

2023

Product overview



2 Profile



► 5

3 Position switches



3A

Position switches for heavy duty applications



FD series

► 11



FP series

► 12



FL series

► 13



FC series

► 14



FR series

► 15



FX series

► 16



FM series

► 17



FZ series

► 18

3B

Position switches for standard applications

3C

Position switches without actuator for heavy duty applications



FD, FL, FC, FP series

► 19

3D

Position switches without actuator for standard applications



FR, FX, FM, FZ series

► 19

3E

Position switches for standard applications with reset



FR series

► 20

3F

Switches for special applications



Electronic contact block

► 20



High temperatures

► 20



3G

Modular pre-wired position switches



NA series

► 21



NF series

► 21

3H

Microswitches



MK series

► 23



Series MS
Series MF

► 25



4 Human-machine interface

4A

Foot switches



PA - PX series

► 27

4B

Modular foot switches



PC series

► 28

4C

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E2 PU, E2 PL series

► 30

4C

Dual/triple/
quadruple buttons



E2 PD, E2 PT,
E2 PQ series

► 30

4D

Selector switches



E2 SE, E2 SL,
E2 SC series

► 31

4E

Emergency stop
buttons



E2 PE
series

► 32

4F

Luminous discs



VE DL
series

► 32

4G

Indicator
lights



E2 IL, E6 IL series

► 33

4H

Joysticks



E2 MA series

► 33

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RJ45 sockets



E2 USB, E2 RJ45 series

► 34

4J

Potentiometers



E6 DM series

► 34

4K

Buzzers



E6 IS series

► 34

4L

Single contact
blocks



E2 CP, E2 CF series

► 35

4M

Double contact
blocks



E2 CP, E2 CF series

► 35

4N

LED units



E2 LP, E2 LF series

► 36

4O

Protected contact
blocks



FR, FX, FK series

► 37

4P

Housings

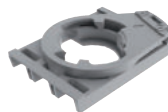


ES, EA series

► 37

4Q

Accessories



► 40

5 Safety devices



5A

Safety switches with separate actuator



For heavy duty applications

► 41

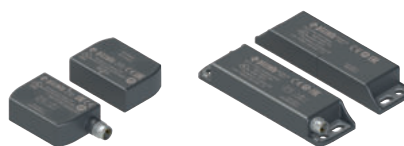


For standard applications

► 41

5B

Magnetic safety sensors



SR A - SR B series

► 41

5C

RFID safety sensors



ST G - ST H series

► 42



ST D series

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5D

Safety switches for hinged doors



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► 44



Switches for hinges

► 44



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5E

Safety switches with separate actuator with lock



FS series

► 45



With manual mechanical delay

► 45



With key release

► 45



FG series

► 46



FY series

► 46



NG RFID series

► 47



NS RFID series

► 48

5F

Control device units



BN series

► 50

5G

P-KUBE safety handles



VF AP series
AP series
AN series

► 51

5H

Safety rope switches



With and without reset for emergency stops or simple stops

► 55

4P

Housings with emergency stop buttons



ES series

► 37

6 Safety modules


6A

For emergency stops and movable guard monitoring



CS AR series

► 56

6B

For emergency stops, monitoring of movable guards, safety mats and safety bumpers with 4-wire technology



CS AR series

► 57

6C

For emergency stops and movable guard monitoring with delayed contacts



CS AT series

► 57

6D

Safety timer modules



CS FS series

► 57

6E

For two-hand controls or synchronism monitoring



CS DM series

► 58

6F

For motor standstill monitoring



CS AM series

► 58

6G

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CS ME series

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6H

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CS MP - CS MF series

► 59

7 Accessories



M8 - M12 connectors

► 62



M12 connectors for series connection

► 62



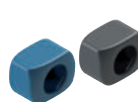
M23 connectors

► 63



Cable glands and adapters

► 63



Tampering protections

► 64



Signalling lights

► 64



Fixing screws

► 64

The products shown in the product overview represent only a selection of Pizzato Elettrica's product range. For the full range, please refer to the **general catalogues**.



MORE THAN 300 PROFESSIONALS WITH PASSION

It is people, with their professionalism and dedication that make a great company. This profound conviction has always guided Pizzato Elettrica in their choice of employees and partners.

Today, Giuseppe and Marco Pizzato lead a tireless team providing the fastest and most efficient response to the demands of the market. This team has grown over the last 10 years and has achieved a considerable increase in sales in all the countries where Pizzato Elettrica is present.

The various strategic sectors of the business are headed by professionals with significant experience and expertise. Many of these people have developed over years with the company.



Others are experts in their specific field and have integrated personal experience with the Pizzato Elettrica ethos to extend the company's capability and knowledge.

From the design office to the technical assistance department, from managers to workers, every employee believes in the company and its future. Pizzato Elettrica employees all give the best of themselves secure in the knowledge they are the fundamental elements of a highly valuable enterprise.



100% MADE IN ITALY

Pizzato Elettrica is one of the leading European manufacturers of position switches, microswitches, safety devices, safety modules, foot switches, control and signalling devices, and devices for lifts. An entrepreneurial company such as Pizzato Elettrica bases its foundations on a solid and widely shared value system. The pillars that form the basis of the company's work have remained constant, and constitute the fundamental guiding principles for all company activities.

PASSION FOR QUALITY

Passion for product quality, orientation towards excellence, innovation, and continuous development, represent the key principles of Pizzato Elettrica's everyday work.

Anyone using Pizzato Elettrica's products does so in the certainty that these devices are of certified quality, since they are the result of a process that is scrupulously controlled at every stage of the production.

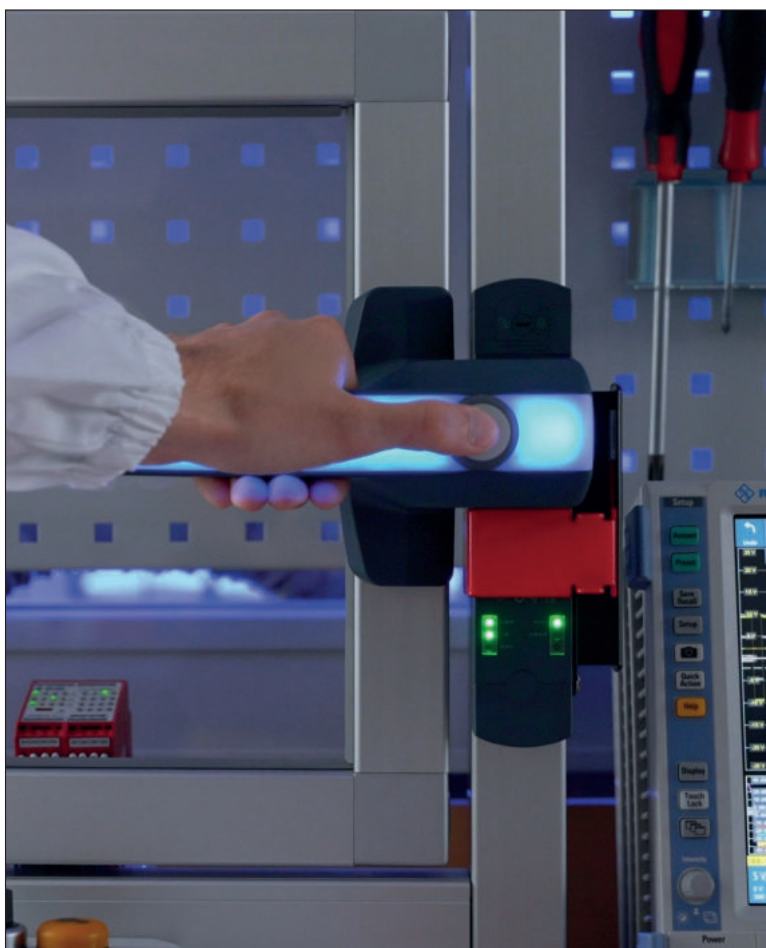
The company's goal is to offer the market safe, reliable, and innovative solutions.

CARE FOR THE CUSTOMER

In order to be successful, a product must respond to the specific needs of those who will use it. Market developments must be carefully monitored in order to understand, in advance, which new applications will prove themselves truly useful. This is why Pizzato Elettrica has always cultivated close synergies with the companies that have chosen it as a supplier, using this continuous dialogue to identify the potential developments of the own product range in order to make it highly flexible, complete and capable to respond to the most diverse needs.

100% MADE IN ITALY

All Pizzato Elettrica products are designed, developed, and tested entirely at the company plants in Marostica, in the province of Vicenza in Italy. The company is thus able to meet specific customer requirements at all times, by offering a comprehensive range of products and technologically advanced solutions.





1984: AN ENTREPRENEURIAL STORY BEGINS

- 1984** The company Pizzato di Pizzato B. & C. snc. manufacturer of position switches is founded.
- 1988** The company becomes a limited liability partnership, and is renamed Pizzato Elettrica, a brand shortly destined to become renowned and valued nationwide. The first company-owned plant (P1) geared towards mechanical processing was built.
- 1990** By the end of the decade, thanks to the development of quality products and the experience built on the Italian market, Pizzato Elettrica turns to the international market.
- 1995** Building of the second plant (P3) geared towards the moulding of plastic materials. Development of the position switch range continues in parallel. Start of significant years in terms of safety devices planning. The safety sector becomes a key sector to the company.
- 1998** Construction of the third plant (P4), housing the assembly department.
- 2002** Achievement of the ISO 9001:2000 certification. Launching of the first safety modules. The new factory headquarters and logistics centre (P5) is built and will remain the company's headquarters for many years. Continued expansion of the industrial safety and automation product range.
- 2007** Pizzato Elettrica faces its first generational change: Giuseppe and Marco Pizzato take over the company directorship.
- 2010** Extension of Pizzato Elettrica product portfolio, with the launch of the innovative EROUND line consisting of control and signalling devices. This product range accompanies position switches and safety devices, thus offering complete solutions to customers.
- 2012** Introduction of Gemnis Studio, the first software produced by Pizzato Elettrica. A graphic development environment for the creation, simulation, and debugging of programs that can be integrated in the Gemnis line modules.
- 2013** Foundation of first subsidiary of Pizzato Elettrica, Pizzato Deutschland GmbH, in Germany.
- 2014** A new production facility (P8) dedicated to switches and automatic machines is opened, spanning a surface area of 6000 m².
- 2016** The new NS series of safety switches with electromagnets and RFID technology is introduced, fruit of the company's experience, spanning more than thirty years in the field of industrial safety. To date it is the state of the art in its industry. Foundation of second subsidiary of Pizzato Elettrica, Pizzato France SARL, in France.
- 2017** The company continues to expand and achieves the quality certification based on the more recent version of standard ISO 9001 of 2015. In Spain, the third Pizzato Elettrica subsidiary is founded: Pizzato Iberica SL. The foundation stone is laid for the new factory (P6), which is to become the company's headquarters.
- 2018** The safety handle P-KUBE Krome is launched, a brand new product in the market, confirming that Pizzato Elettrica thrives on innovation in the sectors of automation and industrial safety. Foundation of fourth subsidiary of Pizzato Elettrica, Pizzato USA Inc, in the United States.
- 2019** The new factory (P6) is opened, a modern building of 28,000 m² realized with the most advanced Industry 4.0 technologies, where all offices and production divisions are transferred, allowing to further improve the flow of material and information. The logistics and shipment department is optimised with the introduction of a new completely automated warehouse.
- 2021** Pizzato Elettrica India Ltd. and Pizzato Korea Ltd., commercial branches of Pizzato Elettrica, are established in India and South Korea, respectively.
- 2022** Foundation of Pizzato Academy, Pizzato Elettrica's new training site for getting better acquainted with our products and following the constant regulatory developments in the sector.
- Today**, Giuseppe and Marco Pizzato lead a company in constant growth in terms of new product launches, number of employees, turnover, and new markets. Pizzato Elettrica is continuing its new product internationalisation and development process.



100 MILLION PARTS SOLD WORLDWIDE

Pizzato Elettrica's product catalogue contains more than 10,000 articles, with more than 1,500 special codes developed for devices personalised according to clients' specific needs. Pizzato Elettrica devices can be grouped, according to typology, into three main macro-categories.

POSITION SWITCHES

Pizzato Elettrica position switches are daily installed in every type of industrial machinery all over the world for applications in the sector of wood, metal, plastic, automotive, packaging, lifting, medicinal, naval, etc.

In order to be used in a such wide variety of sectors and countries, Pizzato Elettrica position switches are made to be assembled in a lot of configurations thanks to the various body shapes, dozens of contact blocks, hundreds of actuators and materials, forces, assembling versions.

Pizzato Elettrica can offer one of the widest product range of position switches in the world. Moreover, the use of high quality materials, high reliability technologies (e.g. twin bridge contact blocks) as well as the IP67 protection degree make this range of position switches one of the most technologically evolved.

SAFETY DEVICES

The company Pizzato Elettrica has been one of the first Italian companies developing dedicated items for this sector, creating and patenting dozens of innovative products, thus becoming one of the main European manufacturers of safety devices.

The vast range of products aimed specifically at the safety of machinery, fully designed and assembled at the Marostica (VI) company premises, includes not only more traditional safety switches with separate actuator (with or without locking mechanism) and hinge switches but also state-of-the-art anti-tampering devices with RFID technology, such as the ST series sensors, and NG and NS series locking devices.

The product range is complemented by safety handles for guards, with the innovative P-KUBE Krome model whose grip can be illuminated with multicolour signalling LEDs, as well as by the CS series safety modules, available in single function versions, or user-programmable with the use of the Gemnis Studio software; fully implemented by Pizzato Elettrica and distributed with a free

licence.

MAN-MACHINE INTERFACE

Pizzato Elettrica's control and signalling devices of the EROUND line are designed for the use in the human-machine interface sector. Thanks to the elegant design, the care for details and the elegance of the product combined with its maximum safety and reliability, this series is one of the most complete and cutting-edge on the market.

In order to satisfy its customers' needs and requests, Pizzato Elettrica offers a lot of accessories purposely designed not only to complete its wide range of products, but also to help device installation on machineries.





MILLIONS OF CERTIFIED PRODUCT CODES

A simple brand isn't enough: the company is aiming for the Pizzato Elettrica brand to be widely recognised as a synonym for absolute quality and certainty.

A result that has been reached and consolidated over the years, updating and expanding the series of certifications obtained from the most important Italian and international control organisations. Product quality is assessed by seven accredited external bodies: IMQ, UL, CCC, TÜV SÜD, EAC, BSI, BV. These bodies lay out high technical and qualitative standards for the company to achieve and maintain, verified yearly with several inspections: these are performed, without prior notice, by qualified inspectors, who extract samples of products and materials destined for sale from plants, or from the market directly, to subject them to apposite tests.

- **CE MARK.** All Pizzato Elettrica products bear the CE marking in conformity with the European Directives in force.
- **UKCA MARK.** All Pizzato Elettrica products bear the UKCA marking in conformity with the United Kingdom directives in force.
- **ISO 9001 CERTIFICATION.** The company's production system is compliant with the international ISO 9001 standard, in its most recent 2015 revision. The certification covers all of the company's plants and their production and managerial activities: entry checks,

technical, purchasing and commercial department activities, manufacturing operations assessments, final pre-shipping product tests and checks, equipment reviews and the management of the metrological lab.

The Pizzato Elettrica quality management system ensures that all sensitive company processes – from component design to implementation, from materials provisioning to verification of non-compliant products – are carried out according to the procedures laid down, with the aim of providing our customers with continuously improved and reliable products.

- **CERTIFICATION OF COMPANY QUALITY SYSTEMS.** Pizzato Elettrica has obtained the certificate of compliance with the UNI EN ISO 9000 regulations in force in Italy and abroad. It is issued by a recognised independent body that guarantees the quality and reliability of the service offered to clients worldwide.
- **CSQ, CISQ AND IQNET.** The CSQ system is part of the CISQ (Italian Certification of Quality Systems) federation, which consists of the primary certification bodies operating in Italy in the various product sectors. CISQ is the Italian representative body within IQNet, the biggest international Quality Systems and Company Management certification network, which is adhered to by 25 certification organs in as many countries.





GLOBAL SUBSIDIARIES

Pizzato Deutschland GmbH
Munich
Founding year: 2013
info@pizzato.com

Pizzato France Sarl
Villeurbanne - Lyon
Founding year: 2016
info@pizzato.com

Pizzato Iberica SL
Barcelona
Founding year: 2017
info@pizzato.com

Pizzato USA
East Syracuse, NY
Founding year: 2018
info@pizzatousa.com

Pizzato Elettrica India Ltd.
Pune
Founding year: 2021
info@pizzato.com

Pizzato Korea Ltd.
Seoul
Founding year: 2021
info@pizzato.com

The purpose of these subsidiaries is to coordinate and support the activities of representative agencies, or distributors, present in the various countries, managing marketing and sales activities, with further objectives of increasing brand visibility and penetration capacity of Pizzato Elettrica products in markets considered strategic.

Products from Pizzato Elettrica are currently used in over 80 countries: The commercial support network, which is made up of local professional and experienced representatives, combined with the productive capacity of the headquarters in Italy, are the basis for the formation of a group that, together with its partners, has all the necessary requirements to become one of the most important companies in the field of automation and industrial safety.

TECHNICAL AND SALES ASSISTANCE



TECHNICAL DEPARTMENT

The Pizzato Elettrica technical department provides direct technical and qualified assistance in Italian and English, helping in this way the customers to choose the suitable product for their own application explaining the characteristics and the correct installation.

Office hours: Monday to Friday
08:00 am - 12:30 pm / 02:00 pm - 05:30 pm CET
Telephone: +39.0424.470.930
E-mail: tech@pizzato.com

Spoken languages:  

SALES DEPARTMENT

Among the strengths in the company relationship with the commercial network, the direct assistance guaranteed in five languages: Italian, English, French, German and Spanish. A service that confirms Pizzato Elettrica quality and attention to the needs of customers from around the world.

Office hours: Monday to Friday
08:00 am - 12:30 pm / 02:00 pm - 05:30 pm CET
Telephone: +39.0424.470.930
E-mail: info@pizzato.com

Spoken languages:     



FD series

Metal housing

One M20x1.5 conduit entry

Protection degree IP67

Marks:      

Ambient temperature: -25°C ... +80°C





























Snap action contacts 1NO+1NC
Slow action contacts 1NO+1NC
Slow action contacts 2NC
Slow action contacts 1NO+2NC
Snap action contacts 2x(1NO-1NC)

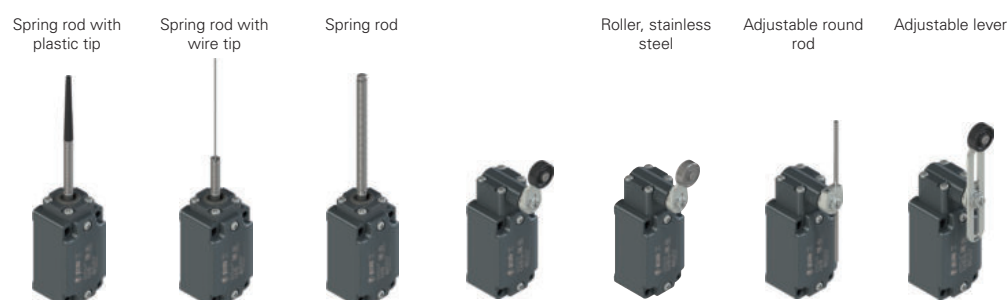


External gasket

Roller, stainless steel, external gasket

Roller, stainless steel

FD 501-M2 	FD 502-M2 	FD 505-M2 	FD 510-M2 	FD 511-M2 	FD 515-M2 	FD 516-M2 
FD 601-M2 	FD 602-M2 	FD 605-M2 	FD 610-M2 	FD 611-M2 	FD 615-M2 	FD 616-M2 
FD 901-M2 	FD 902-M2 	FD 905-M2 	FD 910-M2 	FD 911-M2 	FD 915-M2 	FD 916-M2 
FD 2001-M2 	FD 2002-M2 	FD 2005-M2 	FD 2010-M2 	FD 2011-M2 	FD 2015-M2 	FD 2016-M2 
FD 201-M2	FD 202-M2	FD 205-M2	FD 210-M2	FD 211-M2	FD 215-M2	FD 216-M2



Spring rod with plastic tip

Spring rod with wire tip









Spring rod

Roller, stainless steel

Adjustable round rod

Adjustable lever

Snap action contacts 1NO+1NC
Slow action contacts 1NO+1NC
Slow action contacts 2NC
Slow action contacts 1NO+2NC
Snap action contacts 2x(1NO-1NC)

FD 520-M2	FD 521-M2	FD 525-M2	FD 531-M2 	FD 531-M2R24 	FD 532-M2	FD 535-M2
/	/	/	FD 631-M2 	FD 631-M2R24 	FD 632-M2	FD 635-M2
/	/	/	FD 931-M2 	FD 931-M2R24 	FD 932-M2	FD 935-M2
FD 2020-M2	FD 2022-M2	FD 2025-M2	FD 2031-M2 	FD 2031-M2R24 	FD 2032-M2	FD 2035-M2
FD 220-M2	FD 221-M2	FD 225-M2	FD 231-M2	FD 231-M2R24	FD 232-M2	FD 235-M2



Roller, stainless steel














Glass fibre rod

Bistable

Porcelain roller

Rope switch for signalling

Snap action contacts 1NO+1NC
Slow action contacts 1NO+1NC
Slow action contacts 2NC
Slow action contacts 1NO+2NC
Snap action contacts 2x(1NO-1NC)

FD 535-M2R24	FD 536-M2	FD 542-M2 	FD 551-M2 	FD 552-M2 	FD 553-E11M2V9 	FD 576-M2
FD 635-M2R24	FD 636-M2	/	FD 651-M2 	FD 652-M2 	FD 653-E11M2V9 	FD 676-M2
FD 935-M2R24	FD 936-M2	/	FD 951-M2 	FD 952-M2 	FD 953-E11M2V9 	FD 976-M2
FD 2035-M2R24	FD 2036-M2	/	FD 2051-M2 	FD 2052-M2 	FD 2053-E11M2V9 	FD 2076-M2
FD 235-M2R24	FD 236-M2	/	FD 251-M2	FD 252-M2	FD 253-E11M2	FD 276-M2

Accessories

See page 62.
For a complete list of accessories, see the general catalogues.





FP series

Technopolymer housing

One M20x1.5 conduit entry

Protection degree IP67

Marks:

Ambient temperature: -25°C ... +80°C

External gasket

Roller, stainless steel, external gasket

Roller, stainless steel



Snap action contacts 1NO+1NC
Slow action contacts 1NO+1NC
Slow action contacts 2NC
Slow action contacts 1NO+2NC
Snap action contacts 2x(1NO-1NC)

FP 501-M2	FP 502-M2	FP 505-M2	FP 510-M2	FP 511-M2	FP 515-M2	FP 516-M2
FP 601-M2	FP 602-M2	FP 605-M2	FP 610-M2	FP 611-M2	FP 615-M2	FP 616-M2
FP 901-M2	FP 902-M2	FP 905-M2	FP 910-M2	FP 911-M2	FP 915-M2	FP 916-M2
FP 2001-M2	FP 2002-M2	FP 2005-M2	FP 2010-M2	FP 2011-M2	FP 2015-M2	FP 2016-M2
FP 201-M2	FP 202-M2	FP 205-M2	FP 210-M2	FP 211-M2	FP 215-M2	FP 216-M2

Spring rod with plastic tip

Spring rod with wire tip

Spring rod

Roller, stainless steel

Adjustable round rod

Adjustable lever



Snap action contacts 1NO+1NC
Slow action contacts 1NO+1NC
Slow action contacts 2NC
Slow action contacts 1NO+2NC
Snap action contacts 2x(1NO-1NC)

FP 520-M2	FP 521-M2	FP 525-M2	FP 531-M2	FP 531-M2R24	FP 532-M2	FP 535-M2
/	/	/	FP 631-M2	FP 631-M2R24	FP 632-M2	FP 635-M2
/	/	/	FP 931-M2	FP 931-M2R24	FP 932-M2	FP 935-M2
FP 2020-M2	FP 2022-M2	FP 2025-M2	FP 2031-M2	FP 2031-M2R24	FP 2032-M2	FP 2035-M2
FP 220-M2	FP 221-M2	FP 225-M2	FP 231-M2	FP 231-M2R24	FP 232-M2	FP 235-M2

Roller, stainless steel

Glass fibre rod

Bistable

Porcelain roller

Rope switch for signalling



Snap action contacts 1NO+1NC
Slow action contacts 1NO+1NC
Slow action contacts 2NC
Slow action contacts 1NO+2NC
Snap action contacts 2x(1NO-1NC)

FP 535-M2R24	FP 536-M2	FP 542-M2	FP 551-M2	FP 552-M2	FP 553-E11M2V9	FP 576-M2
FP 635-M2R24	FP 636-M2	/	FP 651-M2	FP 652-M2	FP 653-E11M2V9	FP 676-M2
FP 935-M2R24	FP 936-M2	/	FP 951-M2	FP 952-M2	FP 953-E11M2V9	FP 976-M2
FP 2035-M2R24	FP 2036-M2	/	FP 2051-M2	FP 2052-M2	FP 2053-E11M2V9	FP 2076-M2
FP 235-M2R24	FP 236-M2	/	FP 251-M2	FP 252-M2	FP 253-E11M2	FP 276-M2

FL series

Metal housing

Three M20x1.5 conduit entries

Protection degree IP67

Marks:      

Ambient temperature: -25°C ... +80°C

External gasket

Roller, stainless
steel, external
gasket

Roller, stainless
steel































Snap action contacts 1NO+1NC

Slow action contacts 1NO+1NC

Slow action contacts 2NC

Slow action contacts 1NO+2NC

Snap action contacts 2x(1NO-1NC)

FL 501-M2 	FL 502-M2 	FL 505-M2 	FL 510-M2 	FL 511-M2 	FL 515-M2 	FL 516-M2 
FL 601-M2 	FL 602-M2 	FL 605-M2 	FL 610-M2 	FL 611-M2 	FL 615-M2 	FL 616-M2 
FL 901-M2 	FL 902-M2 	FL 905-M2 	FL 910-M2 	FL 911-M2 	FL 915-M2 	FL 916-M2 
FL 2001-M2 	FL 2002-M2 	FL 2005-M2 	FL 2010-M2 	FL 2011-M2 	FL 2015-M2 	FL 2016-M2 
FL 201-M2	FL 202-M2	FL 205-M2	FL 210-M2	FL 211-M2	FL 215-M2	FL 216-M2

Spring rod with
plastic tip

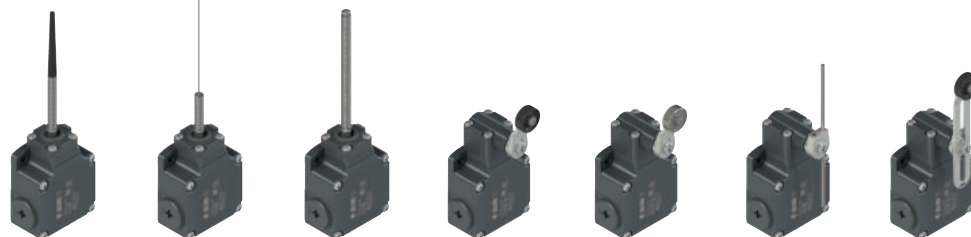
Spring rod with
wire tip

Spring rod

Roller, stainless
steel

Adjustable round
rod

Adjustable lever











Snap action contacts 1NO+1NC

Slow action contacts 1NO+1NC

Slow action contacts 2NC

Slow action contacts 1NO+2NC

Snap action contacts 2x(1NO-1NC)

FL 520-M2	FL 521-M2	FL 525-M2	FL 531-M2 	FL 531-M2R24 	FL 532-M2	FL 535-M2
/	/	/	FL 631-M2 	FL 631-M2R24 	FL 632-M2	FL 635-M2
/	/	/	FL 931-M2 	FL 931-M2R24 	FL 932-M2	FL 935-M2
FL 2020-M2	FL 2022-M2	FL 2025-M2	FL 2031-M2 	FL 2031-M2R24 	FL 2032-M2	FL 2035-M2
FL 220-M2	FL 221-M2	FL 225-M2	FL 231-M2	FL 231-M2R24	FL 232-M2	FL 235-M2

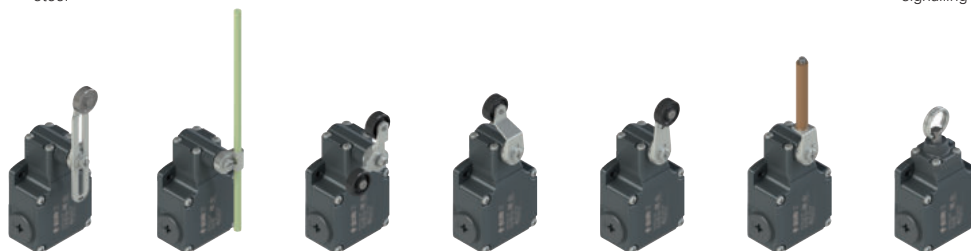
Roller, stainless
steel

Glass fibre rod

Bistable

Porcelain roller

Rope switch for
signalling
















Snap action contacts 1NO+1NC

Slow action contacts 1NO+1NC

Slow action contacts 2NC

Slow action contacts 1NO+2NC

Snap action contacts 2x(1NO-1NC)

FL 535-M2R24	FL 536-M2	FL 542-M2 	FL 551-M2 	FL 552-M2 	FL 553-E11M2V9 	FL 576-M2
FL 635-M2R24	FL 636-M2	/	FL 651-M2 	FL 652-M2 	FL 653-E11M2V9 	FL 676-M2
FL 935-M2R24	FL 936-M2	/	FL 951-M2 	FL 952-M2 	FL 953-E11M2V9 	FL 976-M2
FL 2035-M2R24	FL 2036-M2	/	FL 2051-M2 	FL 2052-M2 	FL 2053-E11M2V9 	FL 2076-M2
FL 235-M2R24	FL 236-M2	/	FL 251-M2	FL 252-M2	FL 253-E11M2	FL 276-M2

Accessories

See page 62.

For a complete list of
accessories, see the
general catalogues.





FC series

Metal housing

One M20x1.5 conduit entry

Protection degree IP67

Marks:

Ambient temperature: -25°C ... +80°C

External gasket

Roller, stainless
steel, external
gasket

Roller, stainless
steel



Snap action contacts 1NO+1NC

FC 301-M2

FC 302-M2

FC 305-M2

FC 310-M2

FC 311-M2

FC 315-M2

FC 316-M2

Slow action contacts 1NO+1NC

FC 3301-M2

FC 3302-M2

FC 3305-M2

FC 3310-M2

FC 3311-M2

FC 3315-M2

FC 3316-M2

Slow action contacts 2NC

FC 3401-M2

FC 3402-M2

FC 3405-M2

FC 3410-M2

FC 3411-M2

FC 3415-M2

FC 3416-M2

Spring rod with
plastic tip

Spring rod with
wire tip

Spring rod

Roller, stainless
steel

Adjustable round
rod

Adjustable lever



Snap action contacts 1NO+1NC

FC 320-M2

FC 321-M2

FC 325-M2

FC 331-M2

FC 331-M2R24

FC 332-M2

FC 335-M2

Slow action contacts 1NO+1NC

FC 3320-M2

FC 3321-M2

FC 3325-M2

FC 3331-M2

FC 3331-M2R24

FC 3332-M2

FC 3335-M2

Slow action contacts 2NC

FC 3420-M2

FC 3421-M2

FC 3425-M2

FC 3431-M2

FC 3431-M2R24

FC 3432-M2

FC 3435-M2

Roller, stainless
steel

Glass fibre rod

Porcelain roller

Rope switch for
signalling



Snap action contacts 1NO+1NC

FC 335-M2R24

FC 336-M2

FC 351-M2

FC 352-M2

FC 353-E11M2

FC 376-M2

Slow action contacts 1NO+1NC

FC 3335-M2R24

FC 3336-M2

FC 3351-M2

FC 3352-M2

FC 3353-E11M2V9

FC 3376-M2

Slow action contacts 2NC

FC 3435-M2R24

FC 3436-M2


FC 3451-M2

FC 3452-M2

FC 3453-E11M2V9

FC 3476-M2

FR series

Technopolymer housing 

One M20x1.5 conduit entry

Protection degree IP67

Marks:     

Ambient temperature: -25°C ... +80°C

External gasket

Roller Ø 12 mm,
stainless steel

Plastic roller































Snap action contacts 1NO+1NC

Slow action contacts 1NO+1NC

Slow action contacts 2NC

Slow action contacts 1NO+2NC

Snap action contacts 2x(1NO-1NC)

FR 501-M2 	FR 502-M2 	FR 505-M2 	FR 507-M2 	FR 508-M2 	FR 513-M2 	FR 515-M2 
FR 601-M2 	FR 602-M2 	FR 605-M2 	FR 607-M2 	FR 608-M2 	FR 613-M2 	FR 615-M2 
FR 901-M2 	FR 902-M2 	FR 905-M2 	FR 907-M2 	FR 908-M2 	FR 913-M2 	FR 915-M2 
FR 2001-M2 	FR 2002-M2 	FR 2005-M2 	FR 2007-M2 	FR 2008-M2 	FR 2013-M2 	FR 2015-M2 
FR 201-M2	FR 202-M2	FR 205-M2	FR 207-M2	FR 208-M2	FR 213-M2	FR 215-M2

Metal roller

Spring rod with
plastic tip

Spring rod with
wire tip

Spring rod

Round rod,
stainless steel















Snap action contacts 1NO+1NC

Slow action contacts 1NO+1NC

Slow action contacts 2NC

Slow action contacts 1NO+2NC

Snap action contacts 2x(1NO-1NC)

FR 515-M2R28 	FR 520-M2	FR 521-M2	FR 525-M2	FR 530-M2 	FR 531-M2 	FR 550-M2
FR 615-M2R28 	/	/	/	FR 630-M2 	FR 631-M2 	FR 650-M2
FR 915-M2R28 	/	/	/	FR 930-M2 	FR 931-M2 	FR 950-M2
FR 2015-M2R28 	FR 2020-M2	FR 2022-M2	FR 2025-M2	FR 2030-M2 	FR 2031-M2 	FR 2050-M2
FR 215-M2R28	FR 220-M2	FR 221-M2	FR 225-M2	FR 230-M2	FR 231-M2	FR 250-M2

Porcelain roller

Adjustable lever

Adjustable safety
lever

Glass fibre rod

Rope switch for
signalling



Snap action contacts 1NO+1NC

Slow action contacts 1NO+1NC

Slow action contacts 2NC

Slow action contacts 1NO+2NC

Snap action contacts 2x(1NO-1NC)

FR 551-M2 	FR 553-E0M2V9 	FR 554-M2 	FR 555-M2	FR 556-M2 	FR 569-M2	FR 576-M2
FR 651-M2 	FR 653-E0M2V9 	FR 654-M2 	FR 655-M2	FR 656-M2 	FR 669-M2	FR 676-M2
FR 951-M2 	FR 953-E0M2V9 	FR 954-M2 	FR 955-M2	FR 956-M2 	FR 969-M2	FR 976-M2
FR 2051-M2 	FR 2053-E0M2V9 	FR 2054-M2 	FR 2055-M2	FR 2056-M2 	FR 2069-M2	FR 2076-M2
FR 251-M2	FR 253-E0M2	FR 254-M2	FR 255-M2	FR 256-M2	FR 269-M2	FR 276-M2

Accessories

See page 62.

For a complete list of
accessories, see the
general catalogues.





FX series

Technopolymer housing

Two conduit entries M20x1.5

Protection degree IP67

Marks:

Ambient temperature: -25°C ... +80°C

External gasket

Roller Ø 12 mm,
stainless steel

Plastic roller



Snap action contacts 1NO+1NC

FX 501-M2 FX 502-M2 FX 505-M2 FX 507-M2 FX 508-M2 FX 513-M2 FX 515-M2

Slow action contacts 1NO+1NC

FX 601-M2 FX 602-M2 FX 605-M2 FX 607-M2 FX 608-M2 FX 613-M2 FX 615-M2

Slow action contacts 2NC

FX 901-M2 FX 902-M2 FX 905-M2 FX 907-M2 FX 908-M2 FX 913-M2 FX 915-M2

Slow action contacts 1NO+2NC

FX 2001-M2 FX 2002-M2 FX 2005-M2 FX 2007-M2 FX 2008-M2 FX 2013-M2 FX 2015-M2

Snap action contacts 2x(1NO-1NC)

FX 201-M2 FX 202-M2 FX 205-M2 FX 207-M2 FX 208-M2 FX 213-M2 FX 215-M2

Metal roller

Spring rod with
plastic tip

Spring rod with
wire tip

Spring rod

Round rod,
stainless steel



Snap action contacts 1NO+1NC

FX 515-M2R28 FX 520-M2 FX 521-M2 FX 525-M2 FX 530-M2 FX 531-M2 FX 550-M2

Slow action contacts 1NO+1NC

FX 615-M2R28 / / / / FX 630-M2 FX 631-M2 FX 650-M2

Slow action contacts 2NC

FX 915-M2R28 / / / / FX 930-M2 FX 931-M2 FX 950-M2

Slow action contacts 1NO+2NC

FX 2015-M2R28 FX 2020-M2 FX 2022-M2 FX 2025-M2 FX 2030-M2 FX 2031-M2 FX 2050-M2

Snap action contacts 2x(1NO-1NC)

FX 215-M2R28 FX 220-M2 FX 221-M2 FX 225-M2 FX 230-M2 FX 231-M2 FX 250-M2

Porcelain roller

Adjustable lever

Adjustable safety
lever

Glass fibre rod

Rope switch for
signalling



Snap action contacts 1NO+1NC

FX 551-M2 FX 553-E0M2V9 FX 554-M2 FX 555-M2 FX 556-M2 FX 569-M2 FX 576-M2

Slow action contacts 1NO+1NC

FX 651-M2 FX 653-E0M2V9 FX 654-M2 FX 655-M2 FX 656-M2 FX 669-M2 FX 676-M2

Slow action contacts 2NC

FX 951-M2 FX 953-E0M2V9 FX 954-M2 FX 955-M2 FX 956-M2 FX 969-M2 FX 976-M2

Slow action contacts 1NO+2NC

FX 2051-M2 FX 2053-E0M2V9 FX 2054-M2 FX 2055-M2 FX 2056-M2 FX 2069-M2 FX 2076-M2

Snap action contacts 2x(1NO-1NC)

FX 251-M2 FX 253-E0M2 FX 254-M2 FX 255-M2 FX 256-M2 FX 269-M2 FX 276-M2

FM series

Metal housing

One M20x1.5 conduit entry

Protection degree IP67

Marks:    

Ambient temperature: -25°C ... +80°C








External gasket

Roller Ø 12 mm,
stainless steel








Metal roller










Snap action contacts 1NO+1NC

FM 501-M2  FM 502-M2  FM 505-M2  FM 507-M2  FM 508-M2  FM 513-M2  FM 515-M2R28 








Slow action contacts 1NO+1NC

FM 601-M2  FM 602-M2  FM 605-M2  FM 607-M2  FM 608-M2  FM 613-M2  FM 615-M2R28 

Slow action contacts 2NC

FM 901-M2  FM 902-M2  FM 905-M2  FM 907-M2  FM 908-M2  FM 913-M2  FM 915-M2R28 

Slow action contacts 1NO+2NC

FM 2001-M2  FM 2002-M2  FM 2005-M2  FM 2007-M2  FM 2008-M2  FM 2013-M2  FM 2015-M2R28 

Snap action contacts 2x(1NO-1NC)

FM 201-M2 FM 202-M2 FM 205-M2 FM 207-M2 FM 208-M2 FM 213-M2 FM 215-M2R28

Spring rod with
plastic tip




Spring rod with
wire tip

Spring rod




Round rod,
stainless steel






Snap action contacts 1NO+1NC

FM 520-M2 FM 521-M2 FM 525-M2 FM 530-M2  FM 531-M2  FM 550-M2 FM 551-M2 




Slow action contacts 1NO+1NC

/ / / FM 630-M2  FM 631-M2  FM 650-M2 FM 651-M2 

Slow action contacts 2NC

/ / / FM 930-M2  FM 931-M2  FM 950-M2 FM 951-M2 

Slow action contacts 1NO+2NC

FM 2020-M2 FM 2022-M2 FM 2025-M2 FM 2030-M2  FM 2031-M2  FM 2050-M2 FM 2051-M2 

Snap action contacts 2x(1NO-1NC)

FM 220-M2 FM 221-M2 FM 225-M2 FM 230-M2 FM 231-M2 FM 250-M2 FM 251-M2

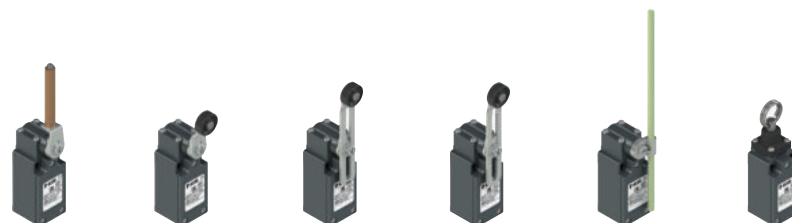
Porcelain roller

Adjustable lever




Adjustable safety
lever

Glass fibre rod




Rope switch for
signalling






Snap action contacts 1NO+1NC

FM 553-E0M2V9  FM 554-M2  FM 555-M2 FM 556-M2  FM 569-M2 FM 576-M2




Slow action contacts 1NO+1NC

FM 653-E0M2V9  FM 654-M2  FM 655-M2 FM 656-M2  FM 669-M2 FM 676-M2

Slow action contacts 2NC

FM 953-E0M2V9  FM 954-M2  FM 955-M2 FM 956-M2  FM 969-M2 FM 976-M2

Slow action contacts 1NO+2NC

FM 2053-E0M2V9  FM 2054-M2  FM 2055-M2 FM 2056-M2  FM 2069-M2 FM 2076-M2

Snap action contacts 2x(1NO-1NC)

FM 253-E0M2 FM 254-M2 FM 255-M2 FM 256-M2 FM 269-M2 FM 276-M2

Accessories

See page 62.

For a complete list of
accessories, see the
general catalogues.





FZ series

Metal housing

Two conduit entries M20x1.5

Protection degree IP67

Marks:      





























Ambient temperature: -25°C ... +80°C

External gasket

Roller Ø 12 mm,
stainless steel

Metal roller



Snap action contacts 1NO+1NC	FZ 501-M2 	FZ 502-M2 	FZ 505-M2 	FZ 507-M2 	FZ 508-M2 	FZ 513-M2 	FZ 515-M2R28 
Slow action contacts 1NO+1NC	FZ 601-M2 	FZ 602-M2 	FZ 605-M2 	FZ 607-M2 	FZ 608-M2 	FZ 613-M2 	FZ 615-M2R28 
Slow action contacts 2NC	FZ 901-M2 	FZ 902-M2 	FZ 905-M2 	FZ 907-M2 	FZ 908-M2 	FZ 913-M2 	FZ 915-M2R28 
Slow action contacts 1NO+2NC	FZ 2001-M2 	FZ 2002-M2 	FZ 2005-M2 	FZ 2007-M2 	FZ 2008-M2 	FZ 2013-M2 	FZ 2015-M2R28 
Snap action contacts 2x(1NO-1NC)	FZ 201-M2	FZ 202-M2	FZ 205-M2	FZ 207-M2	FZ 208-M2	FZ 213-M2	FZ 215-M2R28













Spring rod with
plastic tip

Spring rod with
wire tip

Spring rod

Round rod,
stainless steel



Snap action contacts 1NO+1NC	FZ 520-M2	FZ 521-M2	FZ 525-M2	FZ 530-M2 	FZ 531-M2 	FZ 550-M2	FZ 551-M2 
Slow action contacts 1NO+1NC	/	/	/	FZ 630-M2 	FZ 631-M2 	FZ 650-M2	FZ 651-M2 
Slow action contacts 2NC	/	/	/	FZ 930-M2 	FZ 931-M2 	FZ 950-M2	FZ 951-M2 
Slow action contacts 1NO+2NC	FZ 2020-M2	FZ 2022-M2	FZ 2025-M2	FZ 2030-M2 	FZ 2031-M2 	FZ 2050-M2	FZ 2051-M2 
Snap action contacts 2x(1NO-1NC)	FZ 220-M2	FZ 221-M2	FZ 225-M2	FZ 230-M2	FZ 231-M2	FZ 250-M2	FZ 251-M2

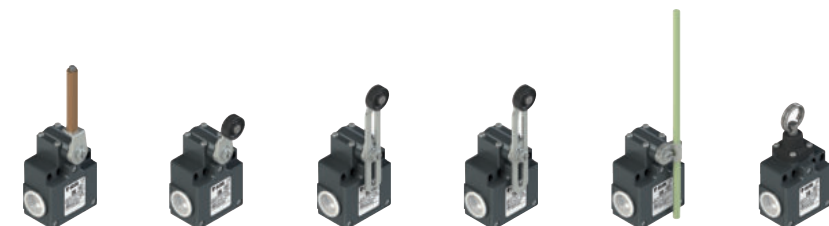
Porcelain roller













Adjustable lever

Adjustable safety
lever

Glass fibre rod


Rope switch for
signalling



Snap action contacts 1NO+1NC	FZ 553-E0M2V9 	FZ 554-M2 	FZ 555-M2	FZ 556-M2 	FZ 569-M2	FZ 576-M2
Slow action contacts 1NO+1NC	FZ 653-E0M2V9 	FZ 654-M2 	FZ 655-M2	FZ 656-M2 	FZ 669-M2	FZ 676-M2
Slow action contacts 2NC	FZ 953-E0M2V9 	FZ 954-M2 	FZ 955-M2	FZ 956-M2 	FZ 969-M2	FZ 976-M2
Slow action contacts 1NO+2NC	FZ 2053-E0M2V9 	FZ 2054-M2 	FZ 2055-M2	FZ 2056-M2 	FZ 2069-M2	FZ 2076-M2
Snap action contacts 2x(1NO-1NC)	FZ 253-E0M2	FZ 254-M2	FZ 255-M2	FZ 256-M2	FZ 269-M2	FZ 276-M2

FD, FL, FC, FP series**Position switches with swivelling lever without actuator**

Metal housing (FD, FL, FC)

Technopolymer housing (FP) 

One M20x1.5 conduit entry (FD, FP, FC)

Three M20x1.5 conduit entries (FL)

Protection degree IP67

Marks:      






Snap action contacts 1NO+1NC

Slow action contacts 1NO+1NC

Slow action contacts 2NC

Slow action contacts 1NO+2NC

Snap action contacts 2x(1NO-1NC)

FD 538-M2 	FD 558-M2 	FL 538-M2 	FL 558-M2 	FC 338-M2	FC 358-M2	FP 538-M2 	FP 558-M2 
FD 638-M2 	FD 658-M2 	FL 638-M2 	FL 658-M2 	FC 3338-M2 	FC 3358-M2 	FP 638-M2 	FP 658-M2 
FD 938-M2 	FD 958-M2 	FL 938-M2 	FL 958-M2 	FC 3438-M2 	FC 3458-M2 	FP 938-M2 	FP 958-M2 
FD 2038-M2 	FD 2058-M2 	FL 2038-M2 	FL 2058-M2 	/	/	FP 2038-M2 	FP 2058-M2 
FD 238-M2	FD 258-M2	FL 238-M2	FL 258-M2	/	/	FP 238-M2	FP 258-M2

Separate actuators

Round rod


Square rod

VF L31  VF L32 VF L33 VF L34 VF L35 VF L36 VF L51  VF L52  VF L53  VF L56  VF L57 

Attention! These separate actuators can be used only with items of the FD, FL, FC and FP series.

3D Position switches without actuator for **standard** applications**FR, FX, FM, FZ series****Position switches with swivelling lever without actuator**

Metal housing (FM, FZ)

Technopolymer housing (FR, FX) 

One M20x1.5 conduit entry (FR, FM)

Two M20x1.5 conduit entries (FX, FZ)

Protection degree IP67

Marks:      

With reset




















Snap action contacts 1NO+1NC

Slow action contacts 1NO+1NC

Slow action contacts 2NC

Slow action contacts 1NO+2NC

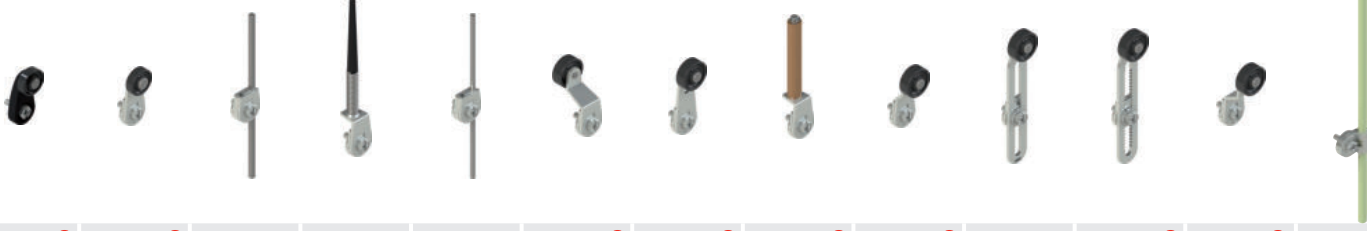
Snap action contacts 2x(1NO-1NC)

FR 538-M2 	FX 538-M2 	FM 538-M2 	FZ 538-M2 	/
FR 638-M2 	FX 638-M2 	FM 638-M2 	FZ 638-M2 	FR 638-W3M2 
FR 938-M2 	FX 938-M2 	FM 938-M2 	FZ 938-M2 	FR 938-W3M2 
FR 2038-M2 	FX 2038-M2 	FM 2038-M2 	FZ 2038-M2 	FR 2038-W3M2 
FR 238-M2	FX 238-M2	FM 238-M2	FZ 238-M2	FR 238-W3M2

Separate actuators

Square rod

Round rod

VF LE30  VF LE31  VF LE33 VF LE34 VF LE50 VF LE51  VF LE52  VF LE53  VF LE54  VF LE55 VF LE56  VF LE57  VF LE69

Attention! These separate actuators can be used only with items of the FR, FX, FM and FZ series.

Accessories

See page 62.

For a complete list of accessories, see the general catalogues.





FR series

Technopolymer housing

One M20x1.5 conduit entry

Protection degree IP67

Marks:

Ambient temperature: -25°C ... +80°C



Slow action contacts 1NO+1NC

FR 601-W3M2 FR 602-W3M2 FR 605-W3M2 FR 607-W3M2 FR 615-W3M2 FR 630-W3M2 FR 651-W3M2 FR 654-W3M2

Slow action contacts 2NC

FR 901-W3M2 FR 902-W3M2 FR 905-W3M2 FR 907-W3M2 FR 915-W3M2 FR 930-W3M2 FR 951-W3M2 FR 954-W3M2

Slow action contacts 1NO+2NC

FR 2001-W3M2 FR 2002-W3M2 FR 2005-W3M2 FR 2007-W3M2 FR 2015-W3M2 FR 2030-W3M2 FR 2051-W3M2 FR 2054-W3M2

To order a product of the **FX, FM or FZ series**, replace FR with FX, FM or FZ in the codes shown above.

Position switches with swivelling lever without actuator, see page 19



Pizzato Elettrica has developed a reset device code W3 to make perfectly simultaneous the actuator and the contact block tripping. This device is a module that is mounted between the body and the head of the switch that can be rotated independently from the head. The reset device has the following advantages:

- Contact blocks with snap action are no more necessary because the tripping movement is executed by the reset device itself;
- Can be rotated independently from the head ensuring maximum flexibility during installation;
- Can be delivered with two different actuating forces: standard (W3) and increased (W4) for vibration applications;
- Mechanical endurance: 1 million operating cycles.

Switches for special applications

FR series

with electronic contact block

Technopolymer housing

One M20x1.5 conduit entry

Protection degree IP67

Marks:

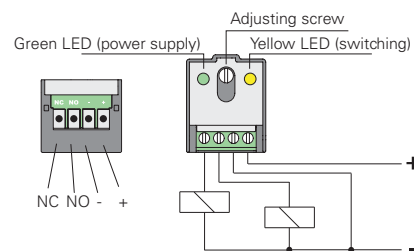
Ambient temperature: -25°C ... +80°C



For separate actuators see page 19

- Rated voltage (Ue): 10 ... 30 Vdc
- Rated current (Ie): 200 mA
- Adjustable switching point
- Bounce-free output signals
- Two static outputs, 1NO and 1NC

- Reduced actuating force
- Signal LEDs for power supply and switching
- Minimum differential travel



PNP switching outputs (1NO-1NC)

FR E121-M2 FR E155-M2 FR E138-M2

To order a product of the **FX, FM or FZ series**, replace FR with FX, FM or FZ in the codes shown above. Example: **FR E121-M2** → **FM E121-M2**

MK series

for high temperatures

Ambient temperature: -25°C ... +120°C

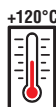
Technopolymer housing

Versions with positive opening

Screw terminals

Protection degree IP40 (electrical contacts)

Marks:



Snap action contacts 1NO+1NC

MK V11D05-T7 MK V11D10-T7 MK V11D12-T7 MK V11D15-T7 MK V11F30-T7 MK V11F40-R16T7 MK V11F45-R16T7

FD series

for high temperatures

Ambient temperature: -15°C ... +180°C

Metal housing

One M20x1.5 conduit entry

Protection degree IP67

Marks:



Slow action contacts 1NO+2NC

FD 2011-M2T2 FD 2016-M2T2 FD 2031-M2R24T2 FD 2032-M2T2 FD 2033-M2T2 FD 2056-M2R24T2 FD 2057-M2R24T2

NA series

Metal housing

Cable length 2 m

(other cable lengths available on request)

Mounting hole spacing 20 mm

Protection degrees IP67 and IP69K

Marks:      

Snap action contacts 1NO+1NC

Snap action contacts 1NO+2NC

Snap action contacts 2NO+2NC

Slow action contacts 1NO+1NC

Slow action contacts 1NO+2NC

Slow action contacts 2NO+2NC



NA B110AB-DN2	NA B110BB-DN2	NA B110EB-DN2	NA B110FB-DN2	NA B110HB-DN2	NA B110HE-DN2	NA B112KC-DN2	NA B112KD-DN2
NA B120AB-DN2	NA B120BB-DN2	NA B120EB-DN2	NA B120FB-DN2	NA B120HB-DN2	NA B120HE-DN2	NA B122KC-DN2	NA B122KD-DN2
NA B220AB-DN2	NA B220BB-DN2	NA B220EB-DN2	NA B220FB-DN2	NA B220HB-DN2	NA B220HE-DN2	NA B222KC-DN2	NA B222KD-DN2
NA G110AB-DN2	NA G110BB-DN2	NA G110EB-DN2	NA G110FB-DN2	/	/	NA G112KC-DN2	NA G112KD-DN2
NA G120AB-DN2	NA G120BB-DN2	NA G120EB-DN2	NA G120FB-DN2	/	/	NA G122KC-DN2	NA G122KD-DN2
NA G220AB-DN2	NA G220BB-DN2	NA G220EB-DN2	NA G220FB-DN2	/	/	NA G222KC-DN2	NA G222KD-DN2

M12 connector, right



To order a product with **M12 right connector**, replace DN2 with DMK in the codes shown above. Example: NA B110AA-DN2 → NA B110AA-DMK

M12 connector, bottom



To order a product with **M12 bottom connector**, replace DN2 with SMK in the codes shown above. Example: NA B110AA-DN2 → NA B110AA-SMK

AMP Superseal 1.5 connector




To order a product with **AMP connector**, replace DN2 with SAK in the codes shown above. Example: NA B110AA-DN2 → NA B110AA-SAK

Cable and M12 connector



To order a product with **cable and M12 connector** replace DN2 with DM0.2 in the codes shown above. Example: NA B110AA-DN2 → NA B110AA-DM0.2

NF series

Technopolymer housing 

Cable length 2 m (other cable lengths available on request)

Mounting hole spacing 20 mm

Protection degrees IP67 and IP69K

Marks:      

Snap action contacts 1NO+1NC

Snap action contacts 1NO+2NC

Snap action contacts 2NO+2NC

Slow action contacts 1NO+1NC

Slow action contacts 1NO+2NC

Slow action contacts 2NO+2NC



NF B110AB-DN2	NF B110BB-DN2	NF B110EB-DN2	NF B110FB-DN2	NF B110HB-DN2	NF B110HE-DN2	NF B112KC-DN2	NF B112KD-DN2
NF B120AB-DN2	NF B120BB-DN2	NF B120EB-DN2	NF B120FB-DN2	NF B120HB-DN2	NF B120HE-DN2	NF B122KC-DN2	NF B122KD-DN2
NF B220AB-DN2	NF B220BB-DN2	NF B220EB-DN2	NF B220FB-DN2	NF B220HB-DN2	NF B220HE-DN2	NF B222KC-DN2	NF B222KD-DN2
NF G110AB-DN2	NF G110BB-DN2	NF G110EB-DN2	NF G110FB-DN2	/	/	NF G112KC-DN2	NF G112KD-DN2
NF G120AB-DN2	NF G120BB-DN2	NF G120EB-DN2	NF G120FB-DN2	/	/	NF G122KC-DN2	NF G122KD-DN2
NF G220AB-DN2	NF G220BB-DN2	NF G220EB-DN2	NF G220FB-DN2	/	/	NF G222KC-DN2	NF G222KD-DN2

M12 connector, right



To order a product with **M12 right connector**, replace DN2 with DMK in the codes shown above. Example: NF B110AA-DN2 → NF B110AA-DMK

M12 connector, bottom



To order a product with **M12 bottom connector**, replace DN2 with SMK in the codes shown above. Example: NF B110AA-DN2 → NF B110AA-SMK

AMP Superseal 1.5 connector



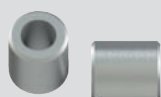
To order a product with **AMP connector**, replace DN2 with SAK in the codes shown above. Example: NF B110AA-DN2 → NF B110AA-SAK

Cable and M12 connector

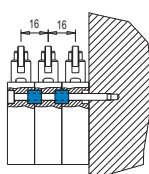


To order a product with **cable and M12 connector** replace DN2 with DM0.2 in the codes shown above. Example: NF B110AA-DN2 → NF B110AA-DM0.2

Accessories



By installing spacers between two switches, it is possible to have 2 or more pre-wired switches, preventing them from slipping.



Article	Description
VN DT1F	Spacer for NA and NF series

Packs of 10 pcs. We only accept orders for complete packaging units.

Accessories

See page 62.
For a complete list of accessories, see the general catalogues.



**Housings**NA metal housing
hole spacing 20 mmNF technopolymer housing
hole spacing 20 mm

NA B11000	⊕	1NO+1NC	R	NF B11000	⊕	1NO+1NC	R
NA G11000	⊕	1NO+1NC	L	NF G11000	⊕	1NO+1NC	L
NA B12000	⊕	1NO+2NC	R	NF B12000	⊕	1NO+2NC	R
NA G12000	⊕	1NO+2NC	L	NF G12000	⊕	1NO+2NC	L
NA B22000	⊕	2NO+2NC	R	NF B22000	⊕	2NO+2NC	R
NA G22000	⊕	2NO+2NC	L	NF G22000	⊕	2NO+2NC	L

Contact type: **R** = snap action**L** = slow action**Connectors with cable**Connector
for NA housingsConnector
for NF housingsCable
length (m)

VN CM11DN2	1NO+1NC	VN CP11DN2	1NO+1NC	2
VN CM11DN5	1NO+1NC	VN CP11DN5	1NO+1NC	5
VN CM12DN2	1NO+2NC	VN CP12DN2	1NO+2NC	2
VN CM12DN5	1NO+2NC	VN CP12DN5	1NO+2NC	5
VN CM22DN2	2NO+2NC	VN CP22DN2	2NO+2NC	2
VN CM22DN5	2NO+2NC	VN CP22DN5	2NO+2NC	5

M12 or AMP connectorsM12 connector, right,
for NA housingsM12 connector, bottom,
for NA housingsCable and M12
connector for NA
housingsM12 connector, right,
for NF housingsM12 connector,
bottom, for NF
housingsAMP Superseal 1.5
connector for NF
housingsCable and M12
connector for NF
housings

VN CM11DMK 1NO+1NC	VN CM11SMK 1NO+1NC	VN CM11DM0.2 1NO+1NC	VN CP11DMK 1NO+1NC	VN CP11SMK 1NO+1NC	VN CP11SAK 1NO+1NC	VN CP11DM0.2 1NO+1NC
VN CM22DMK 2NO+2NC	VN CM22SMK 2NO+2NC	VN CM22DM0.2 2NO+2NC	VN CP22DMK 2NO+2NC	VN CP22SMK 2NO+2NC	VN CP02SAK 2NC	VN CP22DM0.2 2NO+2NC

Attention! Always check that the applied electric load is within the voltage and current limits defined for the connectors.**Actuators**

Unidirectional roller lever

VN AA0AA ⊕	VN AA0AB ⊕	VN AA0AC ⊕	VN AA0AE ⊕	VN AA0BB ⊕	VN AA0BE ⊕	VN AA0CB ⊕	VN AA0CH ⊕	VN AA0CP ⊕
VN AA0CV ⊕	VN AA0EB ⊕	VN AA0EE ⊕	VN AA0FB ⊕	VN AA0GB ⊕	VN AA0HB	VN AA0HE	VN AA0HH	VN AA0BB-W5 ⊕

Plunger with Ø
6 mm ball**Levers****Attention!** These separate actuators can be used only with items of the NA and NF series.

VN A00KA ⊕	VN A00KB ⊕	VN A00KC ⊕	VN A00KD ⊕	VN A00KE ⊕	VN A00KF ⊕	VN A00KG ⊕	VN A00KH ⊕	VN A00KP ⊕
VN A00LB	VN A00LE	VN A00LH	VN A00LL	VN AA200 ⊕	VN AA000-W5 ⊕			

Stainless
steel rod
3 x 3 x 125 mm,
adjustableStainless
steel rod
Ø 3 x 125 mm,
adjustableGlass fibre rod
Ø 6 x 200 mm,
adjustableMetal head
for swivelling lever
actuators

90° redirection

Installation for safety applications:


To obtain a safety switch with positive opening, ⊕ only use housings and actuators which are marked with the symbol ⊕ for positive opening next to their article code ⊕.


Example:

VN A00KB ⊕ + VN AA200 ⊕ + NA B11000 ⊕

MK series

Screw terminals

Technopolymer housing 

Versions with positive opening 

Marks:       

Maximum protection degree IP40

Maximum protection degree IP65

Direct actuation

1NO+1NC, snap action



MK V11D01

MK V11D02

MK V11D03

MK V11D04

MK V11D05 

MK V11D06 


MK V11D08 


MK V12D01


MK V12D02

MK V12D03

MK V12D04

MK V12D05 

MK V12D06 

MK V12D08 

Direct actuation

1NO+1NC, snap action



MK V11D09 

MK V11D10 


MK V11D12 


MK V11D13 


MK V11D15 


MK V11D17 


MK V11D18 


MK V12D09 


MK V12D10 

MK V12D12 

MK V12D13 

MK V12D15 

MK V12D17 

MK V12D18 

Direct actuation

1NO+1NC, snap action



MK V11D19 

MK V11D30


MK V11D31

MK V11D32

MK V11D35

MK V11D37

MK V11D40

MK V12D19 

MK V12D30

MK V12D31

MK V12D32

MK V12D35

MK V12D37

MK V12D40

Direct actuation

1NO+1NC, snap action



MK V11D42

MK V11D45

MK V11D46

MK V11D47

MK V11D53

MK V11D59

MK V12D42

MK V12D45

MK V12D46

MK V12D47

MK V12D53

MK V12D59

Direct actuation at the back

1NO+1NC, snap action



MK V11F30

MK V11F31 

MK V11F32


MK V11F35

MK V11F40

MK V11F42 

MK V11F45 


MK V12F30


MK V12F31 

MK V12F32

MK V12F35

MK V12F40

MK V12F42 

MK V12F45 

Direct actuation at the back

1NO+1NC, snap action




MK V11F46 


MK V11F47 


MK V11F49 

MK V11F53


MK V11F59 

MK V12F46 

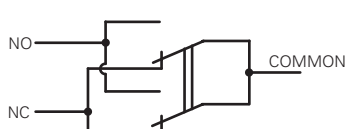
MK V12F47 

MK V12F49 

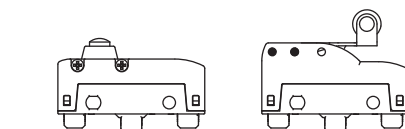
MK V12F53

MK V12F59 

Circuit diagram



Mobile contact with single interruption and double contacts



COMMON NC NO COMMON NC NO

Actuators with variable orientation



Thanks to our new lateral fixing system, the roller of the microswitches MK ••••15 and MK ••••17 can be now rotated in 90° steps.

Terminal types



V (example: MK V11D04)
Screw with self-lifting plate



H (example: MK H11D04)
Faston 6.3 mm, vertical

Protection degree

IP00 without terminal cover
IP20 (with terminal covers VF C01, VF C03)
IP40 (with terminal covers VF MKC•1•, VF C02)
IP65 (with terminal covers VF MKC•22, VF MKC•23)



MK series

Faston terminals

Technopolymer housing

Versions with positive opening

Marks:

Maximum protection degree IP40

Maximum protection degree IP65

Direct actuation

1NO+1NC, snap action



MK H11D01	MK H11D02	MK H11D03	MK H11D04	MK H11D05	MK H11D06	MK H11D08
MK H12D01	MK H12D02	MK H12D03	MK H12D04	MK H12D05	MK H12D06	MK H12D08

Direct actuation

1NO+1NC, snap action



Maximum protection degree IP40
Maximum protection degree IP65

MK H11D09	MK H11D10	MK H11D12	MK H11D13	MK H11D15	MK H11D17	MK H11D18
MK H12D09	MK H12D10	MK H12D12	MK H12D13	MK H12D15	MK H12D17	MK H12D18

Direct actuation

1NO+1NC, snap action



Maximum protection degree IP40
Maximum protection degree IP65

MK H11D19	MK H11D30	MK H11D31	MK H11D32	MK H11D35	MK H11D37	MK H11D40
MK H12D19	MK H12D30	MK H12D31	MK H12D32	MK H12D35	MK H12D37	MK H12D40

Direct actuation

1NO+1NC, snap action



Maximum protection degree IP40
Maximum protection degree IP65

MK H11D42	MK H11D45	MK H11D46	MK H11D47	MK H11D53	MK H11D59
MK H12D42	MK H12D45	MK H12D46	MK H12D47	MK H12D53	MK H12D59

Direct actuation at the back

1NO+1NC, snap action



Maximum protection degree IP40
Maximum protection degree IP65

MK H11F30	MK H11F31	MK H11F32	MK H11F35	MK H11F40	MK H11F42	MK H11F45
MK H12F30	MK H12F31	MK H12F32	MK H12F35	MK H12F40	MK H12F42	MK H12F45

Direct actuation at the back

1NO+1NC, snap action



Maximum protection degree IP40
Maximum protection degree IP65

MK H11F46	MK H11F47	MK H11F49	MK H11F53	MK H11F59
MK H12F46	MK H12F47	MK H12F49	MK H12F53	MK H12F59

Protective terminal covers

Packs of 10 pcs. We only accept orders for complete packaging units.



Terminal cover for vertical faston terminals with strain relief cable gland and snap-in mounting. It allows to install multiple switches side-by-side.

Article	Description	Prot. degree
VF MKCH11	Without gasket for cables Ø 5 ... 7.5 mm	IP40
VF MKCH12	Without gasket for cables Ø 4 ... 7.5 mm	IP40
VF MKCH13	Without gasket for cables Ø 2 ... 5 mm	IP40
VF MKCH22	With gasket for cables Ø 4 ... 7.5 mm	IP65
VF MKCH23	With gasket for cables Ø 2 ... 5 mm	IP65



Terminal cover for screw terminals with strain relief cable gland and snap-in mounting. It allows to install multiple switches side-by-side.

Article	Description	Prot. degree
VF MKCV11	Without gasket for cables Ø 5 ... 7.5 mm	IP40
VF MKCV12	Without gasket for cables Ø 4 ... 7.5 mm	IP40
VF MKCV13	Without gasket for cables Ø 2 ... 5 mm	IP40
VF MKCV22	With gasket for cables Ø 4 ... 7.5 mm	IP65
VF MKCV23	With gasket for cables Ø 2 ... 5 mm	IP65



Protective terminal cover for screw terminals.
Protection degree IP20.



Protective terminal cover for screw terminals with PG9 cable gland for multipolar cables Ø 5 ... 7 mm.
Protection degree IP40.




Protective terminal cover for screw terminals, snap-in mounting. It allows to install multiple switches side-by-side.
Protection degree IP20.

Article	Description	Article	Description	Article	Description
VF C01	Protective terminal cover	VF C02	Protective terminal cover	VF C03	Protective terminal cover

MS series

Solder terminals

Technopolymer housing 

Marks:   

Maximum protection degree IP40

Direct actuation
1NO+1NC,
snap action



MS 05

MS 08

MS 09

MS 10

MS 15

MS 17

MS 20

Direct actuation
1NO+1NC,
snap action



Maximum protection degree IP40

MS 30

MS 40

MS 42

MS 45

MS 49

Inverted actuation
1NO+1NC,
snap action




Maximum protection degree IP40

MS 55

MS 60

MF series

Faston terminals

Technopolymer housing 

Marks:   

Maximum protection degree IP40

Direct actuation
1NO+1NC,
snap action



MF 05

MF 08

MF 09

MF 10

MF 15

MF 17

MF 20

Direct actuation
1NO+1NC,
snap action



Maximum protection degree IP40

MF 30

MF 40

MF 42

MF 45

MF 49

Inverted actuation
1NO+1NC,
snap action



Maximum protection degree IP40

MF 55

MF 60

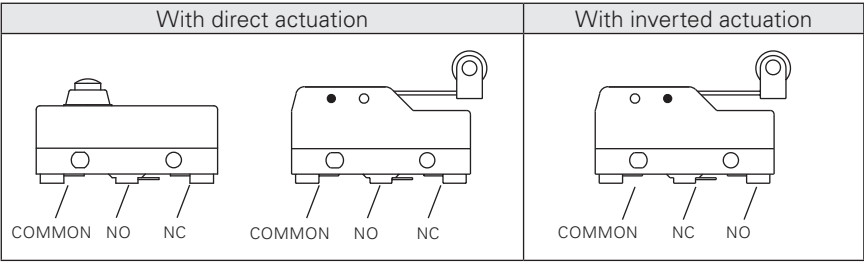
Orientable roller



It is possible to rotate the roller of the M•20 microswitch in 90° steps.



Circuit diagram



Change-over contact element with single interruption and three terminals.

Protective terminal covers

Packs of 10 pcs.



Protective terminal cover for screw terminals.
Protection degree IP20.



Protective terminal cover for screw terminals with PG9 cable gland for multipolar cables Ø 5 ... 7 mm.
Protection degree IP40.




Protective terminal cover for screw terminals, snap-in mounting. It allows to install mutiple switches side-by-side.
Protection degree IP20.

Article	Description
VF C01	Protective terminal cover

Article	Description
VF C02	Protective terminal cover

Article	Description
VF C03	Protective terminal cover

PA, PX series

Technopolymer housing 

One M20x1.5 conduit entry

Two lateral knock-out conduit entries

Stainless steel external metallic parts

Protection degree IP53 or IP65

Contact block marks:     

Snap action contacts 1NO+1NC


Snap action contacts 2NO+2NC


Slow action contacts 1NO+1NC




With M25 hole for VF KIT31


PX 10110-M2 


PX 10210-M2 


PX 10310-M2 


PA 20100-M2 

PA 20200-M2 

PA 20300-M2 

PX 10110-BM2 

PX 10210-BM2 

PX 10310-BM2 

Code structure

Foot switches
PX closed version
PA open version

article **PX 10110-AGM2** options

Contact block combinations

01	1NO+1NC, snap action
02	2x(1NO+1NC), snap action
03	1NO+1NC, slow action
04	2x(1NO+1NC), slow action
05	2x2NO, slow action
06	2x2NC, slow action
07	2NC, slow action
08	2NO, slow action
09	1NO+1NC, slow action, make before break
14	2NO, snap action
15	2NC, snap action
20	2x(1NO+1NC), snap action, shifted
24	(1NO+1NC)+(2NC), snap action, shifted

Protection colour

1	yellow RAL 1023 (standard)
2	red RAL 3020
4	grey RAL 7040
5	black RAL 9017
6	blue RAL 5017

Devices

0	no device
1	with safety lever
2	lock of the pedal actuator
3	without safety lever and with two-stage actuating force (only when combined with contact blocks 20-24)
4	with safety lever and with two-stage actuating force (only when combined with contact blocks 20-24)

Threaded conduit entry

M2	M20x1.5 (standard)
PG	PG 13.5

Contact type

	silver contacts (standard)
G	silver contacts with 1 µm gold coating
G1	silver contacts with 2.5 µm gold coating

Accessories (PX series only)

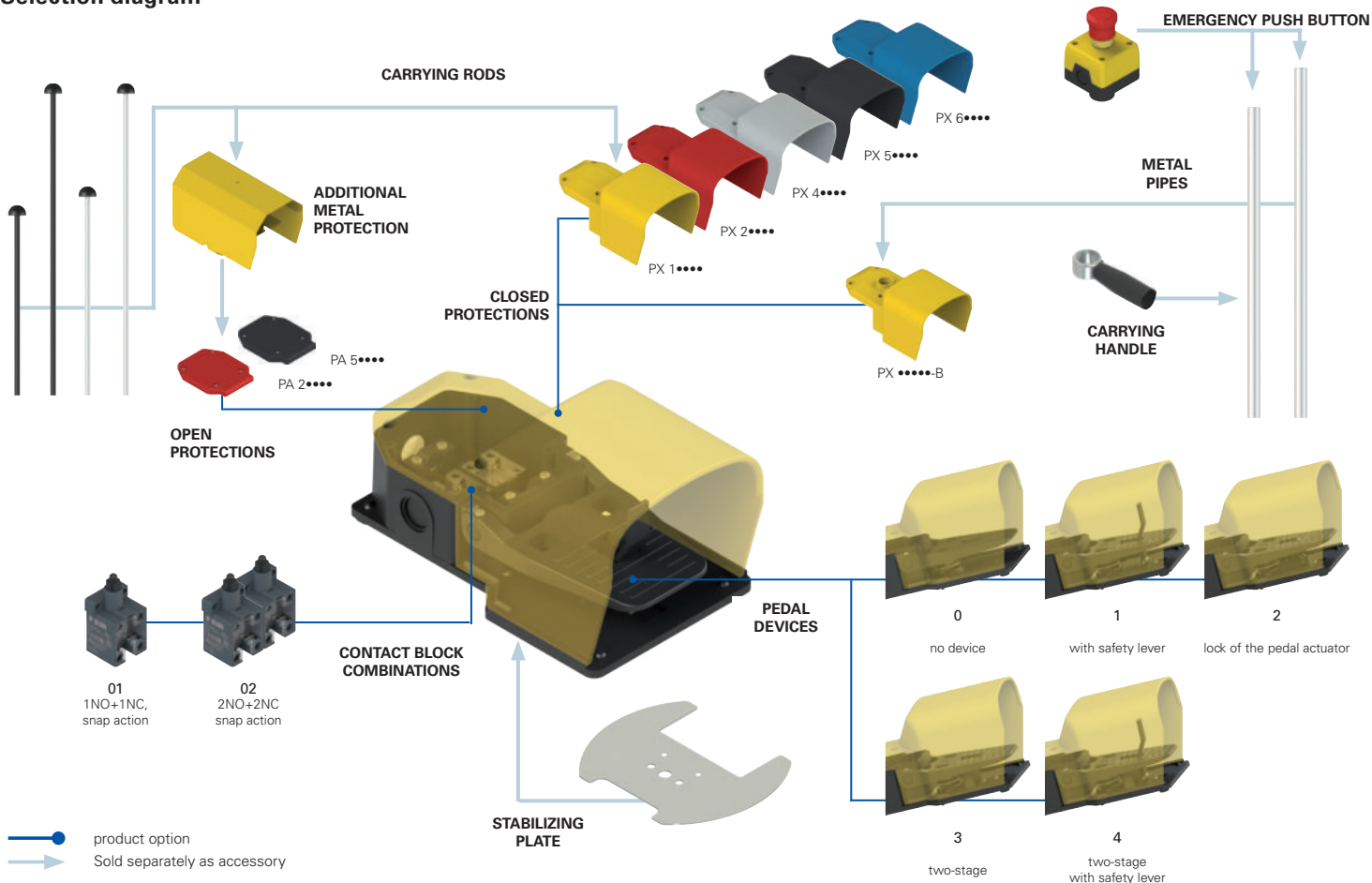
	no accessories (standard)
A	with technopolymer carrying rod (400 mm)
B	with M25 hole for VF KIT31
C	with M25 hole for VF KIT31 with stabilizing plate
D	with technopolymer carrying rod (660 mm)

Protection degree












0	IP53
1	IP65

Attention! The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.

Selection diagram

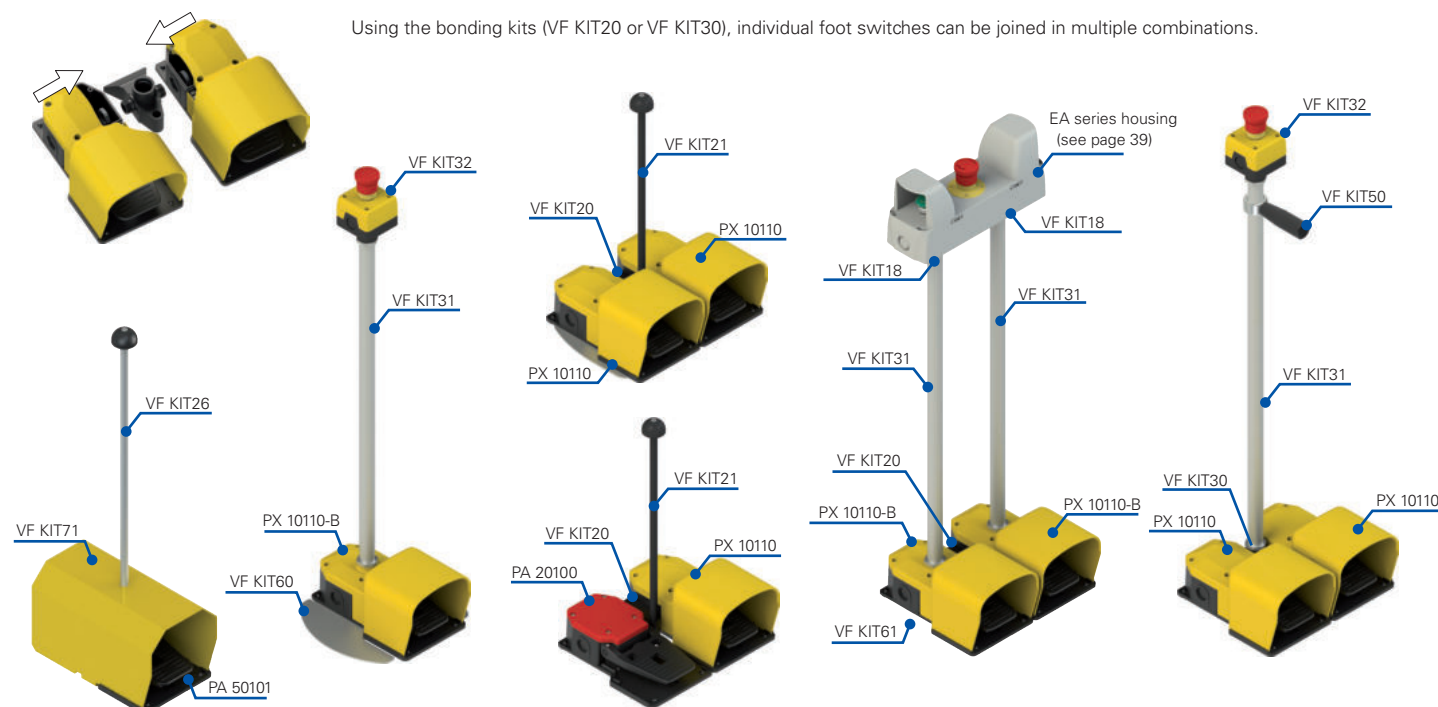


Auxiliary elements for modular foot switches

							
VF KIT20		VF KIT30		VF KIT21 (L=400 mm) VF KIT22 (L=660 mm)		VF KIT25 (L=400 mm) VF KIT26 (L=660 mm)	
Joining element for technopolymer pedals with hole for carrying rod, with nuts, seals and self-tapping screws for the fixing of the two single pedals. Protection degree IP65.		Joining element for technopolymer pedals with M25x1.5 threaded hole, with nuts, seals and self-tapping screws for the fixing of the two single pedals. Protection degree IP65.		Plastic carrying rod set (can be connected to VF KIT20) with self-tapping screw for rod fixing.		Metal carrying rod set (can be connected to VF KIT20) with self-tapping screw for rod fixing.	
							
VF KIT31 (L=660 mm) VF KIT29 (L=740 mm)		VF KIT18		VF KIT32 (1NC) ⊖ VF KIT33 (1NC+1NO) ⊖ VF KIT34 (2NC) ⊖		VF KIT35	
Ø 25 metal tube set with M25x1.5 threaded ends with brass nuts and gaskets.		Metal nut M25x1.5 to be used with VF KIT31 or VF KIT29 if off-the-shelf housings are used. Packs of 10 pcs.		Emergency stop button kit with mechanical positive actuation compliant with EN 60947-5-1 and EN ISO 13850, to combine with VF KIT31 or VF KIT29. Protection degree IP65.		Empty housing kit with Ø 22 mm hole, compliant with EN 60947-5-1, to combine with VF KIT31 or VF KIT29. Protection degree IP65.	
							
VF KIT60		VF KIT61		VF KIT71		VF KIT81	
Metal stabilizing plate for single pedals.		Metal stabilizing plate for double pedals.		Additional metal protections for single PA series foot switches. In heavy-duty work environments, increased dimensions for safety shoe. Not applicable with VF KIT60.		Additional metal protections for PC series modular foot switches. In heavy-duty work environments, increased dimensions for safety shoe. Not applicable with VF KIT61.	
							
						VF B501 ⊖ (1NC+1NO, snap action) VF B601 ⊖ (1NC+1NO, slow action)	
						Additional contact block for foot switches (all pedals are supplied with pre-installed contact blocks).	

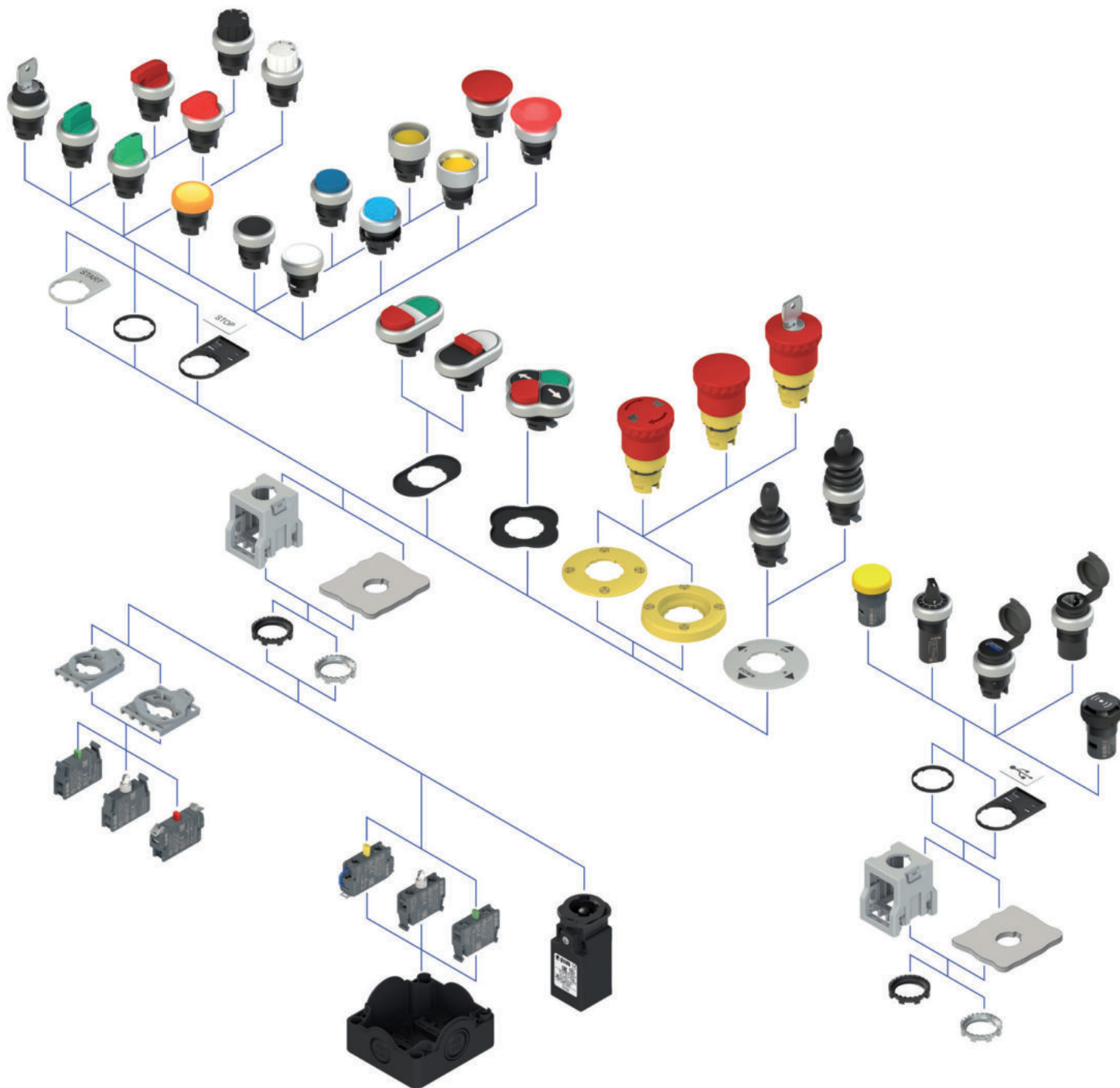
Modular foot switches - PC series

Using the bonding kits (VF KIT20 or VF KIT30), individual foot switches can be joined in multiple combinations.



4 EROUND line introduction

Pizzato Elettrica's innovative EROUND control and signalling devices combine elegance and functionality in a single product. The ergonomic design allows a comfortable and easy use of the devices. The details have been carefully designed giving the products a pleasant appearance and making them suitable for applications also on well designed machinery. The devices of the EROUND line, thanks to their design and functionality, guarantee maximum reliability, and are suitable for any type of application. Most devices, not only have an IP67 protection degree, but have also passed the test proving their IP69K protection degree according to the prescriptions established by the ISO 20653 standard.



Buttons
E2 PU series

Protection degrees IP67 and IP69K
 Ambient temperature: -25°C ... +80°C
 Marks:



Colour and engraving actuator	Spring-return button / satin chrome bezel			
	Flush	Projecting	Protected	Mushroom
without lens	E2 1PU2R0290	Same article, flush button	E2 1PU2P0290	-
black	E2 1PU2R1290	E2 1PU2S1290	E2 1PU2P1290	E2 1PU2F1490
white	E2 1PU2R2290	E2 1PU2S2290	E2 1PU2P2290	E2 1PU2F2490
red	E2 1PU2R3290	E2 1PU2S3290	E2 1PU2P3290	E2 1PU2F3490
green	E2 1PU2R4290	E2 1PU2S4290	E2 1PU2P4290	E2 1PU2F4490
yellow	E2 1PU2R5290	E2 1PU2S5290	E2 1PU2P5290	E2 1PU2F5490
blue	E2 1PU2R6290	E2 1PU2S6290	E2 1PU2P6290	E2 1PU2F6490
orange	E2 1PU2R8290	E2 1PU2S8290	E2 1PU2P8290	E2 1PU2F8490
red	E2 1PU2R329L1	E2 1PU2S329L1	-	E2 1PU2F349L1
green	E2 1PU2R429L2	E2 1PU2S429L2	E2 1PU2P429L2	E2 1PU2F449L2
black	E2 1PU2R129L1	E2 1PU2S129L1	-	E2 1PU2F149L1
white	E2 1PU2R229L2	E2 1PU2S229L2	E2 1PU2P229L2	E2 1PU2F249L2

Illuminated buttons
E2 PL series

Protection degrees IP67 and IP69K
 Ambient temperature: -25°C ... +80°C
 Marks:



Colour and engraving actuator	Spring-return button / satin chrome bezel			
	Flush	Projecting	Protected	Mushroom
without lens	E2 1PL2R0290	Same article, flush button	E2 1PL2P0290	-
white	E2 1PL2R2290	E2 1PL2S2290	E2 1PL2P2290	E2 1PL2F2490
red	E2 1PL2R3290	E2 1PL2S3290	E2 1PL2P3290	E2 1PL2F3490
green	E2 1PL2R4290	E2 1PL2S4290	E2 1PL2P4290	E2 1PL2F4490
yellow	E2 1PL2R5290	E2 1PL2S5290	E2 1PL2P5290	E2 1PL2F5490
blue	E2 1PL2R6290	E2 1PL2S6290	E2 1PL2P6290	E2 1PL2F6490
orange	E2 1PL2R8290	E2 1PL2S8290	E2 1PL2P8290	E2 1PL2F8490
red	E2 1PL2R329L1	E2 1PL2S329L1	-	E2 1PL2F349L1
green	E2 1PL2R429L2	E2 1PL2S429L2	E2 1PL2P429L2	E2 1PL2F449L2
white	E2 1PL2R229L1	E2 1PL2S229L1	-	E2 1PL2F249L1
white	E2 1PL2R229L2	E2 1PL2S229L2	E2 1PL2P229L2	E2 1PL2F249L2

For ordering a maintained button replace 1PU2 with 1PU1 in the respective article code. Example: E2 1PU2R0210 → E2 1PU1R0210
 For ordering a button with black bezel replace 9 with 1 in the respective article code. Example: E2 1PU2R0290 → E2 1PU1R0210
 Please contact our technical department for buttons with custom markings.

Maintained button Spring-return button

Double/triple buttons
E2 PD/PT series

Protection degrees IP67 and IP69K
 Ambient temperature: -25°C ... +80°C
 Marks:



Colour and engraving actuator	Spring-return button / satin chrome bezel	
	Upper button flush Central cap, flush Lower button flush	Upper button flush Central cap, flush Lower button projecting
green button	E2 1PDRL90423	E2 1PDSL90423
white cap, illuminated red button	E2 1PDRL9AAAD	E2 1PDSL9AAAD
"I" green button	E2 1PDRL9AAAD	E2 1PDSL9AAAD
"O" red button	E2 1PDRL9AAAP	E2 1PDSL9AAAP
"START" green button	E2 1PDRL9AAAP	E2 1PDSL9AAAP
"STOP" red button	E2 1PDRL9AAAP	E2 1PDSL9AAAP
white button	E2 1PDRL90221	E2 1PDSL90221
white cap, illuminated black button	E2 1PDRL90221	E2 1PDSL90221
"I" white button	E2 1PDRL9AAAA	E2 1PDSL9AAAA
"O" black button	E2 1PDRL9AAAA	E2 1PDSL9AAAA
"START" white button	E2 1PDRL9AAAN	E2 1PDSL9AAAN
"STOP" black button	E2 1PDRL9AAAN	E2 1PDSL9AAAN
"↓" black button	E2 1PDRL9AAAB	E2 1PDSL9AAAB
"↑" black button	E2 1PDRL9AAAB	E2 1PDSL9AAAB

Colour and engraving actuator	Spring-return button satin chrome bezel	
	Upper button flush Central button projecting Lower button flush	Upper button flush Central button projecting Lower button flush
"I" green button	E2 1PTRS9AAAY	E2 1PTRS9AAAY
"II" green button	E2 1PTRS9AAAZ	E2 1PTRS9AAAZ
"↓" green button	E2 1PTRS9AAAZ	E2 1PTRS9AAAZ
"↑" green button	E2 1PTRS9AAAZ	E2 1PTRS9AAAZ
"I" white button	E2 1PTRS9AABD	E2 1PTRS9AABD
"STOP" red button	E2 1PTRS9AABD	E2 1PTRS9AABD
"↓" black button	E2 1PTRS9AABA	E2 1PTRS9AABA
"↑" black button	E2 1PTRS9AABA	E2 1PTRS9AABA
"I" green button	E2 1PTRS9AABA	E2 1PTRS9AABA
"I" white button	E2 1PTRS9AABE	E2 1PTRS9AABE
"↓" black button	E2 1PTRS9AABE	E2 1PTRS9AABE
"↑" black button	E2 1PTRS9AABE	E2 1PTRS9AABE
"STOP" red button	E2 1PTRS9AABF	E2 1PTRS9AABF
"↓" black button	E2 1PTRS9AABF	E2 1PTRS9AABF
"↑" black button	E2 1PTRS9AABF	E2 1PTRS9AABF
"I" green button	E2 1PTRS9AABB	E2 1PTRS9AABB
"STOP" red button	E2 1PTRS9AABB	E2 1PTRS9AABB
"I" green button	E2 1PTRS9AABB	E2 1PTRS9AABB

Quadruple buttons
E2 PQ series

Protection degree IP67
 Ambient temperature
 -25°C ... +80°C
 Marks:









Actuator colour and engraving (starting from the top and clockwise)	Spring-return button satin chrome bezel	
	Upper button flush Right button flush Lower button flush Left button flush	Upper button flush Right button flush Lower button flush Left button flush
"↓" black button	E2 1PQFA9QAAA	E2 1PQFA9QAAA
"↑" black button	E2 1PQFA9QAAA	E2 1PQFA9QAAA
"←" black button	E2 1PQFA9QAAA	E2 1PQFA9QAAA
"→" black button	E2 1PQFA9QAAA	E2 1PQFA9QAAA
"START" green button	E2 1PQFA9QAAAB	E2 1PQFA9QAAAB
"STOP" red button	E2 1PQFA9QAAAB	E2 1PQFA9QAAAB
"I" white button	E2 1PQFA9QAAAC	E2 1PQFA9QAAAC
"↓" black button	E2 1PQFA9QAAAC	E2 1PQFA9QAAAC
"↑" black button	E2 1PQFA9QAAAC	E2 1PQFA9QAAAC
"←" black button	E2 1PQFA9QAAAC	E2 1PQFA9QAAAC
"→" black button	E2 1PQFA9QAAAC	E2 1PQFA9QAAAC
"I" green button	E2 1PQFA9QAAD	E2 1PQFA9QAAD
"↓" black button	E2 1PQFA9QAAD	E2 1PQFA9QAAD
"↑" black button	E2 1PQFA9QAAD	E2 1PQFA9QAAD
"←" black button	E2 1PQFA9QAAD	E2 1PQFA9QAAD
"→" black button	E2 1PQFA9QAAD	E2 1PQFA9QAAD
"I" white button	E2 1PQFA9QAAE	E2 1PQFA9QAAE
"↓" black button	E2 1PQFA9QAAE	E2 1PQFA9QAAE
"↑" black button	E2 1PQFA9QAAE	E2 1PQFA9QAAE
"←" black button	E2 1PQFA9QAAE	E2 1PQFA9QAAE
"→" black button	E2 1PQFA9QAAE	E2 1PQFA9QAAE







For ordering a button with black bezel replace 9 with 1 in the respective article code. Example: E2 1PDRL90423 → E2 1PDRL10423
 Please contact our technical department for buttons with custom markings.

4D Selector switches

E2 SE series selector switches with 2 or 3 positions

Protection degrees IP67 and IP69K
Ambient temperature: -25°C ... +80°C
Marks:      









Positions	Satin chrome bezel						
	black	white	red	green	yellow	blue	orange
	E2 1SE12AVA19AB	E2 1SE12AVA29AB	E2 1SE12AVA39AB	E2 1SE12AVA49AB	E2 1SE12AVA59AB	E2 1SE12AVA69AB	E2 1SE12AVA89AB
	E2 1SE12EVA19AB	E2 1SE12EVA29AB	E2 1SE12EVA39AB	E2 1SE12EVA49AB	E2 1SE12EVA59AB	E2 1SE12EVA69AB	E2 1SE12EVA89AB
	E2 1SE13ACE19AB	E2 1SE13ACE29AB	E2 1SE13ACE39AB	E2 1SE13ACE49AB	E2 1SE13ACE59AB	E2 1SE13ACE69AB	E2 1SE13ACE89AB
	E2 1SE13ECE19AB	E2 1SE13ECE29AB	E2 1SE13ECE39AB	E2 1SE13ECE49AB	E2 1SE13ECE59AB	E2 1SE13ECE69AB	E2 1SE13ECE89AB
	E2 1SE13FCE19AB	E2 1SE13FCE29AB	E2 1SE13FCE39AB	E2 1SE13FCE49AB	E2 1SE13FCE59AB	E2 1SE13FCE69AB	E2 1SE13FCE89AB
	E2 1SE13GCE19AB	E2 1SE13GCE29AB	E2 1SE13GCE39AB	E2 1SE13GCE49AB	E2 1SE13GCE59AB	E2 1SE13GCE69AB	E2 1SE13GCE89AB







For ordering a selector switch with black bezel replace 9 with 1 in the respective article code. Example: E2 1SE12AVA39AB → E2 1SE12AVA31AB
For ordering a knob selector switch replace 1 with 4 in the respective article code. Example: E2 1SE12AVA39AB → E2 1SE42AVA39AB
For ordering a selector switch with long handle replace 1 with 2 in the respective article code. Example: E2 1SE12AVA39AB → E2 1SE22AVA39AB



Illuminated selector switches with 2 or 3 positions E2 SL series

Protection degrees IP67 and IP69K
Ambient temperature: -25°C ... +80°C
Marks:      









Positions	Satin chrome bezel					
	white	red	green	yellow	blue	orange
	E2 1SL12AVD29AB	E2 1SL12AVD39AB	E2 1SL12AVD49AB	E2 1SL12AVD59AB	E2 1SL12AVD69AB	E2 1SL12AVD89AB
	E2 1SL12EVD29AB	E2 1SL12EVD39AB	E2 1SL12EVD49AB	E2 1SL12EVD59AB	E2 1SL12EVD69AB	E2 1SL12EVD89AB
	E2 1SL13ACH29AB	E2 1SL13ACH39AB	E2 1SL13ACH49AB	E2 1SL13ACH59AB	E2 1SL13ACH69AB	E2 1SL13ACH89AB
	E2 1SL13ECH29AB	E2 1SL13ECH39AB	E2 1SL13ECH49AB	E2 1SL13ECH59AB	E2 1SL13ECH69AB	E2 1SL13ECH89AB
	E2 1SL13FCH29AB	E2 1SL13FCH39AB	E2 1SL13FCH49AB	E2 1SL13FCH59AB	E2 1SL13FCH69AB	E2 1SL13FCH89AB
	E2 1SL13GCH29AB	E2 1SL13GCH39AB	E2 1SL13GCH49AB	E2 1SL13GCH59AB	E2 1SL13GCH69AB	E2 1SL13GCH89AB

For ordering a selector switch with black bezel replace 9 with 1 in the respective article code. Example: E2 1SL12AVD39AB → E2 1SL12AVD31AB
For ordering a knob selector switch replace 1 with 4 in the respective article code. Example: E2 1SL12AVD39AB → E2 1SL42AVD39AB
For ordering a selector switch with long handle replace 1 with 2 in the respective article code. Example: E2 1SL12AVD39AB → E2 1SL22AVD39AB























E2 AC series complete units with 4-position selector switches

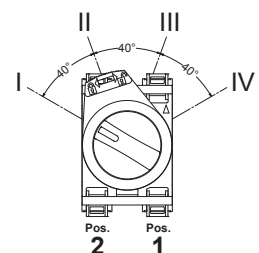
Protection degrees IP67 and IP69K
Ambient temperature: -25°C ... +80°C
Marks:      

















Contact diagram

contacts		Selector position			
		I	II	III	IV
pos. 1					
pos. 2					
pos. 3					
pos. 4					

■ closed contact □ open contact



Colour and engraving actuator	Selector switches					Illuminated selector switches				
	Contacts			Positions	Satin chrome bezel	Contacts			Satin chrome bezel	
	pos. 2	pos. 3	pos. 1			pos. 2	pos. 3	pos. 1		
	1NO+1NC	-	1NO+1NC		E2 AC-DXBC2203	-	-	-	-	
	1NO+1NC	-	1NO+1NC		E2 AC-DXBC2211	1NO+1NC	LED	1NO+1NC	E2 AC-DXBC2259	
	1NO+1NC	-	1NO+1NC		E2 AC-DXBC2219	1NO+1NC	LED	1NO+1NC	E2 AC-DXBC2267	
	1NO+1NC	-	1NO+1NC		E2 AC-DXBC2227	1NO+1NC	LED	1NO+1NC	E2 AC-DXBC2275	
	1NO+1NC	-	1NO+1NC		E2 AC-DXBC2235	1NO+1NC	LED	1NO+1NC	E2 AC-DXBC2283	
	1NO+1NC	-	1NO+1NC		E2 AC-DXBC2243	1NO+1NC	LED	1NO+1NC	E2 AC-DXBC2291	
	1NO+1NC	-	1NO+1NC		E2 AC-DXBC2251	1NO+1NC	LED	1NO+1NC	E2 AC-DXBC2299	

On request, selector switches can be customized with a knob or a long handle.
On request, knob selector switches can be customized with symbols and inscriptions.
Note: The LED supplied with the illuminated selector switch has a supply voltage of 12 ... 30 Vac/dc. Other voltages on request.

**4D****Key selector switches
E2 SC series**

Protection degrees IP67 and IP69K
Ambient temperature: -25°C ... +80°C
Marks:

Legend

- Maintained
 Spring-return
 Key extraction position



Actuator colour and engraving	Positions	3 positions
		Satin chrome bezel
		E2 1SC3ACE19AA
		E2 1SC3BCE19AA
		E2 1SC3CCE19AA
		E2 1SC3DCE19AA
		E2 1SC3ECE19AA
		E2 1SC3FCE19AA
		E2 1SC3GCE19AA

Actuator colour and engraving	Positions	3 positions
		Satin chrome bezel
		E2 1SC3HCE19AA
		E2 1SC3LCE19AA
		E2 1SC3MCE19AA
		E2 1SC3NCE19AA
		E2 1SC3PCE19AA
		E2 1SC3QCE19AA
		E2 1SC3RCE19AA

Actuator colour and engraving	Positions	2 positions
		Satin chrome bezel
		E2 1SC2AVA19AA
		E2 1SC2BVA19AA
		E2 1SC2CVA19AA
		E2 1SC2DVA19AA
		E2 1SC2ACA19AA
		E2 1SC2BCA19AA
		E2 1SC2DCA19AA

For ordering a selector switch with black bezel replace 9 with 1 in the respective article code. Example:
E2 1SC2AVA19AA → E2 1SC2AVA11AA

The standard colour of the selectors with the codes shown on the side is **BLACK**. Other colours on request. Key selectors switches can be customized with symbols and inscriptions on request. All keys of the selector switches have the PY333 key coding. Other codes on request.

Emergency stop buttons**4E****Emergency stop buttons
E2 PE series**

Protection degrees IP67 and IP69K
Ambient temperature: -25°C ... +80°C
Marks:



Body and actuator colour		Push-pull	Rotary release	Windowed push-pull	Windowed rotary release	Key release, key coding 333
	Red mushroom Yellow body	E2 1PEPZ4531	E2 1PERZ4531	E2 1PEPF4531	E2 1PERF4531	E2 1PEBZ4531
	Red mushroom Yellow body with green indication	E2 1PEPZ4731	E2 1PERZ4731	E2 1PEPF4731	E2 1PERF4731	E2 1PEBZ4731
	Black mushroom Yellow body	E2 1PEPZ4511	E2 1PERZ4511	-	-	E2 1PEBZ4511
	Yellow mushroom Yellow body	E2 1PEPZ4551	E2 1PERZ4551	-	-	-

Labels with shaped hole

Packs of 5 pcs.



Ø 60 mm	VE TF32A5700	VE TF32A5101	VE TF32A5102	VE TF32A5109	VE TF32A5120	VE TF32A5113	VE TF32G5700	VE TF32G5103	VE TF32G5110	VE TF32G5121
Ø 90 mm	VE TF32D5700	VE TF32D5101	VE TF32D5102	VE TF32D5109	VE TF32D5120	VE TF32D5113				

Luminous discs**4F****Luminous discs
VE DL series**

Protection degree IP67
Ambient temperature: -25°C ... +70°C
Marks:

Yellow luminous disc, Ø 60 mm,
without engraving.
Acc. to ISO 13850.



Yellow luminous disc, Ø 60 mm,
with engraving:
Acc. to ISO 13850.









Yellow luminous disc, Ø 60 mm,
with engraving: STOP STOP STOP STOP















Operating voltage	12 Vac/dc	24 Vac/dc	12 Vac/dc	24 Vac/dc	12 Vac/dc	24 Vac/dc
Continuous light	VE DL5A5A00	VE DL1A5A00	VE DL5A5A13	VE DL1A5A13	VE DL5A5A09	VE DL1A5A09
Blinking light	VE DL5A5L00	VE DL1A5L00	VE DL5A5L13	VE DL1A5L13	VE DL5A5L09	VE DL1A5L09
Dual function	VE DL5A5D00	VE DL1A5D00	VE DL5A5D13	VE DL1A5D13	VE DL5A5D09	VE DL1A5D09

4G Indicator lights

Indicator lights E2 IL series

Protection degrees IP67 and IP69K
Ambient temperature: -25°C ... +70°C
Marks:      

					
					
white	red	green	yellow	blue	orange
E2 1ILA210	E2 1ILA310	E2 1ILA410	E2 1ILA510	E2 1ILA610	E2 1ILA810


Monolithic indicator lights E6 IL series

Protection degree IP67
Ambient temperature: -40°C ... +70°C
Marks:      

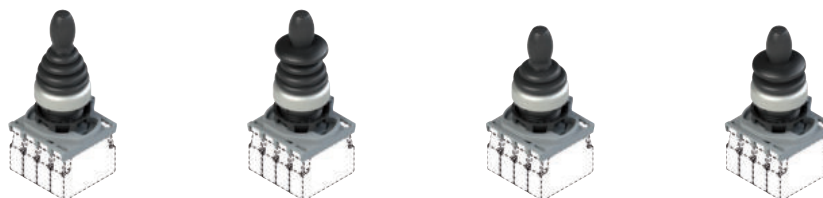
						
Operating voltage						
	white	red	green	yellow	blue	orange
12..30 Vac/dc	E6 1IL1A2110	E6 1IL1A3110	E6 1IL1A4110	E6 1IL1A5110	E6 1IL1A6110	E6 1IL1A8110
120 Vac	E6 1IL3A2110	E6 1IL3A3110	E6 1IL3A4110	E6 1IL3A5110	E6 1IL3A6110	E6 1IL3A8110
230 Vac	E6 1IL4A2110	E6 1IL4A3110	E6 1IL4A4110	E6 1IL4A5110	E6 1IL4A6110	E6 1IL4A8110

4H Joysticks

Joysticks with contacts E2 MA series

Protection degrees IP67 and IP69K
Ambient temperature: -40°C ... +80°C
Marks:     

Legend:
● maintained actuation
▶ spring-return actuation



Functions		Contacts				Standard height (55 mm) without lock	Standard height (55 mm) with lock	Reduced height (45 mm) without lock	Reduced height (45 mm) with lock
		pos. 3	pos. 2	pos. 4	pos. 1	Satin chrome bezel	Satin chrome bezel	Satin chrome bezel	Satin chrome bezel
	UP spring-return, RIGHT spring-return, DOWN spring-return, LEFT spring-return	1NO	1NO	1NO	1NO	E2 AC-DXBC2602	E2 AC-DXBC2604	E2 AC-DXBC2603	E2 AC-DXBC2605
	LEFT spring-return, RIGHT spring-return	1NO			1NO	E2 AC-DXBC2601	E2 AC-DXBC2613	E2 AC-DXBC2618	E2 AC-DXBC2622
	UP spring-return, DOWN spring-return		1NO	1NO		E2 AC-DXBC2600	E2 AC-DXBC2611	E2 AC-DXBC2616	E2 AC-DXBC2620
	UP maintained, RIGHT maintained, DOWN maintained, LEFT maintained	1NO	1NO	1NO	1NO	E2 AC-DXBC2608	E2 AC-DXBC2614	E2 AC-DXBC2609	E2 AC-DXBC2623
	LEFT maintained, RIGHT maintained	1NO			1NO	E2 AC-DXBC2607	E2 AC-DXBC2612	E2 AC-DXBC2617	E2 AC-DXBC2621
	UP maintained, DOWN maintained		1NO	1NO		E2 AC-DXBC2606	E2 AC-DXBC2610	E2 AC-DXBC2615	E2 AC-DXBC2619

Round labels with shaped hole

Rectangular labels with shaped hole





									
VE TF32A9130	VE TF12A1230	VE TF32A9133	VE TF12A1233	VE TF32G9131	VE TF12G1231	VE TF32G9134	VE TF12G1234	VE TF32G9132	VE TF12G1232



USB sockets
E2 USB series

Protection degree IP67
Ambient temperature: -25°C ... +70°C
Marks:    

RJ45 sockets
E2 RJ45 series

Protection degree IP67
Ambient temperature: -25°C ... +70°C
Speed up to 10 Gb/s for Cat. 6
Marks:    

For ordering a socket with black bezel replace 9 with 1 in the respective article code. Example:
E2 1USB9CAK → E2 1USB1CAK

For ordering a USB 3.0 socket replace C with A in the respective article code. Example:
E2 1USB9CAK → E2 1USB1AAK



For ordering a socket with black bezel replace 9 with 1 in the respective article code. Example:
E2 1RJ459AAK → E2 1RJ451AAK







Rear connection	Front connection A-type USB 2.0 integrated socket
A-type USB integrated socket	E2 1USB9CAK
Output with PVC cable, length 0.8 m and A-type USB male connector	E2 1USB9CN0.8
Output with PVC cable, length 1.8 m and A-type USB male connector	E2 1USB9CN1.8
Output with PVC cable, length 3 m and A-type USB male connector	E2 1USB9CN3
Output with PVC cable, length 5 m and A-type USB male connector (available only with USB 2.0 socket)	E2 1USB9CN5

Connection type	Transfer speeds	
	1 Gb/s (for Cat. 5e)	10 Gb/s (for Cat. 6)
Integrated RJ45 socket	E2 1RJ459AAK	E2 1RJ459CAK
Output with PVC cable (length 1 m) and RJ45 male connector	E2 1RJ459AN1	E2 1RJ459CN1
Output with PVC cable (length 1.5 m) and RJ45 male connector	E2 1RJ459AN1.5	E2 1RJ459CN1.5
Output with PVC cable (length 2.5 m) and RJ45 male connector	E2 1RJ459AN2.5	E2 1RJ459CN2.5

Potentiometers

Potentiometers
E6 DM series

Protection degrees IP67 and IP69K
Ambient temperature: -40°C ... +80°C
Potentiometer with Cermet technology
Marks:    

Potentiometer 1 W

Potentiometer 0.5 W Packs of 50 pcs.

For ordering a potentiometer with black bezel replace 9 with 1 in the respective article code. Example:
E6 1DM001K-D119 → E6 1DM001K-D111



For ordering a potentiometer with black bezel replace 9 with 1 in the respective article code. Example:
E6 1DM001K-D319 → E6 1DM001K-D311







Resistance	Max power	Article
1 kΩ	1 W	E6 1DM001K-D119
2.2 kΩ	1 W	E6 1DM02K2-D119
4.7 kΩ	1 W	E6 1DM04K7-D119
10 kΩ	1 W	E6 1DM010K-D119
22 kΩ	1 W	E6 1DM022K-D119
47 kΩ	1 W	E6 1DM047K-D119
100 kΩ	0.9 W	E6 1DM100K-D119
470 kΩ	0.23 W	E6 1DM470K-D119

Resistance	Max power	Article
1 kΩ	0.5 W	E6 1DM001K-D319
2.2 kΩ	0.5 W	E6 1DM02K2-D319
4.7 kΩ	0.5 W	E6 1DM04K7-D319
10 kΩ	0.5 W	E6 1DM010K-D319
22 kΩ	0.5 W	E6 1DM022K-D319
47 kΩ	0.5 W	E6 1DM047K-D319

Buzzers

Buzzers
E6 IS series

Protection degree: IP40 (perforated lens)
IP67 (perforation-free lens)
Ambient temperature: -20°C ... +70°C
Marks:    



Sound type	Supply voltage	Perforated lens	dB	Perforation-free lens	dB
Continuous ◀	12 Vac/dc	E6 1IS5A1CV1B	90	E6 1IS5B1CV1B	75
	24 Vac/dc	E6 1IS6A1CV1B	95	E6 1IS6B1CV1B	80
Pulsing ◀ -	12 Vac/dc	E6 1IS5A1PV1B	90	E6 1IS5B1PV1B	75
	24 Vac/dc	E6 1IS6A1PV1B	95	E6 1IS6B1PV1B	80

**E2 CP/CF series
single contact blocks**











Protection degree IP20
Ambient temperature: -40°C ... +80°C

Positive opening contacts acc. to IEC 60947-5-1

Marks:      

Packs of **10 pcs.**



Contact block	Panel mounting			Base mounting	
	Screw connection	PUSH-IN spring-operated connection	Solder connection	Screw connection	PUSH-IN spring-operated connection
1NC, slow action	E2 CP01G2V1  0 1.1 \ominus 2.1 5	E2 CP01G2M1  0 1.1 \ominus 2.1 5	E2 CP01G2S0  0 1.1 \ominus 2.1 5	E2 CF01G2V1  0 1.1 \ominus 2.1 5	E2 CF01G2M1  0 1.1 \ominus 2.1 5
1NO, slow action	E2 CP10G2V1 0 2.5 5	E2 CP10G2M1 0 2.5 5	E2 CP10G2S0 0 2.5 5	E2 CF10G2V1 0 2.5 5	E2 CF10G2M1 0 2.5 5
1NC, slow action, delayed	E2 CP01K2V1  0 2.5 \ominus 3.5 5	E2 CP01K2M1  0 2.5 \ominus 3.5 5	E2 CP01K2S0  0 2.5 \ominus 3.5 5	E2 CF01K2V1  0 2.5 \ominus 3.5 5	E2 CF01K2M1  0 2.5 \ominus 3.5 5
1NO, slow action, early make	E2 CP10L2V1 0 1.5 5	E2 CP10L2M1 0 1.5 5	E2 CP10L2S0 0 1.5 5	E2 CF10L2V1 0 1.5 5	E2 CF10L2M1 0 1.5 5

**E2 CP/CF series
single self-monitored con-
tact blocks**

Protection degree IP20
Ambient temperature: -40°C ... +80°C

Positive opening contacts acc. to IEC 60947-5-1

Marks:      

Packs of **5 pcs.**



Contact block	Panel mounting Screw connection	Contact block	Base mounting in position 3 Screw connection
Slow action contacts 1NC self-monitored	E2 CP01S2V1  2.3 0.8 0 1.1 \ominus 2.1 5	Slow action contacts 1NC self-monitored	E2 CF01S2V1  2.3 0.8 0 1.1 \ominus 2.1 5

Note: Ideal in safety applications combined with emergency stop buttons E2•PE•••••, they automatically detect any detachment of the contact block from the emergency stop button.

**E2 CP/CF series
double contact blocks**





Protection degree IP20
Ambient temperature: -40°C ... +80°C

Positive opening contacts acc. to IEC 60947-5-1

Marks:      

Packs of **5 pcs.**



Contact block	Panel mounting Screw connection	Contact block	Panel mounting Screw connection
Slow action contacts 1NO+1NC	E2 CP11G2V1  0 2.5 5 1.1 \ominus 2.1	Slow action contacts 1NO+1NC	E2 CF11G2V1  0 2.5 5 1.1 \ominus 2.1
Slow action contacts 2NO	E2 CP20G2V1 0 2.5 5	Slow action contacts 2NO	E2 CF20G2V1 0 2.5 5
Slow action contacts 2NC	E2 CP02G2V1  0 1.1 \ominus 2.1 5	Slow action contacts 2NC	E2 CF02G2V1  0 1.1 \ominus 2.1 5

**E2 LP/LF series
LED units**

Protection degree IP20






Three supply voltages:

12 ... 30 Vac/dc, 120 Vac, 230 Vac

Ambient temperature: -25°C ... +70°C






Marks:

Packs of **5 pcs.**

LED colour	Available device colour	Panel mounting								
		Screw connection			PUSH-IN spring-operated connection			Solder connection		
		Operating voltage								
		12 ... 30 Vac/dc	120 Vac	230 Vac	12 ... 30 Vac/dc	120 Vac	230 Vac	12 ... 30 Vac/dc	120 Vac	230 Vac
 white	white / yellow	E2 LP1A2V1	E2 LP3A2V1	E2 LP4A2V1	E2 LP1A2M1	E2 LP3A2M1	E2 LP4A2M1	E2 LP1A2S0	E2 LP3A2S0	E2 LP4A2S0
 red	red	E2 LP1A3V1	E2 LP3A3V1	E2 LP4A3V1	E2 LP1A3M1	E2 LP3A3M1	E2 LP4A3M1	E2 LP1A3S0	E2 LP3A3S0	E2 LP4A3S0
 green	green	E2 LP1A4V1	E2 LP3A4V1	E2 LP4A4V1	E2 LP1A4M1	E2 LP3A4M1	E2 LP4A4M1	E2 LP1A4S0	E2 LP3A4S0	E2 LP4A4S0
 blue	blue	E2 LP1A6V1	E2 LP3A6V1	E2 LP4A6V1	E2 LP1A6M1	E2 LP3A6M1	E2 LP4A6M1	E2 LP1A6S0	E2 LP3A6S0	E2 LP4A6S0
 orange	orange	E2 LP1A8V1	E2 LP3A8V1	E2 LP4A8V1	E2 LP1A8M1	E2 LP3A8M1	E2 LP4A8M1	E2 LP1A8S0	E2 LP3A8S0	E2 LP4A8S0


We recommend to match the colour combination of the LEDs with the actuator colours.








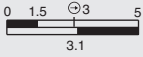

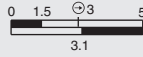

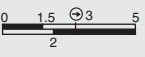

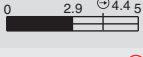

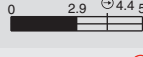

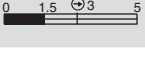




LED colour	Available device colour	Base mounting					
		Screw connection			PUSH-IN spring-operated connection		
		Operating voltage					
		12 ... 30 Vac/dc	120 Vac	230 Vac	12 ... 30 Vac/dc	120 Vac	230 Vac
 white	white / yellow	E2 LF1A2V1	E2 LF3A2V1	E2 LF4A2V1	E2 LF1A2M1	E2 LF3A2M1	E2 LF4A2M1
 red	red	E2 LF1A3V1	E2 LF3A3V1	E2 LF4A3V1	E2 LF1A3M1	E2 LF3A3M1	E2 LF4A3M1
 green	green	E2 LF1A4V1	E2 LF3A4V1	E2 LF4A4V1	E2 LF1A4M1	E2 LF3A4M1	E2 LF4A4M1
 blue	blue	E2 LF1A6V1	E2 LF3A6V1	E2 LF4A6V1	E2 LF1A6M1	E2 LF3A6M1	E2 LF4A6M1
 orange	orange	E2 LF1A8V1	E2 LF3A8V1	E2 LF4A8V1	E2 LF1A8M1	E2 LF3A8M1	E2 LF4A8M1

We recommend to match the colour combination of the LEDs with the actuator colours.

Protected contact blocks
FR, FX, FK series


 Technopolymer housing 
 Protection degree IP67

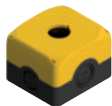
 Ambient temperature: -25°C ... +80°C
 Marks:    


Contact block	One M20 conduit entry	Contact block	Two conduit entries M20	Contact block	One M16 conduit entry
Slow action contacts 1NO+1NC	FR 6E2-M2  	Slow action contacts 1NO+1NC	FX 6E2-M2  	Slow action contacts 1NO+1NC	FK 33E2-M1  
Slow action contacts 2NC	FR 9E2-M2  	Slow action contacts 2NC	FX 9E2-M2  	Slow action contacts 2NC	FK 34E2-M1  
Slow action contacts 1NO+2NC	FR 20E2-M2  	Slow action contacts 1NO+2NC	FX 20E2-M2  		

4P Housings

ES series
housings

 Self-extinguishing polycarbonate housing 
 Protection degrees IP67 and IP69K
 Ambient temperature: -40°C ... +80°C

 4 x side cable entries + 2 x bottom entries
 Marks:   


ES 31001

ES 31000


ES 32000

ES 33000

ES 34000

ES 36000

ES AC series
housings

 Self-extinguishing polycarbonate housing 
 Protection degrees IP67 and IP69K
 Ambient temperature: -25°C ... +70°C

 4 x side cable entries + 2 x bottom entries
 Marks:   


Actuator colour and engraving	Contacts	Flush button Black bezel	Projecting button Black bezel	Positions and engraving	Contacts	Black selector switch with 2 positions Black bezel
 green	Slow action contacts 1NO	ES AC31001	-		Slow action contacts 1NO	ES AC31019
 red	Slow action contacts 1NC	ES AC31002 	ES AC31017 		Slow action contacts 1NO	ES AC31044
 green	Slow action contacts 1NO	ES AC31015	-		Slow action contacts 2NO	ES AC31045
 red	Slow action contacts 1NC	ES AC31016 	ES AC31018 		Slow action contacts 2NO	ES AC31046



Contacts	Push-pull	Rotary release	Key release
Slow action contacts 1NC	ES AC31004 →	ES AC31003 →	ES AC31022 →
Slow action contacts 1NC self-monitored	ES AC31081 →	ES AC31082 →	ES AC31083 →
Slow action contacts 2NC	ES AC31009 →	ES AC31005 →	ES AC31023 →
Slow action contacts 1NO+1NC	ES AC31010 →	ES AC31006 →	ES AC31011 →
Slow action contacts 1NO+2NC	ES AC31146 →	ES AC31021 →	ES AC31024 →



Contacts	Push-pull with protection guard	Rotary release with protection guard	Key release with protection guard
Slow action contacts 1NC	ES AC31054 →	ES AC31238 →	ES AC31606 →
Slow action contacts 1NC self-monitored	ES AC31601 →	ES AC31605 →	ES AC31607 →
Slow action contacts 2NC	ES AC31602 →	ES AC31050 →	ES AC31092 →
Slow action contacts 1NO+1NC	ES AC31603 →	ES AC31056 →	ES AC31608 →
Slow action contacts 1NO+2NC	ES AC31604 →	ES AC31332 →	ES AC31609 →



Contacts	Emergency stop button Push-Pull Yellow luminous disc, blinking Ø 60 mm, 24 Vac/dc, IP67	Emergency stop button, rotary release Yellow luminous disc, blinking Ø 60 mm, 24 Vac/dc, IP67	Emergency stop button, key release Yellow luminous disc, blinking Ø 60 mm, 24 Vac/dc, IP67
Slow action contacts 1NO+1NC + connection block	ES AC31430 →	ES AC31433 →	ES AC31436 →
Slow action contacts 1NO+1NC self-monitored + connection block	ES AC31431 →	ES AC31434 →	ES AC31437 →
Slow action contacts 1NO+2NC + connection block	ES AC31432 →	ES AC31435 →	ES AC31438 →

↑ 1NO ↓ 1NO Upper button flush, white Lower button flush, black	↑ 1NO ↓ 1NC ⊖ Upper button flush, green Lower button projecting, red	↑ 1NO ↓ 1NC ⊖ Upper button flush, green Lower button projecting, red	↑ 1NO ↓ 1NC ⊖ Upper button flush, white Central button projecting, red Lower button flush, black	↑ 1NO ↓ 1NO Upper button flush, white Central button flush, black Lower emergency stop button with illuminated disc, IP67	↑ 1NO ↓ 1NC ⊖ Upper button flush, green Central button projecting, red Lower button flush, green
ES AC31600	ES AC32010	ES AC32011	ES AC33017	ES AC34035	ES AC33016



Positions and engraving	Contacts	Black key selector switch with 2 positions Black bezel
	Slow action contacts 1NO	ES AC31020
	Slow action contacts 2NO	ES AC31047

Legend: Maintained Spring-return Key extraction position

EA series housings

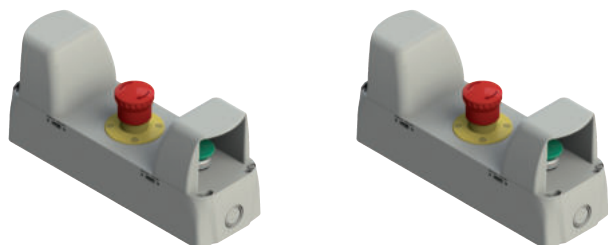
Self-extinguishing polycarbonate housing
 Protection degree IP65
 Ambient temperature: -40°C ... +80°C
 2 x side cable entries + 2 x bottom entries
 Marks:

EA 37014	EA 37010	EA 37015	EA 37011	EA 37012	EA 37013

EA AC series complete housings

Self-extinguishing polycarbonate housing
 Protection degree IP65
 Ambient temperature: -25°C ... +70°C
 2 x side cable entries + 2 x bottom entries
 Marks:

For a correct operation in compliance with standard EN 574, the two-hand controls must be connected to a CS DM••••• safety module for two-hand controls. See page 58.



 1NO Mushroom button	 1NO+1NC Mushroom button
 1NC ⊖ Emergency stop button Ø 40	 2NC ⊖ Emergency stop button Ø 40
 1NO Mushroom button	 1NO+1NC Mushroom button
EA AC37040	EA AC37041

VE GF121A Technopolymer fixing ring. Packs of 20 pcs.	VE GF720A Metal fixing ring. Packs of 20 pcs.	VE CH121A1 Technopolymer fixing key for VE GF fixing rings.	VE GF151A Adapter with ring for panel fixing for Ø 22 devices on Ø 30 holes. Packs of 10 pcs.	VETF12H1700 Black label for laser engraving, without engraving. Packs of 10 pcs.	VETF32H9700 Grey label for laser engraving, without engraving. Packs of 10 pcs.	VETF32H5700 Yellow label for laser engraving, without engraving. Packs of 10 pcs.
VE PT32A00A0 Label holder, for 18x27 mm label, without label. Packs of 10 pcs.	VE TR4A970 Label 18x27, without engraving, for cutter or laser engraving. Packs of 100 pcs.	VE TR3A770 Transparent protective plate 18x27 mm for VE PT label holders, thickness 0.4 mm, without engraving. Packs of 100 pcs.	E2 1BAC11 3-slot mounting adapter for E2 CP contact blocks and E2 LP LED units. Packs of 10 pcs.	E2 1BAC21 4-slot mounting adapter for E2 CP contact blocks. Packs of 10 pcs.	VE BC2PV1 Panel mounting connection block. Packs of 10 pcs.	VE BC2FV1 Connection block for base mounting. Packs of 10 pcs.
VE GP12H1A Shaped ring for single device. Packs of 50 pcs.	VE GP12L1A Shaped ring for double and triple button. Packs of 50 pcs.	VE GP12M1A Shaped ring for quadruple button. Packs of 10 pcs.	VE CA1A1 Protection cap for flush buttons. Packs of 10 pcs.	VE CA1B1 Protection cap for projecting button. Packs of 10 pcs.	VE CA1D1 Protection cap for double flush button. Packs of 10 pcs.	VE CA1C1 Protection cap for double and triple projecting buttons. Packs of 10 pcs.
E2 1TA1A110 Black closing cap for Ø 22 mm holes. Packs of 10 pcs.	VE PR3A70 Transparent dust protection for E2 series panel mounting contact blocks. Packs of 50 pcs.	VE GP32F5A Rectangular open yellow protection guard complete with 4 screws 66x38 mm, 35 mm high.	VE GG3EA7A Lockable protection guard complete with 4 screws (for panel thicknesses between 1 and 3.5 mm)	VE GP32A5A Cylindrical yellow protection guard with 4 windows Ø 40x20 mm.	VE GP32B5A Cylindrical yellow protection guard Ø 43x27 mm.	VE GP32B1A Cylindrical black protection guard Ø 43x27 mm.
VE GP32B4A Cylindrical green protection guard Ø 43x27 mm.	VE GP32B6A Cylindrical blue protection guard Ø 43x27 mm.	VE AD3PF9A0 Support with Ø 22 hole for mounting on DIN rail acc. to EN 60715. Packs of 10 pcs.	VE BD1PV1 Contact block with diode, panel mounting, screw connection.	VE BD1PM1 Contact block with diode, panel mounting, spring-operated connection.	VE BD1FV1 Contact block with diode, base mounting, screw connection.	VE BD1FM1 Contact block with diode, base mounting, spring-operated connection.

FD, FL, FC and FP series safety switches with separate actuator for heavy duty applications

Technopolymer housing (FP)

Metal housing (FD, FL, FC)

Protection degree IP67

Marks:

Slow action contacts 1NO+1NC

Slow action contacts 2NC

Slow action contacts 1NO+2NC

One M20x1.5 conduit entry



FD 693-M2

FD 993-M2

FD 2093-M2

Three M20x1.5 conduit entries



FL 693-M2

FL 993-M2

FL 2093-M2

One M20x1.5 conduit entry



FC 3393-M2

FC 3493-M2

/

One M20x1.5 conduit entry



FP 693-M2

FP 993-M2

FP 2093-M2

Separate actuators



VF KEYF



VF KEYF1



VF KEYF2



VF KEYF3



VF KEYF7



VF KEYF8

Attention! These separate actuators can be used only with items of the FD, FL, FC and FP series.

FR, FX, FK and FW series safety switches with separate actuator for standard applications

Technopolymer housing

Protection degree IP67

Marks:

Slow action contacts 1NO+1NC

Slow action contacts 2NC

Slow action contacts 1NO+2NC

One M20x1.5 conduit entry



FR 693-M2

FR 993-M2

FR 2093-M2

Two conduit entries M20x1.5



FX 693-M2

FX 993-M2

FX 2093-M2

One M16x1.5 conduit entry



FK 3393-M1

FK 3493-M1

/

Two conduit entries M20x1.5



FW 3392-M2

FW 3492-M2

FW 2092-M2

Separate actuators



VF KEYD



VF KEYD1



VF KEYD2



VF KEYD3



VF KEYD5



VF KEYD6



VF KEYD7



VF KEYD8



VF KEYD10



VF KEYD11

Attention! These separate actuators can be used only with items of the FR, FX, FK and FW series.

SR series magnetic safety sensors

Technopolymer housing

With 2 m cable or M8 connector

Protection degrees IP67 and IP69K

Marks:

2NC contacts (with closed guard)

Actuation distance

With M8 connector



SR BD40AN2-B02F

8 mm



SR BD40ALK-B02F

8 mm

With M8 connector



SR AD40AN2-A01N

5 mm



SR AD40ALK-A01N

5 mm



For safety applications, connect with the safety modules shown on the side. See technical data on page 56.

CS AR-01••••^b

CS AR-02••••^b

CS AR-04••••^b

CS AR-05••••

CS AR-06••••

CS AR-08••••

CS AR-46•024

CS AR-91••••

CS AT-0••••

CS AT-1••••

CS AT-3••••

CS FS-5••••

CS MP•••••

CS MF•••••

^b Compatible with modules with production batch later than 06/2014 only.

ST G - ST H series RFID safety sensors

Technopolymer housing
Versions with a magnetic holding force
With 2 m cable or M12 connector
Protection degrees IP67 and IP69K

High level coded actuator (EN ISO 14119)
Multitag programming
Status LED

Supply voltage: 24 Vdc
Marks: **ECOLAB**

Output with PVC cable

Output with PUR cable

Output with M12
technopolymer connector

Output with M12
stainless steel connector

OS safety outputs	O signalling outputs	IS safety inputs	I programming inputs	EDM inputs	Programmable
2	1	-	-	-	-
2	1	2	-	-	-
2	1	2	1	-	●
2	1	2	-	1	-
Actuation distance					



ST GD210N2-G1T
ST GD310N2-G1T
ST GD420N2-G1T
ST GD510N2-G1T

ST GD210H2-G1T
ST GD310H2-G1T
ST GD420H2-G1T
ST GD510H2-G1T

ST GD210MP-G1T
ST GD310MP-G1T
ST GD420MP-G1T
ST GD510MP-G1T

ST GD210MK-G1T
ST GD310MK-G1T
ST GD420MK-G1T
ST GD510MK-G1T

11 mm

11 mm

11 mm

11 mm

Output with 0.2 m cable length and M12 connector

OS safety outputs	O signalling outputs	IS safety inputs	I programming inputs	EDM inputs	Programmable
2	1	-	-	-	-
2	1	2	-	-	-
2	1	2	1	-	●
2	1	2	-	1	-
Actuation distance					



ST GD210M0.2-G1T
ST GD310M0.2-G1T
ST GD420M0.2-G1T
ST GD510M0.2-G1T

11 mm

Output with PVC cable

Output with PUR cable

Output with M12
technopolymer connector

Output with M12
stainless steel connector

OS safety outputs	O signalling outputs	IS safety inputs	I programming inputs	EDM inputs	Programmable
2	1	-	-	-	-
2	1	2	-	-	-
2	1	2	1	-	●
2	1	2	-	1	-
Actuation distance					



ST GD210N2-L1T
ST GD310N2-L1T
ST GD420N2-L1T
ST GD510N2-L1T

ST GD210H2-L1T
ST GD310H2-L1T
ST GD420H2-L1T
ST GD510H2-L1T

ST GD210MP-L1T
ST GD310MP-L1T
ST GD420MP-L1T
ST GD510MP-L1T

ST GD210MK-L1T
ST GD310MK-L1T
ST GD420MK-L1T
ST GD510MK-L1T

11 mm

11 mm

11 mm

11 mm

Output with PVC cable

Output with PUR cable

Output with M12
technopolymer connector

Output with M12
stainless steel connector

OS safety outputs	O signalling outputs	IS safety inputs	I programming inputs	EDM inputs	Programmable
2	1	-	-	-	-
2	1	2	-	-	-
2	1	2	1	-	●
2	1	2	-	1	-
Actuation distance					



ST GD210N2-E1T
ST GD310N2-E1T
ST GD420N2-E1T
ST GD510N2-E1T

ST GD210H2-E1T
ST GD310H2-E1T
ST GD420H2-E1T
ST GD510H2-E1T

ST GD210MP-E1T
ST GD310MP-E1T
ST GD420MP-E1T
ST GD510MP-E1T

ST GD210MK-E1T
ST GD310MK-E1T
ST GD420MK-E1T
ST GD510MK-E1T

18 mm

18 mm

18 mm

18 mm



For safety applications,
connect with the safety
modules shown on the side.
See technical data on page
56.

CS AR-05●●●● CS MF●●●●
CS AR-06●●●● CS MP●●●●
CS AR-08●●●●
CS AT-0●●●●
CS AT-1●●●●



With permanent magnet

OS safety outputs	signalling outputs O	IS safety inputs	programming inputs I	EDM inputs	Programmable
2	1	-	-	-	-
2	1	2	-	-	-
2	1	2	1	-	●
2	1	2	-	1	-
Actuation distance					

Holding force 25 N



Holding force 40 N



ST HE210MP-H1TE	ST HE210MP-H1TF
ST HE310MP-H1TE	ST HE310MP-H1TF
ST HE420MP-H1TE	ST HE420MP-H1TF
ST HE510MP-H1TE	ST HE510MP-H1TF
11 mm	11 mm



Extended temperature range

OS safety outputs	signalling outputs O	IS safety inputs	programming inputs I	EDM inputs	Programmable
2	1	2	1	-	●
Actuation distance					

Output with M12 stainless steel connector



ST GD420MK-G1T-T8
11 mm

Output with M12 stainless steel connector
With permanent magnet
Holding force 25 N

ST HE420MK-H1TE-T8
11 mm

Output with M12 stainless steel connector
With permanent magnet
Holding force 40 N

ST HE420MK-H1TF-T8
11 mm

Multitag programming

OS safety outputs	signalling outputs O	IS safety inputs	programming inputs I	EDM inputs	Programmable
2	1	2	-	-	-
Actuation distance					

Two actuators
TAG 0 activates OS,
TAG 1 activates O

ST GD330MP-P1
11 mm

Two actuators Each TAG
activates OS and sends the TAG no.

ST GD330MP-P2
11 mm

Three actuators Each TAG
activates OS and sends the TAG no.

ST GD330MP-P3
11 mm

Four actuators Each TAG
activates OS and sends the TAG no.

ST GD330MP-P4
11 mm

ST D series
RFID safety sensors

Technopolymer housing
With 2 m cable or M12 connector
High level coded actuator (EN ISO 14119)
Protection degrees IP67 and IP69K

Status LED

Supply voltage: 24 Vdc

Marks: CE cUL US 10A ENEC ECOLAB UK CA

Cable at the right



ST DD210N2-D1T
ST DD310N2-D1T
ST DD420N2-D1T
ST DD510N2-D1T
12 mm

Cable at the left



ST DL210N2-D1T
ST DL310N2-D1T
ST DL420N2-D1T
ST DL510N2-D1T
12 mm

M12 connector, at the right



ST DD210MK-D1T
ST DD310MK-D1T
ST DD420MK-D1T
ST DD510MK-D1T
12 mm

M12 connector, at the left



ST DL210MK-D1T
ST DL310MK-D1T
ST DL420MK-D1T
ST DL510MK-D1T
12 mm



For safety applications,
connect with the safety
modules shown on the side.
See technical data on page
56.

CS AR-05●●●● CS MF●●●●
CS AR-06●●●● CS MP●●●●
CS AR-08●●●●
CS AT-0●●●●
CS AT-1●●●●

HP AA series hinge switches

Metal housing
With 2 m cable or M12 connector
Protection degrees IP67 and IP69K
Marks:

Slow action contacts 1NO+2NC



HP AB series hinge switches

Metal housing
With 2 m cable or M12 connector
Protection degrees IP67 and IP69K
Marks:

Slow action contacts 1NO+2NC



HX series hinge switches

AISI 316L stainless steel housing
With 2 m cable or M12 connector
Protection degrees IP67 and IP69K
Marks:

Slow action contacts 2NO+2NC



HX series electronic hinge switches

AISI 316L stainless steel housing
With 2 m cable or M12 connector
Protection degrees IP67 and IP69K
Status LED
Supply voltage: 24 Vdc
Marks:

PNP switching outputs



For safety applications, the HX series electronic hinge switches must be connected to modules with OSSD inputs. Shown on the side are the compatible Pizzato modules.
See technical data on page 56.

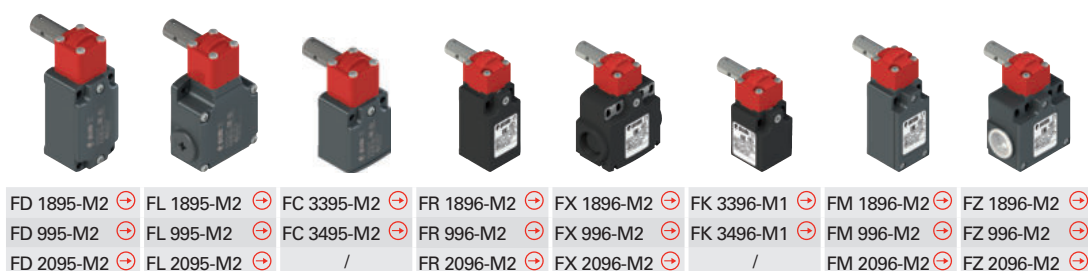
Switches for hinges FD, FL and FC series FR, FX, FK, FM and FZ series

Technopolymer housing or metal housing
One, two or three conduit entries
Protection degree IP67
Marks:

Slow action contacts 1NO+1NC

Slow action contacts 2NC

Slow action contacts 1NO+2NC



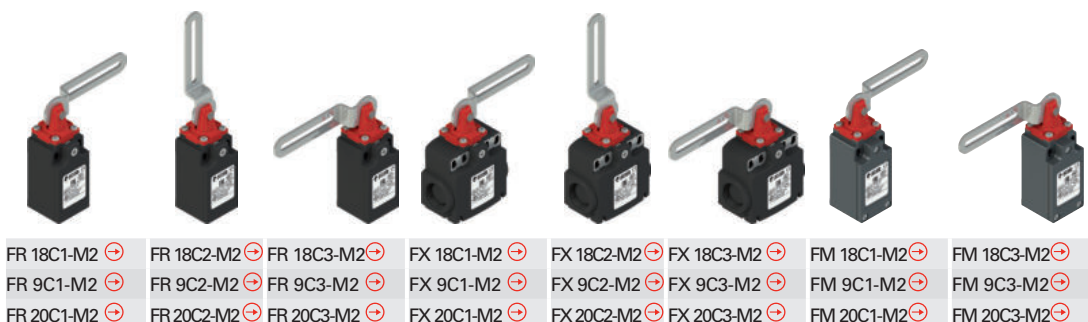
FR, FX, FM series switches with slotted hole lever

Technopolymer housing or metal housing
One or two conduit entries M20x1.5
Protection degree IP67
Marks:








Slow action contacts 1NO+1NC

Slow action contacts 2NC

Slow action contacts 1NO+2NC






**FS series
locking switches**

Technopolymer housing 
 Three M20x1.5 conduit entries
 Max. holding force: 1100 N
 (with key release): 900 N
 Protection degree IP67
 Marks:      

1NO+1NC contacts (magnet)
 1NO+2NC contacts (magnet)
 1NO+1NC contacts (magnet) +1NC (actuator)




Locked actuator with
de-energised 24 Vac/dc
solenoid.



FS 1896D024-M2 
 FS 2096D024-M2 
 FS 2896D024-M2 




Locked actuator with
de-energised 24 Vac/dc
solenoid. With auxiliary
key release.










FS 1898D024-M2 
 FS 2098D024-M2 
 FS 2898D024-M2 

Locked actuator with
energised 24 Vac/dc
solenoid.



FS 1896E024-M2 
 FS 2096E024-M2 
 FS 2896E024-M2 




**FD, FP series
locking switches**

Technopolymer housing (FP) 
 Metal housing (FD)
 One M20x1.5 conduit entry
 Max. holding force: 1000 N
 Protection degree IP67
 Marks:      

Slow action contacts 1NO+1NC
 Slow action contacts 2NC
 Slow action contacts 1NO+2NC




With timed (20 s) manual
actuator **lock/release**



FD 6R2-M2 
 FD 9R2-M2 
 FD 20R2-M2 




With timed (20 s) manual
actuator **lock/release**



FP 6R2-M2 
 FP 9R2-M2 
 FP 20R2-M2 



With timed (10 s) manual
actuator **lock/release**



FD 6R2-L10M2 
 FD 9R2-L10M2 
 FD 20R2-L10M2 



With **key release**



FD 1899-M2 
 /
 FD 2099-M2 

With **key release**



FP 1899-M2 
 /
 FP 2099-M2 

Separate actuators for FD, FP, FS series

VF KEYF



VF KEYF1



VF KEYF2



VF KEYF3



VF KEYF7



VF KEYF8

Attention! These separate actuators cannot be used with items of the FG, FY series.

Lock out device

Padlockable lock out device to prevent the actuator entry and the accidental closing of the door behind operators while they are in the danger area.

Article	Description
VF KB1	Lock out device for FD, FP, FS series
VF KB2	Lock out device for FG, FY series





FG series locking switches

Metal housing
4 switching contacts
Max. holding force: 3000 N
Protection degree IP67
Status LED
Three M20x1.5 conduit entries
Marks:

Locked actuator with
de-energised 24 Vac/dc
solenoid.



FG 60AD1D0A

Locked actuator with
energised 24 Vac/dc
solenoid.



FG 60AD1E0A

Locked actuator with
de-energised 24 Vac/dc
solenoid.
With key release.



FG 60AD5D0A

Locked actuator with
de-energised 24 Vac/dc
solenoid.
With key release and
escape release button.



FG 60AD6D0A

Locked actuator with
de-energised 24 Vac/dc
solenoid.
With escape release
button.



FG 60AD7D0A

1NO+1NC contacts (magnet) + 1NO+1NC (actuator)

2NC contacts (magnet) + 1NO+1NC (actuator)

3NC contacts (magnet) + 1NC (actuator)

FG 60BD1D0A

FG 60BD1E0A

FG 60BD5D0A

FG 60BD6D0A

FG 60BD7D0A

FG 60CD1D0A

FG 60CD1E0A

FG 60CD5D0A

FG 60CD6D0A

FG 60CD7D0A

FY series locking switches

Technopolymer housing
4 switching contacts
Max. holding force: 2800 N
Protection degrees IP67 and IP69K
Status LED
Three M20x1.5 conduit entries
Marks:

Locked actuator with
de-energised 24 Vac/dc
solenoid.



FY 60AD1D0A

Locked actuator with
energised 24 Vac/dc
solenoid.



FY 60AD1E0A

Locked actuator with
de-energised 24 Vac/dc
solenoid.
With key release.



FY 60AD5D0A

Locked actuator with
de-energised 24 Vac/dc
solenoid.
With key release and
escape release button.



FY 60AD6D0A

Locked actuator with
de-energised 24 Vac/dc
solenoid.
With escape release
button.



FY 60AD7D0A

1NO+1NC contacts (magnet) + 1NO+1NC (actuator)

2NC contacts (magnet) + 1NO+1NC (actuator)

3NC contacts (magnet) + 1NC (actuator)

FY 60BD1D0A

FY 60BD1E0A

FY 60BD5D0A

FY 60BD6D0A

FY 60BD7D0A

FY 60CD1D0A

FY 60CD1E0A

FY 60CD5D0A

FY 60CD6D0A

FY 60CD7D0A

FY series locking switches with integrated control devices

Technopolymer housing
4 switching contacts
Max. holding force: 2800 N
Protection degree IP65
Status LED
Three M20x1.5 conduit entries
Marks:

Locked actuator with
de-energised 24 Vac/dc
solenoid.



FY 60AD1D0A-N01

Locked actuator with
energised 24 Vac/dc
solenoid.



FY 60AD1E0A-N03

Locked actuator with
de-energised 24 Vac/dc
solenoid.
With key release.



FY 60AD5D0A-N06

Locked actuator with
de-energised 24 Vac/dc
solenoid.
With key release and
escape release button.



FY 60AD6D0A-N07

Locked actuator with
de-energised 24 Vac/dc
solenoid.
With escape release
button.



FY 60AD7D0A-N10

1NO+1NC contacts (magnet) + 1NO+1NC (actuator)

2NC contacts (magnet) + 1NO+1NC (actuator)

3NC contacts (magnet) + 1NC (actuator)

FY 60BD1D0A-N01

FY 60BD1E0A-N03

FY 60BD5D0A-N06

FY 60BD6D0A-N07

FY 60BD7D0A-N10

FY 60CD1D0A-N01

FY 60CD1E0A-N03

FY 60CD5D0A-N06

FY 60CD6D0A-N07

FY 60CD7D0A-N10

Separate actuators for FG, FY series



VF KEYF20



VF KEYF21









VF KEYF22



VF KEYF28

Attention! These separate actuators cannot be used with items of the FD, FR, FS series.

RFID safety switches with lock NG series

Metal housing, three M20x1.5 conduit entries
High level coded actuator (EN ISO 14119)
Max. holding force: 9750 N
Protection degrees IP67 and IP69K
Status LED
Marks:      

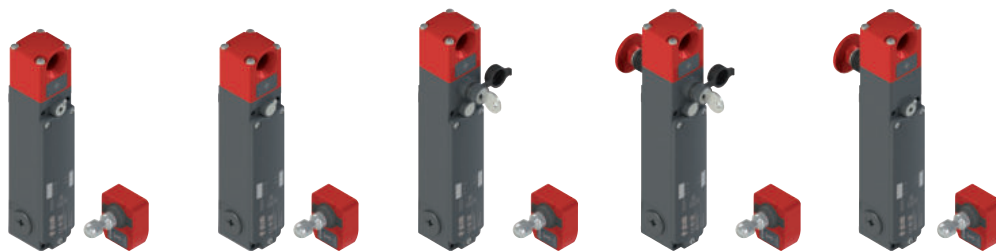
Locked actuator with **de-energised 24 Vdc solenoid.**

Locked actuator with **energised 24 Vdc solenoid.**

Locked actuator with **de-energised 24 Vdc solenoid.**
With key release.

Locked actuator with **de-energised 24 Vdc solenoid.**
With key release and escape release button.

Locked actuator with **de-energised 24 Vdc solenoid.**
With escape release button.



Mode 1

OS1/OS2 safety outputs active with inserted and locked actuator

Mode 2

OS1/OS2 safety outputs active with inserted actuator

Mode 3

OS1 safety output active with inserted and locked actuator, OS2 safety output active with inserted actuator

NG 2D1D411A-F31

NG 2D1E411A-F31

NG 2D5D411A-F31

NG 2D6D411A-F31

NG 2D7D411A-F31

NG 2D1D421A-F31

NG 2D1E421A-F31

NG 2D5D421A-F31

NG 2D6D421A-F31

NG 2D7D421A-F31

NG 2D1D431A-F31







NG 2D1E431A-F31

NG 2D5D431A-F31

NG 2D6D431A-F31

NG 2D7D431A-F31

RFID safety switches with lock NG series with integrated control devices

Metal housing, three M20x1.5 conduit entries
High level coded actuator (EN ISO 14119)
Max. holding force: 9750 N
Protection degree IP65
Status LED
Marks:      

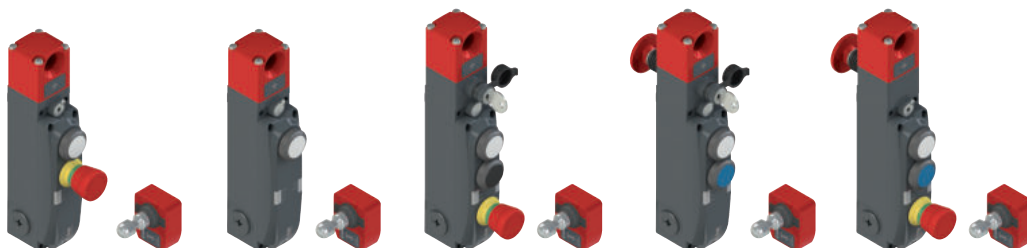
Locked actuator with **de-energised 24 Vdc solenoid.**

Locked actuator with **energised 24 Vdc solenoid.**

Locked actuator with **de-energised 24 Vdc solenoid.**
With key release.

Locked actuator with **de-energised 24 Vdc solenoid.**
With key release and escape release button.

Locked actuator with **de-energised 24 Vdc solenoid.**
With escape release button.



Mode 1

OS1/OS2 safety outputs active with inserted and locked actuator

NG 2D1D412D-F31







NG 2D1E411H-F31

NG 2D5D411D-F31

NG 2D6D412P-F31

NG 2D7D412V-F31

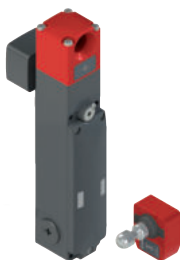
RFID safety switches with lock NG series with remote escape release

Self-monitoring of cable tension
Device can be turned in 90° steps
Flexible installation
Activation button for remote escape release
Marks:      

Note: The codes shown on the side include the safety switch supplied with the remote release cable which has a standard length of 5 meters.
For other lengths, please contact our Technical Department.

The remote escape release switch must be supplemented with the push button with the code VN RR-K4.

Locked actuator with **de-energised 24 Vdc solenoid.**
With remote escape release.



NG 2D9D411A-F31

NG 2D9D421A-F31

NG 2D9D431A-F31

Mode 1

OS1/OS2 safety outputs active with inserted and locked actuator

Mode 2

OS1/OS2 safety outputs active with inserted actuator

Mode 3

OS1 safety output active with inserted and locked actuator, OS2 safety output active with inserted actuator

Activation button for remote escape release

Article	Description
VN RR-K4	Activation button for remote escape release on NG and NS series switches

Note: The actuation cable is integrated in the remote release device connected to the safety switch.

Inputs and outputs

2 safety inputs IS1, IS2
2 safety outputs OS1, OS2
1 signalling output O3: closed guard
1 signalling output O4: locked guard
1 solenoid activation input I4
1 programming / reset input I3



For safety applications, connect with the safety modules shown on the side. See technical data on page 56.

CS AR-05•••••
CS AR-06•••••
CS AR-08•••••
CS AT-0•••••
CS AT-1•••••
CS MP•••••
CS MF•••••



RFID safety switches with lock NS series

Technopolymer housing

High level coded actuator (EN ISO 14119)

Max. holding force: 2100 N

Protection degrees IP67 and IP69K

Status LED

Marks:

Locked actuator with **de-energised** 24Vdc solenoid.
With screwdriver release.

Locked actuator with **de-energised** 24Vdc solenoid.
With key release.

Locked actuator with **de-energised** 24Vdc solenoid.
With key release and escape
release button.

Locked actuator with **de-energised** 24Vdc solenoid.
With screwdriver release and
escape release button.

Locked actuator with **energised** 24Vdc solenoid.
With escape release button.



With M12 connector, axial

Mode 1

OS1/OS2 safety outputs active with inserted and locked actuator

Mode 2

OS1/OS2 safety outputs active with inserted actuator

Mode 3

OS1 safety output active with inserted and locked actuator, OS2 safety output active with inserted actuator

NS D4AZ1SMK-F41

NS D4ST1SMK-F41

NS D4SE1SMK-F41

NS D4CE1SMK-F41

NS E4TE1SMK-F41

NS G4AZ1SMK-F41

NS G4ST1SMK-F41

NS G4SE1SMK-F41

NS G4CE1SMK-F41

NS H4TE1SMK-F41

NS L4AZ1SMK-F41

NS L4ST1SMK-F41

NS L4SE1SMK-F41

NS L4CE1SMK-F41

NS M4TE1SMK-F41

Locked actuator with **de-energised** 24Vdc solenoid.
With screwdriver release.

Locked actuator with **de-energised** 24Vdc solenoid.
With key release.

Locked actuator with **de-energised** 24Vdc solenoid.
With key release and escape
release button.

Locked actuator with **de-energised** 24Vdc solenoid.
With screwdriver release and
escape release button.

Locked actuator with **energised** 24Vdc solenoid.
With escape release button.



With axial cable, 0.2 m length
and M12 connector

Mode 1

OS1/OS2 safety outputs active with inserted and locked actuator

Mode 2

OS1/OS2 safety outputs active with inserted actuator

Mode 3

OS1 safety output active with inserted and locked actuator, OS2 safety output active with inserted actuator

NS D4AZ1SM0.2-F41

NS D4ST1SM0.2-F41

NS D4SE1SM0.2-F41

NS D4CE1SM0.2-F41

NS E4TE1SM0.2-F41

NS G4AZ1SM0.2-F41

NS G4ST1SM0.2-F41

NS G4SE1SM0.2-F41

NS G4CE1SM0.2-F41

NS H4TE1SM0.2-F41

NS L4AZ1SM0.2-F41

NS L4ST1SM0.2-F41

NS L4SE1SM0.2-F41

NS L4CE1SM0.2-F41

NS M4TE1SM0.2-F41

To order a product with lateral output direction, replace S with D in the codes shown above.
Example: NS D4AZ1SM0.2-F41 → NS D4AZ1DM0.2-F41

RFID safety switches with lock NS series with integrated control devices

Technopolymer housing

High level coded actuator (EN ISO 14119)

Max. holding force: 2100 N

Protection degree IP65

Versions with 1 or 2 devices

Status LED

Marks:

Locked actuator with **de-energised** 24Vdc solenoid.
With key release.

Locked actuator with **de-energised** 24Vdc solenoid.
With screwdriver release.

Locked actuator with **de-energised** 24Vdc solenoid.
With key release and escape
release button.

Locked actuator with **de-energised** 24Vdc solenoid.
With screwdriver release and
escape release button.

Locked actuator with **energised** 24Vdc solenoid.
With escape release button.

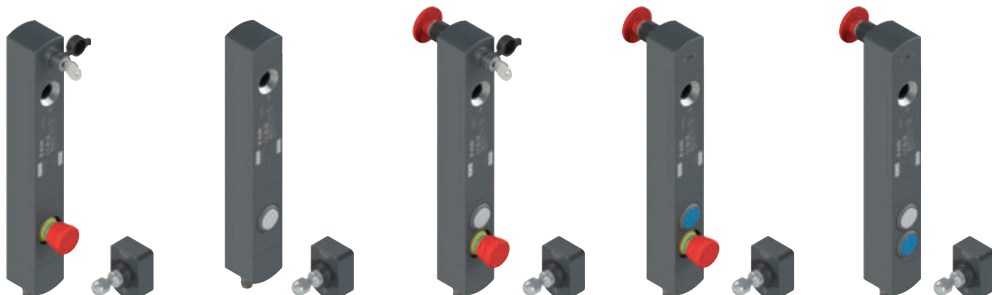
Two M12 connectors, axial.

Two M12 connectors, axial.

Two M12 connectors, axial.

Two M12 connectors, axial.

Two M12 connectors, axial.



Mode 1

OS1/OS2 safety outputs active with inserted and locked actuator

Mode 2

OS1/OS2 safety outputs active with inserted actuator

Mode 3

OS1 safety output active with inserted and locked actuator, OS2 safety output active with inserted actuator

NS D4AZ1SRK-F41N110

NS D4ST1SRK-F41N111

NS D4SE1STK-F41N113

NS D4CE1SRK-F41N114

NS E4TE1SRK-F41N115

NS G4AZ1SRK-F41N110

NS G4ST1SRK-F41N111

NS G4SE1STK-F41N113

NS G4CE1SRK-F41N114

NS H4TE1SRK-F41N115

NS L4AZ1SRK-F41N110

NS L4ST1SRK-F41N111

NS L4SE1STK-F41N113

NS L4CE1SRK-F41N114

NS M4TE1SRK-F41N115

RFID safety switches with lock NS series with integrated control devices

Technopolymer housing

High level coded actuator (EN ISO 14119)

Max. holding force: 2100 N

Protection degree IP65

Versions with 3 or 4 devices

Status LED

Marks:      

Locked actuator with **de-energised** 24Vdc solenoid.
With screwdriver release.

Two M12 connectors, axial.



Locked actuator with **de-energised** 24Vdc solenoid.
With key release.

Two M12 connectors, axial.



Locked actuator with **de-energised** 24Vdc solenoid.
With key release and escape release button.

M23 connector, axial.



Locked actuator with **de-energised** 24Vdc solenoid.
With screwdriver release and escape release button.

Two M12 connectors, axial.



Locked actuator with **energised** 24Vdc solenoid.
With escape release button.

Two M12 connectors, axial.



Mode 1

OS1/OS2 safety outputs active with inserted and locked actuator

Mode 2

OS1/OS2 safety outputs active with inserted actuator

Mode 3

OS1 safety output active with inserted and locked actuator, OS2 safety output active with inserted actuator

NS D4AZ1SRK-F41N001

NS D4ST1SRK-F41N002

NS D4SE1STK-F41N003

NS D4CE1SRK-F41N004

NS E4TE1SRK-F41N005

NS G4AZ1SRK-F41N001

NS G4ST1SRK-F41N002

NS G4SE1STK-F41N003

NS G4CE1SRK-F41N004

NS H4TE1SRK-F41N005

NS L4AZ1SRK-F41N001

NS L4ST1SRK-F41N002

NS L4SE1STK-F41N003

NS L4CE1SRK-F41N004

NS M4TE1SRK-F41N005

RFID safety switches with lock NS series with remote escape release

Self-monitoring of cable tension

Device can be turned in 90° steps

Flexible installation

Activation button for remote escape release

Marks:      

Note: The codes shown on the side include the safety switch supplied with the remote release cable which has a standard length of 5 meters.
For other lengths, please contact our Technical Department.

The remote escape release switch must be supplemented with the push button with the code VN RR-K4.

Locked actuator with **de-energised** 24Vdc solenoid.
With key release and remote escape release.



Locked actuator with **de-energised** 24Vdc solenoid.
With screwdriver release and remote escape release.



NS D4SR1SMK-F41

NS D4CR1SMK-F41

NS G4SR1SMK-F41

NS G4CR1SMK-F41

NS L4SR1SMK-F41

NS L4CR1SMK-F41

Activation button for remote escape release



Article

Description

VN RR-K4

Activation button for remote escape release on NG and NS series switches

Note: The actuation cable is integrated in the remote release device connected to the safety switch.

Inputs and outputs

2 safety inputs IS1, IS2

2 safety outputs OS1, OS2

1 signalling output O3: closed guard

1 signalling output O4: locked guard

2 solenoid activation inputs IE1, IE2

1 programming / reset input I3







For safety applications, connect with the safety modules shown on the side. See technical data on page 56.









CS AR-05●●●●
CS AR-06●●●●
CS AR-08●●●●
CS AT-0●●●●●
CS AT-1●●●●●
CS MP●●●●●
CS MF●●●●●









BN series
control device units

Technopolymer housing
Adjustable mounting holes
Versions with 1, 2, 3, 4, 6, 7 or 8 devices

Protection degree IP65
Supply voltage: 24 Vdc
Marks:   



1 device M12 connector 5-pole	1 device M12 connector 5-pole	1 device M12 connector 5-pole	1 device M12 connector 5-pole	2 devices M12 connector 8-pole	2 devices M12 connector 8-pole	2 devices M12 connector 8-pole	2 devices M12 connector 8-pole
							
BN AC1ZA01	BN AC1ZA02	BN AC1ZA03	BN AC1ZA12	BN AC2ZA01	BN AC2ZA02	BN AC2ZA03	BN AC2ZA26

3 devices M12 connector, 12-pole	3 devices M12 connector, 12-pole	3 devices M12 connector, 12-pole	3 devices M12 connector, 12-pole	4 devices M12 connector, 12-pole	4 devices M12 connector, 12-pole	4 devices M23 connector, 12-pole	4 devices M12 connector, 12-pole
							
BN AC3ZA01	BN AC3ZA02	BN AC3ZA03	BN AC3ZB59	BN AC4ZA01	BN AC4ZA02	BN AC4ZA03	BN AC4ZB19

6 devices 2x M12 connector, 12-pole	6 devices M23 connector, 19-pole	6 devices 2x M12 connector, 12-pole	7 devices 2x M12 connector, 12-pole	7 devices 2x M12 connector, 12-pole	8 devices 2x M12 connector, 12-pole
					
BN AC6ZA01	BN AC6ZA02	BN AC6ZA40	BN AC7ZA01	BN AC7ZA07	BN AC8ZA01

P-KUBE 1 safety handles

Can be used with switches from the FD, FG and FY series

Self-centring metal pin

Integrated padlockable lock out device

Thanks to the slotted brackets the handle can be adjusted on 3 different axes

Suitable for use with hinged and sliding doors, either with right or left closing

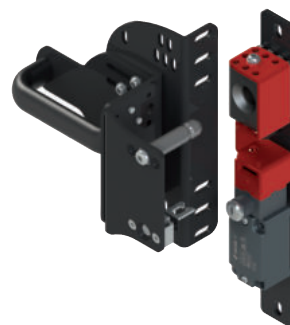
Switch and actuator not included in scope of delivery

For FG, FY series switches



VF AP-P11B-200P

For FD series switches



VF AP-P11A-200P

P-KUBE 2 safety handles

Can be used with switches from the NG series

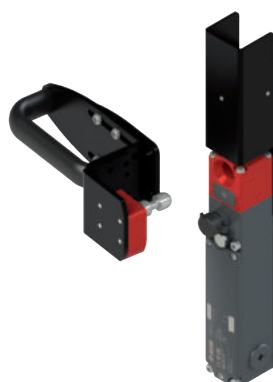
Thanks to the slotted brackets the handle can be adjusted on 3 different axes

Suitable for use with hinged and sliding doors, either with right or left closing

Optional lock out device

Switch and actuator not included in scope of delivery

With lock out device



AP G1A-111P



AP G0B-111P

P-KUBE Fast safety handles

Can be used with switches from the FD, FG and FY series

Compact, lightweight solution

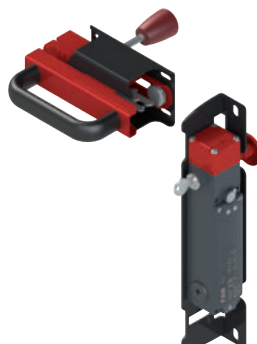
Internal lever for emergency escape

Integrated padlockable lock out device

Suitable for use with hinged and sliding doors, either with right or left closing

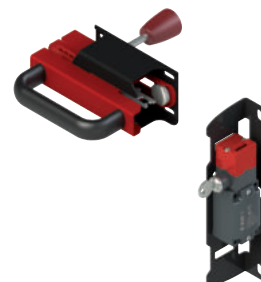
Switch not included in scope of delivery

For FG, FY series switches



VF AP-S13BP-300

For FD series switches



VF AP-S13AP-301

P-KUBE Super safety handles

Can be used with switches from the NG series

Suitable for use in particularly demanding work environments

Dual centring pin

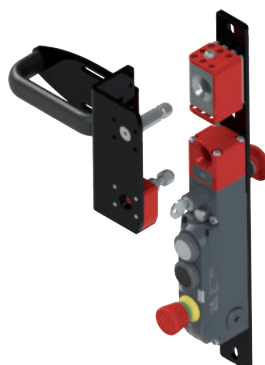
Integrated padlockable lock out device

Thanks to the slotted brackets the handle can be adjusted on 3 different axes

Suitable for use with hinged and sliding doors, either with right or left closing

Switch and actuator not included in scope of delivery

For NG series switches



AP G2C-800P



P-KUBE Krome safety handles

Can be used with switches from the NS and NG series
Technopolymer grip

Satin chrome and illuminated white finishes

Control button integrated into grip

Grip illumination with RGB LED

Internal metal fixing plates

Suitable for use with hinged and sliding doors, either with right or left closing, same individual product code.

Supply voltage 24 Vdc

Protection degree IP65

Optional lock out device

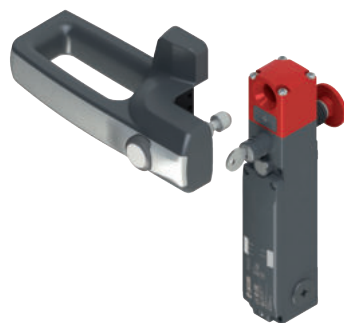
Switch and actuator not included in scope of delivery

Marks:    

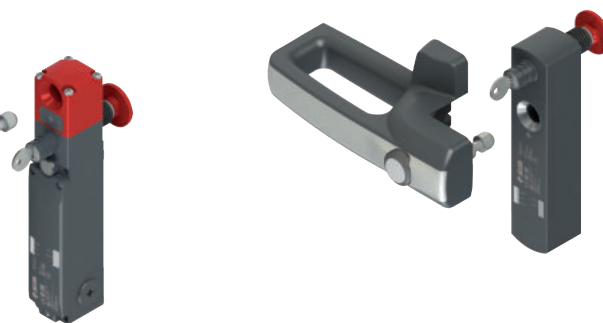
Connection cable not necessary



Without control device



With satin chrome grip, for NS series switches



With satin chrome grip, for NG series switches



AN S9A000A



AN G9A000A

With satin chrome grip, for NS series switches

With satin chrome grip, for NG series switches

With illuminated grip (white), for NS series switches

With illuminated grip (white), for NG series switches



With 3 m long PVC cable



Without control device



With spring-return button, 1NO, white, illuminated



With spring-return button, 1NO, red, illuminated



With spring-return button, 1NO, green, illuminated



With spring-return button, 1NO, yellow, illuminated



With spring-return button, 1NO, blue, illuminated



With spring-return button, 1NO, black, non-illuminated

/

/

AN S1B000A-PN3

AN G1B000A-PN3

AN S9A001A-PN3

AN G9A001A-PN3

AN S1B001A-PN3

AN G1B001A-PN3

AN S9A002A-PN3

AN G9A002A-PN3

AN S1B002A-PN3

AN G1B002A-PN3

AN S9A003A-PN3

AN G9A003A-PN3

AN S1B003A-PN3

AN G1B003A-PN3

AN S9A004A-PN3

AN G9A004A-PN3

AN S1B004A-PN3

AN G1B004A-PN3

AN S9A005A-PN3

AN G9A005A-PN3

AN S1B005A-PN3

AN G1B005A-PN3

AN S9A008A-PN3

AN G9A008A-PN3

AN S1B008A-PN3

AN G1B008A-PN3

With satin chrome grip, for NS series switches

With satin chrome grip, for NG series switches

With illuminated grip (white), for NS series switches

With illuminated grip (white), for NG series switches



With 0.15 m long PVC cable and M12 connector



Without control device



With spring-return button, 1NO, white, illuminated



With spring-return button, 1NO, red, illuminated



With spring-return button, 1NO, green, illuminated



With spring-return button, 1NO, yellow, illuminated



With spring-return button, 1NO, blue, illuminated



With spring-return button, 1NO, black, non-illuminated

/

/

AN S1B000A-PM0.2

AN G1B000A-PM0.2

AN S9A001A-PM0.2

AN G9A001A-PM0.2

AN S1B001A-PM0.2

AN G1B001A-PM0.2

AN S9A002A-PM0.2

AN G9A002A-PM0.2

AN S1B002A-PM0.2

AN G1B002A-PM0.2

AN S9A003A-PM0.2

AN G9A003A-PM0.2

AN S1B003A-PM0.2

AN G1B003A-PM0.2

AN S9A004A-PM0.2

AN G9A004A-PM0.2

AN S1B004A-PM0.2

AN G1B004A-PM0.2

AN S9A005A-PM0.2

AN G9A005A-PM0.2

AN S1B005A-PM0.2

AN G1B005A-PM0.2

AN S9A008A-PM0.2

AN G9A008A-PM0.2

AN S1B008A-PM0.2

AN G1B008A-PM0.2

P-KUBE Smart safety handles

Usable with ST series RFID safety sensors

Possibility of application with horizontal or vertical handle

Satin chrome and illuminated white finishes

Control button integrated into grip

Grip illumination with RGB LED

Direct fixing on the grip or through solid inner plate

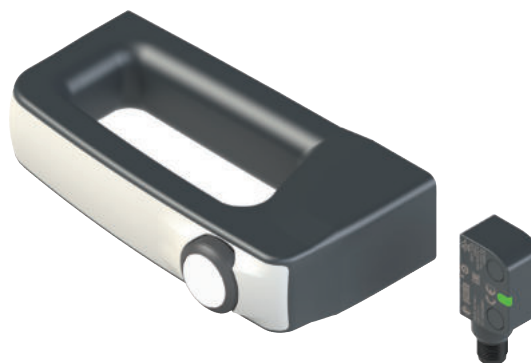
Suitable for use with hinged and sliding doors, either right or left closing, same individual product code

Supply voltage 24 Vdc

Protection degree IP65

ST series sensor not included

Marks:    



With satin chrome grip with fixing on internal metal plate



ANT9A000A1

With satin chrome grip with fixing on the grip



ANT9A100A1

With satin chrome grip with fixing on internal metal plate



/

With satin chrome grip with fixing on the grip



/

With illuminated white grip with fixing on the internal metal plate



ANT1B000A1-PN3

With illuminated white grip with fixing on the grip



ANT1B100A1-PN3

With RFID at a high level of coding for ST series sensors.
Connection cable not necessary



Without control device

With 3 m long PVC cable and RFID at a high level of coding for ST series sensors



Without control device



With spring-return button, 1NO, white, illuminated

ANT9A001A1-PN3

ANT9A101A1-PN3

ANT1B001A1-PN3

ANT1B101A1-PN3



With spring-return button, 1NO, red, illuminated

ANT9A002A1-PN3

ANT9A102A1-PN3

ANT1B002A1-PN3

ANT1B102A1-PN3



With spring-return button, 1NO, green, illuminated

ANT9A003A1-PN3

ANT9A103A1-PN3

ANT1B003A1-PN3

ANT1B103A1-PN3



With spring-return button, 1NO, yellow, illuminated

ANT9A004A1-PN3

ANT9A104A1-PN3

ANT1B004A1-PN3

ANT1B104A1-PN3



With spring-return button, 1NO, blue, illuminated

ANT9A005A1-PN3

ANT9A105A1-PN3

ANT1B005A1-PN3

ANT1B105A1-PN3



With spring-return button, 1NO, black, non-illuminated

ANT9A008A1-PN3

ANT9A108A1-PN3

ANT1B008A1-PN3

ANT1B108A1-PN3

With satin chrome grip with fixing on internal metal plate



/

With satin chrome grip with fixing on the grip



/

With illuminated white grip with fixing on the internal metal plate



ANT1B000A1-PM0.2

With illuminated white grip with fixing on the grip



ANT1B100A1-PM0.2

With 0.15 m long PVC cable and M12 connector and RFID at a high level of coding for ST series sensors



Without control device

ANT9A001A1-PM0.2

ANT9A101A1-PM0.2

ANT1B001A1-PM0.2

ANT1B101A1-PM0.2



With spring-return button, 1NO, red, illuminated

ANT9A002A1-PM0.2

ANT9A102A1-PM0.2

ANT1B002A1-PM0.2

ANT1B102A1-PM0.2



With spring-return button, 1NO, green, illuminated

ANT9A003A1-PM0.2

ANT9A103A1-PM0.2

ANT1B003A1-PM0.2

ANT1B103A1-PM0.2



With spring-return button, 1NO, yellow, illuminated

ANT9A004A1-PM0.2

ANT9A104A1-PM0.2

ANT1B004A1-PM0.2

ANT1B104A1-PM0.2



With spring-return button, 1NO, blue, illuminated

ANT9A005A1-PM0.2

ANT9A105A1-PM0.2

ANT1B005A1-PM0.2

ANT1B105A1-PM0.2



With spring-return button, 1NO, black, non-illuminated

ANT9A008A1-PM0.2

ANT9A108A1-PM0.2

ANT1B008A1-PM0.2

ANT1B108A1-PM0.2



Lock out devices

Can be used with switches from the NS and NG series

Made entirely of metal

Prevents unexpected start-up of the machine

Mechanical and RFID signal shielding of actuator

Compatible with P-KUBE 2 and P-KUBE Krome safety handles

For NS series switches,
mounting on the left side of the switch



LK S1S001

For NS series switches,
mounting on the right side of the switch



LK S1D001

For NG series switches



AP G1Z-000Z

Rope switches for emergency stop FD, FL, FC and FP series

Technopolymer housing or metal housing

One or three conduit entries

Protection degree IP67

Marks:

1NO+1NC contacts

2NC contacts

1NO+2NC contacts

Longitudinal
head



Longitudinal
head



Longitudinal
head



Longitudinal
head



Left transversal
head



Right transversal
head



Left transversal
head



Right transversal
head



FD 1878-M2 FL 1878-M2 FC 3378-M2 FP 1878-M2

FD 978-M2 FL 978-M2 FC 3478-M2 FP 978-M2

FD 2078-M2 FL 2078-M2 / FP 2078-M2

FD 1883-M2 FD 1884-M2 FL 1883-M2 FL 1884-M2

FD 983-M2 FD 984-M2 FL 983-M2 FL 984-M2

FD 2083-M2 FD 2084-M2 FL 2083-M2 FL 2084-M2

FD, FL, FC and FP series rope switches for simple stop

Technopolymer housing or metal housing

One or three conduit entries

Protection degree IP67

Marks:

1NO+1NC contacts

2NC contacts

1NO+2NC contacts

Longitudinal
head



Longitudinal
head



Longitudinal
head



Longitudinal
head



Right transversal
head



Right transversal
head



FD 1879-M2 FL 1879-M2 FC 3379-M2 FP 1879-M2

FD 979-M2 FL 979-M2 FC 3479-M2 FP 979-M2

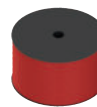
FD 2079-M2 FL 2079-M2 / FP 2079-M2

FD 1880-M2 FL 1880-M2

FD 980-M2 FL 980-M2

FD 2080-M2 FL 2080-M2

Accessories for rope installation



VF AF-TR5

VF AF-TR8

VF AF-MR5

VF AF-TR2X

VF T870

VF AF-ME78

VF AF-ME80

VF F05-100

VF AF-IF1GR11

VF AF-CA5

VF AF-CA10

Adjustable stay
bolt

Stay bolt

End clamp

Adjustable stay
bolt in stainless
steel

Stay bolt

Safety spring
for longitudinal
heads

Safety spring
for transversal
heads

Rope Ø 5 mm.
Spool with
100 m

Rope function
indicator

Stainless steel
pulley

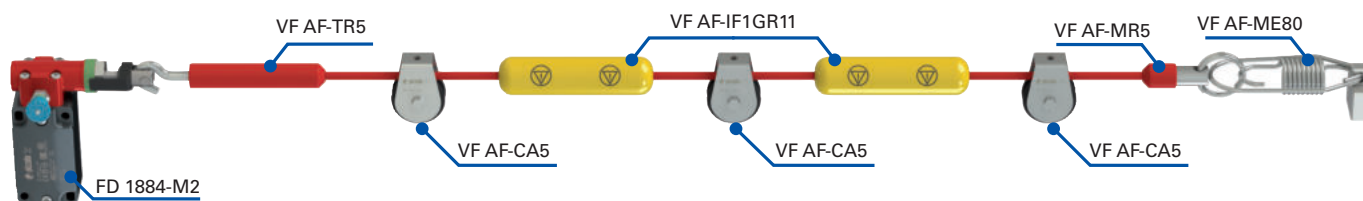
Angular pulley,
stainless steel

Accessory sets for rope installation - FAST line



Article	Set content	
VF AF-KT10M0	1x VF AF-TR5 1x VF AF-MR5 1x VF F05-010	10 m
VF AF-KT20M0	1x VF AF-TR5 1x VF AF-MR5 1x VF F05-020	20 m
VF AF-KT35M0	1x VF AF-TR5 1x VF AF-MR5 1x VF F05-035	35 m

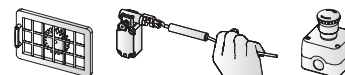
Application example





The clear objectives in the development of the CS series safety modules were safety and reliability. The design, development and production of these products have been approached with the passion for quality that characterises Pizzato Elettrica. During the design phase, the components were deliberately oversized and the circuit diagrams were verified by third-party and independent bodies. Quality was the underlying factor for choosing the components. Basic elements, such as the relays with forcibly guided contacts, were chosen from leading manufacturers. The production process, done entirely in-house by Pizzato Elettrica, is controlled by a functional check of 100% of all products. Every single part produced is tested in a computerized testing station that, only if the product passes all the electrical tests, prints the label of the safety module, identified by a precise serial number. Particular attention has been paid to the connection type. Here, the customer can choose between fixed terminals, a removable connector, screw connections or spring connections. Additionally, the product range includes different supply voltages with wide tolerances of the nominal values, so as to be compatible for use in less industrialized countries as well.

Safety modules for emergency stops and end position monitoring for movable guards



6A

Product code	Supply voltage	Output contacts instantaneous	For applications up to			Start		Input types ⑦				Connection type ④			Housing dimensions (mm)
			PL	SIL	Saf. cat.	autom. & manual	monitored	⚡	⚡	⚡	⚡	V	M	X	
CS AR-01V024	24 Vac/dc	2NO+1NC	e	3	4	■	■	■	-	⑧	-	■	■	■	22,5 x 114
CS AR-01V120	120 Vac	2NO+1NC	e	3	4	■	■	■	-	⑧	-	■	■	■	22,5 x 114
CS AR-01V230	230 Vac	2NO+1NC	e	3	4	■	■	■	-	⑧	-	■	■	■	22,5 x 114
CS AR-01VE02	10 ... 30 Vdc	2NO+1NC	e	3	4	■	■	■	-	■	-	■	■	■	22,5 x 114
CS AR-02V024	24 Vac/dc	3NO	e	3	4	■	■	■	-	⑧	-	■	■	■	22,5 x 114
CS AR-02V120	120 Vac	3NO	e	3	4	■	■	■	-	⑧	-	■	■	■	22,5 x 114
CS AR-02V230	230 Vac	3NO	e	3	4	■	■	■	-	⑧	-	■	■	■	22,5 x 114
CS AR-02VE02	10 ... 30 Vdc	3NO	e	3	4	■	■	■	-	■	-	■	■	■	22,5 x 114
CS AR-04V024	24 Vac/dc	3NO+1NC	e	3	4	■	■	■	-	■	-	■	■	■	22,5 x 114
CS AR-04V120	120 Vac	3NO+1NC	e	3	4	■	■	■	-	⑧	-	■	■	■	22,5 x 114
CS AR-04V230	230 Vac	3NO+1NC	e	3	4	■	■	■	-	⑧	-	■	■	■	22,5 x 114
CS AR-05V024	24 Vac/dc	3NO+1NC	e	3	4	■	-	■	■	■	-	■	■	■	22,5 x 114
CS AR-05V120	120 Vac	3NO+1NC	e	3	4	■	-	■	■	■	-	■	■	■	22,5 x 114
CS AR-05V230	230 Vac	3NO+1NC	e	3	4	■	-	■	■	■	-	■	■	■	22,5 x 114
CS AR-06V024	24 Vac/dc	3NO+1NC	e	3	4	-	■	■	■	■	-	■	■	■	22,5 x 114
CS AR-06V120	120 Vac	3NO+1NC	e	3	4	-	■	■	■	■	-	■	■	■	22,5 x 114
CS AR-06V230	230 Vac	3NO+1NC	e	3	4	-	■	■	■	■	-	■	■	■	22,5 x 114
CS AR-07M024	24 Vac/dc	4NO+1NC	e	3	4	■	■	■	-	-	-	-	■	■	22,5 x 149
CS AR-08VU12	12 Vdc	2NO	e	3	4	■	■	■	■	■	-	■	■	■	22,5 x 114
CS AR-08V024	24 Vac/dc	2NO	e	3	4	■	■	■	■	■	-	■	■	■	22,5 x 114
CS AR-08V120	120 Vac	2NO	e	3	4	■	■	■	■	■	-	■	■	■	22,5 x 114
CS AR-08V230	230 Vac	2NO	e	3	4	■	■	■	■	■	-	■	■	■	22,5 x 114
CS AR-20V024	24 Vac/dc	2NO	e	3	3	■	-	■	-	-	-	■	■	■	22,5 x 114
CS AR-20V120	120 Vac	2NO	e	3	3	■	-	■	-	-	-	■	■	■	22,5 x 114
CS AR-20V230	230 Vac	2NO	e	3	3	■	-	■	-	-	-	■	■	■	22,5 x 114
CS AR-21V024	24 Vac/dc	2NO	e	3	3	-	■	■	-	-	-	■	■	■	22,5 x 114
CS AR-21V120	120 Vac	2NO	e	3	3	-	■	■	-	-	-	■	■	■	22,5 x 114
CS AR-21V230	230 Vac	2NO	e	3	3	-	■	■	-	-	-	■	■	■	22,5 x 114
CS AR-22V024	24 Vac/dc	3NO+1NC	e	3	3	■	-	■	-	-	-	■	■	■	22,5 x 114
CS AR-22V120	120 Vac	3NO+1NC	e	3	3	■	-	■	-	-	-	■	■	■	22,5 x 114
CS AR-22V230	230 Vac	3NO+1NC	e	3	3	■	-	■	-	-	-	■	■	■	22,5 x 114
CS AR-23V024	24 Vac/dc	3NO+1NC	e	3	3	-	■	■	-	-	-	■	■	■	22,5 x 114
CS AR-23V120	120 Vac	3NO+1NC	e	3	3	-	■	■	-	-	-	■	■	■	22,5 x 114
CS AR-23V230	230 Vac	3NO+1NC	e	3	3	-	■	■	-	-	-	■	■	■	22,5 x 114
CS AR-24V024	24 Vac/dc	4NO+1NC	e	3	3	■	-	■	-	-	-	■	■	■	22,5 x 114
CS AR-25V024	24 Vac/dc	4NO+1NC	e	3	3	-	■	■	-	-	-	■	■	■	22,5 x 114
CS AR-40V024	24 Vac/dc	2NO	d	2	2	■	-	■	-	-	-	■	■	■	22,5 x 91
CS AR-41V024	24 Vac/dc	2NO	d	2	2	-	■	■	-	-	-	■	■	■	22,5 x 91
CS AR-46V024	24 Vac/dc	1NO	c	1	1	■	-	■	-	■	-	■	■	■	22,5 x 91
CS AR-91V024	24 Vac/dc	2NO+1PNP	e	3	4	■	■	■	-	■	-	■	■	■	22,5 x 114

⑧ Modules compatible with SR••••• series magnetic safety sensors from 06/2014.

Code structure

CS AR-01V024

Connection type		Supply voltage	
V	Screw terminals	024	24 Vac/dc
M	Connector with screw terminals	120	120 Vac
X	Connector with spring terminals	230	230 Vac
		E02	10 ... 30 Vdc



V screw terminals



M Removable connector with screw terminals



X Removable connector with spring terminals

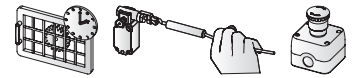
6B Safety modules for 4-wire safety mats and safety bumpers



Product code	Supply voltage	Instantaneous output contacts	For applications up to			Start		Input types ⑦				Connection type ④			Housing dimensions (mm)
			PL	SIL	Saf. cat.	autom. & manual	monitored					V	M	X	
CS AR-51V024	24 Vac/dc	2NO	e	3	4	■	■	■	-	-	■	■	■	■	22,5 x 114

6C

Safety modules for emergency stops and end position monitoring for movable guards with delayed contacts



Product code	Supply voltage	Output contacts		For applications up to			Start		Input types ⑦				Connection type ④			Housing dimensions (mm)
		instantaneous	delayed	PL	SIL	Saf. cat.	autom. & manual	monitored					V	M	X	
CS AT-0③V024	24 Vac/dc	2NO+1NC	2NO	e	3	4 (②)	■	■	■	■	■	-	■	■	■	45 x 114
CS AT-0③V120	120 Vac	2NO+1NC	2NO	e	3	4 (②)	■	■	■	■	■	-	■	■	■	45 x 114
CS AT-0③V230	230 Vac	2NO+1NC	2NO	e	3	4 (②)	■	■	■	■	■	-	■	■	■	45 x 114
CS AT-1③V024	24 Vac/dc	3NO	2NO	e	3	4 (②)	■	■	■	■	■	-	■	■	■	45 x 114
CS AT-1③V120	120 Vac	3NO	2NO	e	3	4 (②)	■	■	■	■	■	-	■	■	■	45 x 114
CS AT-1③V230	230 Vac	3NO	2NO	e	3	4 (②)	■	■	■	■	■	-	■	■	■	45 x 114
CS AT-3③V024	24 Vac/dc	2NO	1NO	e	3	4 (②)	■	■	■	-	■	-	■	■	■	45 x 114

6D

Safety timer modules



Product code	Supply voltage	Function	Output contacts delayed	For applications up to			Start		Input types ⑦				Connection type ④			Housing dimensions (mm)
				PL	SIL	Saf. cat.	autom. & manual	monitored					V	M	X	
CS FS-1③V024	24 Vac/dc	delay on	1NO+2NC	①	①	①	-	-	■	-	-	-	■	■	■	45 x 114
CS FS-1③V120	120 Vac	delay on	1NO+2NC	①	①	①	-	-	■	-	-	-	■	■	■	45 x 114
CS FS-1③V230	230 Vac	delay on	1NO+2NC	①	①	①	-	-	■	-	-	-	■	■	■	45 x 114
CS FS-2③VU24	24 Vdc	delay on	1NO+1NC+1CO	d	2	3	-	-	■	-	-	-	■	■	■	45 x 114
CS FS-2③V120	120 Vac	delay on	1NO+1NC+1CO	d	2	3	-	-	■	-	-	-	■	■	■	45 x 114
CS FS-3③VU24	24 Vdc	delay off	1NO+1NC+1CO	d	2	3	-	-	■	-	-	-	■	■	■	45 x 114
CS FS-3③V120	120 Vac	delay off	1NO+1NC+1CO	d	2	3	-	-	■	-	-	-	■	■	■	45 x 114
CS FS-5③VU24	24 Vdc	delay off	1NO+1NC+1CO	d	2	3	■	-	■	-	■	-	■	■	■	45 x 114
CS FS-5③V120	120 Vac	delay off	1NO+1NC+1CO	d	2	3	■	-	■	-	■	-	■	■	■	45 x 114

Legend

- Available for this article
 - Not available for this article
 ① Depending on the base module
 ② Category 4 for instantaneous contacts, category 3 for delayed contacts

- ③ Release times for delayed contacts
 0 Fixed time
 1 adjustable, 0.3 ... 3 s, 0.3 s steps
 2 adjustable, 1 ... 10 s, 1 s steps
 3 adjustable, 3 ... 30 s, 3 s steps
 4 adjustable, 30 ... 300 s, 30 s steps

- ④ Connection type
 V Screw terminals
 M Connector with screw terminals
 X Connector with spring terminals

- ⑤ Release time in absence of power supply
 TF0.5 0.5 s fixed time
 TF1 1 s fixed time
 TF2 2 s fixed time
 TF3 3 s fixed time

- ⑥ Release time in absence of power supply
 TF1 1 s fixed time

 TF12 12 s fixed time

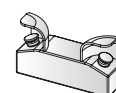
- ⑦ Input type
 Electromechanical contacts
 ESPE with PNP outputs
 magnetic safety sensors
 4-wire safety mats and safety bumpers

Quality marks:





Safety modules for two-hand controls or synchronism monitoring



6E

Product code	Supply voltage	Output contacts instantaneous	Safety category	Start		Input types ⑦				Connection type ④			Housing dimensions (mm)
				autom. & manual	monitored					V	M	X	
CS DM-01V024	24 Vac/dc	3NO+1NC	IIIC (EN 574)	-	-	■	-	-	-	■	■	■	22,5 x 114
CS DM-01V120	120 Vac	3NO+1NC	IIIC (EN 574)	-	-	■	-	-	-	■	■	■	22,5 x 114
CS DM-01V230	230 Vac	3NO+1NC	IIIC (EN 574)	-	-	■	-	-	-	■	■	■	22,5 x 114
CS DM-02V024	24 Vac/dc	2NO	IIIC (EN 574)	-	-	■	-	-	-	■	■	■	22,5 x 114
CS DM-02V120	120 Vac	2NO	IIIC (EN 574)	-	-	■	-	-	-	■	■	■	22,5 x 114
CS DM-02V230	230 Vac	2NO	IIIC (EN 574)	-	-	■	-	-	-	■	■	■	22,5 x 114
CS DM-20V024	24 Vac/dc	2NO	IIIA (EN 574)	-	-	■	-	-	-	■	■	■	22,5 x 114
CS DM-20V120	120 Vac	2NO	IIIA (EN 574)	-	-	■	-	-	-	■	■	■	22,5 x 114
CS DM-20V230	230 Vac	2NO	IIIA (EN 574)	-	-	■	-	-	-	■	■	■	22,5 x 114

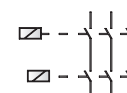
Safety modules for motor standstill monitoring



6F

Product code	Supply voltage	Output contacts instantaneous	For applications up to			Start		Input types ⑦				Connection type ④			Housing dimensions (mm)
			PL	SIL	Saf. cat.	autom. & manual	monitored					V	M	X	
CS AM-01VE01	24 ... 230 Vac/dc	2NO+1NC	d	2	3	-	-	-	-	-	-	■	■	■	45 x 114

Expansion modules with instantaneous contacts or delayed contacts at de-energizing



6G

Product code	Supply voltage	Output contacts			For applications up to			Delay time upon de-energizing	Input types ⑦				Connection type ④			Housing dimensions (mm)
		instantaneous	delayed	feedback	PL	SIL	Saf. cat.						V	M	X	
CS ME-01V024	24 Vac/dc	5NO+1NC	-	1NC	①	①	①	-	■	-	-	-	■	■	■	22,5 x 114
CS ME-02VU24	24 Vdc	4NO+2NC	-	1NC	①	①	①	-	■	-	-	-	■	■	■	22,5 x 114
CS ME-03VU24	24 Vdc	3NO	-	1NC	①	①	①	-	■	■	-	-	■	■	■	22,5 x 91
CS ME-20VU24-TF⑤	24 Vdc	-	4NO+2NC	1NC	①	①	①	up to 3 s (fix)	■	-	-	-	■	■	■	22,5 x 114
CS ME-31VU24-TS12	24 Vdc	-	4NO+2NC	1NC	①	①	①	1 ... 12 s (adjustable)	■	-	-	-	■	■	■	45 x 114

Code structure

CS AR-01V024

Connection type		Supply voltage	
V	Screw terminals	024	24 Vac/dc
M	Connector with screw terminals	120	120 Vac
X	Connector with spring terminals	230	230 Vac



V screw terminals



M Removable connector with screw terminals



X Removable connector with spring terminals

- Available for this article
- ① Not available for this article
- ② Depending on the base module
- ③ Category 4 for instantaneous contacts, Category 3 for delayed contacts

- ③ Release times for delayed contacts
- 0 Fixed time
- 1 adjustable, 0.3 ... 3 s, 0.3 s steps
- 2 adjustable, 1 ... 10 s, 1 s steps
- 3 adjustable, 3 ... 30 s, 3 s steps
- 4 adjustable, 30 ... 300 s, 30 s steps

- ④ Connection type
- V Screw terminals
- M Connector with screw terminals
- X Connector with spring terminals

- ⑤ Release time in absence of power supply
- TF0.5 0.5 s fixed time
- TF1 1 s fixed time
- TF2 2 s fixed time
- TF3 3 s fixed time

- ⑥ Release time in absence of power supply
- TF1 1 s fixed time
-
- TF12 12 s fixed time

- ⑦ Input type
- Electromechanical contacts
- ESPE with PNP outputs
- Magnetic safety sensors
- 4-wire safety mats and safety bumpers

Quality marks:




GEMNIS
Quality marks:


The CS MP series programmable safety modules are the result of Pizzato Elettrica's long experience in the machine safety sector. A CS MP series module is a programmable safety device, which allows several safety functions to be carried out simultaneously. This product series has been developed for manufacturers of machines with a low to average number of safety functions. As an indication, these modules can manage applications which are equivalent to the functions carried out by 3 to 4 traditional electromechanical safety modules, up to circuits with dozens of inputs.

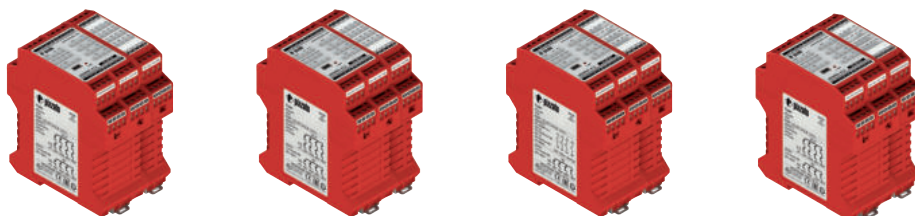
The **Gemnis Studio** program is a graphic development environment for the creation, simulation and debugging of programs that are uploaded to the corresponding modules of the Gemnis family. **This software is licensed free of charge to users wishing to program these modules, subject to prior registration at www.gemnis.com**



Article	CS MP201M0	CS MP202M0	CS MP203M0	CS MP204M0	CS MP205M0
Dimensions (H x W x D)	111.5 x 45 x 99 mm	111.5 x 45 x 99 mm	111.5 x 45 x 99 mm	111.5 x 45 x 99 mm	111.5 x 45 x 99 mm
Safety inputs (Ix)	8	16	12	12	4
Decoupled digital inputs (Jx)	/	/	/	/	4
Inputs for 4-20 mA analogue signals (Cx)	/	/	/	/	/
Inputs for frequency signals from 0 to 4 kHz (speed monitor) (Fx)	/	/	/	/	4
Test outputs (Tx)	8	4	4	4	4
Semiconductor signalling output circuits (Ox)	4	4	4	4	4
Semiconductor safety output circuits (OSx)	/	4PNP	/	/	4PNP
Safety relay circuits	3NO	/	3NO+1NO	3NO	/



Article	CS MP206M0	CS MP207M0	CS MP208M0	CS MP301M0
Dimensions (H x W x D)	111.5 x 45 x 99 mm	111.5 x 45 x 99 mm	111.5 x 45 x 99 mm	111.5 x 67.5 x 99 mm
Safety inputs (Ix)	8	4	16	24
Decoupled digital inputs (Jx)	/	/	/	/
Inputs for 4-20 mA analogue signals (Cx)	/	2	/	/
Inputs for frequency signals from 0 to 4 kHz (speed monitor) (Fx)	/	/	/	/
Test outputs (Tx)	4	4	4	8
Semiconductor signalling output circuits (Ox)	12	4	/	4
Semiconductor safety output circuits (OSx)	4PNP	4PNP	8PNP	/
Safety relay circuits	/	/	/	3NO



Article	CS MP302M0	CS MP303M0	CS MP304M0	CS MP305M0
Dimensions (H x W x D)	111.5 x 67.5 x 99 mm	111.5 x 67.5 x 99 mm	111.5 x 67.5 x 99 mm	111.5 x 67.5 x 99 mm
Safety inputs (Ix)	24	32	28	24
Decoupled digital inputs (Jx)	/	/	/	/
Inputs for 4-20 mA analogue signals (Cx)	/	/	/	/
Inputs for frequency signals from 0 to 4 kHz (speed monitor) (Fx)	/	/	/	/
Test outputs (Tx)	12	4	4	4
Semiconductor signalling output circuits (Ox)	4	4	4	12
Semiconductor safety output circuits (OSx)	4PNP	4PNP	/	4PNP
Safety relay circuits	/	/	3NO+1NO	/



Article	CS MP306M0	CS MP307M0	CS MP308M0	CS MP309M0
Dimensions (H x W x D)	111.5 x 67.5 x 99 mm	111.5 x 67.5 x 99 mm	111.5 x 67.5 x 99 mm	111.5 x 67.5 x 99 mm
Safety inputs (Ix)	20	8	24	32
Decoupled digital inputs (Jx)	/	4	/	/
Inputs for 4-20 mA analogue signals (Cx)	/	2	/	/
Inputs for frequency signals from 0 to 4 kHz (speed monitor) (Fx)	/	4	/	/
Test outputs (Tx)	4	4	4	4
Semiconductor signalling output circuits (Ox)	12	4	8	/
Semiconductor safety output circuits (OSx)	/	4PNP	8PNP	8PNP
Safety relay circuits	3NO+1NO	/	/	/



Article	CS MP310M0	CS MP311M0	CS MP312M0	CS MP401M0
Dimensions (H x W x D)	111.5 x 67.5 x 99 mm	111.5 x 67.5 x 99 mm	111.5 x 67.5 x 99 mm	111.5 x 90 x 99 mm
Safety inputs (Ix)	8	20	16	40
Decoupled digital inputs (Jx)	8	/	4	/
Inputs for 4-20 mA analogue signals (Cx)	/	2	/	/
Inputs for frequency signals from 0 to 4 kHz (speed monitor) (Fx)	8	/	4	/
Test outputs (Tx)	4	4	8	4
Semiconductor signalling output circuits (Ox)	4	4	/	12
Semiconductor safety output circuits (OSx)	4PNP	4PNP	8PNP	4PNP
Safety relay circuits	/	/	/	/



Article	CS MP402M0	CS MP403M0	CS MP406M0
Dimensions (H x W x D)	111.5 x 90 x 99 mm	111.5 x 90 x 99 mm	111.5 x 90 x 99 mm
Safety inputs (Ix)	32	40	32
Decoupled digital inputs (Jx)	/	/	/
Inputs for 4-20 mA analogue signals (Cx)	/	/	/
Inputs for frequency signals from 0 to 4 kHz (speed monitor) (Fx)	/	/	/
Test outputs (Tx)	12	4	4
Semiconductor signalling output circuits (Ox)	8	8	20
Semiconductor safety output circuits (OSx)	8PNP	8PNP	4PNP
Safety relay circuits	/	/	/

For the latest news visit the website www.gemnis.com



An increasing number of users requires products which carry out several safety functions without needing the complex management of a safety PLC or the complex wiring of many traditional safety modules. Such problems arise mainly when the safety functions are typically greater than 3 or 4, or when managing a safety PLC software (software purchase, training courses, programming of all modules, software management and filing, updates etc.) turns out to be too great an overhead in relation to problem complexity. With the CS MF series of Gemnis, Pizzato Elettrica offers a series of electronic modules which are pre-programmed for specific customer applications or for generic safety macro-functions commonly used in industrial contexts.

The General Catalogue Safety (available from www.pizzato.com) lists some of the pre-programmed products for generic macro-functions commonly used in the industrial sector. These products are available for individual purchase. Any customer requiring a product pre-programmed to their particular specification can contact the Pizzato Elettrica technical department (minimum volumes are requested). All Gemnis series products are able to provide circuit solutions at SIL 3 (EN 62061), PL e (EN 13849) or category 4 (EN 954-1) levels.

CS MF201M0-P●●

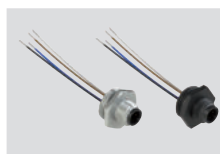
Hardware code	Program code
●●● Hardware code	P●● Program code

Quality marks:



Connection type	Supply voltage
M Connector with screw terminals	0 24 Vdc

M8 - M12 connectors



M12 male connectors for panel mounting
Protection degrees IP67 and IP69K.
PG 13.5 or M20x1.5 thread on the device side.
Gold-plated contacts.

	Article	Description
Threads M20x1.5	VF CNM4MM	M12 connector, 4-pole, metal
	VF CNM5MM	M12 connector, 5-pole, metal
	VF CNM8MM	M12 connector, 8-pole, metal
	VF CNM12MM-L16	M12 connector, 12-pole, metal
	VF CNP4MM	M12 connector, 4-pole, plastic
	VF CNP5MM	M12 connector, 5-pole, plastic
	VF CNP8MM	M12 connector, 8-pole, plastic
Threads PG 13.5	VF CNM4PM	M12 connector, 4-pole, metal
	VF CNM5PM	M12 connector, 5-pole, metal
	VF CNM8PM	M12 connector, 8-pole, metal
	VF CNP4PM	M12 connector, 4-pole, plastic
	VF CNP5PM	M12 connector, 5-pole, plastic



Field wireable M12 female connectors
Technopolymer connector body.
Gold-plated contacts.
Screw terminals for cable screw fittings.
Protection degree IP67.

Article	Description
VF CBMP4DM04	Field wireable M12 female connector, 4-pole, straight, for Ø 4 ... 6.5 mm multipolar cables
VF CBMP5DM04	Field wireable M12 female connector, 5-pole, straight, for Ø 4 ... 6.5 mm multipolar cables
VF CBMP8DM04	Field wireable M12 female connector, 8-pole, straight, for Ø 4 ... 7 mm multipolar cables



M8 and M12 female connectors with cable
Protection degrees IP67 and IP69K.
Self-locking ring nut.
Gold-plated contacts.

	Article	Description
PVC cable	VF CA4PD3K	M8 connector, 4-pole, straight, length 3 m
	VF CA4PD5K	M8 connector, 4-pole, straight, length 5 m
	VF CA4PD3M	M12 connector, 4-pole, straight, length 3 m
	VF CA4PD5M	M12 connector, 4-pole, straight, length 5 m
	VF CA4PD10M	M12 connector, 4-pole, straight, length 10 m
	VF CA5PD3M	M12 connector, 5-pole, straight, length 3 m
	VF CA5PD5M	M12 connector, 5-pole, straight, length 5 m
	VF CA5PD10M	M12 connector, 5-pole, straight, length 10 m
	VF CA8PD3M	M12 connector, 8-pole, straight, length 3 m
	VF CA8PD5M	M12 connector, 8-pole, straight, length 5 m
	VF CA8PD10M	M12 connector, 8-pole, straight, length 10 m
	VF CA8PD20M	M12 connector, 8-pole, straight, length 20 m
	VF CA12PD3M	M12 connector, 12-pole, straight, length 3 m
	VF CA12PD5M	M12 connector, 12-pole, straight, length 5 m
	VF CA12PD10M	M12 connector, 12-pole, straight, length 10 m
	VF CA12PD20M	M12 connector, 12-pole, straight, length 20 m
	VF CA12PD30M	M12 connector, 12-pole, straight, length 30 m
PUR cable	VF CA8UD5M-X	M12 connector, 8-pole, straight, length 5 m, with stainless steel hexagonal ring nut
	VF CA8UD10M-X	M12 connector, 8-pole, straight, length 10 m, with stainless steel hexagonal ring nut
	VF CA12UD10M-X	M12 connector, 12-pole, straight, length 10 m, with stainless steel hexagonal ring nut



Field wireable M12 male connectors
Technopolymer connector body.
Gold-plated contacts.
Screw terminals for cable screw fittings.
Protection degree IP67.

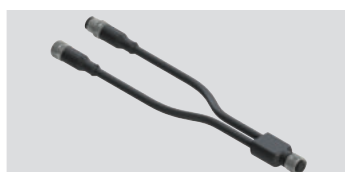
Article	Description
VF CCMP5DM04	Field wireable M12 male connector, 5-pole, straight, for Ø 4 ... Ø 6.5 mm multipolar cables
VF CCMP8DM04	Field wireable M12 male connector, 8-pole, straight, for Ø 4 ... Ø 7 mm multipolar cables

M12 connectors for series connection



M12 extension cables with male and female connector
Polyurethane connector body.
Protection degree IP67.
Gold-plated contacts.
Self-locking ring nut.

Article	Description
VF CA5PD3M-MD	M12 connector, 5-pole, straight, length 3 m
VF CA5PD5M-MD	M12 connector, 5-pole, straight, length 5 m
VF CA5PD10M-MD	M12 connector, 5-pole, straight, length 10 m
VF CA8PD3M-MD	M12 connector, 8-pole, straight, length 3 m
VF CA8PD5M-MD	M12 connector, 8-pole, straight, length 5 m
VF CA8PD10M-MD	M12 connector, 8-pole, straight, length 10 m



M12 connector, Y-shaped, for series connections with 150 mm cable length
Polyurethane connector body.
Protection degree IP67.
Gold-plated contacts.
Self-locking ring nut.

Article	Description
VF CY201P0	M12 connector, Y-shaped, for series connections with 150 mm cable length



M12 terminating plugs for series connections
Polyurethane connector body.
Protection degree IP67.
Gold-plated contacts.
Self-locking ring nut.

Article	Description
VF CY100P0	M12 terminating plugs for series connections, 4-pole



M12 connector, Y-shaped, for series connections without cable
Polyurethane connector body.
Protection degree IP67.
Gold-plated contacts.
Self-locking ring nut.

Article	Description
VF CY203P0	M12 connector, Y-shaped, for series connections without cable

M23 connectors



M23 male connectors for panel mounting
Protection degrees IP67 and IP69K.
M20x1.5 thread on the device side.
Gold-plated contacts.

Article	Description
VF CNM12MT-L10	M23 connector, 12-pole, length 10 cm
VF CNM12MT-L16	M23 connector, 12-pole, length 16 cm
VF CNM19MT-L10	M23 connector, 19-pole, length 10 cm
VF CNM19MT-L16	M23 connector, 19-pole, length 16 cm



M23 female connectors for panel mounting
Protection degrees IP67 and IP69K.
M20x1.5 thread on the device side.
Gold-plated contacts.

Article	Description
VF CPM12MT-L10	M23 connector, 12-pole, length 10 cm
VF CPM12MT-L20	M23 connector, 12-pole, length 20 cm
VF CPM19MT-L10	M23 connector, 19-pole, length 10 cm
VF CPM19MT-L20	M23 connector, 19-pole, length 20 cm



M23 female connectors with cable
Protection degrees IP67 and IP69K.
Gold-plated contacts.

Article	Description
VF CA12PD10S	M23 connector, 12-pole, length 10 m
VF CA12PD20S	M23 connector, 12-pole, length 20 m
VF CA12PD30S	M23 connector, 12-pole, length 30 m
VF CA19PD5S	M23 connector, 19-pole, length 5 m
VF CA19PD10S	M23 connector, 19-pole, length 10 m
VF CA19PD20S	M23 connector, 19-pole, length 20 m
VF CA19PD30S	M23 connector, 19-pole, length 30 m

Cable glands and adapters



Protection caps
Protection caps for threaded conduit entries.
Protection degree IP67.

Packs of **100 pcs.**

Article	Description
VF PTG13,5	Protection cap PG13.5
VF PTM20	Protection cap M20x1.5



Chock plugs
Chock plug for multipolar cables, threaded, M20x1.5.
Protection degree IP54.

Packs of **100 pcs.**

Article	Description
VF PFM20C8N	Chock plug for cables Ø 8 ... 12 mm, threaded, M20x1.5
VF PFM20C4N	Chock plug for cables Ø 4 ... 8 mm, threaded, M20x1.5



Strain relief cable glands
This particular design ensures high resistance to traction of the cable glands. All cable glands are also suitable for a wide range of cable diameters. Protection degree IP67.

Packs of **10 pcs.**

	Article	Description	Rubber shapes
Metric threads	VF PAM25C7N	M25x1.5, for 1 cable from Ø 10 ... 17 mm	○
	VF PAM20C6N	M20x1.5, for 1 cable from Ø 6 ... 12 mm	○
	VF PAM20C5N	M20x1.5, for 1 cable from Ø 5 ... 10 mm	○
	VF PAM20C3N	M20x1.5, for 1 cable from Ø 3 ... 7 mm	○
	VF PAM16C5N	M16x1.5, for 1 cable from Ø 5 ... 10 mm	○
	VF PAM16C4N	M16x1.5, for 1 cable from Ø 4 ... 8 mm	○
	VF PAM16C3N	M16x1.5, for 1 cable from Ø 3 ... 7 mm	○
	VF PAM20CBN	M20x1.5 for 2 cables Ø 3 ... 5 mm	⊗
	VF PAM20CDN	M20x1.5 for 3 cables Ø 1 ... 4 mm	⊗
	VF PAM20CEN	M20x1.5 for 3 cables Ø 3 ... 5 mm	⊗
	VF PAM20CFN	M20x1.5 for 4 cables Ø 1 ... 4 mm	⊗
	VF PAM20CFN	M20x1.5 for 4 cables Ø 1 ... 4 mm	⊗
PG threads	VF PAP13C6N	PG 13.5, for one cable from Ø 6 ... 12 mm	○
	VF PAP13C5N	PG 13.5, for one cable from Ø 5 ... 10 mm	○
	VF PAP13C3N	PG 13.5, for one cable from Ø 3 ... 7 mm	○
	VF PAP11C5N	PG 11, for one cable from Ø 5 ... 10 mm	○
	VF PAP11C4N	PG 11, for one cable from Ø 4 ... 8 mm	○
	VF PAP11C3N	PG 11, for one cable from Ø 3 ... 7 mm	○



Thread adapters
Thread adapters make it possible to fulfil requests for switches with a different thread to those generally found in stock. This means it is possible to offer customers a single product type with various threaded connections, while only having to stock the product itself and many kinds of adapters.

Packs of **100 pcs.**

Article	Description
VF ADPG13-PG11	Adapter from PG 13.5 to PG 11
VF ADPG13-M20	Adapter from PG 13.5 to M20x1.5
VF ADPG13-1/2NPT	Adapter from PG 13.5 to 1/2 NPT
VF ADPG11-1/2NPT	Adapter from PG 11 to 1/2 NPT
VF ADPG11-PG13	Adapter from PG 11 to PG 13.5
VF ADM20-1/2NPT	Adapter from M20x1.5 to 1/2 NPT

Tampering protection for M12 connectors



Tampering protection for M12 connectors

These tampering protections are composed of two identical snap-on shells. They are applied to the device connectors, thereby making them inaccessible. The shells can only be removed by breaking them. Thus, any attempt to tamper with them will be immediately evident.

Packs of **10 pcs.**

Article	Description
VF PC1A9	Tampering protection for device connectors - grey
VF PC2A9	Tampering protection for male-female connectors - grey
VF PC1B6	Tampering protection for device connectors - blue, detectable
VF PC2B6	Tampering protection for male-female connectors - blue, detectable

LED signalling lights



Signalling lights

These LED signalling lights are used for signalling that an electric contact has changed its state inside the switch. They can be installed on switches by screwing them on one of the conduit entries not used for electric cables.

- Protection degrees IP67 and IP69K
- Ambient temperature: -25°C ... +70°C
- Push-in type spring-operated connection system
- Body with M20x1.5 thread

Packs of **5 pcs.**

Article	Description
VF SL1A2PA1	White, 24 Vac/dc
VF SL1A3PA1	Red, 24 Vac/dc
VF SL1A4PA1	Green, 24 Vac/dc
VF SL1A5PA1	Yellow, 24 Vac/dc

Fixing screws

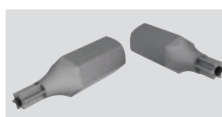


Torx safety screws

Pan head screws with Torx fitting and pin, stainless steel. Use a thread locker where required for applications acc. to. EN ISO 14119.

Packs of **10 pcs.**

Article	Description
VF VAM4X10BX-X	M4x10 screw, with Torx T20 fitting, AISI 304
VF VAM4X15BX-X	M4x15 screw, with Torx T20 fitting, AISI 304
VF VAM4X20BX-X	M4x20 screw, with Torx T20 fitting, AISI 304
VF VAM4X25BX-X	M4x25 screw, with Torx T20 fitting, AISI 304
VF VAM4X30BX-X	M4x30 screw, with Torx T20 fitting, AISI 304
VF VAM5X10BX-X	M5x10 screw, with Torx T25 fitting, AISI 304
VF VAM5X15BX-X	M5x15 screw, with Torx T25 fitting, AISI 304
VF VAM5X20BX-X	M5x20 screw, with Torx T25 fitting, AISI 304
VF VAM5X25BX-X	M5x25 screw, with Torx T25 fitting, AISI 304
VF VAM5X35BX-X	M5x35 screw, with Torx T25 fitting, AISI 304
VF VAM5X45BX-X	M5x45 screw, with Torx T25 fitting, AISI 304



Bits for Torx safety screws

Bits for safety screws, with 1/4" connection.

Article	Description
VF VAIT1T20	Bits for M4 screws with Torx T20 fitting with safety pin
VF VAIT1T25	Bits for M5 screws with Torx T25 fitting with safety pin
VF VAIT1T30	Bits for M6 screws with Torx T30 fitting with safety pin



OneWay safety screws

Pan head screws with OneWay fitting in stainless steel. This screw type cannot be removed or tampered with using common tools. Ideal for fixing safety device actuators in accordance with EN ISO 14119.

Packs of **10 pcs.**

Article	Description
VF VAM4X10BW-X	M4x10 screw, with OneWay fitting, AISI 304
VF VAM4X15BW-X	M4x15 screw, with OneWay fitting, AISI 304
VF VAM4X20BW-X	M4x20 screw, with OneWay fitting, AISI 304
VF VAM4X25BW-X	M4x25 screw, with OneWay fitting, AISI 304
VF VAM5X10BW-X	M5x10 screw, with OneWay fitting, AISI 304
VF VAM5X15BW-X	M5x15 screw, with OneWay fitting, AISI 304
VF VAM5X20BW-X	M5x20 screw, with OneWay fitting, AISI 304
VF VAM5X25BW-X	M5x25 screw, with OneWay fitting, AISI 304

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Notes

[illegible]A full-page sheet of white graph paper featuring a light gray grid. The grid consists of small, equal-sized squares covering the entire area. There are no margins, text, or other markings on the page.



General Catalogue
Detection



General Catalogue
HMI



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Safety



General Catalogue
Lift



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