

Safety Systems





Safety Systems: Powered by Mechtric's Expertise and Global Partnerships

With over 60 years of industry experience, Mechtric proudly partners with world-class manufacturers to deliver innovative solutions.

Mechtric's **Safety Systems** solutions include light curtains, safety switches, fail-safe sensors, and rope-operated limit switches designed to protect personnel and equipment in industrial environments. Safety controllers, interfaces, relays, and contactors ensure reliable integration into control architectures, providing effective monitoring and fail-safe operation. Together, these products deliver robust protection and compliance with the highest safety standards.

Mechtric delivers high-quality products, competitive pricing, and unparalleled technical support, empowering your business to perform at its best.

 **REER**

 **Lovato**
electric

Safety Systems

Safety Sensors

Safety light curtains



ReeR

N-3...5

Fail-safe inductive sensors



ReeR

N-5

Safety Switches

Safety switches



ReeR

N-6

Rope-operated limit switches



Lovato

N-10

Safety Controllers

Safety controllers



ReeR

N-7

Safety Relays & Contactors

Safety interfaces and relays



ReeR

N-8

Safety contactors

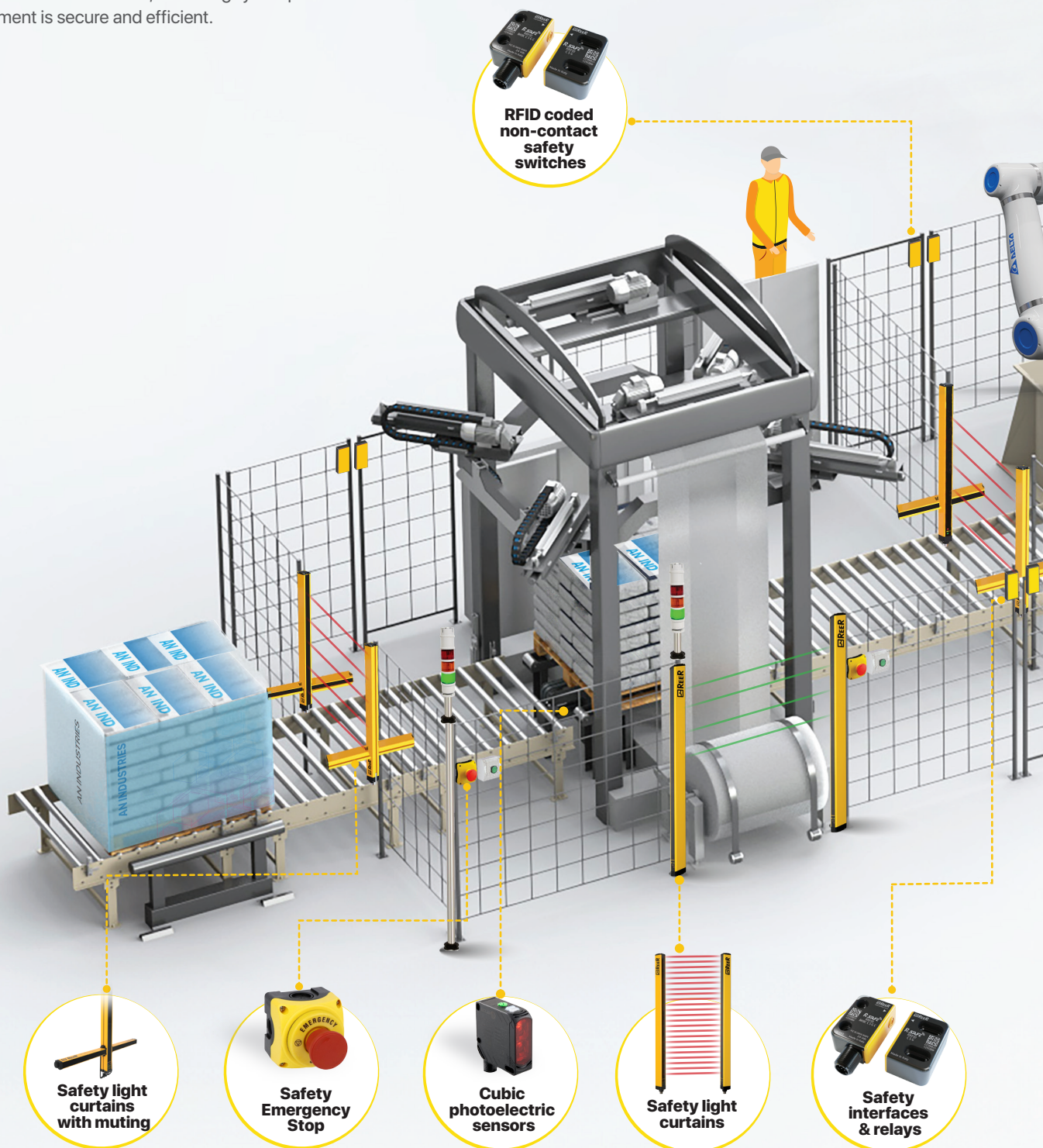


Lovato

N-9

Prioritising Safety in Process Automation

In today's fast-paced industrial environments, ensuring the safety of both people and machinery is paramount. A safe workplace not only protects employees but also enhances productivity and reduces downtime. Our comprehensive range of safety products is designed to meet the rigorous demands of a safety-conscious employer. From advanced sensor technology to reliable emergency systems, our solutions are sourced from globally recognised manufacturers, ensuring your process automation environment is secure and efficient.





Collaborative robots



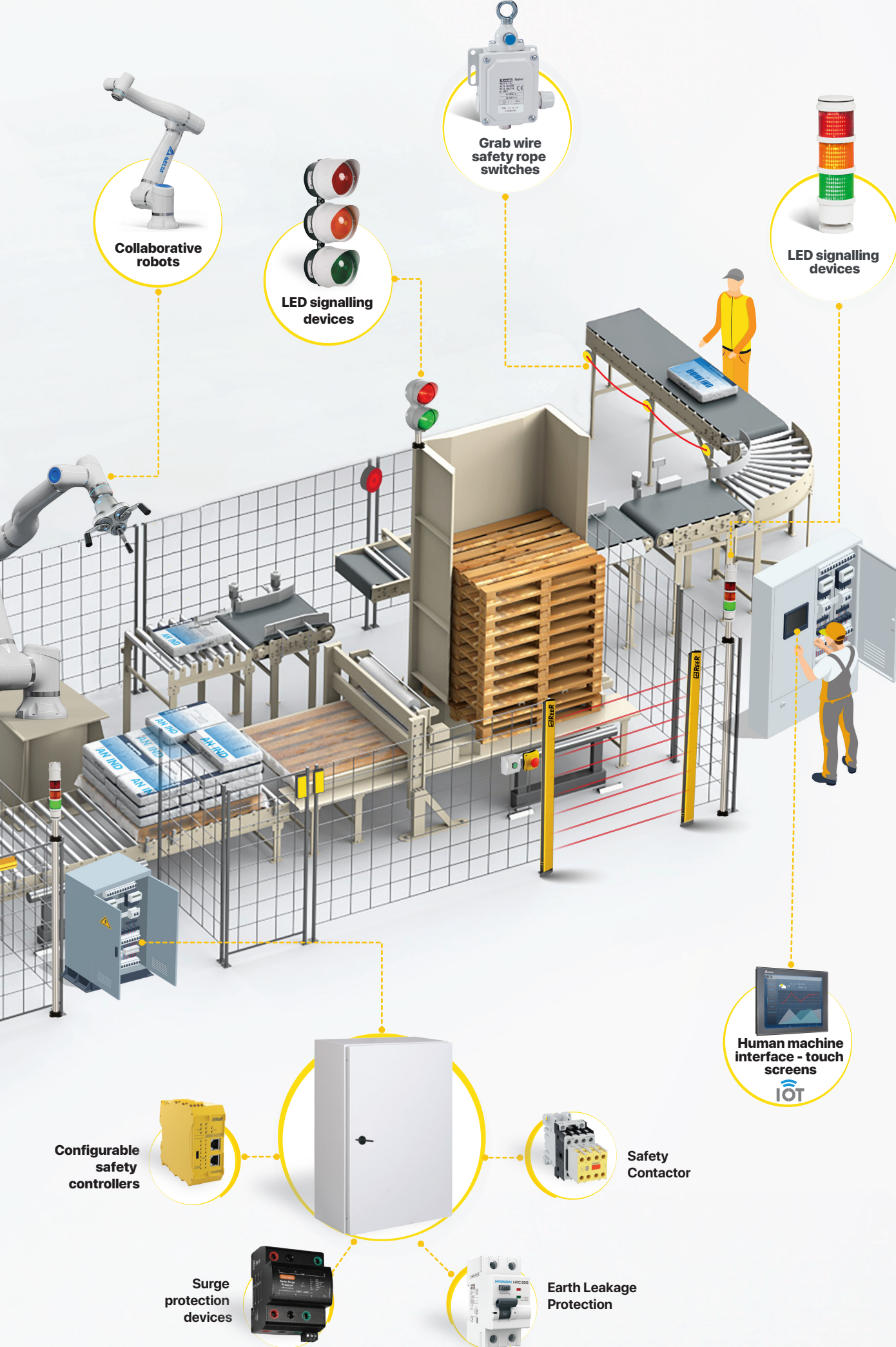
LED signalling devices



Grab wire safety rope switches



LED signalling devices



Configurable safety controllers



Surge protection devices



Safety Contactor



Earth Leakage Protection

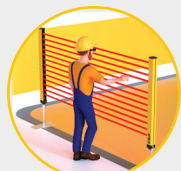


Human machine interface - touch screens





SAFETY LEVEL	SAFETY LEVEL
TYPE 4	TYPE 2
SIL 3 - SILCL 3 PL e - Cat. 4	SIL 1 - SILCL 1 PL c - Cat. 2



EOS series - Safety light curtains

EOS series is a compact safety light curtain range with competitive performance and innovative features. Includes models with integrated safety functions such as self-monitoring static outputs, control of external contactors (EDM) and selectable automatic or manual restart. 2 safety PNP static outputs. Easy connection and installation thanks to the M12 connectors and the use of unshielded cables up to 100 meters.

- Power supply: 24 VDC $\pm$ 20%
- Dimensions: (W) 28 x (D) 30 mm
- Status display: LEDs for light curtain's status and diagnostic
- Mounting: Via back slot with provided standard mounting brackets
- Connection: Emitter: M12 5-pin - Receiver: M12 8-pin
- OSSD safety outputs: 2 PNP - 400 mA at 24 VDC with short-circuit, overload, polarity reversal protection

type	resolution	protected height	No. beams	description	overall height	connection type
------	------------	------------------	-----------	-------------	----------------	-----------------

For finger and hand detection - Safety light curtains

IP65/67

EOS2 X - Safety light curtain with built-in control functions - Type 2

- Detection: Hand detection (30 mm resolution)
- Safety Level: Type 2, SIL 1/SILCL 1, PL c, Cat. 2
- Maximum range: Selectable 4/12 meter

EOS2 303 X	30 mm	310 mm	16	safety light curtain	363 mm	M12 plug
EOS2 453 X	30 mm	460 mm	23	safety light curtain	513 mm	M12 plug
EOS2 603 X	30 mm	610 mm	31	safety light curtain	663 mm	M12 plug
EOS2 753 X	30 mm	760 mm	38	safety light curtain	813 mm	M12 plug
EOS2 903 X	30 mm	910 mm	46	safety light curtain	963 mm	M12 plug
EOS2 1203 X	30 mm	1210 mm	61	safety light curtain	1263 mm	M12 plug
EOS2 1503 X	30 mm	1510 mm	76	safety light curtain	1563 mm	M12 plug

EOS4 X - Safety light curtain with built-in control functions - Type 4

- Detection: Finger detection (14 mm resolution)
- Safety Level: Type 4, SIL 3/SILCL 3, PL e, Cat. 4
- Maximum range: Selectable 3/6 meter

EOS4 151 X	14 mm	160 mm	15	safety light curtain	213 mm	M12 plug
EOS4 301 X	14 mm	310 mm	30	safety light curtain	363 mm	M12 plug
EOS4 451 X	14 mm	460 mm	45	safety light curtain	513 mm	M12 plug
EOS4 601 X	14 mm	610 mm	60	safety light curtain	663 mm	M12 plug
EOS4 751 X	14 mm	760 mm	75	safety light curtain	813 mm	M12 plug
EOS4 901 X	14 mm	910 mm	90	safety light curtain	963 mm	M12 plug
EOS4 1051 X	14 mm	1060 mm	105	safety light curtain	1113 mm	M12 plug
EOS4 1201 X	14 mm	1210 mm	120	safety light curtain	1263 mm	M12 plug

EOS4 X - Safety light curtain with built-in control functions - Type 4

- Detection: Hand detection (30 mm resolution)
- Safety Level: Type 4, SIL 3/SILCL 3, PL e, Cat. 4
- Maximum range: Selectable 4/12 meter

EOS4 303 X	30 mm	310 mm	16	safety light curtain	363 mm	M12 plug
EOS4 453 X	30 mm	460 mm	23	safety light curtain	513 mm	M12 plug
EOS4 603 X	30 mm	610 mm	31	safety light curtain	663 mm	M12 plug
EOS4 753 X	30 mm	760 mm	38	safety light curtain	813 mm	M12 plug
EOS4 903 X	30 mm	910 mm	46	safety light curtain	963 mm	M12 plug
EOS4 1203 X	30 mm	1210 mm	61	safety light curtain	1263 mm	M12 plug
EOS4 1503 X	30 mm	1510 mm	76	safety light curtain	1563 mm	M12 plug

Note: Heights (from 160 to 2200 mm) and extended range up to 20 meters available on request.

For access control / body protection - Safety light curtains

IP65/67

EOS2 X - Safety light curtain with built-in control functions - Type 2 - Max range: 12 meter

EOS2 2B X	—	510 mm	2	safety light curtain	653 mm	M12 plug
EOS2 4B X	—	910 mm	4	safety light curtain	1053 mm	M12 plug

EOS4 X - Safety light curtain with built-in control functions - Type 4 - Max range: 12 meter

EOS4 2B X	—	510 mm	2	safety light curtain	653 mm	M12 plug
EOS4 4B X	—	910 mm	4	safety light curtain	1053 mm	M12 plug

EOS4 XH - Safety light curtain with built-in control functions - Type 4 - Max range: 20 meter

EOS4 2B XH	—	510 mm	2	safety light curtain	653 mm	M12 plug
EOS4 4B XH	—	910 mm	4	safety light curtain	1053 mm	M12 plug

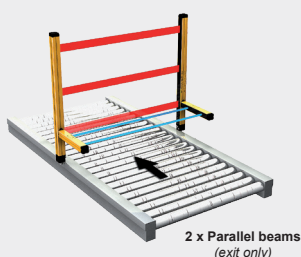
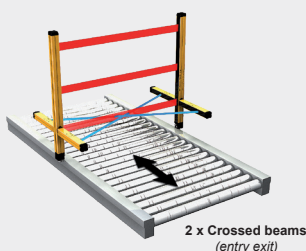
Mounting accessories for safety light curtains

(std L-shaped brackets included with light curtains)

SFB E180	—	brackets	set of (4) x 180° swivel brackets for	EOS2/4
SFB FAST	—	brackets	set of (4) x FAST coupling brackets for	EOS2/4
SAV 8E	—	dampers	set of (8) vibration dampers for	EOS2/4
SFB 4E	—	brackets	set of (4) x adjustable brackets for	EOS2/4
FE 4	—	brackets	set of (4) flat brackets for	EOS2/4



SAFETY LEVEL
TYPE 4
SIL 3 - SILCL 3
PL e - Cat. 4



Safegate - Safety light curtains (with integrated muting functionality)

Safety light curtains with integrated Muting function for human material differentiation applications. Safegate guarantees the integration of the muting sensors directly to the safety light curtain.

Programmable models (SMPO) functional parameters configuration can be managed via Safegate Configuration Software (SCS).

Hardware configuration:

No programming necessary, allows parameterisation and muting logic configuration.

Software configuration:

Allows configuration of functional parameters, muting and additional functions (e.g. Filters, delays, partial muting etc).

3 Pre-Configured Muting Logic:

Exit-Only (Parallel or Crossed Beams), Entry-Exit (Parallel Beams), Entry-Exit (Crossed Beams).

Muting sensors:

MA Muting Arms, MZ Muting Brackets, any dark-on M12 5-pole photocell

General features:

- Power supply: 24 VDC $\pm$ 20%
- Dimensions: (W) 50 x (D) 55 mm
- Restart: Selectable (manual/automatic) Start/Restart
- Status display: LEDs for light curtain status and diagnostics
- Integrated function: External Device Monitoring (EDM) function
- Muting: Integrated muting function
- Mounting: Via back slot with provided standard mounting brackets
- Connection: Emitter: M12 5-pin - Receiver: M12 12-pin
- OSSD safety outputs: 2 PNP - 400 mA at 24 VDC with short-circuit, overload, polarity reversal protection

type	protected height	No. beams	description	overall height	connection type
------	------------------	-----------	-------------	----------------	-----------------

SAFEGATE SMPO - Safety light curtain with integrated muting function IP65/67

For access control - Integrated status lamp and programmable functions – Type 4

• Maximum range:	12 meter				
SMPO 2B	510 mm	2	safety light curtain	710 mm	M12 plug
SMPO 4B	910 mm	4	safety light curtain	1110 mm	M12 plug

Hand detection 30 mm resolution

SMPO 603	610 mm	31	safety light curtain	720 mm	M12 plug
SMPO 903	910 mm	46	safety light curtain	1020 mm	M12 plug
SMPO 1203	1210 mm	61	safety light curtain	1320 mm	M12 plug
CS12USB	–	–	USB to M12 5 pin programming cable		(2 meter)

Muting arms

type	muting logic	No. beams	description	maximum range	connection type
------	--------------	-----------	-------------	---------------	-----------------

MA muting arms - with integrated photocells (pre-wired)

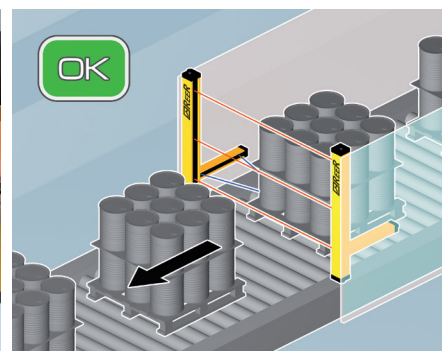
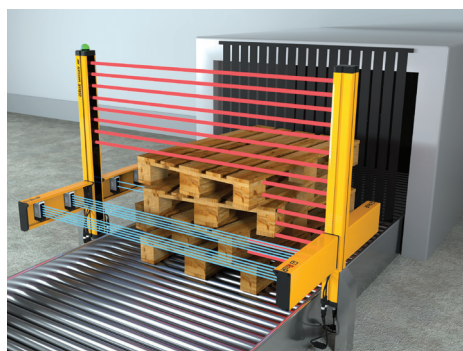
MA L2X	exit - only	2	crossed beams photocells	2.5 m	M12 plug
MA T2X	entry - exit	2	crossed beams photocells	2.5 m	M12 plug
MA L2P TRX	exit - only	2	parallel beams photocells	3.5 m	M12 plug
MA T4P TRX	entry - exit	4	parallel beams photocells	3.5 m	M12 plug

MZ muting arms - with integrated M5 5-beam photocells (pre-wired)

MZ L2XP	exit - only	2	crossed beams photocells	3.5 m	M12 plug
MZ T2X	entry - exit	2	crossed beams photocells	3.5 m	M12 plug
MZ T4P	entry - exit	4	parallel beams photocells	3.5 m	M12 plug

Human material differentiation

Restriction of unauthorised access into dangerous zones



ReeR engineers a complete ecosystem of purpose-built accessories that make it easier to install, align, interconnect and protect EOS2, EOS4 and Safegate light curtains. The range lets you tailor each installation while keeping everything 100% compatible with ReeR's safety certification.

type	No. beams / Overall height	description	connection type
------	----------------------------	-------------	-----------------

Perimeter protection accessories

Floor mounting columns and deflecting mirrors allow to create perimeter protection of areas with access points on multiple sides, with a considerable reduction of costs. Eliminates the need to use multiple safety light curtains allowing perimeter protection of up to 4 sides

Floor mounting columns and deflection mirrors (designed to provide secure fastening to the floor)

- Built-in spirit level for a correct positioning of the vertical axis
- Fast installation, easy assembling and disassembling of the light curtain
- Options include deflecting mirrors - simple and precise adjustment of the optical alignment

FMC-EB2	column	2B/1000 mm	floor mounting column	EOS2/4
FMC-EB4	column	3B/4B/1330 mm	floor mounting column	EOS2/4
FMC-EB1700	column	1700 mm	floor mounting column	EOS2/4
FMC-SGB4	column	4B/1200	floor mounting column	Safegate
FMC-S2	column	2B/1000 mm	floor mounting column w/ deflection mirror	
FMC-S4	column	3B/4B/1330 mm	floor mnt column w/ def. mirror	EOS/S/GATE*
FMC-S1700	column	1700 mm	floor mnt column w/ def. mirror	
FMC-SB4	column	4B	floor mounting column w/ 4 adj. deflection mirrors	
FMC-CB	adj. base	—	for all floor mounting columns	EOS/S/GATE

* EOS/S/GATE for S2, S4, S1700 & SB4

Stand-alone deflecting mirror for light curtains (perimeter protection with access points on multiple sides)

SP 300S	mirror	310 mm	deflecting mirror	EOS/S/GATE
SP 600S	mirror	610 mm	deflecting mirror	EOS/S/GATE
SP 900S	mirror	910 mm	deflecting mirror	EOS/S/GATE
SP 1200S	mirror	1210 mm	deflecting mirror	EOS/S/GATE
LAD 4	laser	up to 100 m	laser alignment device for EOS safety light curtains	

Cables for EOS Safety light curtains

M12 5-pole straight connector (emitter)

CD5	M12	5-pole female connector cable	5 meter
CD10	M12	5-pole female connector cable	10 meter

M12 8-pole straight connector (receiver)

C8D5	M12	8-pole female connector cable	5 meter
C8D10	M12	8-pole female connector cable	10 meter

Cables for SAFEGATE SMPO Safety light curtains

M12 5-pole straight connector (Emitter and external Muting lamp, when required)

CD5	M12	5-pole female connector cable	5 meter
CD10	M12	5-pole female connector cable	10 meter

M12 12-pole straight male connector (Receiver)

CS12D5	M12	12-pole female connector cable	5 meter
CS12D10	M12	12-pole female connector cable	10 meter

Other lengths available on request

PI-SAFE - Proximity inductive safety sensors

IP65, IP67

A complete range of inductive sensors for position detection. Inductive safety applications are special applications which require a non-contact and safe detection of a metal object.

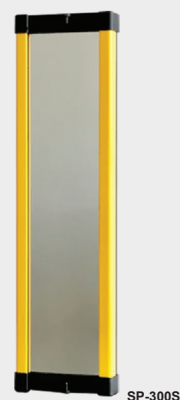
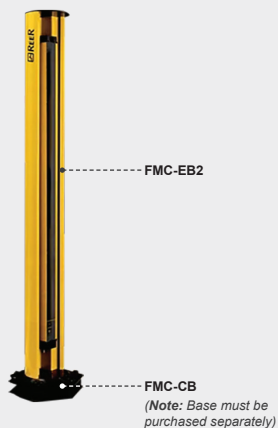
- Connection type: M12 connector (can be used with CDx cables)

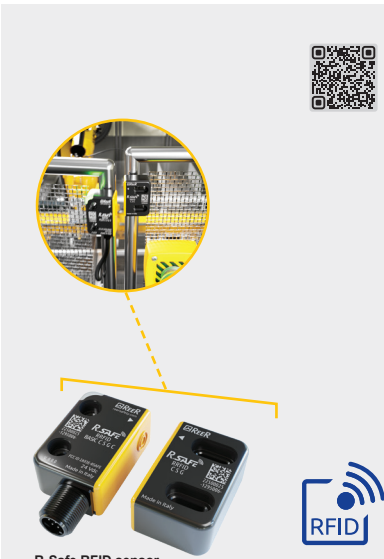
Inductive sensors

PI M12 NF	M12	0.5/4 mm	enable zone non-flush mounting
PI M18 NF	M18	1/8 mm	enable zone non-flush mounting
PI M18 F	M18	1/5 mm	enable zone flush mounting
PI M30 NF	M30	1/15 mm	enable zone non-flush mounting
PI M30 F	M30	1/10 mm	enable zone flush mounting
PI SQ NF	—	4/20 mm	square, enable zone non-flush mounting

Accessories

PI M12 B	M12	bracket	angle bracket for PI-Safe
PI M18 B	M18	bracket	angle bracket for PI-Safe
PI M30 B	M30	bracket	angle bracket for PI-Safe
PI M12 C	M12	clamp	mounting clamp for PI-Safe
PI M18 C	M18	clamp	mounting clamp for PI-Safe
PI M30 C	M30	clamp	mounting clamp for PI-Safe





R-Safe RFID sensor
Serial connection - Up to 16 sensors with serialised status output



RRFID A M G



CRY12-S1



MG S 20



MG B 20

R-Safe RFID non-contact safety sensors ensure reliable, tamper-proof protection by monitoring protective doors, gates, and guards, uniquely identifying passive RFID transponders with high level coding.

- Generic coding:** The actuator is free and not specifically assigned to the sensor
(*one actuator can work with multiple sensors*)
- Teach-in coding:** Programmed via teach-in and permanently assigned to sensor during set-up
- Indication: Super bright LED status indicators for immediate diagnostics
 - Output: 2 safety inputs and outputs and 1 diagnostic output
 - Mounting: Screw mounting, 22 mm inter-axis (78 mm available with adapter)
 - Can be installed individually or in series with up to 16 units (*PLUS version only, with Y-splitter accessories*)
 - IP67 and IP69K protection (*cable versions only*) ensure excellent reliability in harsh environments

BASIC: Automatic restart

PLUS: Selectable Manual/Automatic restart and serial status output

PRO: Automatic restart and individual status output

type	switching distance (mm)	coding	connection type	dimensions (mm)		
				(H)	(W)	(D)
RFID safety switches		24 VDC	SIL 3 - SILCL 3 - PL e - Cat. 4			
R-Safe RFID		supplied as sensor/actuator combination				
BASIC C S G C	12...25	generic	M12 connector	28.5	57	18
BASIC C S G P	12...25	generic	M12 pigtail	28.5	57	18
BASIC C S G 5	12...25	generic	5 m cable	28.5	57	18
BASIC C S T C	12...25	teach-in	M12 connector	28.5	57	18
BASIC C S T P	12...25	teach-in	M12 pigtail	28.5	57	18
BASIC C S T 5	12...25	teach-in	5 m cable	28.5	57	18
PLUS C S G C	12...25	generic	M12 connector	28.5	57	18
PLUS C S G P	12...25	generic	M12 pigtail	28.5	57	18
PLUS C S G 5	12...25	generic	5 m cable	28.5	57	18
PLUS C S T C	12...25	teach-in	M12 connector	28.5	57	18
PLUS C S T P	12...25	teach-in	M12 pigtail	28.5	57	18
PLUS C S T 5	12...25	teach-in	5 m cable	28.5	57	18
PRO C S G C	12...25	generic	M12 connector	28.5	57	18
PRO C S G P	12...25	generic	M12 pigtail	28.5	57	18
PRO C S G 5	12...25	generic	5 m cable	28.5	57	18
PRO C S T C	12...25	teach-in	M12 connector	28.5	57	18
PRO C S T P	12...25	teach-in	M12 pigtail	28.5	57	18
PRO C S T 5	12...25	teach-in	5 m cable	28.5	57	18

Accessories and cables for R-SAFE RFID safety switches

Spare Actuators (*Standard and Slim*)

RRFID A S G	standard	generic	Interaxis 22 mm
RRFID A M G	slim	generic	Interaxis 40 mm
RRFID A S T	standard	teach-in	Interaxis 22 mm
RRFID A M T	slim	teach-in	Interaxis 40 mm

Connection cables for R-SAFE RFID safety switches

CD3	M12	5-pole	female connector cable (3 m)	Basic
CD5	M12	5-pole	female connector cable (5 m)	Basic
CF 8P 3	M12	8-pole	straight female conn. (3 m)	Pro/Plus
CF 8P 5	M12	8-pole	straight female conn. (5 m)	Pro/Plus

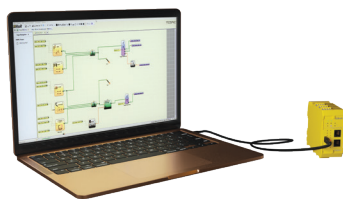
Accessories for series connection (*PLUS versions only*)

CRY12-S1	type S1	Y-splitter	for the last sensor of the series	
CRY12-S2	type S2	Y-splitter	for all sensors (<i>excl. last sensor</i>)	
CFM 5P 3	M12	5-pole	2x (male-female) ext.(3 m)	Plus version
CFM 5P 5	M12	5-pole	2x (male-female) ext.(5 m)	Plus version
CFM 8P 3	M12	8-pole	2x (male-female) ext.(3 m)	Plus version
CFM 8P 5	M12	8-pole	2x (male-female) ext.(5 m)	Plus version

Mounting accessories

R-SAFE ADAPTER	kit of 2 adapter brackets interaxis			78 mm
-----------------------	-------------------------------------	--	--	-------

Magnetic safety switches		24 VDC	robust thermoplastic enclosure (PBT)			
• Coded magnetic operation		• Sensor with M8/4pin connector: 2 x NO contacts				
MG S 20	3...10	MGS 22 mm mag. safety switch	36	13	26	
MG S M	3...10	MGS mag. actuator for above switch	36	13	26	
MG B 20	4...16	MGB 78 mm mag. safety switch	88	25	14	
MG B M	4...16	MGB mag. actuator for above switch	88	25	14	
C8 G3	M8	4-pole straight female conn. (3 m)	MG series			
C8 G5	M8	4-pole straight female conn. (5 m)	MG series			
C8 G95	M8	4-pole 90 deg. female conn. (5 m)	MG series			



FREE DESIGNER SOFTWARE included with M1/M1S units



MOSAIC M1



MOSAIC M1S COM



MZERO

Mosaic - A unique safety controller: Modular, Expandable, Configurable

Mosaic is a modular configurable safety controller capable of managing all safety functions of machinery or plants. Made up of a Master unit which can operate as a stand-alone device or control up to 14 expansion units in a system.

Capable of monitoring several safety sensors and signals such as: light curtains - photocells - laser scanners - emergency stops - electromechanical switches - safety door switches - magnetic switches - safety mats and edges - two-hand controls - hand grip switches - encoders and proximities for safety speed control - load cells - pressure switches - temperature, flow and level measurements (*regardless of brand*).

- Power supply: 24V DC $\pm$ 20%
- Safety level: SIL 3, PL e, SILCL 3, Cat. 4
- Connections: Removable (*screw terminal*) blocks
- Mounting: DIN rail mounting according to EN 50022-35 standard
- Dimensions: (H) 108 x (W) 22.5 x (D) 114.5 - (H) 108 x (W) 45 x (D) 114.5 (M1S COM / MZERO)

Advantages

- Tamper-proof system configuration
- Reduced control panel dimension, design and construction time
- Logic configured via graphic interface, eliminating laborious wiring as with traditional solutions
- **Simulation function** allows to validate system functionality without connecting to a machine

MOSAIC SAFETY DESIGNER (MSD)

Mosaic master units come with a complementary copy of the MSD designer software and configuration is done via a USB connection. The Drag & Drop functionality allows to easily create all logic scenarios in a machine directive compliant environment. Also offers remote connection via M1S COM.

type	digital inputs	Start / Restart inputs	OSSD safety outputs	status outputs	description
------	----------------	------------------------	---------------------	----------------	-------------

Mosaic master units

Master units can operate as stand-alone device or expanded with additional I/O modules.

M1 - Standard master unit

- 2 pairs SIL 3 OSSD safety outputs (*PNP 400 mA*)
- 2 inputs for Start/Restart interlock and external device monitoring (*EDM*)
- 2 programmable digital status outputs (*PNP 100 mA*)
- 4 test outputs (*for sensor monitoring*)

MOSAIC M1	8	2	2 pairs	2	standard master controller
------------------	---	---	---------	---	----------------------------

M1S/M1S COM - Enhanced master unit

- 4 single SIL 3 OSSD or (*2 pairs*) safety outputs (*PNP 400 mA*)
- 4 inputs for Start/Restart interlock and external device monitoring (*EDM*)
- 4 programmable digital status outputs (*PNP 100 mA*)
- 4 test outputs (*for sensor monitoring*)
- Remote monitoring and built-in Ethernet IP, Modbus TCP, EtherCAT and Profinet (*M1S COM only*)

MOSAIC M1S	8	4	4 or (<i>2 pairs</i>)	4	enhanced master controller
MOSAIC M1S COM	8	4	4 or (<i>2 pairs</i>)	4	master controller built-in comms

MZero - Stand-alone safety integrated controller

MZERO is a configurable safety hub able to manage all safety functions of a machinery or a plant. Allows cost reductions and minimal wiring. MZERO can manage safety sensors and signals such as light curtains, photocells, laser scanners, emergency stops, electromechanical switches, guard-lock door switches, magnetic switches, RFID switches, inductive sensors, mats and edges, two-hand controls and hand grip switches.

- 4 pairs OSSD safety outputs (*PNP 400 mA*)
- 4 inputs for Start/Restart interlock, EDM or single input devices
- 16 safety inputs / 4 test outputs (*for short-circuit monitoring*)
- USB 2.0 serial bus for the connection to the MZERO Safety Designer software (MZD)

MZero - Stand-alone master unit

MZERO*	16	4	4 pairs	4	standalone safety controller
---------------	----	---	---------	---	------------------------------

* Not expandable

Accessories for M1/M1S/COM/MZERO master units

MCM	memory card	backup to store or duplicate master unit config.
MSC	rear bus connector	required to connect to any expansion module
CSU-C	USB cable	(Type C, length 1.8 m) config. cable for M1S/M1S COM
CSU	USB cable	(A-mini B, length 1.8 m) config. cable for M1/MZERO
MTB-Y	screw	replacement screw set of 6 (<i>numbered 1-24</i>)
MTBC-Y	clamp	replacement clamp set of 6 (<i>numbered 1-24</i>)
CPM	polarized keys	keys for Mosaic terminal blocks MTB
MC25	shielded cable	remote conn. units, bus-transfer, 25 m Mosaic MCT



MOR4S8



MBE COM


Multifunction
safety relay

SR SELECT



SR ONE

... Continued...

type	digital inputs	Start / Restart inputs	OSSD safety outputs	status outputs	description
------	----------------	------------------------	---------------------	----------------	-------------

Expansion modules for M1/M1S/COM master units

Input/output expansion modules provides additional digital inputs and outputs to the master unit

MI8O2	8	2	2 pairs	2	expansion module
MI8O4*	8	4	4 pairs	4	expansion module
MI16	16	—	—	—	4x test outputs (for sensor monitoring)
MA4*	—	—	—	—	4x 4-20mA (or 0-10V) analogue inputs (for analogue sensors)

* Only compatible with M1S and M1SCOM enhanced Master unit.

MO4	—	4	4 pairs	4	expansion module
MO4LHCS8	—	4	4 single	8	expansion module

Status outputs additional non-safety outputs to the master unit

MOS16	—	—	—	—	16x prog. digital (SIL 1 rated) signal outputs
-------	---	---	---	---	--

Safety relays provides safety relay outputs with guided contacts

MR4	—	—	—	—	4x safety relay outputs with guided contacts (6A 250 VAC)
MOR4S8	—	—	—	—	4x configurable safety relay outputs with guided contacts

Communication modules for connection to the most common industrial Field-bus systems

MBP	Profibus DP	—	—	—	module for diagnostics and data communication
MBD	DeviceNET	—	—	—	module for diagnostics and data communication
MBC	CANopen	—	—	—	module for diagnostics and data communication
MBEI	EtherNET IP	—	—	—	module for diagnostics and data communication
MBMR	Modbus RTU	—	—	—	module for diagnostics and data communication
MBE COM	—	—	—	—	Multi-protocol Ethernet IP, Modbus TCP, EtherCAT and Profinet

Safety speed monitoring expansion unit

MV0	2 inputs	proximity switches	—	—	monitors proximity switches
MV1T	1 input	TTL encoder	—	—	monitors proximity switches and encoders
MV1H	1 input	HTL encoder	—	—	monitors proximity switches and encoders
MV1S	1 input	Sin/Cos encoder	—	—	monitors proximity switches and encoders
MV2T	2 inputs	TTL encoders	—	—	monitors proximity switches and encoders
MV2H	2 inputs	HTL encoders	—	—	monitors proximity switches and encoders
MV2S	2 inputs	Sin/Cos encoders	—	—	monitors proximity switches and encoders

Remote connection expansion unit

MCT1*	1-line	bus transfer	—	—	provides remote I/Os to the system
-------	--------	--------------	---	---	------------------------------------

* Requires 2 units, one on each end, and a MC cable. Max 50m distance between units

Safety interfaces and relays DIN rail mounting

Allows four different operating modes offering the possibility to connect and control different types of safety devices including: Safety Light Curtains, Solid-State-Output Devices (i.e. RFID safety switch), Dual-Channel Emergency Stops, Two-Hand Controls and Type 2 Safety Photocells

- Power supply: 24 VDC $\pm$ 20%
- Dimensions: All relays Interfaces - (H) 99 x (W) 22.5 x (D) 114.5 mm
Interfaces (SR ONE M) - (H) 99 x (W) 35 x (D) 114 mm

type	no. of inputs	safety inputs	relay outputs	status outputs	description
------	---------------	---------------	---------------	----------------	-------------

Multifunction safety Interface PL e - Cat. 4

SR SELECT	2	2	2NO	1	SLC, E-Stop, OSSD, Two-hand, Photocells
-----------	---	---	-----	---	---

Safety interface for emergency stop buttons PL e - Cat. 4

AD SRE4	1	2 of 1	3NO+1NC	—	auto/manual start restart
SR E4	1	2	2NO	—	auto/manual start restart

Safety interface for safety light curtains and switches PL e - Cat. 4

SR ZERO	—	2	2NO+1NC	1	relay module for EOS X
SR ZERO A	—	2	2NO	1	relay module for EOS X
SR ONE	—	2	2NO	1	relay module for all OSSD devices
SR ONE M	6	4	2NO	2	relay module with muting

Safety speed monitoring interface (H) 108 x (W) 22.5 x (D) 114.5 mm SIL 3 - SILCL 3 - PL e - Cat. 4

SV MR0	2	2	2NO	2	over/zerospeed detection + 2 proxi sen.
SV MR0 U	2	2	2NO	2	underspeed detection + 2 proxi sensors

Safety interface for two-hand controls PL e - Cat. 4 Type III C (EN574)

SR T	1	2	2NO	—	two hand control
------	---	---	-----	---	------------------

Lovato safety solutions:

LOVATO Electric offers a wide range of safety devices designed to ensure maximum protection and reliability in every industrial application.



Safety contactors



Control stations and emergency stop



Illuminated "emergency" disk - emergency stop pushbutton



Safety limit & Rope-pull lever limit switches

Contactors for safety applications

BFS series safety contactors are specialised contactors with **built-in fail-safe mechanisms** to ensure electrical systems **can be safely stopped or disconnected** in the event of a fault or emergency.

General features:

- Auxiliary contact blocks with yellow covers to highlight their role in the safety circuit
- Non-removable auxiliary contact blocks to prevent tampering
- Clear contactor status indication (*open/closed*), visible from the front
- Manual operation or operation using tools is made impossible in order to prevent tampering during operation

Applications: Ideal for automation panels (OEMs), material handling, robotics, industrial machinery, and process control systems.

Certifications:

- **ISO 13849-1:** Safety of machinery - Safety-related parts of control systems
- **IEC/EN 62061:** Safety of machinery - Functional safety of safety-related control systems

BFS safety contactors

type	rated current (AC1) (AC3)		kW rating (AC3) 400V	control	description	main contacts
AC contactors						
BFS0923A...	25A	9A	4.2 kW	AC	safety contactor	2NO+3NC
BFS1223A...	25A	12A	5.7 kW	AC	safety contactor	2NO+3NC
BFS2523A...	32A	25A	12.5 kW	AC	safety contactor	2NO+3NC
BFS3222A...	32A	25A	12.5 kW	AC	safety contactor	2NO+2NC
BFS3822A...	56A	38A	18.5 kW	AC	safety contactor	2NO+2NC

Standard coil voltages (add to part number): **AC** - 024/048/110/230V

DC contactors

BFS0923D024	25A	9A	4.2 kW	024 VDC	safety contactor	2NO+3NC
BFS1223D024	25A	25A	5.7 kW	024 VDC	safety contactor	2NO+3NC
BFS2523D024	32A	25A	12.5 kW	024 VDC	safety contactor	2NO+3NC
BFS3222D024	32A	25A	12.5 kW	024 VDC	safety contactor	2NO+2NC
BFS3822D024	56A	38A	18.5 kW	024 VDC	safety contactor	2NO+2NC

Emergency stopping

type	colour	supply	description		size
------	--------	--------	-------------	--	------

Illuminated "Emergency Stop" disc - for 22 mm mushroom head pushbuttons

Illuminated Emergency Stop discs remain highly recognisable in poor visibility, instantly showing which mushroom has been activated. Two lighting modes: steady or flashing are selectable via wiring, with discs fitting Ø22 mm **LPC** (plastic-chrome) and **LPS** (metal) operators.

LPCDAU115024	yellow	24 VAC/DC	LED illuminated emerg disc	Ø60 mm
LPCDAU115230	yellow	240 VAC	LED illuminated emerg disc	Ø60 mm

Ø22 mm Emergency stopping (latching mushroom)

(ISO 13850 compliant / IEC/EN/60974/5/5)

LPCB6634	red	—	twist release pushbutton actuator	Ø30 mm
LPCB6644	red	—	twist release pushbutton actuator	Ø40 mm
LPCB6744	red	—	pull release pushbutton actuator	Ø40 mm
LPCB6844	red	—	key release pushbutton actuator	Ø40 mm

Complete pushbutton stations - 1-way pushbutton stations

type	button colour	contact	cover colour	button symbol	description			dimensions (mm)		
								(H)	(W)	(D)
LPZP1B5600	red	1 x NC	yellow	—	latch mushroom twist release			72	72	56



BFS...



LPX DAU115...



LPCB6644



LPZP1B5600



PLNA1RW



P2L131311



P33036

P33034

P33035



KBN1L11



KXN2



RS11310



RS131310

Rope-operated pull lever limit switches (IP65)

- Heavy-duty metallic body
- Supplied with cable gland (PG11)

type	description	operating force (N)	contacts
------	-------------	---------------------	----------

PL series - Metal limit switches

IP65

PL series delivers a wide choice of actuators and contact configurations for virtually any installation. Oversized contacts and premium materials ensure safe, long-lasting operation. Rugged metal housings with tough thermo-plastic actuators thrive in the harshest conditions.

- Thermal current: lth: 10A Ui: 400 VAC
- Dimensions: (H) 89 x (W) 84 x (D) 40.5 mm
- Certification: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, EN/BS 81-1

Limit switches

PLNA1RW	top roller push plunger	25N	1NC
PLNA1RAG	top roller push plunger (latching/hand reset)	25N	1NC

Heavy duty rope-operated limit switches with pre-tensioning facility

EN418 compliant

P2L limit switches provide dependable, general-purpose control for any installation. Straight forward construction, oversized contacts, and curated materials deliver steady, safe performance. A rugged metal-alloy body with high-grade thermoplastic mechanics ensures lasting reliability in all conditions.

- 2 NC contacts (when pre-tensioned) 1 opens if rope breaks the other opens when rope is pulled
- Large field of overlap for easier regulation of pre-tensioning
- Latching with push button "Reset" facility on switch
- Thermal current: lth: 6A Ui: 400 VAC

with pre
tensioned
rope

P2L series - Rope-operated pull lever limit switches (IP65)

(H) 161 x (W) 100 x (D) 48.5 mm

P2L81311	rope operated limit switch (no-reset)	40N - 9lb	1NO + 1NC
P2L131311	rope operated limit switch (manual-reset)	40N - 9lb	1NO + 1NC
P2L151311	rope operated limit switch (manual-reset)	40N - 9lb	2NO+2NC
P2L151312	rope operated limit switch (manual-reset)	120N - 9lb	2NO+2NC

Accessories for rope-operated switches

P33032	adjustable rope terminal clamp Ø5 mm
P33033	rope eye of Ø5 mm (cable end thimble)
P33034	turn buckle M6 x 60 for rope tensioning
P33035	threaded eye bolt M8 guide for rope
P33036	(100 met) steel rope 0.5 mm PVC sheathed (red insulated)

Safety limit switches (slow break)

Quickly and easily detect the position of moving parts and safely install machinery.

KBQ1L11	slotted lever actuator	safety limit switch	1 NO + 1 NC
KBN1L11	key operated (straight key)	safety limit switch	1 NO + 1 NC
KBN2L11	key operated (angled key)	safety limit switch	1 NO + 1 NC

Spare keys for safety limit switches

KXN1	straight key	for safety limit switches	—
KXN2	angled key	for safety limit switches	—
KXN3	straight "T" key	for safety limit switches	—
KXN4	angled "T" key	for safety limit switches	—

RS1 series - Rope operated limit switches (H) 104 x (W) 30.5 x (D) 35 mm

IP65

- Double-insulated housing glassfibre-reinforced, self extinguishing
- Thermal current: lth:10A Ui: 250 VAC

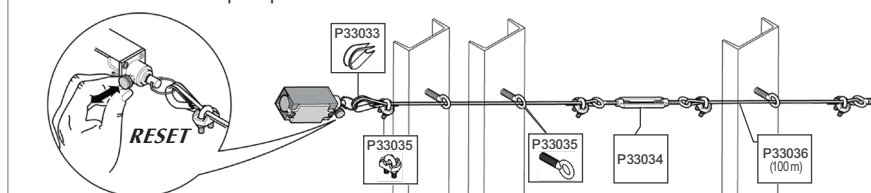
Non-latching rope operated limit switches (snap action)

RS11310	rope operated limit switch (non latching)	25N	1 NO + 1 NC
---------	---	-----	-------------

Latching (hand reset) limit switches - EN418 compliant

RS131310	rope operated limit switch (latching/hand reset)	25N	1 NO + 1 NC
----------	--	-----	-------------

RS1 series - Rope operated limit switch



World Class Innovation, Local Commitment

PERTH

14 Lorries Court
Malaga, 6090

MELBOURNE

21 Kimberly Road,
Dandenong South, 3175

BRISBANE

U6, 57 Mortimer Road,
Acacia Ridge, 4110

SYDNEY

2 Squill Place
Arndell Park, 2148

ADELAIDE

72 Wingfield Road,
Wingfield, 5013



Discover More

Free Call: 1800 252 995

www.mechtric.com.au