pizzato

CS series safety modules

CS AR

For emergency stops and end position monitoring on movable guards

CS AT

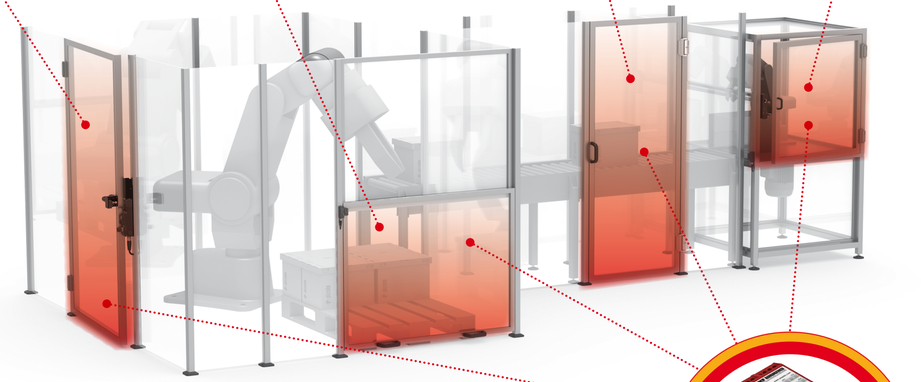
For emergency stops and end position monitoring on movable guards with delayed contacts upon opening of the inputs

CS FS

Safety timer modules

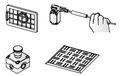
CS DM

For two hand operation or synchronism monitoring



CS AR-51

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



CS AM

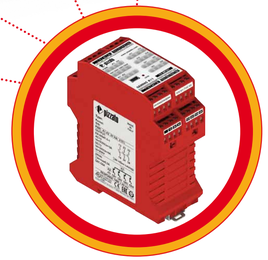
For motor standstill monitoring

CS ME

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

CS MF

Pre-programmed multifunction safety modules



CS MP

Programmable multifunction safety modules

GEMNIS

General Catalogue Detection

General Catalogue HMI

General Catalogue Safety

General Catalogue Elevators

DVD

Website
www.pizzato.com

pizzato
PASSION FOR QUALITY

Pizzato Elettrica s.r.l. Via Torino, 1 - 36063 Marostica (VI) Italy
Phone +39.0424.470.930 - Fax +39.0424.470.955
E-mail: info@pizzato.com - Web site: www.pizzato.com

ZE BRC13A18-ENG

Single-function modules

Product code	Supply voltage	For applications up to PL	SIL	Safety category	Output contacts instantaneous	delayed	feedback	Housing dimensions	Autom. & manual start	Monitored start	Inputs of opposite potentials	Equipotential inputs	Parallel start (24 Vdc only)	Input type ②	Connection type ④ V	M	X
Safety modules for emergency stops and end position monitoring for movable guards																	
CS AR-01	24 Vac/dc; 120 Vac; 230 Vac; 10...30 Vdc	e	3	4	**2 NO + 1 NC**	-	-	22.5 x 114 mm	■	■	■	-	■	■ - ⑧	-	■	■	■
CS AR-02	24 Vac/dc; 120 Vac; 230 Vac; 10...30 Vdc	e	3	4	**3 NO**	-	-	22.5 x 114 mm	■	■	■	-	■	■ - ⑧	-	■	■	■
CS AR-04	24 Vac/dc; 120 Vac; 230 Vac	e	3	4	**3 NO + 1 NC**	-	-	22.5 x 114 mm	■	■	■	-	■	■ - ⑧	-	■	■	■
CS AR-05	24 Vac/dc; 120 Vac; 230 Vac	e	3	4	**3 NO + 1 NC**	-		22.5 x 114 mm	■	-	■	■	■	■ ■	-	■	■	■
CS AR-06	24 Vac/dc; 120 Vac; 230 Vac	e	3	4	**3 NO + 1 NC**	-	-	22.5 x 114 mm	-	■	■	■	■	■ ■	-	■	■	■
CS AR-07	24 Vac/dc	e	3	4	**4 NO + 1 NC**	-	-	22.5 x 129 mm	■	■	■	-	■	■ -	-	■	■	■
CS AR-08	12 Vdc, 24 Vac/dc; 120 Vac; 230 Vac	e	3	4	**2 NO**	-	-	22.5 x 114 mm	■	■	■	■	■	■ ■	-	■	■	■
CS AR-20	24 Vac/dc; 120 Vac; 230 Vac	e	3	3	**2 NO**	-	-	22.5 x 114 mm	■	-	-	-	-	■ -	-	■	■	■
CS AR-21	24 Vac/dc; 120 Vac; 230 Vac	e	3	3	**2 NO**	-	-	22.5 x 114 mm	-	■	-	-	-	■ -	-	■	■	■
CS AR-22	24 Vac/dc; 120 Vac; 230 Vac	e	3	3	**3 NO + 1 NC**	-	-	22.5 x 114 mm	■	-	-	-	-	■ -	-	■	■	■
CS AR-23	24 Vac/dc; 120 Vac; 230 Vac	e	3	3	**3 NO + 1 NC**	-	-	22.5 x 114 mm	-	■	-	-	-	■ -	-	■	■	■
CS AR-24	24 Vac/dc	e	3	3	**4 NO + 1 NC**	-	-	22.5 x 114 mm	■	-	-	-	-	■ -	-	■	■	■
CS AR-25	24 Vac/dc	e	3	3	**4 NO + 1 NC**	-	-	22.5 x 114 mm	-	■	-	-	-	■ -	-	■	■	■
CS AR-40	24 Vac/dc	d	2	2	**2 NO**	-	-	22.5 x 91 mm	■	-	-	-	-	■ -	-	■	■	■
CS AR-41	24 Vac/dc	d	2	2	**2 NO**	-	-	22.5 x 91 mm	-	■	-	-	-	■ -	-	■	■	■
CS AR-46	24 Vac/dc	c	1	1	**1 NO**	-	-	22.5 x 91 mm	■	-	■	-	-	■ - ■	-	■	■	■
CS AR-91	24 Vac/dc	e	3	4	**2 NO+1 PNP**	-	-	22.5 x 114 mm	■	■	■	-	■	■ - ■	-	■	■	■
Module for emergency stops, end position monitoring for movable guards, safety mats and safety bumpers with 4-wire technology																	
CS AR-51	24 Vac/dc	e	3	4	**2 NO**	-	-	22.5 x 114 mm	■	■	■	-	--	■ - -	■	■	■	■
Safety modules for emergency stop and end position monitoring for movable guards with delayed contacts upon opening of the inputs																	
CS AT-0③	24 Vac/dc; 120 Vac; 230 Vac	e	3	4 (②)	**2 NO + 1 NC**	**2 NO**	-	45 x 114 mm	■	■	■	■	■	■ ■ ■	-	■	■	■
CS AT-1③	24 Vac/dc; 120 Vac; 230 Vac	e	3	4 (②)	**3 NO**	**2 NO**	-	45 x 114 mm	■	■	■	■	■	■ - ■	-	■	■	■
CS AT-3③	24 Vac/dc	e	3	4 (②)	**2 NO**	**1 NO**	-	45 x 114 mm	■	■	■	-	-	■ - -	-	■	■	■
Safety timer modules																	
CS FS-1③	24 Vac/dc; 120 Vac; 230 Vac	①	①	①	-	**1 NO + 2 NC**	-	45 x 114 mm	-	-	-	-	-	■ - -	-	■	■	■
CS FS-2③	24 Vdc; 120 Vac	d	2	3	-	**1 NO +1 NC +1 CO**	-	45 x 114 mm	-	-	-	-	-	■ - -	-	■	■	■
CS FS-3③	24 Vdc; 120 Vac	d	2	3	-	**1 NO +1 NC +1 CO**	-	45 x 114 mm	-	-	-	-	-	■ - -	-	■	■	■
CS FS-5③	24 Vdc; 120 Vac	d	2	3	-	**1 NO +1 NC +1 CO**	-	45 x 114 mm	■	■	-	■	-	■ - ■	-	■	■	■
Safety modules for two-hand controls or synchronism monitoring																	
CS DM-01	24 Vac/dc; 120 Vac; 230 Vac	III C acc. to EN 574			**3 NO + 1 NC**	-	-	22.5 x 114 mm	-	-	■	-	-	■ - -	-	■	■	■
CS DM-02	24 Vac/dc; 120 Vac; 230 Vac	III C acc. to EN 574			**2 NO**	-	-	22.5 x 114 mm	-	-	■	-	-	■ - -	-	■	■	■
CS DM-20	24 Vac/dc; 120 Vac; 230 Vac	III A acc. to EN 574			**2 NO**	-	-	22.5 x 114 mm	-	-	■	-	-	■ - -	-	■	■	■
Safety modules for motor standstill monitoring																	
CS AM-0	24 ... 230 Vac/dc	d	2	3	**2 NO + 1 NC**	-	-	45 x 114 mm	-	-	-	-	-	■ - -	-	■	■	■
Expansion modules with instantaneous contacts or delayed contacts at de-energizing																	
CS ME-01	24 Vac/dc	①	①	①	**5 NO + 1 NC**	-	**1 NC**	22.5 x 114 mm	-	-	①	①	-	■ - -	-	■	■	■
CS ME-02	24 Vdc	①	①	①	**4 NO + 2 NC**		**1 NC**	22.5 x 114 mm	-	-	①	①	-	■ - -	-	■	■	■
CS ME-03	24 Vdc	①	①	①	**3 NO**	-	**1 NC**	22.5 x 91 mm	-	-	-	①	-	■ ■ -	-	■	■	■
CS ME-20VU24-⑤	24 Vdc	①	①	①	-	**4 NO + 2 NC**	**1 NC**	22.5 x 114 mm	-	-	①	①	-	■ - -	-	■	■	■
CS ME-30VU24-⑥	24 Vdc	①	①	①	-	**4 NO + 2 NC**	**1 NC**	45 x 114 mm	-	-	①	①	-	■ - -	-	■	■	■
CS ME-31VU24-TS12	24 Vdc	①	①	①	-	**4 NO + 2 NC**	**1 NC**	45 x 114 mm	-	-	①	①	-	■ - -	-	■	■	■

■ 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
semiconductor outputs (e.g. light barriers)
magnetic safety sensors
4-wire safety mats and safety bumpers

⑧ Modules compatible with magnetic sensors from June 2014

GEMNIS multifunction programmable modules

A Gemnis series safety module is a programmable safety device, which allows several safety functions to be carried out simultaneously. With a single module, functions carried out by 3 to 4 traditional electromechanical safety modules, up to circuits with dozens of inputs, can be managed.

The modules can be programmed and managed using the **GEMNIS STUDIO** software, developed entirely by Pizzato Elettrica, and freely downloadable by the user.

GEMNIS

- User-programmable safety device
- Allows implementation of multiple safety functions with a single module
- Internal switching cabinet space saving
- Safety module purchase cost saving
- Wiring operation saving
- Integrated safety solution
- For safety circuits up to: SIL 3 acc. to EN 62061 and PL e acc. to EN ISO 13849-1
- **GEMNIS STUDIO** programming software, with free licence
- Continuous updates to hardware and software by Pizzato Elettrica
- **Simplified graphical interface** for fast programming
- Ability to add support information and notes to aid full program comprehension
- **Simulation environment**, integrated for program verification and debugging
- **Monitor** for real-time program function monitoring
- Compatible with competitor sensors and safety devices

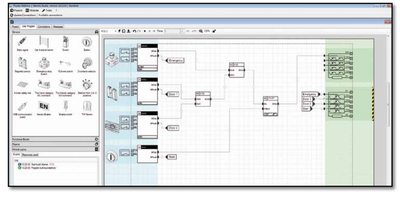
Desktop

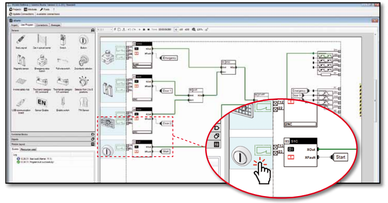
Makes security module functionality immediate and visual.

Divided into **sensors** area (blue), **function blocks** area (white), **outputs** area (green).

Sensors and function blocks are inserted and connected by simply **dragging and dropping**.

The **Connections Report** and **User Program Report** can be printed.





Simulation

The simulation environment allows you to execute tests on the application program under development, and verify its correct operation, before installing it on a module by **interacting with the sensors** and simulating **real-world operations** with a simple click on the icon of the sensor you wish to test.

Transmission of the information via the connectors is visible via **colour change** of the connectors.

Monitor

You can monitor operation of one or more Gemnis modules in **real time** using the Monitor function.

You can observe the overall operation state of the module and various data relating to the program being executed, including a list of most recently saved programs.

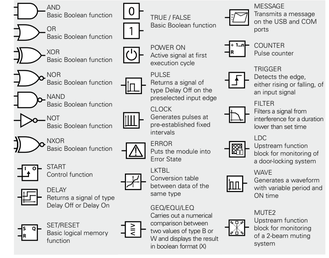
The **execution status of the program** can be viewed in real time.

Function blocks

Thanks to the **libraries of sensors and function blocks**, the user can perform all necessary processing of data between sensors and safety module outputs.

The function blocks contain **elementary logic functions** or **specific complex functions** for the management of safety circuits.

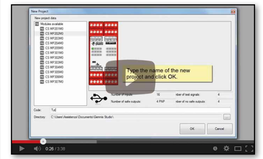
When new function blocks are implemented, Pizzato Elettrica provides **library updates** to all users.



Website: www.gemnis.com

At www.gemnis.com, you can find:

- **online support** for Gemnis products
- **Gemnis Studio installation package**, free of charge
- **support files**
- most up to date version **of the instruction manual**
- **video tutorial** on Gemnis Studio program functionality



Hardware structure of the modules

Module	Inputs	Test signals T	OS safety outputs	O signalling outputs	Width (mm)
CS MP201M0	8 type I	8	3NO	4	45
CS MP202M0	16 type I	4	4 PNP	4	45
CS MP203M0	12 type I	4	3NO + 1NO	4	45
CS MP204M0	12 type I	4	3NO	4	45
CS MP205M0	4 type I 4 type J 4 type F	4	4 PNP	4	45
CS MP206M0	8 type I	4	4 PNP	12	45
CS MP207M0	4 type I 2 type C	4	4 PNP	4	45
CS MP208M0	16 type I	4	8 PNP	-	45
CS MP301M0	24 type I	8	3NO	4	67.5
CS MP302M0	24 type I	12	4 PNP	4	67.5

Module	Inputs	Test signals T	OS safety outputs	O signalling outputs	Width (mm)
CS MP303M0	32 type I	4	4 PNP	4	67.5
CS MP304M0	28 type I	4	3NO + 1NO	4	67.5
CS MP305M0	24 type I	4	4 PNP	12	67.5
CS MP306M0	20 type I	4	3NO + 1NO	12	67.5
CS MP307M0	8 type I 4 type J 2 type C 4 type F	4	4 PNP	4	67.5
CS MP308M0	24 type I	4	8 PNP	8	67.5
CS MP309M0	32 type I	4	8 PNP	-	67.5
CS MP401M0	40 type I	4	4 PNP	12	90
CS MP402M0	32 type I	12	8 PNP	8	90
CS MP403M0	40 type I	4	8 PNP	8	90

I = Digital inputs
J = Digital inputs, decoupled
C = Inputs for 4-20 mA analogue signals
F = Inputs for 0 ... 4 kHz frequency signals

T = Test signals
OS = OSSD safety outputs (PNP)
nn = Relay safety outputs
O = signalling outputs (PNP)