

# EUCHNER

## Selection Guide

Touch Screen Edition 2.0

04/30/2025

# Product Stock Program

- [Purple Links](#) will take you to a product page within this document.
- Products actively being stocked will be represented by an **Euchner Red** part number ([111145](#)) and when selected will take you to the product webpage, internet required.
- Products that are not actively being stocked will be represented by a **Blue** part number ([158632](#)) and when selected will take you to the product webpage, internet required.

Example:

Switch Family	Unicode – High Code	Multicode – Low Code	OSSD Maximum Current (mA)	M12 (5 Pin) Connector	*Actuator Range Up To (mm)	Door Closed Aux. Signal	IP Rating	Unicode – High Code 20m Cable Flying Leads	Multicode – Low Code 20m Cable Flying Leads	Part Number  Technical Data Specifications Wiring Diagrams Accessories
C01	X	-	400	X	27	-	67	-	-	<a href="#">111145</a>
	-	X	400	X	27	-	67	-	-	<a href="#">111708</a>
C04	X	-	150	X	25	-	67	-	-	<a href="#">115150</a>
	X	-	150	X	25	X	67	-	-	<a href="#">116502</a>
	-	X	150	X	25	-	67	-	-	<a href="#">117323</a>
	-	X	150	X	25	X	67	-	-	<a href="#">117324</a>
C07	X	-	150	X	13	-	69K	-	-	<a href="#">162815</a>
	X	-	150	X	13	X	69K	-	-	<a href="#">160080</a>
	-	X	150	X	13	-	69K	-	-	<a href="#">162813</a>
	-	X	150	X	13	X	69K	-	-	<a href="#">160076</a>
C14	X	-	150	-	24	X	69K	X	-	<a href="#">158632</a>
	-	X	150	-	24	X	69K	-	X	<a href="#">158631</a>

- Selecting the Euchner More than safety logo will return you to the Product Tiles pages.





MGB2 Modular  
PROFINET



MGB2 Modular  
EtherCAT



MGB  
Ethernet/IP



MGB2 Classic



MGBS



CTP  
Extended



CET



CTP



CTS



CES



CKS2  
Safety Key Solution



IP67  
Solutions



EtherNet/IP  
Solutions



PROFINET  
Solutions



EtherCAT  
Solutions



STP  
Metal Head Switch



TP  
Plastic Head Switch



Safety  
Limit Switches



NZ1VZ  
All Metal Switch



SGP  
Metal Head Switch



GP  
Plastic Head Switch



MCM-X  
Configurable Module



Enable Switches



MSC  
Safety Controller



ESM  
Safety Relays

## Selection Guide

### MGB2 Modular Multifunctional Gate Box for Industrial Networks

Modular, flexible design with many options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ Ingress Protection rating up to IP65
- ▶ Locking force up to 2,000N
- ▶ Supports multiple protocols - simply exchange the BUS/Communication module
- ▶ Up to 6 Safety Gate switches per BUS module
- ▶ Allows fast reconfiguring between left and right hand applications in the field
- ▶ Offers a wide variety of submodules to meet your particular requirements
- ▶ Standard submodules include a lens set for user-defined push button color and functionality
- ▶ Easily integrate stack lights, dry contact switches and OSSD switches onto the network.
- ▶ Expand your network by either direct connect or cable connect options, call for assistance



#### 1. Select a Base Unit

Select the **part number** for the orientation and locking principle that your application requires.



Left Hand **L1** Power to Unlock: **165568**

Left Hand **L2** Power to Lock: **165570**



Right Hand **L1** Power to Unlock: **165567**

Right Hand **L2** Power to Lock: **165569**

# MGB2 Modular Multifunctional Gate Box for Industrial Networks

## 2. Select an Optional Submodule for the Second Slot



**137746**



**127040**



**168594**



**137752**



**137750**



**168641**

Euchner has over 100 submodule options, see next page

## 3. Select a BUS Module

EtherNet/IP	PROFINET	EtherCAT
M12 5 Pin L Code Power M12 D Code Network <b>COMING SOON!</b>	M12 5 Pin L Code Power M12 D Code Network <b><u>169766</u></b>	M12 5 Pin L Code Power M12 D Code Network <b><u>173313</u></b>
M12 4 Pin L Code Power M12 D Code Network <b>COMING SOON!</b>	M12 4 Pin L Code Power M12 D Code Network <b><u>169489</u></b>	M12 4 Pin L Code Power M12 D Code Network <b><u>173401</u></b>
7/8" Circular Power M12 D Code Network <b>COMING SOON!</b>	7/8" Circular Power M12 D Code Network <b><u>169765</u></b>	7/8" Circular Power M12 D Code Network <b><u>163291</u></b>
M12 4 Pin A Code Power M12 D Code Network <b>COMING SOON!</b>	AIDA Push Pull 5 Pin Power RJ45 Network <b><u>169764</u></b>	M8 P Coded Power/Network <b><u>163293</u></b>

## 4. Select Optional Accessories

### Expansion Modules



**164241**



**157854**

**157774**

### Connectors



Direct Connect  
**157025**



Cable IN Connect  
**157024**



Blind Plug / Cover  
**156718**



Cable OUT Connect  
**157028**

### Straight M12 5 Pin Male/Female

#### PVC Cables

5m: **100180**

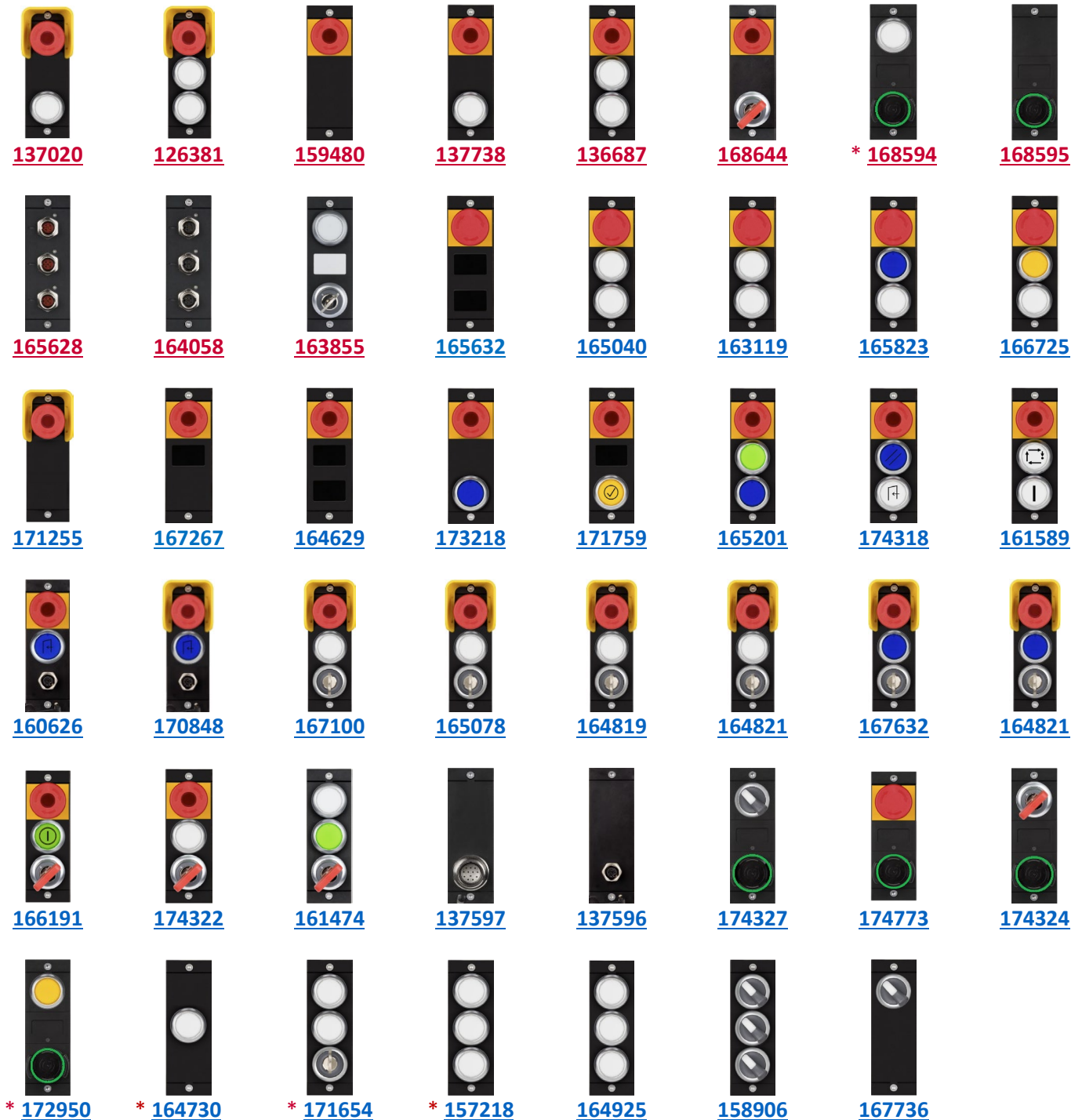
10m: **100181**

20m: **100182**

PUR Cables  
Available



## MGB2 Modular Safety Device Submodules



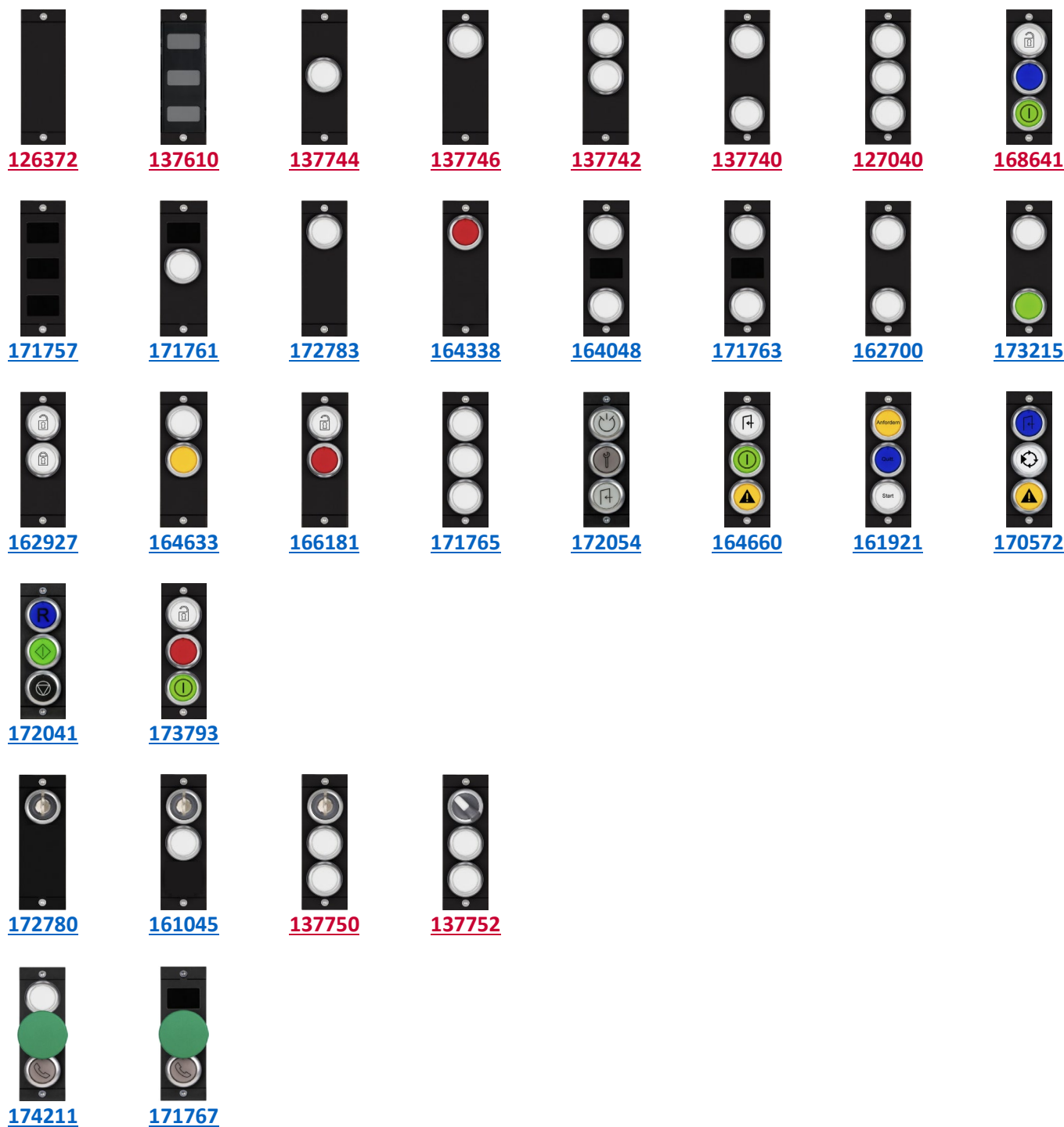
Submodules on this page include 1 or more safety devices (Dual Channel)

Submodules on this page may also include standard devices (single channel, non-safety)

\* Acknowledgement Push Buttons are preprogrammed by Euchner and the functionality cannot be modified

Euchner offers more than 100 submodule options, [click here](http://www.euchner-usa.com) to visit the website

# MGB2 Modular Standard Device Submodules



Submodules on this page include standard devices only

Euchner offers more than 100 submodule options, [click here](#) to visit the website

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## Selection Guide

### MGB Safety Gate Switch for EtherNet/IP CIP Safety

Flexible design with many options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ CIP Safety Protocol
- ▶ Locking force rating of up to 2,000N
- ▶ Ingress Protection Rating IP65
- ▶ RFID high coded solution
- ▶ Guard locking with guard lock monitoring
- ▶ Illuminated E-STOP, up to 4 illuminated PBs
- ▶ M12 Power and M12 Ethernet connectors
- ▶ Diagnostic information provided via LEDs
- ▶ Handle, Lock and Communication modules come pre-installed on mounting plates
- ▶ Lock module includes a lens set allowing for user-defined push button color and functionality



Right Hand Hinge  
Orientation

Optional  
Escape Release

## 1. Determine Application Requirements

- ▶ What locking principle is required?
  - Power To Unlock [[MGB-L1](#)]
  - Power To Lock [[MGB-L2](#)]
- ▶ Which switch variation will be required?
  - Illuminated E-STOP and 2 Illuminated Push Buttons
  - Illuminated E-STOP and 3 Illuminated Push Buttons
  - Illuminated E-STOP and 4 Illuminated Push Buttons
- ▶ Which orientation is required
  - Right Hand Hinge
  - Left Hand Hinge
- ▶ Will an escape release be required?
  - Full body application – Escape Release is typically required
  - Partial body application – Escape Release may not be required

# MGB Safety Gate Switch for EtherNet/IP CIP Safety

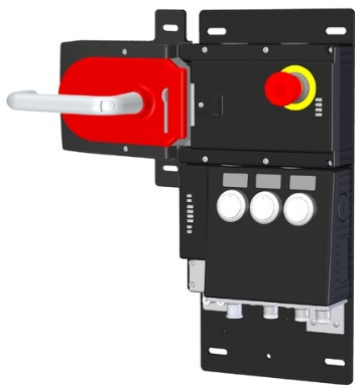
## 2. Determine Switch Part Number

Power To Unlock		
M12 A Code Power Connectors and M12 D Code Ethernet Connectors		
Left Hand Hinge	Illuminated Devices Installed	Right Hand Hinge
<a href="#">126638</a>	E-STOP and 2 Push Buttons	<a href="#">126636</a>
<a href="#">128327</a>	E-STOP and 3 Push Buttons	<a href="#">128324</a>
<a href="#">136389</a>	E-STOP and 4 Push Buttons	<a href="#">136386</a>
Power To Lock		
M12 A Code Power Connectors and M12 D Code Ethernet Connectors		
Left Hand Hinge	Illuminated Devices Installed	Right Hand Hinge
<a href="#">127679</a>	E-STOP and 2 Push Buttons	<a href="#">127677</a>
<a href="#">157791</a>	E-STOP and 3 Push Buttons	<a href="#">157789</a>
Additional options available – Contact the Applications Team for assistance		

## 3. Select Accessories



## Switch Orientation



Left Hand Hinge



Right Hand Hinge

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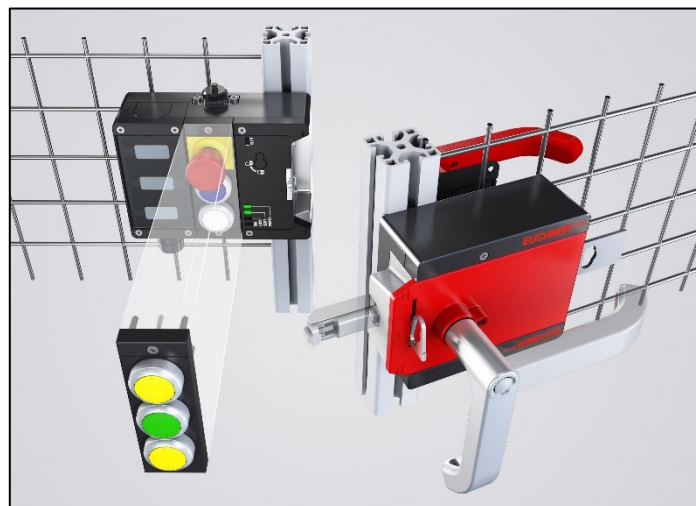
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## Selection Guide

### MGB2 Classic Multifunctional Gate Box for Safety I/O

Modular, flexible design with many options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ Locking force rating of up to 2,000N
- ▶ Ingress Protection rating IP65
- ▶ Guard lock monitoring – OSSD Outputs
- ▶ BP version wires directly to the safety PLC, safety controller, or safety relay
- ▶ Manufactured with a built in metal doorstop and lock out capability
- ▶ Allows fast reconfiguring between left and right hand applications in the field
- ▶ Submodules include a lens set allowing user-defined push button color and functionality



## 1. Select a Base Unit

Select the **part number** for the orientation and locking principle that your application requires.



Left Hand **L1** Power to Unlock: **167026**

Left Hand **L2** Power to Lock: **173308**



Right Hand **L1** Power to Unlock: **167025**

Right Hand **L2** Power to Lock: **173307**

# MGB2 Classic Multifunctional Gate Box for Safety I/O

## 2. Select a Submodule

Select the desired submodule for your application. Each base unit listed can accept one submodule.



**136687**



**126381**



**137732**



**137736**



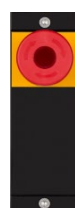
**137738**



**137020**



**137734**



**159480**



**137746**



**137744**



**137740**



**137742**



**127040**



**137750**



**137752**

**Warning:** Not all submodules work with the connector used in these Base Units. Contact the Applications Team for assistance if you need to use a submodule that is not listed above.

## 3. Select Accessories

Escape release for full body access applications



Guarding Profile Up To

40mm

**100465**

45mm

**163885**

Escape release extension rod for guarding profiles greater than 45mm



**106761**

PUR cables:  
Straight M23 19 Pin Female

3m: **092816**

20m: **092726**

6m: **077014**

25m: **092727**

8m: **077015**

30m: **095993**

10m: **092898**

40m: **102490**

15m: **077016**

**ESM Safety Relay Options**

**MSC Safety Controller Options**

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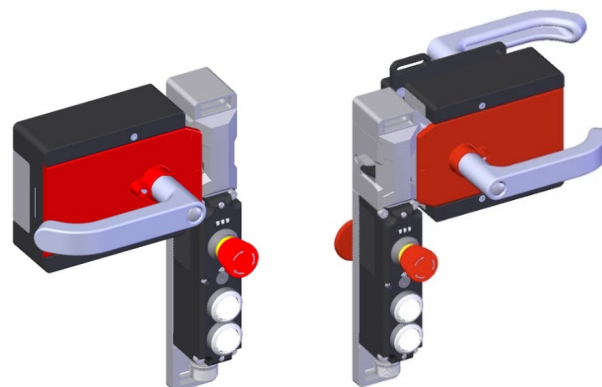
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## Selection Guide

### MGBS RFID Locking Safety Gate Switch

Flexible design with many options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ Metal head with a reinforced thermoplastic body
- ▶ Locking force rating of up to 3,000N
- ▶ Slim profile with an IP65 rating
- ▶ RFID high coded solution
- ▶ Guard lock monitoring – OSSD Safety Outputs
- ▶ Switch head includes a built in door stop
- ▶ Diagnostic information provided via LEDs
- ▶ E-STOP and 2 Illuminated Push Buttons available
- ▶ MGB2 style handle with built in lockout capability
- ▶ Switch includes a lens set allowing for user-defined push button color and functionality



Without  
Escape Release

With  
Escape Release

## 1. Determine Application Requirements

- ▶ Which switch variation will be required?
  - AP – Wiring each switch individually to a PLC Safety Input or Safety Relay
    - Currently unavailable with control devices
  - AR – Wiring multiple switches in series (or individually) to a PLC Safety Input or Safety Relay
    - Available with control devices
- ▶ What locking principle is required?
  - Power To Unlock [[MGBS-P-L1](#)]
  - Power To Lock [[MGBS-P-L2](#)]
- ▶ Which orientation is required?
  - Right Hand Hinge
  - Left Hand Hinge
- ▶ Will an escape release be required?
  - Full body application – Escape Release is typically required
  - Partial body application – Escape Release may not be required

# MGBS RFID Locking Safety Gate Switch

## 2. Determine Switch Part Number

AP Version		
Switch is wired individually to a Safety PLC, Safety Controller or Safety Relay <b>M12 Male 8 Pin Connector</b>		
Without Escape Release	Locking Principle	With Escape Release
<a href="#"><u>161565</u></a>	Power To Unlock – <b>Right Hand Hinge</b>	<a href="#"><u>161558</u></a>
<a href="#"><u>161567</u></a>	Power To Unlock – <b>Left Hand Hinge</b>	<a href="#"><u>161559</u></a>
[AP] currently unavailable with an E-STOP or Illuminated Push Buttons		
AR Version		
Switches can be wired in series (or individually) to a Safety PLC, Safety Controller or Safety Relay <b>M23 Male 19 Pin Connector</b>		
Without Escape Release	Locking Principle	With Escape Release
<a href="#"><u>161563</u></a>	Power To Unlock – <b>Right Hand Hinge</b>	<a href="#"><u>160520</u></a>
<a href="#"><u>161564</u></a>	Power To Unlock – <b>Left Hand Hinge</b>	<a href="#"><u>160521</u></a>
<a href="#"><u>160522</u></a>	Power To Lock – <b>Right Hand Hinge</b>	<a href="#"><u>164688</u></a>
<a href="#"><u>160523</u></a>	Power To Lock – <b>Left Hand Hinge</b>	<a href="#"><u>164689</u></a>
[AR] Versions <b>include</b> an E-STOP and 2 Illuminated Push Buttons [AR] Versions are offered in other configurations, contact the Applications Team for options <b>Wiring switches in series – Contact the Application Team for assistance</b>		

## 3. Select Accessories

PUR cables:  
Straight M23 19 Pin Female

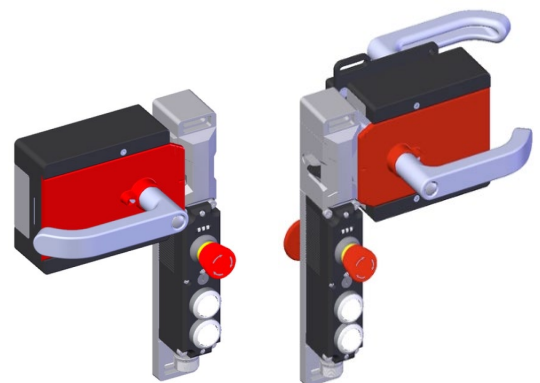
3m: [092816](#) 20m: [092726](#)  
6m: [077014](#) 25m: [092727](#)  
8m: [077015](#) 30m: [095993](#)  
10m: [092898](#) 40m: [102490](#)  
15m: [077016](#)

PVC cables:  
Straight M12 8 Pin Female

5m: [100177](#)  
10m: [100178](#)  
20m: [100179](#)  
30m: [115116](#)  
40m: [156065](#)

PUR Cables Available

## Switch Orientation



Left Hand Hinge

Right Hand Hinge

[ESM Safety Relay Options](#)

[MSC Safety Controller Options](#)

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## Selection Guide

### CTP Extended RFID Locking Safety Gate Switch

Flexible design with several options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ Metal head with a reinforced thermoplastic body
- ▶ Locking force rating of up to 3,000N
- ▶ Slim profile with an IP65 rating
- ▶ RFID high coded solution
- ▶ Guard lock monitoring – OSSD Safety Outputs
- ▶ Diagnostic information provided via LEDs
- ▶ E-STOP and 2 Illuminated Push Buttons
- ▶ Includes lens set allowing for user-defined push button color and functionality

- ▶ **Actuator sold separately**



## 1. Determine Application Requirements

- ▶ Which switch variation will be required?
  - AP – Wiring each switch individually to a PLC Safety Input or Safety Relay
  - AR – Wiring multiple switches in series (or individually) to a PLC Safety Input or Safety Relay
- ▶ What locking principle is required?
  - Power To Unlock [CTP-L1]
  - Power To Lock [CTP-L2]
- ▶ Will an escape release be required?
  - Full body application – Escape Release is typically required
  - Partial body application – Escape Release may not be required
- ▶ Select Accessories
  - Improves Reliability
  - Provides Additional Functionality

# CTP Extended RFID Locking Safety

## 2. Determine Switch Part Number

AP Version		
Switch is wired individually to a Safety PLC, Safety Controller or Safety Relay <b>M23 Male 19 Pin Connector</b>		
Without Escape Release	Locking Principle	With Escape Release
<a href="#"><u>156056</u></a>	Power To Unlock	Call for Options
AR Version		
Switches can be wired in series (or individually) to a Safety PLC, Safety Controller or Safety Relay <b>M23 Male 19 Pin Connector</b>		
Without Escape Release	Locking Principle	With Escape Release
<a href="#"><u>126874</u></a>	Power To Unlock	<a href="#"><u>137164</u></a>
<a href="#"><u>137165</u></a>	Power To Lock	<a href="#"><u>159112</u></a>
<b>Wiring switches in series – Contact the Applications Team for assistance</b>		

## 3. Select Accessories

Steel Slide Bolt  
Includes Actuator



Without  
Escape Release  
[123653](#)



With  
Escape Release  
[123655](#)

Actuators



[122667](#)



[126015](#)



Hinged Actuators Available



PUR cables:  
Straight M23 19 Pin Female

3m: [092816](#) 20m: [092726](#)

6m: [077014](#) 25m: [092727](#)

8m: [077015](#) 30m: [095993](#)

10m: [092898](#) 40m: [102490](#)

15m: [077016](#)

[ESM Safety Relay Options](#)

[MSC Safety Controller Options](#)

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## Selection Guide

### CET RFID Locking Safety Gate Switch

Flexible design with many options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ Heavy Duty - metal head and metal body
- ▶ Locking force rating of up to 5,000N
- ▶ Ingress Protection Rating IP67
- ▶ RFID high coded solution
- ▶ Guard lock monitoring – OSSD Safety Outputs
- ▶ Diagnostic information provided via LEDs
- ▶ Built in ramp used in conjunction with the spring loaded actuator provides unmatched flexibility

- ▶ **Actuator sold separately**



Without  
Escape Release



With  
Escape Release

## 1. Determine Application Requirements

- ▶ Which switch variation will be required?
  - AP – Wiring each switch individually to a PLC Safety Input or Safety Relay
  - AR – Wiring multiple switches in series (or individually) to a PLC Safety Input or Safety Relay
- ▶ What locking principle is required?
  - Power To Unlock [[CET3](#)]
  - Power To Lock [[CET4](#)]
- ▶ Will an escape release be required?
  - Full body application – Escape Release is typically required
  - Partial body application – Escape Release may not be required
- ▶ Select Accessories
  - Improves Reliability
  - Provides Additional Functionality

# CET RFID Locking Safety Gate Switch

## 2. Determine Switch Part Number

AP Version		
Switch is wired individually to a Safety PLC, Safety Controller or Safety Relay <b>M12 Male 8 Pin Connector</b>		
Without Escape Release	Locking Principle	With Escape Release
<b><u>122398</u></b>	Power To Unlock	<b><u>124601</u></b>
<b><u>122415</u></b>	Power To Lock	Call for Options
AR Version		
Switches can be wired in series (or individually) to a Safety PLC, Safety Controller or Safety Relay <b>M12 Male 8 Pin Connector and M12 Male 5 Pin Connector</b>		
Without Escape Release	Locking Principle	With Escape Release
<b><u>109401</u></b>	Power To Unlock	<b><u>113965</u></b>
<b><u>111683</u></b>	Power To Lock	Call for Options
<b>Wiring switches in series – Contact the Applications Team for assistance</b>		

## 3. Select Accessories

Steel Slide Bolt  
Includes Actuator Cover  
Actuator Ordered Separately



Without  
Escape Release  
**104309**

With  
Escape Release  
**106172**

Actuator



**096327**

Lockout Bar



**155865**

Actuator  
Protective Cover



**124979**

PVC cables:  
Straight Connector M12 Female

5 Pin	8 Pin
5m: <b><u>100183</u></b>	5m: <b><u>100177</u></b>
10m: <b><u>100184</u></b>	10m: <b><u>100178</u></b>
20m: <b><u>100185</u></b>	20m: <b><u>100179</u></b>
	30m: <b><u>115116</u></b>
	40m: <b><u>156065</u></b>

PUR Cables Available

[ESM Safety Relay Options](#)

[MSC Safety Controller Options](#)

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## Selection Guide

### CTP RFID Locking Safety Gate Switch

Flexible design with many options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ Self-clearing metal head
- ▶ Locking force rating of up to 3,000N
- ▶ Slim profile with an IP67/IP69/IP69K rating
- ▶ RFID high coded solution
- ▶ Guard lock monitoring – OSSD Safety Outputs
- ▶ Diagnostic information provided via LEDs
- ▶ Mounting pattern compatible when upgrading TP / STP electromechanical switches to RFID

- ▶ **Actuator sold separately**



Without  
Escape Release



With  
Escape Release

## 1. Determine Application Requirements

- ▶ Which switch variation will be required?
  - AP – Wiring each switch individually to a PLC Safety Input or Safety Relay
  - AR – Wiring multiple switches in series (or individually) to a PLC Safety Input or Safety Relay
- ▶ What locking principle is required?
  - Power To Unlock [[CTP-L1](#)]
  - Power To Lock [[CTP-L2](#)]
- ▶ Will an escape release be required?
  - Full body application – Escape Release is typically required
  - Partial body application – Escape Release may not be required
- ▶ Select Accessories
  - Improves Reliability
  - Provides Additional Functionality

# CTP RFID Locking Safety Gate Switch

## 2. Determine Switch Part Number

AP Version		
Switch is wired individually to a Safety PLC, Safety Controller or Safety Relay <b>M12 Male 8 Pin Connector</b>		
Without Escape Release	Locking Principle	With Escape Release
<b><u>124225</u></b>	Power To Unlock	<b><u>126912</u></b>
<b><u>124728</u></b>	Power To Lock	<b><u>136841</u></b>
AR Version		
Switches can be wired in series (or individually) to a Safety PLC, Safety Controller or Safety Relay <b>M12 Male 8 Pin Connector and M12 Male 5 Pin Connector</b>		
Without Escape Release	Locking Principle	With Escape Release
<b><u>122812</u></b>	Power To Unlock	<b><u>122813</u></b>
<b><u>122814</u></b>	Power To Lock	Call for Options
<b>Wiring switches in series – Contact the Applications Team for assistance</b>		
<b>Need an E-STOP and 2 Illuminated Push Buttons?</b> Ask about the <b>Euchner CTP Extended</b> Safety Gate Switch		

## 3. Select Accessories

Steel Slide Bolt Includes Actuator		Actuators		PVC cables: Straight Connector M12 Female	
				5 Pin	8 Pin
Without Escape Release <b><u>123653</u></b>	With Escape Release <b><u>123655</u></b>	<b><u>122667</u></b>	<b><u>126015</u></b>	5m: <b><u>100183</u></b>	5m: <b><u>100177</u></b>
				10m: <b><u>100184</u></b>	10m: <b><u>100178</u></b>
				20m: <b><u>100185</u></b>	20m: <b><u>100179</u></b>
					30m: <b><u>115116</u></b>
					40m: <b><u>156065</u></b>
		 Hinged Actuators Available		PUR Cables Available	

[ESM Safety Relay Options](#)

[MSC Safety Controller Options](#)

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## Selection Guide

### CTS RFID Locking Safety Gate Switch

Flexible design with many options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ Metal head and reinforced thermoplastic body
- ▶ Locking force rating of up to 3,000N
- ▶ Slim profile with an IP65/IP67/IP69/IP69K rating
- ▶ RFID high coded solution – Actuator 167919
- ▶ Guard lock monitoring – OSSD Safety Outputs
- ▶ Diagnostic information provided via LEDs
- ▶ FlexFunction actuators determine the switch configuration and function – 4 options available

- ▶ **Actuator sold separately**



## 1. Determine Application Requirements

- ▶ Which switch variation will be required?
  - BP – Wiring each switch individually to a PLC Safety Input or Safety Relay
  - BR – Wiring multiple switches in series (or individually) to a PLC Safety Input or Safety Relay
- ▶ What locking principle is required?
  - Power To Unlock [**CTS-C1**]
  - Power To Lock [**CTS-C2**]
- ▶ Will an escape release be required?
  - Full body application – Escape Release is typically required
  - Partial body application – Escape Release may not be required
- ▶ Select Accessories
  - Improves Reliability
  - Provides Additional Functionality

# CTS RFID Locking Safety Gate Switch

## 2. Determine Switch Part Number

BP Version		
Switch is wired individually to a Safety PLC, Safety Controller or Safety Relay M12 Male 8 Pin Connector		
Switch	Locking Principle	Escape Release Accessory
167917	Power To Unlock	172426
169051	Power To Lock	
BR Version 1		
Up to 10 Switches can be wired in series to a Safety PLC, Safety Controller or Safety Relay M12 Male 8 Pin Connector and M12 Male 5 Pin Connector		
Switch	Locking Principle	Escape Release Accessory
169612	Power To Unlock	172426
169613	Power To Lock	
BR Version 2		
Up to 5 Switches can be wired in series to a Safety PLC, Safety Controller or Safety Relay M12 Male 8 Pin Connector		
Switch	Locking Principle	Escape Release Accessory
174014	Power To Unlock	172426
174018	Power To Lock	
Wiring switches in series – Contact the Applications Team for assistance		

## 3. Select Accessories

Mounting Hardware



Switch Plate & Handle  
[172601](#)

Actuator



[167919](#)

Additional Actuators Available

Lockout Bar



[171364](#)

PVC cables:

Straight Connector M12 Female

	5 Pin	8 Pin
5m:	<a href="#"><u>100183</u></a>	5m: <a href="#"><u>100177</u></a>
10m:	<a href="#"><u>100184</u></a>	10m: <a href="#"><u>100178</u></a>
20m:	<a href="#"><u>100185</u></a>	20m: <a href="#"><u>100179</u></a>
		30m: <a href="#"><u>115116</u></a>
		40m: <a href="#"><u>156065</u></a>

PUR Cables Available

[ESM Safety Relay Options](#)

[MSC Safety Controller Options](#)

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## Selection Guide

### RFID Non-locking Safety Gate Switch

Flexible design with many options available. Provides easy integration and highest reliability for a variety of different applications. Achieve up to Category 4 / PL e safety per EN ISO 13849-1.

- ▶ C01 Largest actuator target in CES series – Range up to 27mm
- ▶ C01 OSSD safety outputs will source up to 400mA
- ▶ C01 Ingress Protection Rating IP67
- ▶ C01 Unique mounting with inline and right angle capability



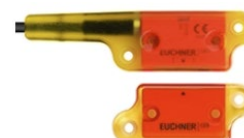
- ▶ C04 Compact size switch and actuator – Range up to 25mm
- ▶ C04 OSSD safety outputs will source up to 150mA
- ▶ C04 Ingress Protection Rating IP67
- ▶ C04 Extremely flexible with 8 mounting positions



- ▶ C07 Compact size switch and actuator – Range up to 13mm
- ▶ C07 OSSD safety outputs will source up to 150mA
- ▶ C07 Ingress Protection Rating IP65/IP67/IP69/IP69K
- ▶ C07 Extremely flexible with 8 mounting positions



- ▶ C14 Switch / Actuator – Range up to 24mm
- ▶ C14 OSSD safety outputs will source up to 150mA
- ▶ C14 Ingress Protection Rating IP65/IP67/IP69/IP69K
- ▶ C14 Extremely resistant to aggressive media



- ▶ **Actuators sold separately**

## 1. Determine Application Requirements

- ▶ What coding level is required?
- ▶ How much current must the OSSD outputs supply?
- ▶ What actuator target size and range is required?
- ▶ What IP rating is required?
- ▶ Is the “Door Closed” auxiliary signal required?

# RFID Non-locking Safety Gate Switch

## 2. Determine Switch Part Number

Switch Family	Unicode – High Code	Multicode – Low Code	OSSD Maximum Current (mA)	M12 (5 Pin) Connector	*Actuator Range Up To (mm)	Door Closed Aux. Signal	IP Rating	Unicode – High Code 20m Cable Flying Leads	Multicode – Low Code 20m Cable Flying Leads	Part Number  Technical Data Specifications Wiring Diagrams Accessories
C01	X	-	400	X	27	-	67	-	-	<a href="#">111145</a>
	-	X	400	X	27	-	67	-	-	<a href="#">111708</a>
C04	X	-	150	X	25	-	67	-	-	<a href="#">115150</a>
	X	-	150	X	25	X	67	-	-	<a href="#">116502</a>
	-	X	150	X	25	-	67	-	-	<a href="#">117323</a>
	-	X	150	X	25	X	67	-	-	<a href="#">117324</a>
C07	X	-	150	X	13	-	69K	-	-	<a href="#">162815</a>
	X	-	150	X	13	X	69K	-	-	<a href="#">160080</a>
	-	X	150	X	13	-	69K	-	-	<a href="#">162813</a>
	-	X	150	X	13	X	69K	-	-	<a href="#">160076</a>
C14	X	-	150	-	24	X	69K	X	-	<a href="#">158632</a>
	-	X	150	-	24	X	69K	-	X	<a href="#">158631</a>
*Maximum range varies based on the actuator, see the manual for specifications										
Need switch part numbers that wire in series – Contact the Applications Team for assistance										

## 3. Select Accessories

### Safety Relays



ESM-BA201  
[085610](#)



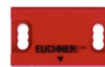
ESM-BA301  
[085613](#)

[CES C01 Slide Bolt](#)

### Actuators



C01  
[098775](#)



C04  
[115271](#)



C07  
[156230](#)



C14  
[160441](#)

[CES C04 Slide Bolt](#)

### PVC Cables M12 5 Pin Female

5m: [100183](#)

10m: [100184](#)

20m: [100185](#)

PUR Cables Available

[CES C07 Slide Bolt](#)

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## Selection Guide

### CKS2 Intelligent RFID Personnel Key Safety Solution

Flexible design with multiple options available. Provides easy integration and highest reliability for a variety of different applications. Achieve up to Category 4 / PL e safety per EN ISO 13849-1.

- ▶ MGB2 Modular lock module solutions
- ▶ MGB2 Modular expansion module solutions
- ▶ MGB2 versions IP65 installed
- ▶ Compact versions IP67 installed
- ▶ Individual and series wiring solutions
- ▶ High coded solution (0A) key
  - More than 65,000 unique codes
- ▶ High coded hybrid solution (0B) key set
  - More than 1000 unique codes plus key identification capability via I/O Link
- ▶ Single key (0A) and Multi-key (0B) solutions available
- ▶ Applications
  - Transfer key
  - Specialized setup mode authorization
  - Allow defined minor maintenance tasks to be performed without machine lock out tag out
  - Prevent unintentional machine reset & start up
- ▶ Keys sold separately



### 1. Determine Application Requirements

- ▶ Will you integrate your CKS2 into MGB2 products?
- ▶ What I/O will you wire your CKS2 Compact solution too?
- ▶ Does your application require one or multiple keys?
- ▶ Will multiple people be allowed in a machine at the same time?
- ▶ Does your machine require special setup modes with on-site authorization from engineering or safety personnel?



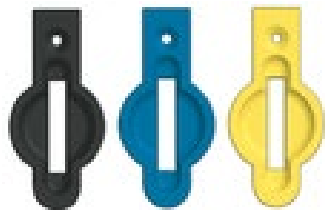
# CKS2 Intelligent RFID Personnel Key Safety Solution

## 2. Determine CKS2 Part Number

CKS2 - MGB2 Modular	
Part Number	Features
<a href="#"><u>168595</u></a>	CKS2 with No Additional Devices
<a href="#"><u>168594</u></a>	CKS2 with Illuminated Acknowledgement PB & Lens Set
<a href="#"><u>172950</u></a>	CKS2 with Yellow Illuminated Acknowledgement PB
<a href="#"><u>174327</u></a>	CKS2 with Safety Selector Switch
<a href="#"><u>174324</u></a>	CKS2 with Safety Key Switch
<a href="#"><u>174773</u></a>	CKS2 with ESTOP PB
CKS2 Compact	
Part Number	Features
<a href="#"><u>168631</u></a>	<b>CKS2 M12 5 Pin Male</b> for IP67/IP20 safety I/O Wired individually to single PLC safety input
<a href="#"><u>167948</u></a>	<b>CKS2 M12 8 Pin Male</b> for IP20 safety I/O Series wiring up to 20 units to single PLC safety Input
<b>Wiring CKS2 in series – Contact the Applications Team for assistance</b>	

## 3. Select Accessories

Multiple Color  
Cover Set



[165413](#)

Single Key (0A)  
Applications



[168921](#)



[171455](#)



[171456](#)



[171458](#)

Multiple Key (0B)  
Applications



[168962](#)



[168963](#)



[173902](#)

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## Selection Guide

### Safety Gate Switches for IP67 Remote I/O Blocks

Flexible design with many options provides easy integration and highest reliability for a variety of different applications, improving safety while saving time and money.

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ M12 5 Pin Male Connectors (x2)
- ▶ Ingress Protection Rating varies by product  
IP67, IP69, IP69K
- ▶ Locking force varies by product  
3000N – 5000N
- ▶ Diagnostic information provided via LED's
- ▶ Coding solutions varies by product
- ▶ Guard lock monitoring capability varies  
by product
- ▶ **Actuator sold separately**



CET w/  
Escape Release



CTP w/  
Escape Release



CTS w/  
Escape Release



CES C01  
w/ Actuator



CES C04  
w/ Actuator



CES C07  
w/ Actuator

## 1. Determine Application Requirements

- ▶ Is a locking switch required?
  - CET
  - CTP
  - CTS
- ▶ Will an escape release be required?
  - Full body application – Typically Required
  - Partial body application – Possibly Required
- ▶ What locking principle is required?
  - Power To Unlock
  - Power To Lock
- ▶ Is a non-locking switch required?
  - CES – C01
  - CES – C04
  - CES – C07

# Safety Gate Switches for IP67 Remote I/O Blocks

## 2. Determine Switch Part Number

RFID Locking Switches		
Without Escape Release	Locking Principle	With Escape Release
<a href="#"><u>111346</u></a>	CET Power To Unlock	<a href="#"><u>114073</u></a>
<a href="#"><u>112082</u></a>	CET Power To Lock	Call for Options
<a href="#"><u>124468</u></a>	CTP Power To Unlock	<a href="#"><u>127640</u></a>
<a href="#"><u>172474</u></a>	CTS Power To Unlock	<a href="#"><u>172474</u></a> + <a href="#"><u>172426</u></a>
<a href="#"><u>172475</u></a>	CTS Power To Lock	<a href="#"><u>172475</u></a> + <a href="#"><u>172426</u></a>
RFID Non-locking Switches		
High Coded	Switch Family	Low Coded
<a href="#"><u>111145</u></a>	CES C01	<a href="#"><u>111708</u></a>
<a href="#"><u>115150</u></a>	CES C04	<a href="#"><u>117323</u></a>
<a href="#"><u>162815</u></a>	CES C07	<a href="#"><u>162813</u></a>
Wiring diagrams available for review using the provided web links		

## 3. Select Required Accessories

## Wiring Diagram

CET  
Actuator



[096327](#)

CTP  
Actuator



[126015](#)

CTS  
Actuator



[167919](#)

CES C01  
Actuator



[098775](#)

CES C04  
Actuator

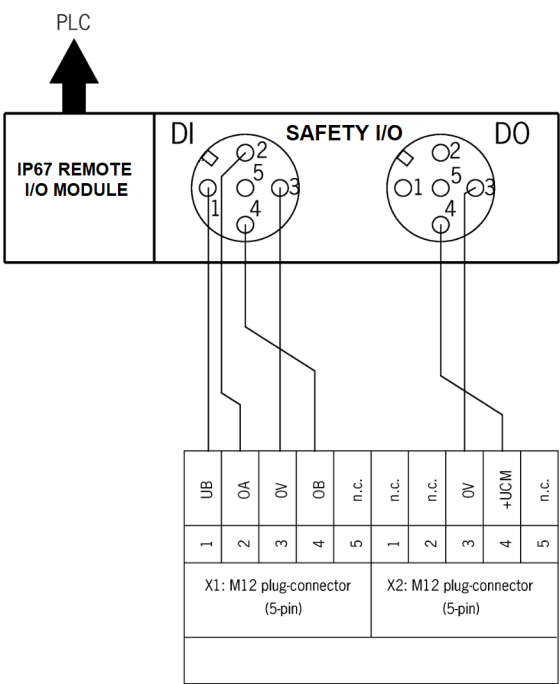


[115271](#)

CES C07  
Actuator



[156230](#)



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## Selection Guide

### Products for EtherNet/IP CIP Safety I/O Modules

Flexible design with many options provides easy integration and highest reliability for a variety of different applications, improving safety while saving time and money.

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ MGB versions available
- ▶ M12 5 Pin & 8 Pin connector options
- ▶ Ingress Protection Rating IP65, IP67, IP69
- ▶ Locking force 3000N – 5000N
- ▶ Diagnostic information provided via LED's
- ▶ Coding solutions available in high and Low
- ▶ Above specifications vary by model



CET with  
Escape Release



CTP with  
Escape Release



CTS with  
Escape Release

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ Ingress Protection Rating IP65, IP67, IP69
- ▶ Diagnostic information provided via LED's
- ▶ Solutions available in high and Low coding
- ▶ Above specifications vary by model



CES C01  
with Actuator



CES C04  
with Actuator



CES C07  
with Actuator

- ▶ CKS2 RFID Safety Key Solution
- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ Single key mode high coded solution
- ▶ Multi-key mode high coded hybrid solution



- ▶ **Actuator / Keys sold separately**



Rope Pull Switches  
LED Left LED Right



Emergency Stop  
Push Button



Safety  
Limit Switches

# Products for EtherNet/IP CIP Safety I/O Modules

## 1. Determine Switch Part Number

RFID Non-locking Switches				
IP67 Remote I/O Modules M12 5 Pin Male Connector				
High Coded	Switch Family			Low Coded
<a href="#"><u>111145</u></a>	CES C01			<a href="#"><u>111708</u></a>
<a href="#"><u>115150</u></a>	CES C04			<a href="#"><u>117323</u></a>
<a href="#"><u>162815</u></a>	CES C07			<a href="#"><u>162813</u></a>
RFID Safety Key Solution				
IP67 Remote I/O Modules M12 5 Pin	Product Family			IP20 Remote I/O Modules M12 8 Pin
<a href="#"><u>168631</u></a>	CKS2			<a href="#"><u>167948</u></a>
Electromechanical Devices				
IP67 Remote I/O Modules M12 5 Pin Male Connector				
* <a href="#"><u>136352</u></a>	LED Left	Rope Pull Switches Illuminated	LED Right	* <a href="#"><u>136353</u></a>
<a href="#"><u>169282</u></a>	Lever Arm	Limit Switches	Plunger	<a href="#"><u>169283</u></a>
<a href="#"><u>169351</u></a>	Housing	Emergency Stop PB Illuminated	N/A	N/A
Wiring diagrams available for review using the provided web links				
* Rope Pull Cord accessories available – Call the Applications Team for assistance				

## 2. Select Required Accessories

CES C01  
Actuator



098775

CES C04  
Actuator



115271

CES C07  
Actuator



156230

CKS2 Keys  
Single Key Application  
168921



Two Key Application  
168962



Three Key Application  
168963



CKS2  
Faceplates



165413

Additional Key Options and Colors Available

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# Products for EtherNet/IP CIP Safety I/O Modules

## 1. Determine Switch Part Number





























RFID Locking Switches		
IP20 Remote I/O Modules M12 8 Pin Male Connector		
Without Escape Release	Locking Principle	With Escape Release
<a href="#"><u>122398</u></a>	CET Power To Unlock	<a href="#"><u>124601</u></a>
<a href="#"><u>122415</u></a>	CET Power To Lock	Call for Options
<a href="#"><u>124225</u></a>	CTP Power To Unlock	<a href="#"><u>126912</u></a>
<a href="#"><u>124728</u></a>	CTP Power To Lock	<a href="#"><u>136841</u></a>
<a href="#"><u>167917</u></a>	CTS Power To Unlock	<a href="#"><u>167917</u></a> + <a href="#"><u>172426</u></a>
<a href="#"><u>169051</u></a>	CTS Power To Lock	<a href="#"><u>169051</u></a> + <a href="#"><u>172426</u></a>
Wiring diagrams available for review using the provided web links		
IP67 Remote I/O Modules Dual M12 5 Pin Male Connectors		
Without Escape Release	Locking Principle	With Escape Release
<a href="#"><u>111346</u></a>	CET Power To Unlock	<a href="#"><u>114073</u></a>
<a href="#"><u>112082</u></a>	CET Power To Lock	Call for Options
<a href="#"><u>124468</u></a>	CTP Power To Unlock	<a href="#"><u>127640</u></a>
<a href="#"><u>172474</u></a>	CTS Power To Unlock	<a href="#"><u>172474</u></a> + <a href="#"><u>172426</u></a>
<a href="#"><u>172475</u></a>	CTS Power To Lock	<a href="#"><u>172475</u></a> + <a href="#"><u>172426</u></a>
Wiring diagrams available for review using the provided web links		

## 2. Select Required Accessories

Accessories listed on the next page

# Products for EtherNet/IP CIP Safety I/O Modules

## 2. Select Required Accessories

CET						
<b>Actuator</b>	<b>Slide Bolt</b> Includes Protective Cover		<b>Auxiliary Release</b>	<b>Emergency Release</b>	<b>Lockout Bar</b>	<b>Protective Cover</b>
						
<u>096327</u>	<u>104309</u>	<u>106172</u>	<u>098850</u>	<u>103714</u>	<u>155865</u>	<u>124979</u>
CTP						
<b>Actuators</b>						
						
<u>126015</u>	<u>122667</u>	<u>122668</u>	<u>122671</u>	<u>122672</u>	<u>122675</u>	<u>122676</u>
<b>Slide Bolt</b>		<b>Auxiliary Release</b>	<b>Auxiliary Release</b>	<b>Emergency Release</b>	<b>Lockout Bar</b>	<b>Bowden Cable</b>
						
<u>123653</u>	<u>123655</u>	<u>109212</u>	<u>103110</u>	<u>099877</u>	<u>123411</u>	<u>097747</u>
CTS						
<b>Actuators</b>				<b>Escape Release</b>	<b>Lockout Bar</b>	<b>Handle &amp; Plate</b>
						
→ L + HC	→ L + LC	→ I + HC	→ I + LC			
<u>167919</u>	<u>169045</u>	<u>169044</u>	<u>169046</u>	<u>172426</u>	<u>171364</u>	<u>172601</u>

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## Selection Guide

### Products for PROFINET PROFI-safe I/O Modules

Flexible design with many options provides easy integration and highest reliability for a variety of different applications, improving safety while saving time and money.

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ [MGB2 versions available](#)
- ▶ M12 5 Pin & 8 Pin connector options
- ▶ Ingress Protection Rating IP65, IP67, IP69
- ▶ Locking force 3000N – 5000N
- ▶ Diagnostic information provided via LED's
- ▶ Coding solutions available in high and Low
- ▶ Above specifications vary by model



CET with  
Escape Release



CTP with  
Escape Release



CTS with  
Escape Release

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ Ingress Protection Rating IP65, IP67, IP69
- ▶ Diagnostic information provided via LED's
- ▶ Solutions available in high and Low coding
- ▶ Above specifications vary by model



CES C01  
with Actuator



CES C04  
with Actuator



CES C07  
with Actuator

- ▶ CKS2 RFID Safety Key Solution
- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ Single key mode high coded solution
- ▶ Multi-key mode high coded hybrid solution



- ▶ **Actuator / Keys sold separately**



Rope Pull Switches  
LED Left LED Right



Emergency Stop  
Push Button



Safety  
Limit Switches

# Products for PROFINET PROFIsafe I/O Modules

## 1. Determine Switch Part Number

RFID Non-locking Switches				
IP67 Remote I/O Modules M12 5 Pin Male Connector				
High Coded	Switch Family			Low Coded
<a href="#"><u>111145</u></a>	CES C01			<a href="#"><u>111708</u></a>
<a href="#"><u>115150</u></a>	CES C04			<a href="#"><u>117323</u></a>
<a href="#"><u>162815</u></a>	CES C07			<a href="#"><u>162813</u></a>
RFID Safety Key Solution				
IP67 Remote I/O Modules M12 5 Pin	Product Family			IP20 Remote I/O Modules M12 8 Pin
<a href="#"><u>168631</u></a>	CKS2			<a href="#"><u>167948</u></a>
Electromechanical Devices				
IP67 Remote I/O Modules M12 5 Pin Male Connector				
* <a href="#"><u>122860</u></a>	LED Left	Rope Pull Switches Illuminated	LED Right	* <a href="#"><u>122861</u></a>
<a href="#"><u>115259</u></a>	Lever Arm	Limit Switches	Lever Arm Adj.	<a href="#"><u>136864</u></a>
<a href="#"><u>162943</u></a>	Housing	Emergency Stop PB Illuminated	N/A	N/A
Wiring diagrams available for review using the provided web links				
* Rope Pull Cord accessories available – Call the Applications Team for assistance				

## 2. Select Required Accessories

CES C01  
Actuator



098775

CES C04  
Actuator



115271

CES C07  
Actuator



156230

CKS2 Keys  
Single Key Application  
168921



Two Key Application  
168962



Three Key Application  
168963



CKS2  
Faceplates



167919

Additional Key Options and Colors Available

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# Products for PROFINET PROFIsafe I/O Modules

## 1. Determine Switch Part Number





























RFID Locking Switches		
IP20 Remote I/O Modules M12 8 Pin Male Connector		
Without Escape Release	Locking Principle	With Escape Release
<a href="#"><u>122398</u></a>	CET Power To Unlock	<a href="#"><u>124601</u></a>
<a href="#"><u>122415</u></a>	CET Power To Lock	Call for Options
<a href="#"><u>124225</u></a>	CTP Power To Unlock	<a href="#"><u>126912</u></a>
<a href="#"><u>124728</u></a>	CTP Power To Lock	<a href="#"><u>136841</u></a>
<a href="#"><u>167917</u></a>	CTS Power To Unlock	<a href="#"><u>167917</u></a> + <a href="#"><u>172426</u></a>
<a href="#"><u>169051</u></a>	CTS Power To Lock	<a href="#"><u>169051</u></a> + <a href="#"><u>172426</u></a>
IP67 Remote I/O Modules Dual M12 5 Pin Male Connectors		
Without Escape Release	Locking Principle	With Escape Release
<a href="#"><u>111346</u></a>	CET Power To Unlock	<a href="#"><u>114073</u></a>
<a href="#"><u>112082</u></a>	CET Power To Lock	Call for Options
<a href="#"><u>124468</u></a>	CTP Power To Unlock	<a href="#"><u>127640</u></a>
<a href="#"><u>172474</u></a>	CTS Power To Unlock	<a href="#"><u>172474</u></a> + <a href="#"><u>172426</u></a>
<a href="#"><u>172475</u></a>	CTS Power To Lock	<a href="#"><u>172475</u></a> + <a href="#"><u>172426</u></a>
Wiring diagrams available for review using the provided web links		

## 2. Select Required Accessories

Accessories listed on the next page

# Products for PROFINET PROFIsafe I/O Modules

## 2. Select Required Accessories

CET						
<b>Actuator</b>	<b>Slide Bolt</b> Includes Protective Cover		<b>Auxiliary Release</b>	<b>Emergency Release</b>	<b>Lockout Bar</b>	<b>Protective Cover</b>
						
<a href="#"><u>096327</u></a>	<a href="#"><u>104309</u></a>	<a href="#"><u>106172</u></a>	<a href="#"><u>098850</u></a>	<a href="#"><u>103714</u></a>	<a href="#"><u>155865</u></a>	<a href="#"><u>124979</u></a>
CTP						
<b>Actuators</b>						
						
<a href="#"><u>126015</u></a>	<a href="#"><u>122667</u></a>	<a href="#"><u>122668</u></a>	<a href="#"><u>122671</u></a>	<a href="#"><u>122672</u></a>	<a href="#"><u>122675</u></a>	<a href="#"><u>122676</u></a>
<b>Slide Bolt</b>		<b>Auxiliary Release</b>	<b>Auxiliary Release</b>	<b>Emergency Release</b>	<b>Lockout Bar</b>	<b>Bowden Cable</b>
						
<a href="#"><u>123653</u></a>	<a href="#"><u>123655</u></a>	<a href="#"><u>109212</u></a>	<a href="#"><u>103110</u></a>	<a href="#"><u>099877</u></a>	<a href="#"><u>123411</u></a>	<a href="#"><u>097747</u></a>
CTS						
<b>Actuators</b>				<b>Escape Release</b>	<b>Lockout Bar</b>	<b>Handle &amp; Plate</b>
						
→ L + HC	→ L + LC	→ I + HC	→ I + LC			
<a href="#"><u>167919</u></a>	<a href="#"><u>169045</u></a>	<a href="#"><u>169044</u></a>	<a href="#"><u>169046</u></a>	<a href="#"><u>172426</u></a>	<a href="#"><u>171364</u></a>	<a href="#"><u>172601</u></a>

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## Selection Guide

### Products for EtherCAT FSoE I/O Modules

Flexible design with many options provides easy integration and highest reliability for a variety of different applications, improving safety while saving time and money.

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ [MGB2 versions available](#)
- ▶ M12 5 Pin & 8 Pin connector options
- ▶ Ingress Protection Rating IP65, IP67, IP69
- ▶ Locking force 3000N – 5000N
- ▶ Diagnostic information provided via LED's
- ▶ Coding solutions available in high and Low
- ▶ Above specifications vary by model



CET with  
Escape Release



CTP with  
Escape Release



CTS with  
Escape Release

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ Ingress Protection Rating IP65, IP67, IP69
- ▶ Diagnostic information provided via LED's
- ▶ Solutions available in high and Low coding
- ▶ Above specifications vary by model



CES C01  
with Actuator



CES C04  
with Actuator



CES C07  
with Actuator

- ▶ CKS2 RFID Safety Key Solution
- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ Single key mode high coded solution
- ▶ Multi-key mode high coded hybrid solution



- ▶ **Actuator / Keys sold separately**

# Products for EtherCAT FSoE I/O Modules

## 1. Determine Switch Part Number

RFID Non-locking Switches		
IP67 Remote I/O Modules <b>M12 5 Pin Male Connector</b>		
High Coded	Switch Family	Low Coded
<u><b>111145</b></u>	CES C01	<u><b>111708</b></u>
<u><b>115150</b></u>	CES C04	<u><b>117323</b></u>
<u><b>162815</b></u>	CES C07	<u><b>162813</b></u>
Wiring diagrams available for review using the provided web links		
RFID Safety Key Solution		
IP67 Remote I/O Modules <b>M12 5 Pin</b>	Product Family	IP20 Remote I/O Modules <b>M12 8 Pin</b>
<u><b>168631</b></u>	CKS2	<u><b>167948</b></u>
Wiring diagrams available for review using the provided web links		

## 2. Select Required Accessories

CES C01  
Actuator



**098775**

CES C04  
Actuator



**115271**

CES C07  
Actuator



**156230**

CKS2 Keys  
Single Key Application  
**168921**



Two Key Application  
**168962**



Three Key Application  
**168963**



CKS2  
Faceplates



**165413**

Additional Key Options and Colors Available

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# Products for EtherCAT FSoE I/O Modules

## 1. Determine Switch Part Number





























RFID Locking Switches		
IP20 Remote I/O Modules M12 8 Pin Male Connector		
Without Escape Release	Locking Principle	With Escape Release
<a href="#"><u>122398</u></a>	CET Power To Unlock	<a href="#"><u>124601</u></a>
<a href="#"><u>122415</u></a>	CET Power To Lock	Call for Options
<a href="#"><u>124225</u></a>	CTP Power To Unlock	<a href="#"><u>126912</u></a>
<a href="#"><u>124728</u></a>	CTP Power To Lock	<a href="#"><u>136841</u></a>
<a href="#"><u>167917</u></a>	CTS Power To Unlock	<a href="#"><u>167917</u></a> + <a href="#"><u>172426</u></a>
<a href="#"><u>169051</u></a>	CTS Power To Lock	<a href="#"><u>169051</u></a> + <a href="#"><u>172426</u></a>
Wiring diagrams available for review using the provided web links		
IP67 Remote I/O Modules Dual M12 5 Pin Male Connectors		
Without Escape Release	Locking Principle	With Escape Release
<a href="#"><u>111346</u></a>	CET Power To Unlock	<a href="#"><u>114073</u></a>
<a href="#"><u>112082</u></a>	CET Power To Lock	Call for Options
<a href="#"><u>124468</u></a>	CTP Power To Unlock	<a href="#"><u>127640</u></a>
<a href="#"><u>172474</u></a>	CTS Power To Unlock	<a href="#"><u>172474</u></a> + <a href="#"><u>172426</u></a>
<a href="#"><u>172475</u></a>	CTS Power To Lock	<a href="#"><u>172475</u></a> + <a href="#"><u>172426</u></a>
Wiring diagrams available for review using the provided web links		

## 2. Select Required Accessories

Accessories listed on the next page

# Products for EtherCAT FSoE I/O Modules

## 2. Select Required Accessories

CET						
<b>Actuator</b>	<b>Slide Bolt</b> Includes Protective Cover		<b>Auxiliary Release</b>	<b>Emergency Release</b>	<b>Lockout Bar</b>	<b>Protective Cover</b>
						
<u>096327</u>	<u>104309</u>	<u>106172</u>	<u>098850</u>	<u>103714</u>	<u>155865</u>	<u>124979</u>
CTP						
<b>Actuators</b>						
						
<u>126015</u>	<u>122667</u>	<u>122668</u>	<u>122671</u>	<u>122672</u>	<u>122675</u>	<u>122676</u>
<b>Slide Bolt</b>		<b>Auxiliary Release</b>	<b>Auxiliary Release</b>	<b>Emergency Release</b>	<b>Lockout Bar</b>	<b>Bowden Cable</b>
						
<u>123653</u>	<u>123655</u>	<u>109212</u>	<u>103110</u>	<u>099877</u>	<u>123411</u>	<u>097747</u>
CTS						
<b>Actuators</b>				<b>Escape Release</b>	<b>Lockout Bar</b>	<b>Handle &amp; Plate</b>
						
→ L + HC	→ L + LC	→ I + HC	→ I + LC			
<u>167919</u>	<u>169045</u>	<u>169044</u>	<u>169046</u>	<u>172426</u>	<u>171364</u>	<u>172601</u>

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## Selection Guide

### STP Electromechanical Locking Safety Gate Switch

Flexible design with many options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ Metal head with a reinforced thermoplastic body
- ▶ Locking force rating of up to 2,000N
- ▶ Slim profile with an IP67 rating
- ▶ Operating voltage 24V AC/DC -15% to +10%
- ▶ Auxiliary Release on the front of the switch
- ▶ Minimum switching current 1mA at 24V
- ▶ Single and Dual channel guard lock monitoring
- ▶ Single and Dual channel door monitoring

- ▶ **Actuator sold separately**



Without  
Escape Release



With  
Escape Release



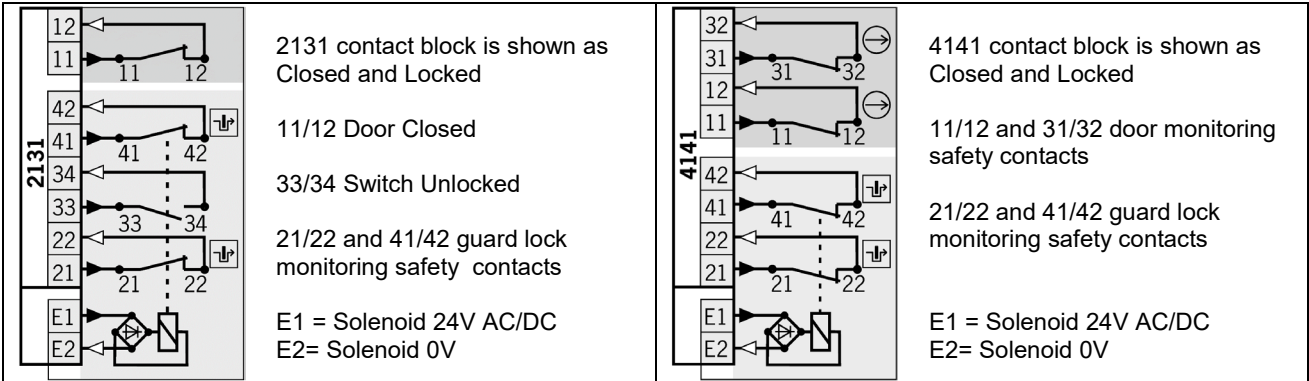
Order Handle  
Separately  
**105329**

## 1. Determine Application Requirements

- ▶ Which contact block variation will be required?
  - 2131 – 1 NC Door Auxiliary Contact & 1 NO Solenoid Auxiliary Contact  
2 NC Guard Lock Monitoring Safety Contacts
  - 4141 – 2 NC Door Monitoring Safety Contacts  
2 NC Guard Lock Monitoring Safety Contacts
- ▶ What locking principle is required?
  - Power To Unlock [[STP3A](#)]
  - Power To Lock [[STP4A](#)]
- ▶ Will an escape release be required?
  - Full body application – Escape Release is typically required
  - Partial body application – Escape Release may not be required
- ▶ Select Accessories
  - Improves Reliability
  - Provides Additional Functionality

# STP Electromechanical Locking Safety Gate Switch

## 2. Determine Switch Part Number





Power To Unlock	Power To Lock	2131 Contact Block	4141 Contact Block	Escape Release Included	M20 x 1.5 Threaded Ports	Part Number
X	-	X	-	-	X	<a href="#">091493</a>
X	-	X	-	X	X	<a href="#">102267</a>
X	-	-	X	-	X	<a href="#">099272</a>
-	X	X	-	-	X	<a href="#">091494</a>
-	X	-	X	-	X	<a href="#">099314</a>
-	X	-	X	X	X	<a href="#">115749</a>

Additional options available – Contact the Application Team for assistance

## 3. Select Accessories

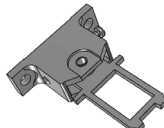
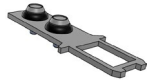
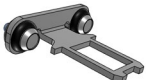
Safety Relays



ESM-BA201  
[085610](#)

ESM-BA301  
[085613](#)


Actuators



[095740](#)[095738](#)

Hinged Actuators Available


Lockout Bar



[105701](#)

M12 Connectors Available

Cable Gland



[MN-M20CGP](#)

Slide bolts available – Call the Applications Team for assistance

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## Selection Guide

### TP Electromechanical Locking Safety Gate Switch

Flexible design with many options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ Plastic head with a reinforced thermoplastic body
- ▶ Locking force rating of up to 1,000N
- ▶ Slim profile with an IP67 rating
- ▶ Operating voltage 24V AC/DC -15% to +10%
- ▶ Minimum switching current 1mA at 24V
- ▶ Auxiliary Release on the front of the switch
- ▶ Single and Dual channel door monitoring
- ▶ Single and Dual channel guard lock monitoring

- ▶ **Actuator sold separately**



Without  
Escape Release



With  
Escape Release

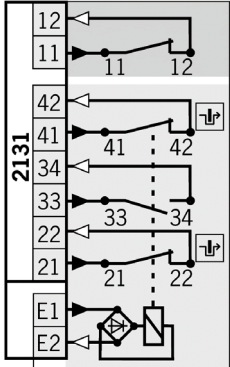
Order Handle  
Separately  
**105329**

## 1. Determine Application Requirements

- ▶ Which contact block variation will be required?
  - 2131 – 1 NC Door Auxiliary & 1 NO Solenoid Auxiliary Contact  
2 NC Guard Lock Monitoring Safety Contacts
  - 4141 – 2 NC Door Monitoring Safety Contacts  
2 NC Guard Lock Monitoring Safety Contacts
- ▶ What locking principle is required?
  - Power To Unlock [TP3]
  - Power To Lock [TP4]
- ▶ Will an escape release be required?
  - Full body application – Escape Release is typically required
  - Partial body application – Escape Release may not be required
- ▶ Select Accessories
  - Improves Reliability
  - Provides Additional Functionality

# TP Electromechanical Locking Safety Gate Switch

## 2. Determine Switch Part Number



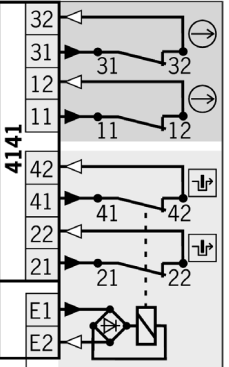
2131 contact block is shown as Closed and Locked

11/12 Door Closed

33/34 Switch Unlocked

21/22 and 41/42 guard lock monitoring safety contacts

E1 = Solenoid 24V AC/DC  
E2= Solenoid 0V



4141 contact block is shown as Closed and Locked

11/12 and 31/32 door monitoring safety contacts

21/22 and 41/42 guard lock monitoring safety contacts

E1 = Solenoid 24V AC/DC  
E2= Solenoid 0V

Power To Unlock	Power To Lock	2131 Contact Block	4141 Contact Block	Escape Release Included	M20 x 1.5 Threaded Ports	Part Number		
X	-	X	-	-	X			<a href="#">084142</a>
X	-	X	-	X	X			<a href="#">087400</a>
X	-	-	X	-	X			<a href="#">084270</a>
-	X	X	-	-	X			<a href="#">084145</a>
-	X	-	X	-	X			<a href="#">084275</a>
Additional options available – Contact the Applications Team for assistance								

## 3. Select Accessories

Safety Relays



ESM-BA201  
[085610](#)

ESM-BA301  
[085613](#)

Actuators



[070038](#)  
[070046](#)

Hinged Actuators Available

Lockout Bar



[096105](#)

M12 Connectors Available

Cable Gland



MN-M20CGP

Slide bolts available – Call the Applications Team for assistance

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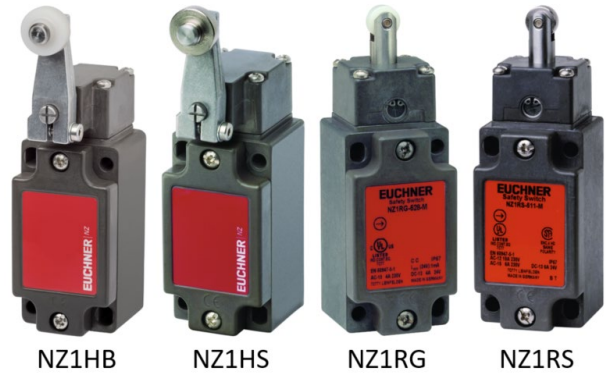


## Selection Guide

### Electromechanical Safety Limit Switches

Flexible design with many options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ Ingress Protection rating of up to IP67
- ▶ 1 to 4 Safety Contacts
- ▶ 1 to 2 Auxiliary Contacts
- ▶ LED Indication available on some models
- ▶ Minimum switching current 1mA at 24V
- ▶ Actuating force varies by model  
15N – 30N
- ▶ Actuating Elements Available
  - Lever Arm – Fixed Length
  - Lever Arm – Adjustable Length
  - Rounded Plunger
  - Roller Plunger
- ▶ Plastic & Metal Roller versions available
- ▶ Snap Action version available in  
511 Contact Block



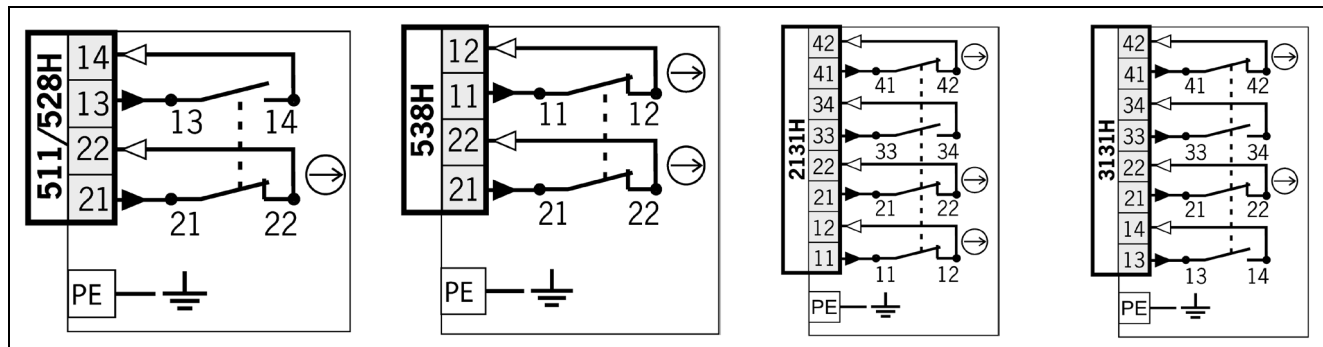
### 1. Determine Application Requirements

- ▶ What contact configuration is required?
- ▶ What actuating element type is required?
- ▶ Do you require a fixed or adjustable length actuating element?



# Electromechanical Safety Limit Switches

## 2. Determine Switch Part Number



Switch Family	528H Contact Block	538H Contact Block	*2121H Contact Block	2131H Contact Block	3131H Contact Block	M20 x 1.5 Threaded Ports	Roller Plunger Arm Material
NZ1HB	<a href="#">088199</a>	<a href="#">090966</a>	-	<a href="#">090968</a>	<a href="#">090969</a>	X	Plastic
NZ1HS	<a href="#">090970</a>	<a href="#">090972</a>	<a href="#">090254</a>	<a href="#">090973</a>	<a href="#">090747</a>	X	Steel
NZ1PB	-	<a href="#">090871</a>	-	<a href="#">090872</a>	<a href="#">090873</a>	X	Plastic
NZ1PS	<a href="#">090874</a>	<a href="#">090875</a>	-	<a href="#">090876</a>	<a href="#">090877</a>	X	Steel
NZ1RG	<a href="#">090932</a>	<a href="#">090933</a>	-	<a href="#">090934</a>	<a href="#">090935</a>	X	Plastic
NZ1RK	<a href="#">090905</a>	<a href="#">090906</a>	-	<a href="#">090907</a>	<a href="#">090908</a>	X	Steel
NZ1RL	<a href="#">090937</a>	<a href="#">090939</a>	-	<a href="#">090941</a>	<a href="#">090942</a>	X	Steel
NZ1RS	<a href="#">089627</a>	<a href="#">090936</a>	<a href="#">087595</a>	<a href="#">089633</a>	<a href="#">089631</a>	X	Steel
NZ1WO	<a href="#">089624</a>	<a href="#">090878</a>	-	<a href="#">089629</a>	<a href="#">089626</a>	X	Steel
*2121 Contact block is not displayed above, <a href="#">Click Link</a> and select wiring diagram to review							

## 3. Select Accessories

### Safety Relays



ESM-BA201  
[085610](#)

ESM-BA301  
[085613](#)

### Cable Gland



Plastic  
**MN-20CGP**

M12 Connectors Available

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## Selection Guide

### Electromechanical Non-locking Safety Gate Switch

Flexible design with many options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ NZ1VZ Metal head and metal body
- ▶ NZ1VZ Heavy duty with self-clearing head
- ▶ NZ1VZ Extraction force 35N
- ▶ NZ1VZ Minimum switching current 1mA at 24V
- ▶ SGP Metal head and reinforced thermoplastic body
- ▶ SGP Medium Duty – Extraction force 20N
- ▶ SGP Minimum switching current 1mA at 24V
- ▶ GP Plastic head and reinforced thermoplastic body
- ▶ GP Light Duty – Extraction force 20N
- ▶ GP Minimum switching current 1mA at 24V
- ▶ **Actuator sold separately**



NZ1VZ



SGP



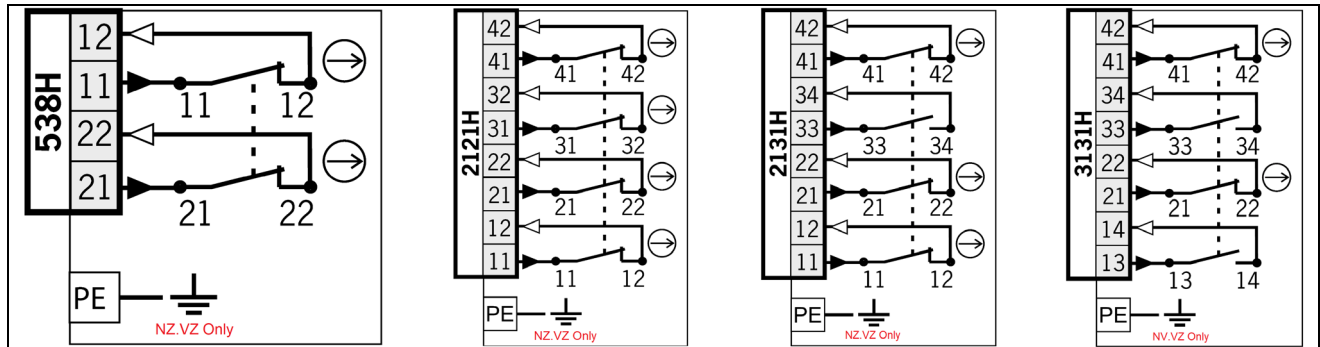
GP

## 1. Determine Application Requirements

- ▶ Which contact block variation will be required?
  - 538 – 2 NC Door Monitoring Safety Contacts
  - 2121 – 4 NC Door Monitoring Safety Contacts
  - 2131 – 3 NC Door Monitoring Safety Contacts  
1 NO Door Monitoring Auxiliary Contacts
  - 3131 – 2 NC Door Monitoring Safety Contacts  
2 NO Door Monitoring Auxiliary Contacts
- ▶ Select Accessories
  - Improves Reliability
  - Provides Additional Functionality

# Electromechanical Non-locking Safety Gate Switch

## 2. Determine Switch Part Number



Switch Family	538 Contact Block	2121 Contact Block	2131 Contact Block	3131 Contact Block	M20 x 1.5 Threaded Ports	Part Number  Technical Data Specifications Wiring Diagrams Accessories
NZ1VZ	X	-	-	-	X	<a href="#">085676</a>
	-	X	-	-	X	<a href="#">089486</a>
	-	-	X	-	X	<a href="#">082123</a>
	-	-	-	X	X	<a href="#">082122</a>
SGP	-	X	-	-	X	<a href="#">097705</a>
	-	-	X	-	X	<a href="#">097706</a>
	-	-	-	X	X	<a href="#">097707</a>
GP	X	-	-	-	X	<a href="#">090250</a>
	-	X	-	-	X	<a href="#">090252</a>
	-	-	X	-	X	<a href="#">090255</a>
	-	-	-	X	X	<a href="#">090258</a>

## 3. Select Accessories

### Safety Relays



ESM-BA201  
[085610](#)



ESM-BA301  
[085613](#)

### Actuators



NZ1VZ  
[016849](#)



SGP  
[095738](#)



GP  
[070046](#)

Hinged Actuators Available

### Cable Gland



[MN-M20CGP](#)

M12 Connectors Available

[Slide bolts are available – Call the Applications Team for assistance](#)

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## Selection Guide

### MCM-X Hardwired Expansion Module

Flexible design with many options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ MGB2 K / P submodule support (See Datasheet)
- ▶ Emergency Stop and Machine Stop PB supported
- ▶ Safety and standard push buttons supported
- ▶ Safety and standard selector switches supported
- ▶ Safety and standard key switches supported
- ▶ MSM submodules support 1 to 3 devices
- ▶ M12 12 pin connectorized version available
- ▶ Cable gland version available
- ▶ Slim profile to allow mounting in tight spaces
- ▶ Custom lens sets with graphic symbols available
- ▶ Colored lens sets included with many standard submodules

- ▶ **Cable Gland ordered separately**



Cable Gland



M12 12 Pin  
Connector

## 1. Determine Application Requirements

- ▶ Which housing is required?
  - Cable Entry – Supports many MSM submodule options
  - M12 Connector – Supports many MSM submodule options up to 12 pins
- ▶ What type of devices are required for your application?
  - Emergency Stop – Illuminated or Auxiliary Contact version
  - Illuminated Push Button – Safety or Standard
  - Illuminated Acknowledgement PB – Safety (Pre-Programmed Function)
  - Illuminated Selector Switches – Safety or Standard
  - Key Switches – Safety or Standard
- ▶ Select Accessories

# MCM-X Hardwired Expansion Module

## 2. Determine MCM-X and Submodule Part Numbers Required



**167435**  
Cable Gland



**169330**  
M12 Connector



**Safety** Device Submodules listed on the following pages

**Note:** These submodules may include up to 2 standard devices

**Standard** Device Submodules listed on the following pages

**Note:** These submodules do not include any safety devices

**Warning:** Not all submodules work with both MCM-X units, see wiring diagrams to confirm selection

## 3. Select Accessories

Cable Gland



**MN-M20CGP**

Lens Sets



**120377**



**126158**



**160049**



**120378**



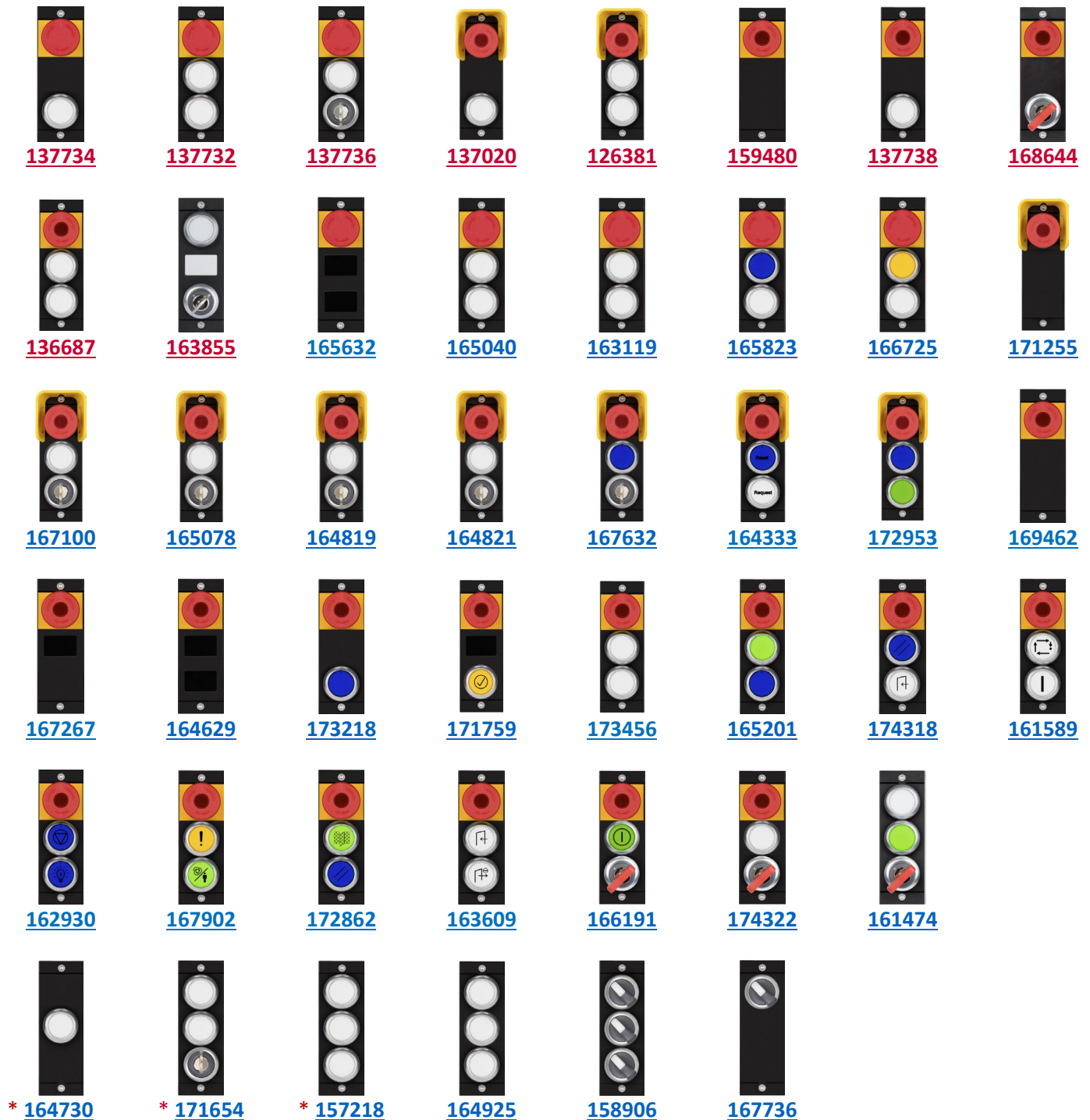
**120344**

[ESM Safety Relay Options](#)

[MSC Safety Controller Options](#)



## MCM-X Safety Device Submodules



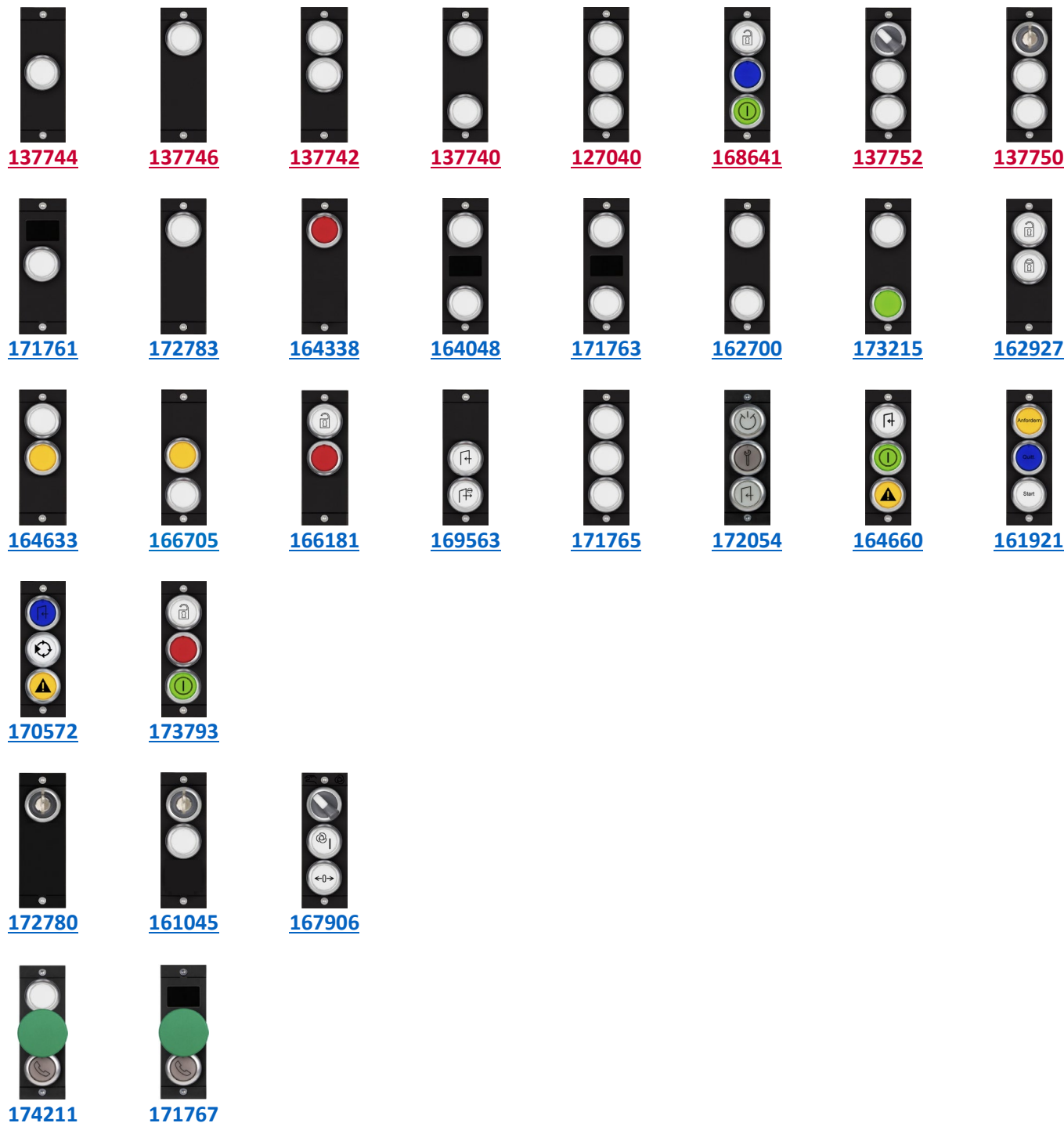
Submodules on this page include 1 or more safety devices (Dual Channel)

Submodules on this page may also include standard MCM devices (single channel, non-safety)

\* Acknowledgement Push Buttons used with MCM-X are not preprogrammed and function as regular safety devices

Euchner offers more than 70 submodule options, [click here](http://www.euchner-usa.com) to visit the website

# MCM-X Standard Device Submodules



Submodules on this page include standard devices only

Euchner offers more than 70 submodule options, [click here](#) to visit the website

[ESM Safety Relay Options](#)

[MSC Safety Controller Options](#)

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## Selection Guide

### Enable Switches – Dual Channel Electromechanical

Flexible design with many options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ ZSA 3 stage function
- ▶ ZSA versions available for MGB2
- ▶ ZSA hard wired versions available
- ▶ ZSA M12 connector versions available
- ▶ ZSA flying lead versions available



ZSA

- ▶ ZSB 3 stage function
- ▶ ZSB versions available for MGB2
- ▶ ZSB hard wired versions available
- ▶ ZSB RC12 connector versions available
- ▶ ZSB flying lead versions available
- ▶ Many variations available



ZSB



ZSB

- ▶ ZSM 3 stage function
- ▶ ZSM versions available for MGB2
- ▶ ZSM hard wired versions available
- ▶ ZSM RC12 connector versions available
- ▶ ZSM flying lead versions available
- ▶ Many variations available



ZSM



ZSM

# Enable Switches – Dual Channel Electromechanical

## 1. Determine Enable Switch Part Number

3 Stage Function	ZSA M12 Connector	ZSB RC12 Connector	ZSM RC12 Connector	+ / - Push Buttons	MGB2 MSM Compatibility <a href="#">137596</a> / <a href="#">160626</a>	MGB2 MSM Compatibility <a href="#">137597</a>	Cable Length	Part Number  Technical Data Specifications Wiring Diagrams Accessories
X	X	-	-	-	X	-	2m	<a href="#">169871</a>
X	X	-	-	-	X	-	10m	<a href="#">110560</a>
X	X	-	-	-	X	-	15m	<a href="#">165899</a>
X	-	X	-	X	-	X	5m	<a href="#">077040</a>
X	-	X	-	X	-	X	5m	<a href="#">077029</a>
X	-	X	-	X	-	X	12m	<a href="#">085058</a>
X	-	-	X	X	-	X	5m	<a href="#">099716</a>
X	-	-	X	X	-	X	13m	<a href="#">113290</a>
Additional options available – Contact the Application Team for assistance								

## 2. Select Accessories

### Safety Relays



ESM-BA201  
[085610](#)



ESM-BA301  
[085613](#)

### Bolt on Holsters



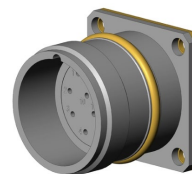
ZSM  
[102969](#)



G1 Housing  
ZSA/ZSB  
[052406](#)

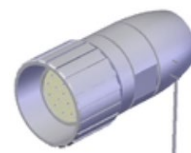
Additional Versions Available

### Flange Connector



RC12  
[167890](#)

### Bridge Plug Kit



RC12  
[073293](#)

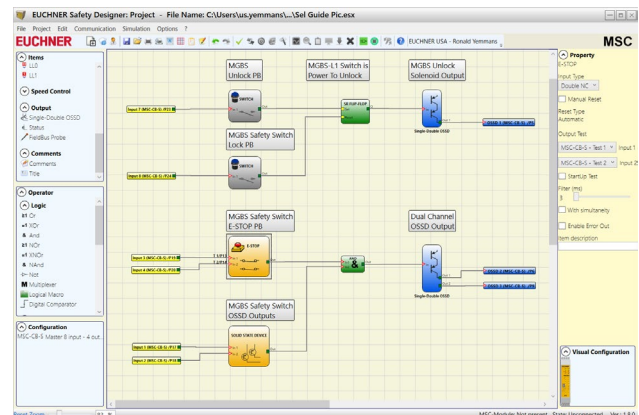
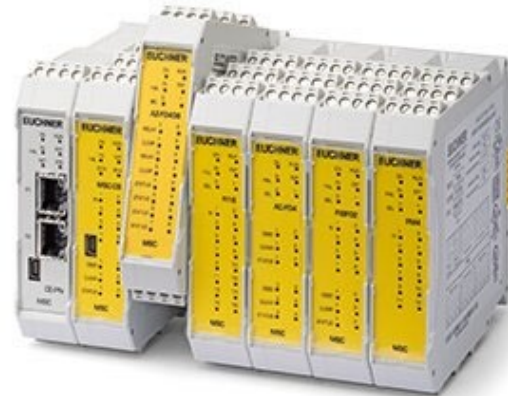
Call for Tooling Requirements

## Selection Guide

### MSC Safety Controller and Expansion Modules

Flexible product family with many options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ Up to Category 4 / PL e per EN ISO 13849-1
- ▶ Enhanced and Standard Controllers Available
- ▶ Base Controller and up to 14 Expansion Modules total. Up to 4 modules per part number
- ▶ Safety / Standard Discrete Inputs (128 max.)
- ▶ Dual Channel OSSD Outputs (16/30 max.)
- ▶ Relay Outputs (12/28 max.)
- ▶ Monitoring / Status Outputs (32/48 max.)
- ▶ Test Pulse Outputs (Electromechanical Devices)
- ▶ Graphical Online Monitoring included
- ▶ Graphical Program Simulator included
- ▶ MSC Safety Designer Programming Environment
- ▶ Speed Monitoring Modules – 7 Available
- ▶ PLC Communication Modules – 8 Available



MSC Safety Designer – [Free Download](#)

## 1. Determine Application Requirements

- ▶ How many safety inputs are required?
- ▶ How many safety outputs are required?
- ▶ How many high current outputs are required?
- ▶ How many relay outputs are required?



# MSC Safety Controller and Expansion Modules

## 2. Determine Part Number

MSC Modules	Safety Inputs Configurable	OSSD Safety Outputs Configurable (2000mA)	OSSD Safety Outputs Dual Channel (400mA)	OSSD Safety Outputs Configurable (400mA)	Monitoring Outputs (100mA)	Test Pulse Outputs	Relay Outputs (20mA – 6000mA)	Communication Inputs	Communication Safety Outputs	Controller / Expansion <b>ENHANCED VERSIONS</b>	Part Number  Technical Data Specifications Wiring Diagrams Accessories
<b>*MSC-CB-AC-FI8FO4S</b>	8/4	-	-	4/2	4	4	-	32	32	X	<b><u>166057</u></b>
<b>**MSC-CE-AC-FI8FO4S</b>	8/4	-	-	4/2	4	4	-	-	-	X	<b><u>166056</u></b>
*MSC-CB-AC-FI8FO2	8/4	-	2	-	2	4	-	8	16	-	<b><u>121289</u></b>
MSC-CE-AC-FI8FO2	8/4	-	2	-	2	4	-	-	-	-	<b><u>121290</u></b>
MSC-CE-FI16	16/8	-	-	-	-	4	-	-	-	-	<b><u>121292</u></b>
MSC-CE-AC-FO4	-	-	4	-	4	-	-	-	-	-	<b><u>121295</u></b>
MSC-CE-AZ-FO4O8	-	-	-	-	8	-	4	-	-	-	<b><u>121299</u></b>
MSC-CE-AH-FO4SO8	-	4/2	-	-	8	-	-	-	-	-	<b><u>122705</u></b>
MSC-CE-O16	-	-	-	-	16	-	-	-	-	-	<b><u>122707</u></b>
*MSC-CB Controllers do not include <b><u>121308</u></b> , order separately if integrating additional expansion modules											
**MSC Expansion Module <b><u>166056</u></b> is only compatible with MSC-CB Controller <b><u>166057</u></b>											
20+ additional expansion modules available, <b><u>Click Here</u></b> for more information											
<b>Terminal Blocks (1 set) must be ordered separately for all modules listed above</b>											
Maximum values listed on the front and back of this document will vary based on the MSC-CB Controller selected Call the Applications Teams for assistance											

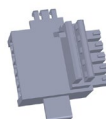
## 3. Select Accessories



Memory Card  
**121309**



Terminal Block Set  
**121321**



Expansion Connector  
**121308**



Programming Cable  
**121322**

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## Selection Guide

### ESM Safety Relays for OSSD and Electromechanical Devices

Flexible product family with many options available. Provides easy integration and highest reliability for a variety of different applications, improves safety while saving time and money.

- ▶ Up to Category 4 / PLe per EN ISO 13849-1
- ▶ Single / Dual Channel Devices Supported
- ▶ Automatic / Manual Start – Configurable
- ▶ Feedback Loop Monitoring
- ▶ Short Circuit / Ground Fault Monitoring
- ▶ Contact Options
  - Instantaneous
  - Time Delayed
  - Auxiliary
  - Monitoring / Diagnostic
- ▶ Expansion module adds 2 safety and 1 auxiliary contact to a base safety relay
- ▶ LED Operation / Diagnostic Indication
- ▶ Versions with integrated terminals blocks
- ▶ Versions with removable terminal blocks



## 1. Determine Application Requirements

- ▶ Does your application require instantaneous / time delayed contacts?
- ▶ Does your application require auxiliary / monitoring contacts?
- ▶ Do you require 2 Hand Control?
- ▶ Do you prefer integrated or removable terminal blocks?

# ESM Safety Relays for OSSD and Electromechanical Devices

## 2. Determine Part Number

ESM Model	Instantaneous Safety Contacts	Time Delay Safety Contacts	Time Delay Range (Seconds)	Auxiliary Contacts	Monitoring / Diagnostic Contacts	Monitoring Outputs	2 Hand Control	Single / Dual Channel Device Support	Expansion Unit (Base Unit Required)	Part Number  Technical Data Specifications Wiring Diagrams Accessories	
BA201	2	-	-	-	-	-	-	X	-	<a href="#">085610</a>	
*BA201P	2	-	-	-	-	-	-	X	-		<a href="#">097226</a>
BA301	3	-	-	-	X	-	-	X	-	<a href="#">085613</a>	
*BA301P	3	-	-	-	X	-	-	X	-		<a href="#">097230</a>
BA701	7	-	-	2	X	2	-	X	-	<a href="#">097224</a>	
*BA701P	7	-	-	2	X	2	-	X	-		<a href="#">097225</a>
2H201	2	-	-	-	-	-	X	X	-	<a href="#">085620</a>	
ES301	3	-	-	-	X	-	-	-	X		<a href="#">085614</a>
*ES301P	3	-	-	-	X	-	-	-	X	<a href="#">090057</a>	
TE301	-	3	1 – 30	-	X	-	-	-	X		<a href="#">085617</a>
BT401	1	3	1 – 30	-	-	-	-	X	-	<a href="#">090818</a>	
BT411	2	2	1 – 30	-	-	-	-	X	-		<a href="#">090819</a>
BT421	3	1	1 – 30	-	-	-	-	X	-	<a href="#">090820</a>	
<b>*Terminal Blocks must be ordered separately – “P” Versions</b>											
<b>Need other control voltages – Contact the Applications Team for assistance</b>											

## 3. Select Accessories

### Terminal Block Sets



Screw Clamp  
[097194](#)



Spring Cage  
[097195](#)

### \*Note: Quantity Required

xx201P: 1 Set Required  
xx301P: 1 Set Required  
xx701P: 2 Sets Required

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## Slide Bolts – 6 reasons to invest in them

1. Euchner slide bolts include a handle, one less thing to issue a PO for.
2. Euchner slide bolts include mounting plates allowing for easy installation of the switch, which reduces labor costs.
3. Euchner slide bolts (most) include a built in door stop which prevents the door from swinging into the hazardous area. This reduces hardware cost and labor of having to install a dedicated doorstop.
4. Euchner slide bolts (most) include a lockout feature that prevents the door from being closed and locked while someone is inside the hazardous area.
5. Euchner slide bolts help protect the switch and actuator from being damaged due to misalignment when the door is closed.
6. Euchner slide bolts (many) include the required actuator for your switch.

