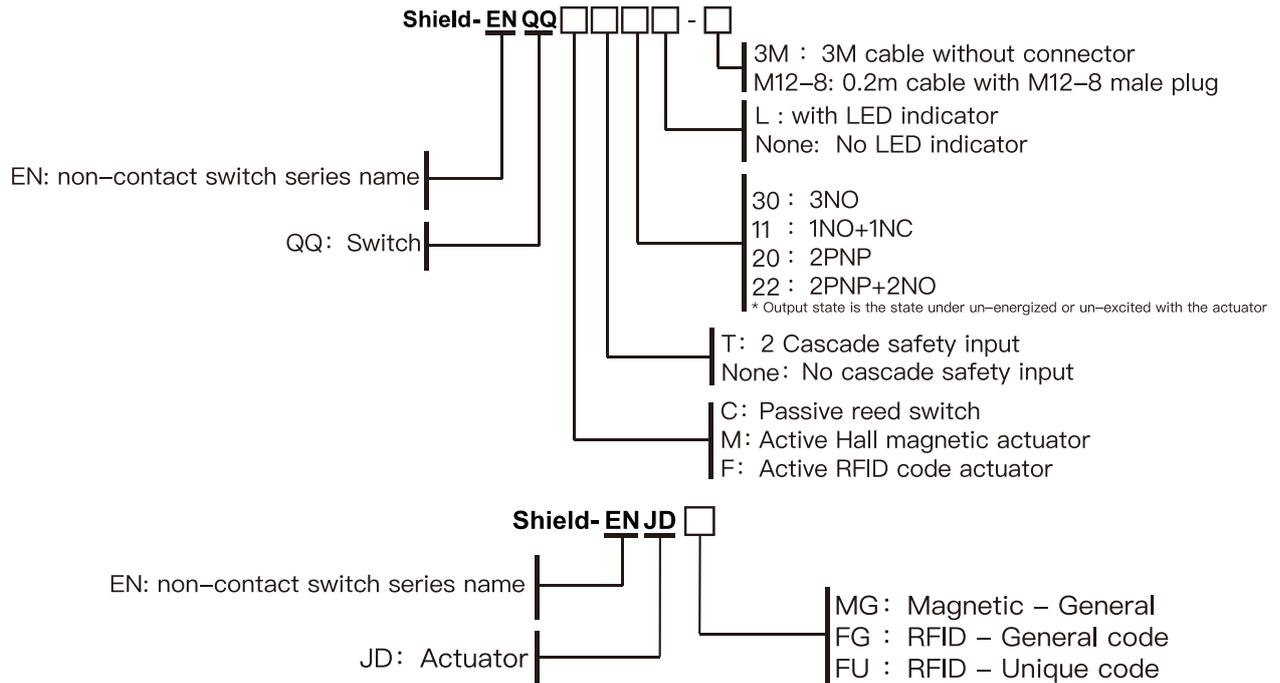
➢ **Function selection**

Safety interlock Switch Sensor Safety Output

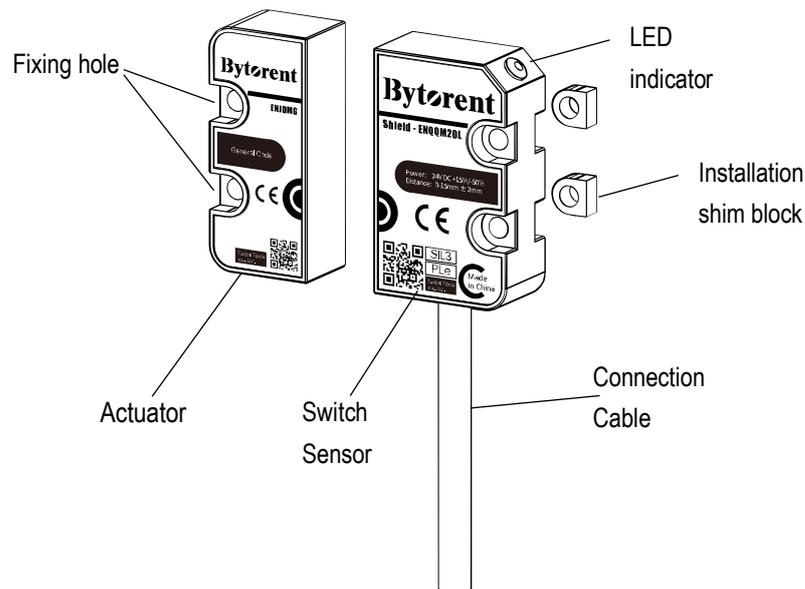| Type	Model	Safety interlock Switch Sensor (No power or induction excitation states - output)						Safety Input
		3NO	1NO +1NC	2NO +1NO (LED)	1NO(LED) +1NC	2PNP	2PNP +2NO	2 PNP Safety Input
Magnetic	ENQQC30-3m	■						
	ENQQC11-3m		■					
	ENQQC30L-3m			■				
	ENQQC11L-3m				■			
	ENQQM20L-3m					■		
	ENQQMT20L-3m					■		■
	ENQQM22L-3m						■	
	ENQQM20L-M12-8					■		
	ENQQMT20L-M12-8					■		■
	ENQQM22L-M12-8						■	
RFID	ENQQF20L-3m					■		
	ENQQFT20L-3m					■		■
	ENQQF22L-3m						■	
	ENQQF20L-M12-8					■		
	ENQQFT20L-M12-8					■		■
	ENQQF22L-M12-8						■	

Safety interlock Switch Actuator code type

Type	Model	Safety interlock Switch Actuator	
		General code	Unique code
Magnetic sensing	ENJDMG	■	
RFID sensing	ENJDFG	■	
	ENJDFU		■

Sensor model and detailed description (the following output states are all states without power or induction excitation)
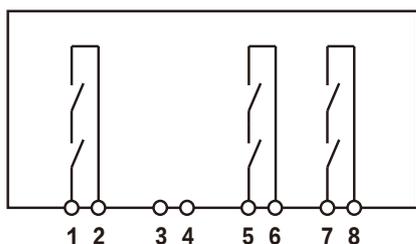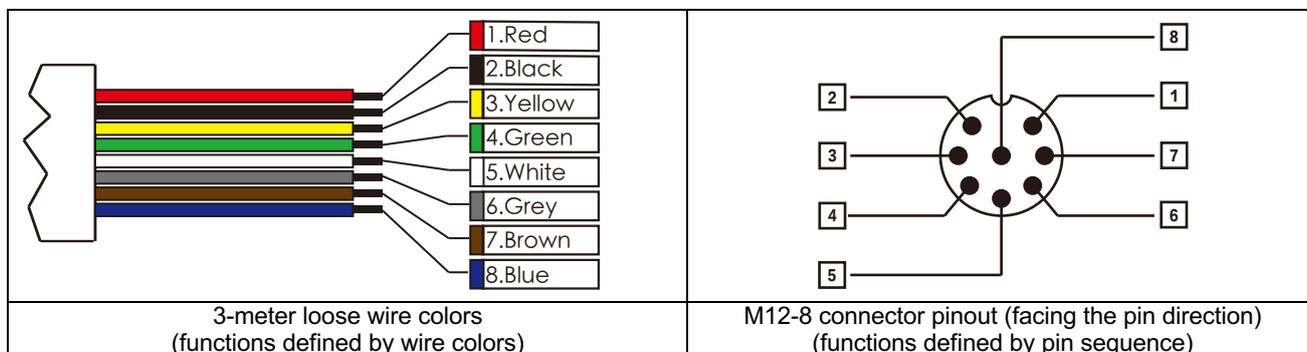
Shield- **EN QQ**☐☐☐☐ - ☐

EN: non–contact switch series name

QQ: Switch

3M： 3M cable without connector
M12–8: 0.2m cable with M12–8 male plug

L : with LED indicator
None: No LED indicator

30： 3NO
11 ： 1NO+1NC
20： 2PNP
22： 2PNP+2NO
* Output state is the state under un–energized or un–excited with the actuator

T： 2 Cascade safety input
None： No cascade safety input

C： Passive reed switch
M： Active Hall magnetic actuator
F： Active RFID code actuator

Shield- **EN JD**☐

EN: non–contact switch series name

JD： Actuator

MG： Magnetic – General
FG ： RFID – General code
FU ： RFID – Unique code

➢ **Structure definition**

Switch sensor with Actuator (Front side)

➢ **Connection Sequence & Function Description**

|	
1.Red 2.Black 3.Yellow 4.Green 5.White 6.Grey 7.Brown 8.Blue	8 2 1 3 7 4 6 5
3-meter loose wire colors (functions defined by wire colors)	M12-8 connector pinout (facing the pin direction) (functions defined by pin sequence)

ENQQC30

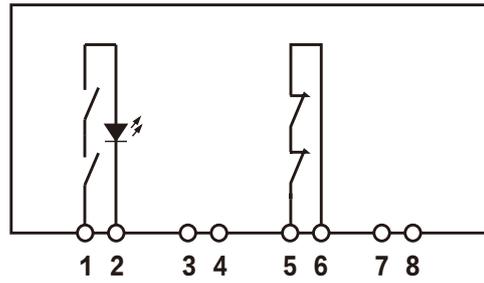| No.	Define	Remark	Wire Color
1	13	SO1 contact1	Red
2	14	SO1 contact2	Black
3	NA		Yellow
4	NA		Green
5	23	SO2 contact1	White
6	24	SO2 contact 2	Grey
7	33	SO3 contact 1	Brown
8	34	SO3 contact 2	Blue
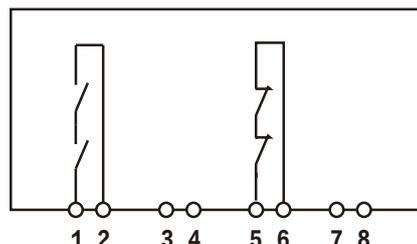
ENQQC11

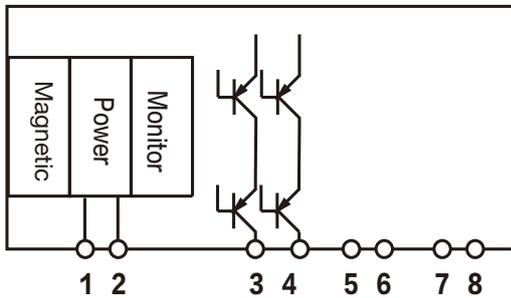| No.	Define	Remark	Wire Color
1	13	SO1 contact1	Red
2	14	SO1 contact2	Black
3	NA		Yellow
4	NA		Green
5	21	SO2 contact1	White
6	22	SO2 contact 2	Grey
7	NA		Brown
8	NA		Blue
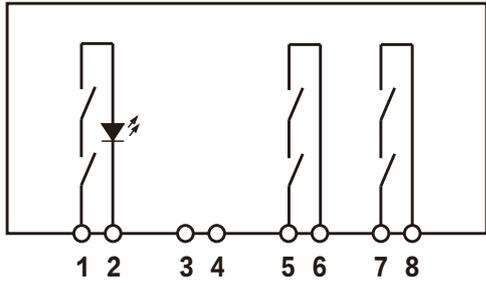
ENQQC30L

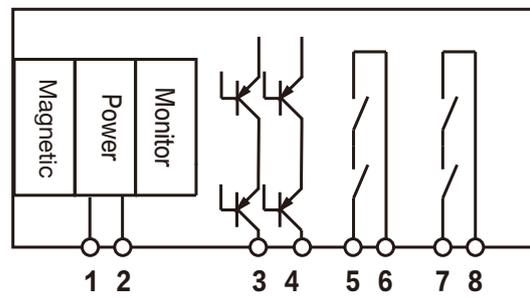| No.	Define	Remark	Wire Color
1	24V/13	24VDC, SO1 contact1	Red
2	0V/14	0V, SO1 contact2	Black
3	NA		Yellow
4	NA		Green
5	23	SO2 contact1	White
6	24	SO2 contact 2	Grey
7	33	SO3 contact 1	Brown
8	34	SO3 contact 2	Blue

ENQQC11L

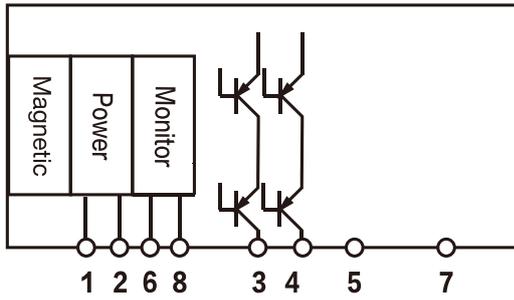| No.	Define	Remark	Wire Color
1	24V/13	24VDC, SO1 contact1	Red
2	0V/14	0V, SO1 contact2	Black
3	NA		Yellow
4	NA		Green
5	21	SO2 contact1	White
6	22	SO2 contact 2	Grey
7	NA		Brown
8	NA		Blue

ENQQM20L

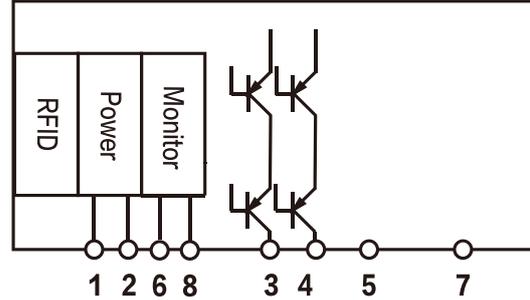| No.	Define	Remark	Wire Color	M12 PIN
1	24V	24VDC	Red	2
2	0V	0V	Black	7
3	OSSD1	PNP output1	Yellow	1
4	OSSD2	PNP output2	Green	6
5	NA		White	3
6	NA		Grey	4
7	NA		Brown	5
8	NA		Blue	8

ENQQM22L

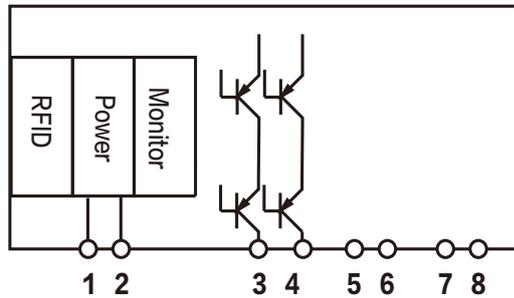| No.	Define	Remark	Wire Color	M12 PIN
1	24V	24VDC	Red	2
2	0V	0V	Black	7
3	OSSD1	PNP output1	Yellow	1
4	OSSD2	PNP output2	Green	6
5	13	SO1 contact output1	White	3
6	14	SO1 contact output2	Grey	4
7	23	SO2 contact output1	Brown	5
8	24	SO2 contact output2	Blue	8

ENQQMT20L

No.	Define	Remark	Wire Color	M12 PIN
1	24V	24VDC	Red	2
2	0V	0V	Black	7
3	OSSD1	PNP output1 / RFID Actuator pairing enable	Yellow	1
4	OSSD2	PNP output2	Green	6
5	NA		White	3
6	SI1	PNP Safety Input 1	Grey	4
7	NA		Brown	5
8	SI2	PNP Safety Input 2	Blue	8

ENQQFT20L

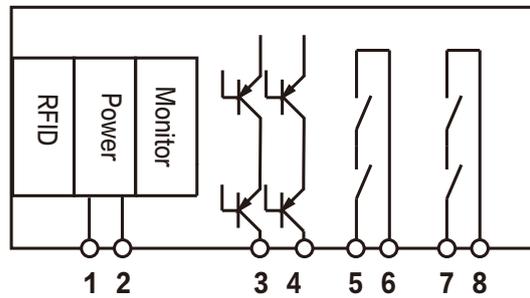| No.	Define	Remark	Wire Color	M12 PIN
1	24V	24VDC	Red	2
2	0V	0V	Black	7
3	OSSD1 /info	PNP output1 / RFID Actuator pairing enable	Yellow	1
4	OSSD2	PNP output2	Green	6
5	NA		White	3
6	SI1	PNP Safety Input 1	Grey	4
7	NA		Brown	5
8	SI2	PNP Safety Input 2	Blue	8

ENQQF20L

No.	Define	Remark	Wire Color	M12 PIN
1	24V	24VDC	Red	2
2	0V	0V	Black	7
3	OSSD1 /info	PNP output1 / RFID Actuator pairing enable	Yellow	1
4	OSSD2	PNP output2	Green	6
5	NA		White	3
6	NA		Grey	4
7	NA		Brown	5
8	NA		Blue	8

ENQQF22L

No.	Define	Remark	Wire Color	M12 PIN
1	24V	24VDC	Red	2
2	0V	0V	Black	7
3	OSSD1 /info	PNP output1 / RFID Actuator pairing enable	Yellow	1
4	OSSD2	PNP output2	Green	6
5	13	SO1 contact output1	White	3
6	14	SO1 contact output2	Grey	4
7	23	SO2 contact output1	Brown	5
8	24	SO2 contact output2	Blue	8

➤ LED indicator status description

| Type	Model	LED indicator status	Description
Magnetic Sensing	ENQQC30 ENQQC11	N/A	N/A
	ENQQC30L ENQQC11L	☐ Off	No power/no actuator detected
		■ Green On	Actuator detected
	ENQQM20L ENQQM22L ENQQMT20L	☐ Off	No power
		■ Green On	Actuator detected
		★☆ Red & Green alternately flashing	No actuator detected
		★☆ Red flashing	Internal system failure
		■ Red & Green On (Orange)	Detected acutator, waiting for safety input (ENQQMT20L only)
RFID sensing	ENQQF20L ENQQF22L ENQQFT20L	☐ Off	No power
		■ Green On	Actuator detected
		★☆ Red & Green alternately flashing	No actuator detected
		★☆ Red flashing	Internal system failure
		★☆ Green flashing	Pairing mode
		■ Red On	Missing paired actuator data (please pair devices)
		■ Red & Green On (Orange)	Actuator Pairing completed
			Detected acutator, waiting for safety input (ENQQMT20L only)

➤ Cascade Connection

Multiple EN devices (models with cascading functionality) can be connected in a cascaded manner to monitor the opening and closing status of multiple doors, windows, or similar structures on the same machine.

1. **Cascading of Passive Models**:　Multiple passive model devices (ENQQC models) can be directly connected in series and then connected to the safety signal circuit of a safety relay to achieve cascading. The specific connection method can be referred to in the connection example: "Connection Example Diagram 2".

2. **Cascading of Active Models**:　For the ENQQFT20L or ENQQMT20L models, when cascading, the OSSD1 and OSSD2 of the upper device should be connected to the Safety Input 1 (SI1) and Safety Input 2 (SI2) of the next device, respectively. The OSSD1 and OSSD2 of the last device in the cascade should be connected to the safety inputs SI1 and SI2 of the safety relay or other external devices. The safety inputs SI1 and SI2 of the first device should be connected to the 24VDC supply. The specific connection method can be referred to in the connection example: "Connection Example Diagram 3".

➤ Connection examples

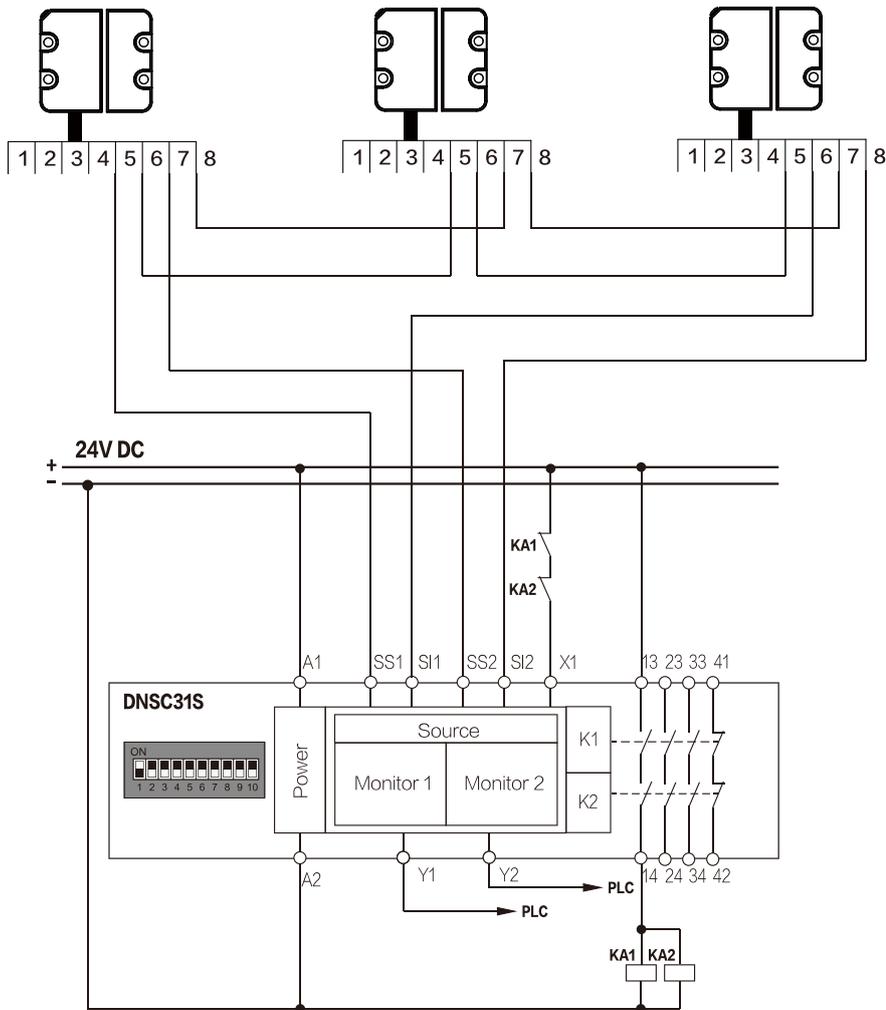◆ **Example 1: active models connect to safety relay example**
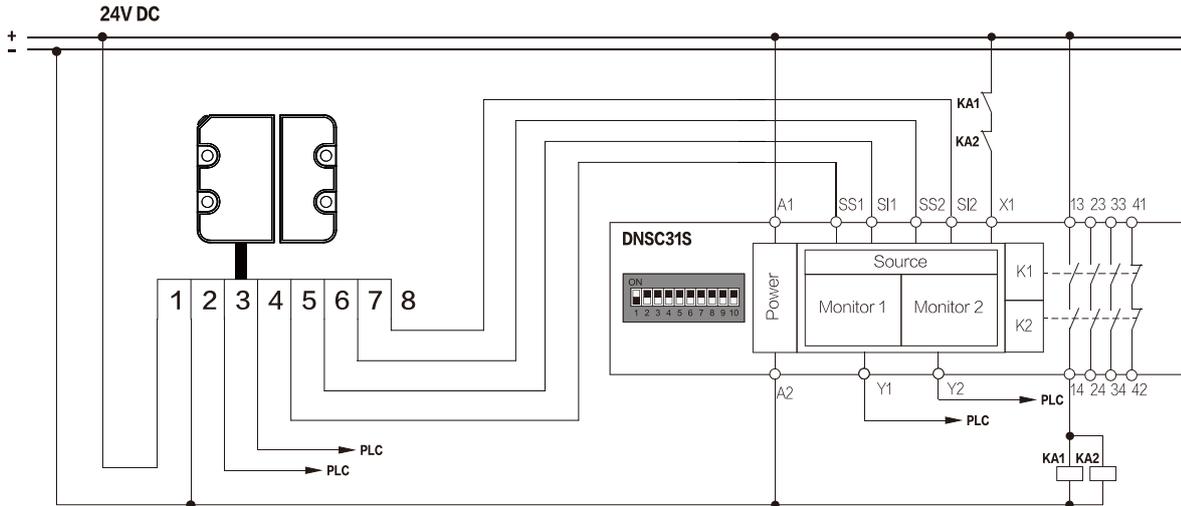
Example Diagram 1: Using ENQQF22L-3m RFID non-contact safety switch with DNSC31S safety relay,
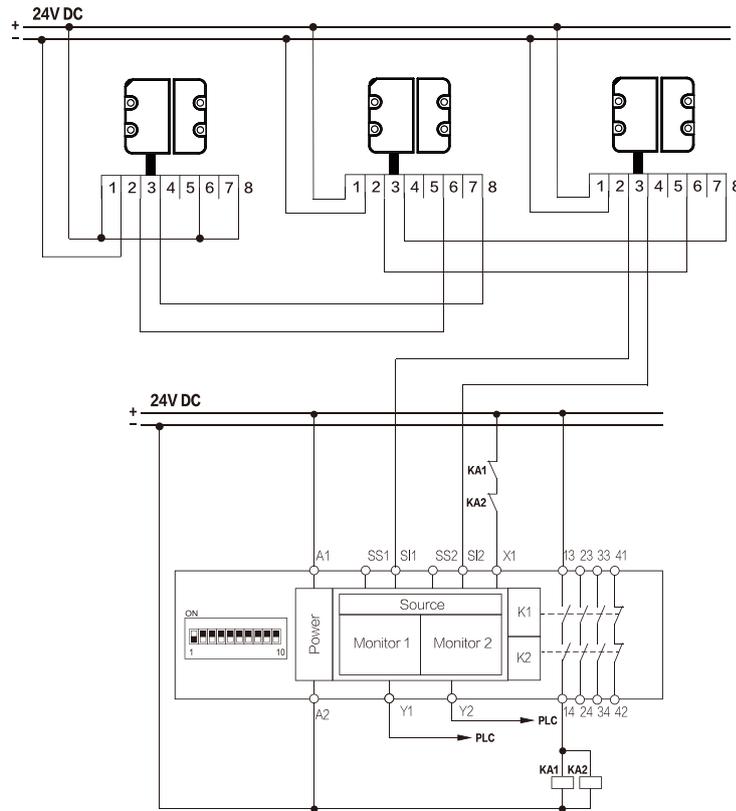
dual channels, automatically reset

◆   **Example 2: passive models cascading connect example**

Example Diagram 2: Using multiple ENQQC30-3m non-contact safety switches in series cascade, with DNSC31S safety relay,

dual channel detection, automatic reset

◆ **Example 3: Active Models cascading connect to example**

Example Diagram 3: Using multiple ENQQMT20/ENQQFT20 non-contact safety switches in cascade connect,

with DNSC31S safety relay, dual channel detection, automatic reset

⚠ **Note: Different circuit structures have different functional safety levels, which need to be selected according to the actual requirement of the site. For details, please consult our customer service.**

➢ **RFID Actuator Matching**

RFID actuators come in two types: universal coding and independent coding. Universal coding switches are pre-matched with actuators at the factory, and typically do not require re-matching when replacing different actuators. However, for independent coding non-contact switch kits, the switch body will only work with the matched independent coding actuator during operation. If the actuator code does not match the previously matched code, the switch body will fail to operate. To replace with another independently coded actuator, the switch body and the new actuator must be matched.

RFID Actuator Matching Method:

1. Connect the switch body to the power supply (-3M: Red wire to 24VDC, Black wire to 0V; -M12-8: PIN2 to 24VDC, PIN7 to 0V). Connect the actuator pairing enable (-3M: Yellow wire; -M12-8: PIN1) to 24VDC.

2. After powering on the switch, the green LED will flash, indicating that the pairing mode has been entered. Bring the actuator close to the switch body to complete the matching.

3. Once the pairing is complete, the LED indicator on the switch will display a steady orange light, indicating that the pairing is successful.

4. Remove the actuator, disconnect the power and actuator pairing enable lines, restore the normal working wiring, and power on again to use. After rebooting, if the switch does not detect the actuator, the LED indicator will display alternating

red and green flashes. When the actuator is brought within the detection range, the switch's LED light will turn to a steady green light, indicating that the actuator has been detected and the switch is operating normally.

After rebooting, if the switch does not detect a actuator, the LED indicator will display alternating red and green flashes. When the actuator is brought within the detection range, the switch's LED light will turn to a steady green light, indicating that the actuator has been detected and the switch is operating normally.

➢ **Technology Parameter**

Power supply		ENQQC	ENQQM	ENQQF
Power supply		24V DC		
Voltage tolerance		N/A	+15%/-50%	+15%/-50%
Power consumption		≤0.1W	≤0.72W	≤0.96W
Input & Output		ENQQC	ENQQM	ENQQF
Reed contact Output	13/14(-LED)	NO, < 15 mA		
	13/14	NO, < 200 mA		
	23/24	NO, < 200 mA		
	33/34	NO, < 200 mA		
	21/22	NC, < 100 mA		
Safety Output – Relay contact			2 NO, ≤ 1A @ 24VDC (Resistive load)	2 NO,≤1A @ 24VDC (Resistive load)
Safety Output – OSSD			OSSD, < 300mA，PNP signal synchronization	OSSD, < 300mA，PNP signal synchronization
Safety Input			OSSD safety input, PNP	OSSD safety input, PNP
Action Parameters		ENQQC	ENQQM	ENQQF
Action distance (off -> on)		11mm±2mm (NO) 13mm±2mm (NC)	13mm±2mm	15mm±2mm
Action distance (on -> off)		13mm±2mm (NO) 17mm±2mm (NC)	17mm±2mm	19mm±2mm
Action accuracy		Within 10% of the action distance		
Response time (off -> on)		1ms	＜50ms	＜130ms
Response time (on -> off)		1ms	＜60ms	＜60ms
General parameters		ENQQC	ENQQM	ENQQF
Electrical lifespan (times)		$1x10^5$ (Test current 0.2A)	$1x10^5$ (Test current 0.3A)	$1x10^5$ (Test current 0.3A)
Mechanical lifespan (times)		$5x10^6$	$1x10^8$	$1x10^8$
Working temperature		-25℃～90℃	-25℃～70℃	
Working humidity		10%-90% (No frozen or Condensation)		
Impulse withstand voltage		2kV		
Vibration resistance		10~150Hz, Amplitude 1.5mm, 3-axis, 60 minutes		
Impact Resistance		15G acceleration, 11ms duration, 3-axis, 3 times per axis.		
Insulation impedance		100MΩ		
Insulation withstand voltage		1500VAC (1min)		

Pulse withstand voltage	6kV (1.2/50us), 5 pulses, duration 20s (Between signal and relay output (unpowered))				
	4kV (1.2/50us), 5 pulses, duration 20s (Between signal output (unpowered))				
Rated insulation voltage	125V AC				
Overvoltage category	II				
Pollution degree	3				
Protection level	IP69K				
Storage temperature	-40℃～105℃				
Shell material	PBT，V0 Flame retardant				
Installation method	M4 screw				
Size	H50mm×D30mm×W15.5mm (Sensor); H50mm×D22mm×W15.5mm (actuator)				
Weight		ENQQC11	ENQQC30	ENQQM	ENQQF20	ENQQF22
	-3M set	205g	197g	228g	221g	
	-3M senser	177g	169g	200g	200g	
	-M12-8 senser	N/A		55g	55g	
	Actuator	ENJDMG 28g		ENJDMG 28g	ENJDFG/ENJDFU 21g	

| Connection parameters	
Connecting cable length	3m (-3M loose cable) or 0.2m (-M12-8 with connector)
Interface Type	No connector (-3M model) or M12-8 male connector (-M12-8 model)

Standard application	
Conform to	EN 60947-1
	EN 60947-5-1
	EN ISO 13849-1
	EN 62061
	C€

Safety characteristics		ENQQC	ENQQM	ENQQF
PL Level	EN ISO 13849-1	When used together with safety relays, it can reach up to PLe (EN ISO 13849-1) and SiL3 (IEC61508) safety level requirements.	PLe	PLe
Category	EN ISO 13849-1		Cat.4	Cat.4
DC$_{avg}$	EN ISO 13849-1		High	High
Mission Time	EN ISO 13849-1		20 Years	20 Years
CCF	EN ISO 13849-1		Meet requirement	Meet requirement
MTTF$_d$	EN ISO 13849-1		870 Years	870 Years
SIL CL	EN 62061		SIL CL 3	SIL CL 3
PFH$_d$[1/h]	EN 62061		2.6E-09	2.6E-09
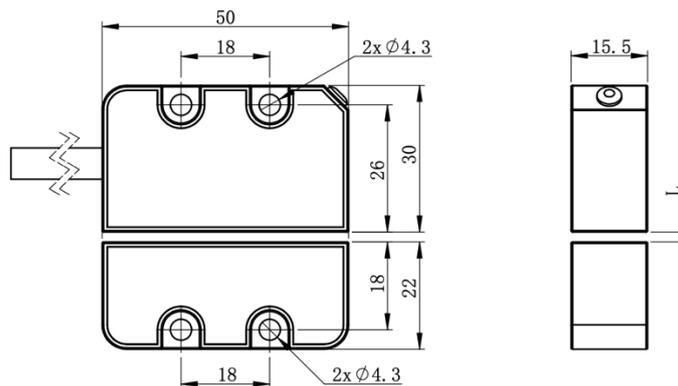
➢ **Dimensions**

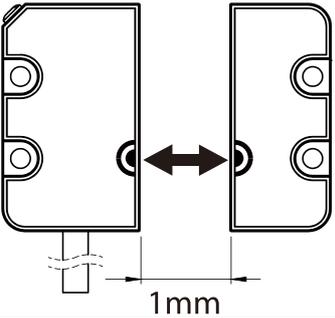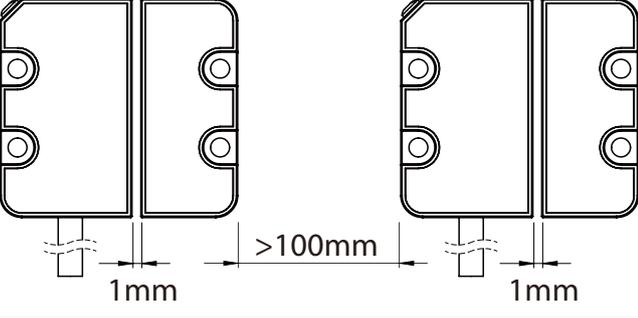**EN Non-contact safety interlock switch dimensions** *Unit in mm*

➢ Safety Precautions

- **Professional Handling:** The design, installation, commissioning, and maintenance of the product should be carried out by qualified technical personnel. Failure to do so may result in personal injury or equipment damage.

- **Electrical Safety:** To avoid electric shock or fire, ensure the equipment power is turned off before installation, removal, wiring, maintenance, or inspection of the switch.

- **Installation Location:** Do not install the actuator in locations where it may come into contact with the human body to prevent potential injury.

➢ Installation Instructions

- **Safety Level:** By using a safety relay module (with a dual-channel safety relay configuration), the product can meet the safety level requirements of CAT 4 (EN ISO 13849-1).

- **Matching Components:** The non-contact switch and the actuator are designed for use together. During installation, configuration, use, and maintenance, ensure that the corresponding matching actuator model is used. Do not use non-matching models.

- **Power and Load:** Do not install or remove the encoded magnetic switch while the power is on. Do not exceed the rated load limits for the corresponding switch model. It is recommended to use a fuse in series to prevent damage due to misuse.

- **Impact Protection:** If the impact force during door closure exceeds 300 m/s² (approximately 30G), it may cause switch failure. It is recommended to install a door stop mechanism (e.g., a door bolt) to prevent direct impact between the non-contact switch and the actuator.

- **Product Integrity:** To ensure the protective performance of the product, do not disassemble it after purchase. If mechanical damage to the enclosure is detected, especially in damp environments, stop using the product immediately and replace it.

- **Storage Conditions:** Do not store the switch in dusty, damp, or organic gas environments, or in areas exposed to direct sunlight.

- **Magnetic Interference:** Do not install magnetic encoded switches (ENQQC, ENQQM series) in environments with strong magnetic interference. For such environments, consider using RFID-enabled contact switches (ENQQF series) or consult a sales advisor for alternative solutions.

➢ Installation Notes

Alignment for Left / Right Opening: When installing for left or right opening, align the marks to avoid misalignment. When the door is fully closed, a gap of approximately **1mm** should be reserved.	**Spacing for Adjacent Installation:** When multiple non-contact switches and actuators are installed adjacent to each other, maintain a minimum spacing of **100mm** between adjacent actuators and switch bodies.

➢ **Installation Torque**

Shim Block Usage: The product is equipped with four Shim blocks for fix hole. It is recommended to use these blocks when tightening the screws to ensure that the switch and actuator are installed horizontally and securely.

Tool and Torque Requirements: Use a non-magnetic screwdriver during installation to avoid interference with the product. The tightening torque should not exceed **1 Newton meter (1 N·m).**
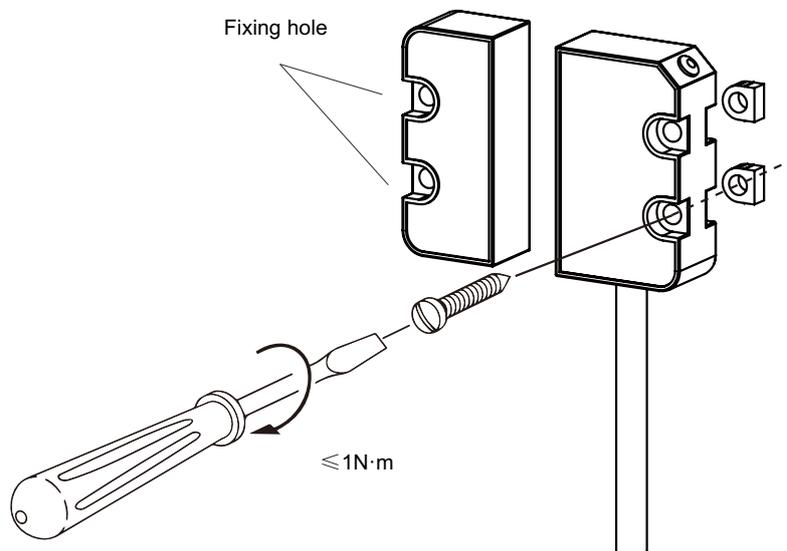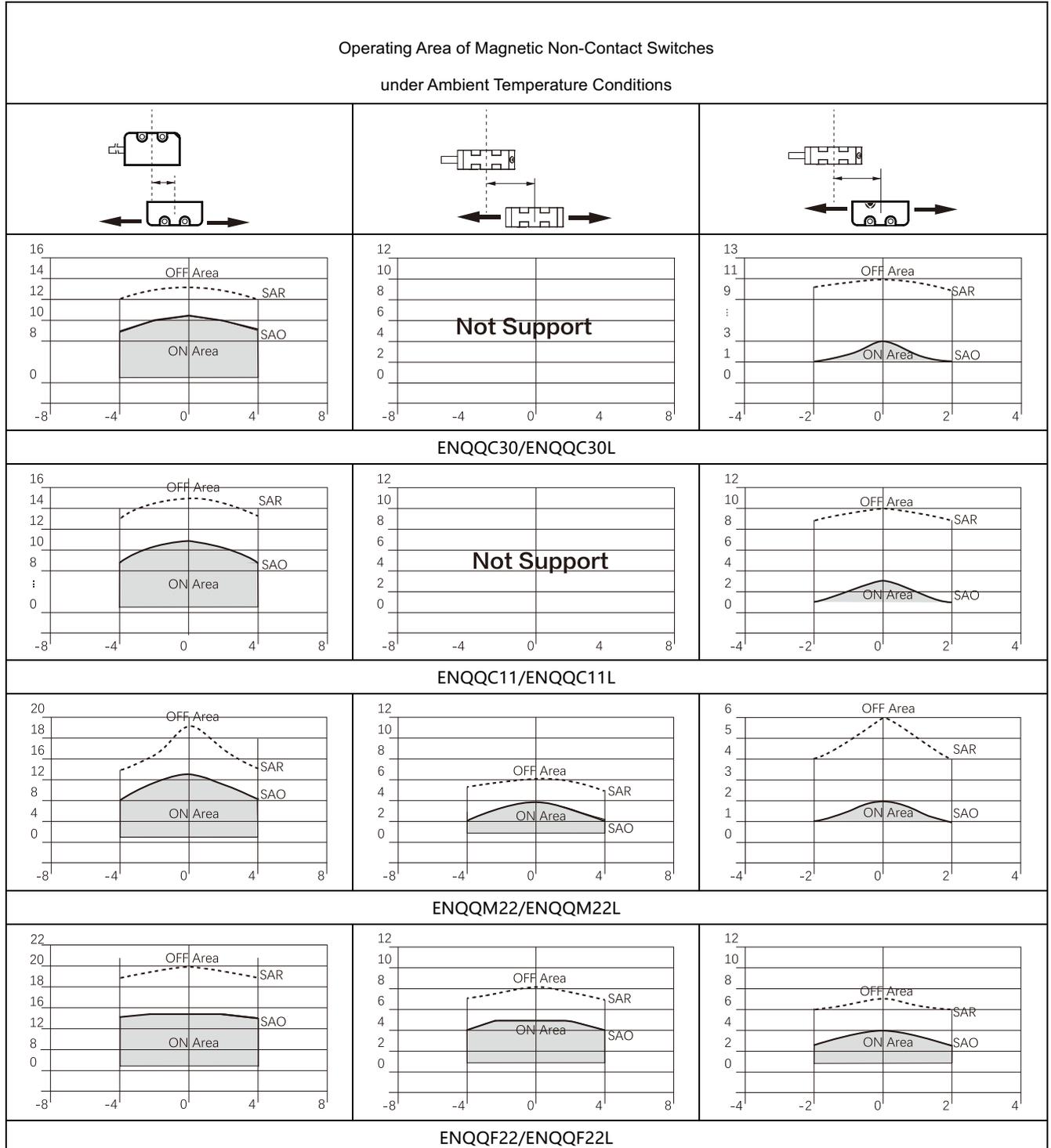

➢ **Cable Wiring Precautions**

• **Avoid Excessive Tension:** Excessive tension during wiring can cause the cable to break. When routing and securing the cable, allow for a small amount of slack to accommodate movement.

- **Handle Cables with Care:** Do not pull the cable forcefully, especially at the switch connection point. Doing so may cause the cable to break or the cable sheath to dislodge, which could compromise the protective performance and lead to other failures.

➢ Magnetic Non-Contact Switch Operating Area

SAO (Safe Operating Distance for Activation): The distance at which the safety output is guaranteed to be activated.

SAR (Safe Operating Distance for Release): The distance at which the safety output is guaranteed to be deactivated.

Operating Area of Magnetic Non-Contact Switches under Ambient Temperature Conditions

ENQQC30/ENQQC30L

ENQQC11/ENQQC11L

ENQQM22/ENQQM22L

ENQQF22/ENQQF22L

➢ **Ordering information**

● **Sensor & Actuator (KIT)**

Model	Code	Qty	Power Supply	Description	Output
ENQQC11-3m / ENJDMG	01120611101	1	Passive	Kit, magnetic encoding type (with safety magnetic encoding actuator), no indicator light, cable length 3m	1NO/1NC
ENQQC30L-3m / ENJDMG	01120611102	1	Passive	Kit, magnetic encoding type (with safety magnetic encoding actuator), with indicator light, cable length 3m	2NO/1NO(LED)
ENQQC11L-3m / ENJDMG	01120611103	1	Passive	Kit, magnetic encoding type (with safety magnetic encoding actuator), with indicator light, cable length 3m	1NO(LED)/1NC
ENQQC30-3m / ENJDMG	01120611104	1	Passive	Kit, magnetic encoding type (with safety magnetic encoding actuator), no indicator light, cable length 3m	3NO
ENQQM20L-3m / ENJDMG	01120611111	1	24V DC	Kit, magnetic encoding type (with safety magnetic encoding actuator), with indicator light, cable length 3m	2PNP
ENQQMT20L-3m / ENJDMG	01120612132	1	24V DC	Kit, magnetic encoding type, supports 2 OSSD safety inputs (with safety magnetic encoding actuator), with indicator light, cable length 3m	2PNP
ENQQM22L-3m/ ENJDMG	01120611112	1	24V DC	Kit, magnetic encoding type (with safety magnetic encoding actuator), with indicator light, cable length 3m	2PNP+2NO
ENQQF20L-3m/ ENJDFG	01120611221	1	24V DC	Kit, RFID universal encoding type (with safety RFID universal encoding actuator), with indicator light, cable length 3m	2PNP
ENQQFT20L-3m / ENJDFG	01120612133	1	24V DC	Kit, RFID universal encoding type, supports 2 OSSD safety inputs (with safety RFID universal encoding actuator), with indicator light, cable length 3m	2PNP
ENQQF22L-3m / ENJDFG	01120611222	1	24V DC	Kit, RFID universal encoding type (with safety RFID universal encoding actuator), with indicator light, cable length 3m	2PNP+2NO
ENQQF20L-3m / ENJDFU	01120611323	1	24V DC	Kit, RFID independent encoding type (with safety RFID independent encoding actuator), with indicator light, cable length 3m	2PNP
ENQQFT20L-3m / ENJDFU	01120612134	1	24V DC	Kit, RFID independent encoding type, supports 2 OSSD safety inputs (with safety RFID independent encoding actuator), with indicator light, cable length 3m	2PNP
ENQQF22L-3m / ENJDFU	01120611324	1	24V DC	Kit, RFID independent encoding type (with safety RFID independent encoding actuator), with indicator light, cable length 3m	2PNP+2NO
ENQQM20L-M12-8 / ENJDMG	01120612111	1	24V DC	Kit, magnetic encoding type switch (with safety magnetic encoding actuator), with indicator light, cable length 0.2m, with M12-8 core connector	2PNP
ENQQMT20L-M12-8 / ENJDMG	01120612135	1	24V DC	Kit, magnetic encoding type switch, supports 2 OSSD safety inputs (with safety magnetic encoding actuator), with indicator light, cable length 0.2m, with M12-8 core connector	2PNP
ENQQM22L-M12-8 / ENJDMG	01120612112	1	24V DC	Kit, magnetic encoding type switch (with safety magnetic encoding actuator), with indicator light, cable length 0.2m, with M12-8 core connector	2PNP+2NO
ENQQF20L-M12-8 / ENJDFG	01120612221	1	24V DC	Kit, RFID encoding type switch (with safety RFID universal encoding actuator), with indicator light, cable length 0.2m, with M12-8 core connector	2PNP
ENQQFT20L-M12-8 / ENJDFG	01120612136	1	24V DC	Kit, RFID encoding type switch, supports 2 OSSD safety inputs (with safety RFID universal encoding actuator), with indicator light, cable length 0.2m, with M12-8 core connector	2PNP
ENQQF22L-M12-8 / ENJDFG	01120612222	1	24V DC	Kit, RFID encoding type switch (with safety RFID universal encoding actuator), with indicator light, cable length 0.2m, with M12-8 core connector	2PNP+2NO
ENQQF20L-M12-8 / ENJDFU	01120612323	1	24V DC	Kit, RFID encoding type switch (with safety RFID independent encoding actuator), with indicator light, cable length 0.2m, with M12-8 core connector	2PNP
ENQQFT20L-M12-8 / ENJDFU	01120612137	1	24V DC	Kit, RFID encoding type switch, supports 2 OSSD safety inputs (with safety RFID independent encoding actuator), with indicator light, cable length 0.2m, with M12-8 core connector	2PNP
ENQQF22L-M12-8 / ENJDFU	01120612324	1	24V DC	Kit, RFID encoding type switch (with safety RFID independent encoding actuator), with indicator light, cable length 0.2m, with M12-8 core connector	2PNP+2NO

- **Sensor & Actuator**

Model	Code	Qty	Power Supply	Description	Output
ENQQC11-3m	01120611001	1	Passive	Magnetic Encoding Sensor, no indicator light, cable length 3m	1NO/1NC
ENQQC30L-3m	01120611002	1	Passive	Magnetic Encoding Sensor, no indicator light, cable length 3m	2NO/1NO(LED)
ENQQC11L-3m	01120611003	1	Passive	Magnetic Encoding Sensor, with indicator light, cable length 3m	1NO/1NC(LED)
ENQQC30-3m	01120611004	1	Passive	Magnetic Encoding Sensor, with indicator light, cable length 3m	3NO
ENQQM20L-3m	01120611011	1	24V DC	Magnetic Encoding Sensor, with indicator light, cable length 3m	2PNP
ENQQMT20L-3m	01120612032	1	24V DC	Magnetic Encoding Sensor, supports 2 OSSD safety inputs, with indicator light, cable length 3m	2PNP
ENQQM22L-3m	01120611012	1	24V DC	Magnetic Encoding Sensor, with indicator light, cable length 3m	2PNP+2NO
ENQQF20L-3m	01120611021	1	24V DC	RFID Universal Encoding Sensor, with indicator light, cable length 3m	2PNP
ENQQFT20L-3m	01120612033	1	24V DC	RFID Universal Encoding Sensor, supports 2 OSSD safety inputs, with indicator light, cable length 3m	2PNP
ENQQF22L-3m	01120611022	1	24V DC	RFID Universal Encoding Sensor, with indicator light, cable length 3m	2PNP+2NO
ENQQM20L-M12-8	01120612011	1	24V DC	Magnetic Encoding Sensor, with indicator light, cable length 0.2m, with M12-8 core connector	2PNP
ENQQMT20L-M12-8	01120612034	1	24V DC	Magnetic Encoding Sensor, supports 2 OSSD safety inputs, with indicator light, cable length 0.2m, with M12-8 core connector	2PNP
ENQQM22L-M12-8	01120612012	1	24V DC	Magnetic Encoding Sensor, with indicator light, cable length 0.2m, with M12-8 core connector	2PNP+2NO
ENQQF20L-M12-8	01120612021	1	24V DC	RFID Encoding Sensor, with indicator light, cable length 0.2m, with M12-8 core connector	2PNP
ENQQFT20L-M12-8	01120612035	1	24V DC	RFID Encoding Sensor, supports 2 OSSD safety inputs, with indicator light, cable length 0.2m, with M12-8 core connector	2PNP
ENQQF22L-M12-8	01120612022	1	24V DC	RFID Encoding Sensor, with indicator light, cable length 0.2m, with M12-8 core connector	2PNP+2NO
ENJDMG	01120611031	1		Safety Magnetic Encoding Actuator	
ENJDFG	01120611032	1		Safety RFID Universal Encoding Actuator	
ENJDFU	01120611033	1		Safety RFID Independent Encoding Actuator	

FCC Warnning:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection againstharmful interference in a residential installation. This equipment generates, uses and can radiateradio frequency energy and, if not installed and used in accordance with the instructions, maycause harmful interference to radio communications. However, there is no guarantee thatinterference will not occur in a particular installation. If this equipment does cause harmfulinterference to radio or television reception, which can be determined by turning the equipmentoff and on, the user is encouraged to try to correct the interference by one or more of thefollowing measures:

• Reorient or relocate the receiving antenna.

• Increase the separation between the equipment and receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1)This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

ISED Statement

- English: This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

- French:Cet appareil contient des émetteurs/récepteurs exempts de licence qui sont conformes aux CNR exempts de licence d'Innovation, Sciences et Développement économique Canada. Le fonctionnement est soumis aux deux conditions suivantes :

(1) Cet appareil ne doit pas causer d'interférences.

(2) Cet appareil doit accepter toute interférence, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l'appareil.

This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Cet équipement est conforme Canada limites d'exposition aux radiations dans un environnement non contrôlé.

Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps.