

Safety Switch Selection Guide

SIMPLE. ROBUST. INTELLIGENT

SICK Safety Switch Overview

SICK has 70 years' experience in machine safety and can provide you with customized solutions and services that deliver the expertise that is necessary to implement safety in your machines in compliance with directives.

In partnering with us, SICK is capable of making a contribution to the ongoing development of the safety culture in your organization with the aim of:

- ✓ Improving the safety of existing machines and systems
- ✓ Ensuring integral safety on new machines and systems

SICK has provided this Safety Switch Selection Guide to ease the ordering process and selection of safety switches for an effective solution.

What are the common application types? Guard monitoring and or guard locking, Including:

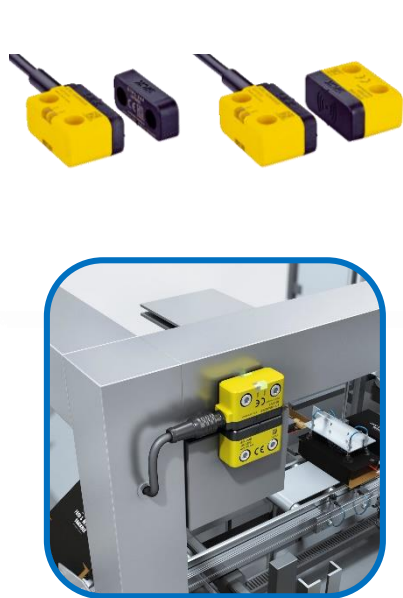
- ✓ Swing/Hinged doors
- ✓ Flaps
- ✓ Shields
- ✓ Other movable guards



Guard Monitoring: STR1

Guard Locking: TR110 & MLP1

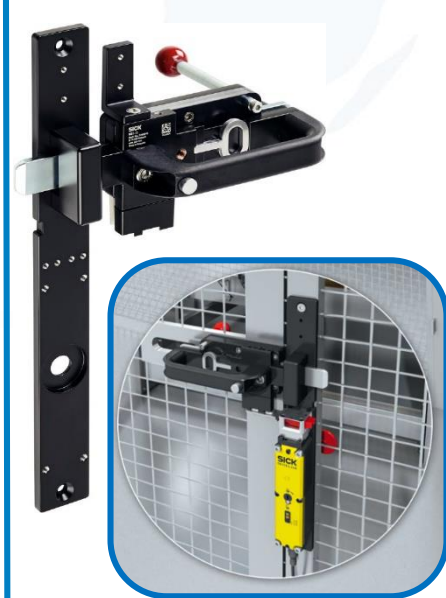
Door Solution: MB1



- ✓ Non-contact guard monitoring
- ✓ RFID technology for better performance and higher safety rating
- ✓ Increased machine availability due to high offset tolerance
- ✓ Economical and visible diagnostics



- ✓ Electro-mechanical guard locking
- ✓ High locking force for people protection (TR110)
- ✓ Magnetic locking force for process protection (MLP1)
- ✓ Flexible mounting positions
- ✓ RFID technology for better performance and higher safety rating



- ✓ Complete door solution
- ✓ Extended sensor life due to mechanical protection of sensors
- ✓ Fault exclusion possible to reach higher performance level
- ✓ Universal P/N's for left and right hinged doors
- ✓ ANSI compliant locking mechanism

Selecting an STR1

Use this step-by-step guide for selecting your STR1 components



1

Select the STR1



2

Select cabling



3







Select the safety relay





4

Select additional accessories

1 Select the STR1

Application Type	Standalone		Cascading w/T-connector		Cascading w/Flexi Loop	
Actuator size						
Coding	Flat	Standard	Flat	Standard	Flat	Standard
Universal	1069567	1072711	1069566	1073212	1069565	1073211
Unique	1069577	1073213	1069576	1069561	1069575	1069560
Permanent	1073208	1069562	1073207	1072710	1073206	1072709
	*3m flying leads connection		*M12x8pin pigtail connection		*M12x5pin pigtail connection	

2 Select Cabling

Description	Figure	Length	Model Name	P/N
M12x5pin female to flying leads		2 m	YF2A15-020UB5XLEAX	2095617
		5 m	YF2A15-050UB5XLEAX	2095618
		10 m	YF2A15-100UB5XLEAX	2095619
		20 m	YF2A15-200UB5XLEAX	2095614
M12x8pin female to flying leads		2 m	YF2A18-020UB5XLEAX	2095652
		5 m	YF2A18-050UB5XLEAX	2095653
		10 m	YF2A18-100UB5XLEAX	2095654
		20 m	YF2A18-200UB5XLEAX	2095680

3 Select Safety Relay

RLY3-OSSD200 P/N 1085344



[*Other options available](#)

4 Select Additional Accessories

For T-connection:

P/N 5339609



P/N 1078201



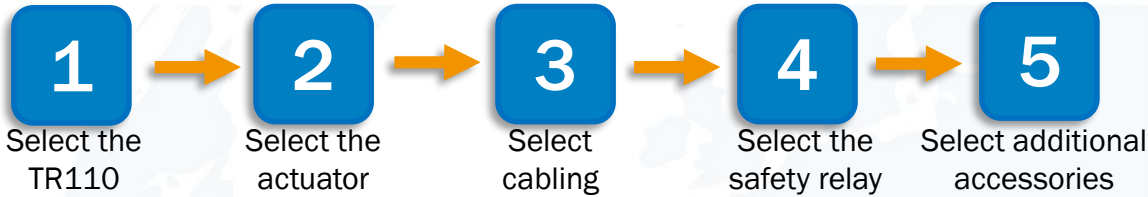
For Flexi Loop:

Click Here to watch a short tutorial and/or contact your local application support.



Selecting a TR110

Use this step-by-step guide for selecting your TR110 components



1 Select the TR110

Application Type	Standalone		Cascading w/T-connector		Cascading w/Flexi Loop			
Locking Principle	Power to lock	Power to unlock	Power to lock	Power to unlock	Power to lock	Power to unlock		
Features	No extras	Pushbuttons	Escape release	Pushbuttons & Escape release	No extras	Pushbuttons	Escape release	Pushbuttons & Escape release
No extras	6034589	6033743	6051481	6044635	6044633	6044632	6044634	6044632
Pushbuttons	6068077	6068076	—	—	—	—	—	—
Escape release	—	6044631	—	6068075	—	—	—	6044634
Pushbuttons & Escape release	—	6068078	—	—	—	—	—	—

*All models have an M12x8pin connection *Models with pushbuttons have additional M12x5pin

2 Select Actuator

P/N 5321176

Straight actuator





P/N 5334663

Right angle actuator



[*Other options available](#)

3 Select Cabling

Description	Figure	Length	Model Name	P/N
M12x5pin female to flying leads (for models w/pushbuttons only)		5 m	YF2A15-050UB5XLEAX	2095618
		10 m	YF2A15-100UB5XLEAX	2095619
		20 m	YF2A15-200UB5XLEAX	2095614
M12x8pin female to flying leads		5 m	YF2A18-050UB5XLEAX	2095653
		10 m	YF2A18-100UB5XLEAX	2095654
		20 m	YF2A18-200UB5XLEAX	2095680

4 Select Safety Relay

RLY3-OSSD200 P/N 1085344



[*Other options available](#)

5 Select Additional Accessories

For T-connection:
P/N 5339609



P/N 1078201



For Flexi Loop:

See video tutorial and/or contact your local application support.



Selecting an MLP1

Use this step-by-step guide for selecting your TR110 components



1

BOM guide for MLP1






2

Select cabling



3

Select the safety relay

1 BOM Guide for MLP1

Application Type	Standalone	Cascading w/T-connector	Direct Cascading	Cascading w/Flexi Loop
MLP1 P/N	 P/N 1077943	 P/N 1080321	 P/N 1077942	 P/N 1080321
Connection Type	M12x5pin	M12x8pin	M12x5pin	M12x8pin
Accessories		 P/N 5339609 + 1078201	 P/N 1078201	 See tutorial

2 Select Cabling

Description	Figure	Length	Model Name	P/N
M12x5pin female to flying leads		2 m	YF2A15-020UB5XLEAX	2095617
		5 m	YF2A15-050UB5XLEAX	2095618
		10 m	YF2A15-100UB5XLEAX	2095619
		20 m	YF2A15-200UB5XLEAX	2095614
M12x8pin female to flying leads		2 m	YF2A18-020UB5XLEAX	2095652
		5 m	YF2A18-050UB5XLEAX	2095653
		10 m	YF2A18-100UB5XLEAX	2095654
		20 m	YF2A18-200UB5XLEAX	2095680

3 Select Safety Relay

RLY3-OSSD200 P/N 1085344



[*Other options available](#)

Selecting an MB1

Use this step-by-step guide for selecting your TR110 components



BOM guide for MB1

1 BOM Guide for MB1

