REER

Your future's safe!

MOSAIC

modular safety integrated controller

short form

A unique safety controller: modular, expandable and configurable

Key features

Mosaic is a safety hub able to manage all safety functions of a machinery or a plant.

Configurable and scalable.

Allows cost reductions and minimal wiring.

Mosaic can manage safety sensors and signals such as

Light curtains, photocells, laser scanners, emergency stops, electromechanical switches, guard-lock safety door switches, magnetic switches, RFID switches, safety mats and edges, two-hands controls, hand grip switches, encoders and proximities for safety speed control.

Advantages

Reducing the number of devices and wiring used and, therefore, the overall size of the project.

Speeding-up control panel construction.

Allows tamper-proof system configurations.

All logic is configured through a graphic interface. No more laborious wiring is needed as with traditional solutions.

A lower number of electromechanical components also means a better Performance Level and, therefore, a higher Safety Level.

The project report provides the actual values of PFH, DCavg and MTTFd according to EN 13849-1 and EN 62061.

MOSAIC
MOdular SAfety Integrated Controller

Watch the video!

YouTube

EN 8120/50

RoHS Compliant

www.reersafety.com

Connect up to 14 expansion units to the Master Unit

communication | speed monitoring | safety relays | Master Units | additional I/O | additional inputs | additional outputs

MBx MCT | MV0 MV1 MV2 | MR2 MR4 MOR4 MOR4S8 | MI8O2 MI8O4 | MI8 MI16 MI12T8 | MO2 MO4 MO4LHCS8 | MOS8 MOS16

MBx
Field-bus units

MBP Profibus DP
MBD DeviceNET
MBC CANopen
MBEI EthernetIP
MBEI2B EthernetIP
MBEC EtherCAT
MBEP Profinet
MBMR Modbus RTU
MBEM Modbus TCP/IP
MBU USB

MBCCL CC-Link

new

MCT
Interface connection units

Interface module allowing the connection of remote expansions via the proprietary MSC bus

MCT1
1 connection interface (1 I/O cable)

MCT2
2 connection interface (2 I/O cables)

MV0/MV1/MV2
Speed monitoring units

Safety speed monitoring (up to PL e) for: Zero speed control, Maximum speed control, Speed range control, Direction

MV0
Input for 2 proximity switches

MV1
Input for 1 incremental encoder and 2 proximity switches (TTL, HTL or SIN/COS)

MV2
Input for 2 incremental encoders and 2 proximity switches (TTL, HTL or SIN/COS)

MR2/MR4
Safety relay output units

MR2
2 safety relays with guided contacts
2 NO + 1 NC contacts (250 VAC 6 A)
1 NC contacts for EDM feedback

MR4
4 safety relays with guided contacts
4 NO + 2 NC contacts (250 VAC 6 A)
2 NC contacts for EDM feedback

MOR4/MOR4S8
Safety relay output units

MOR4
4 safety relays with guided contacts
4 NO contacts (250 VAC 6 A)
4 inputs for Start/Restart interlock and EDM
It is possible to select two different configurations via MSD:
4 independent single channel outputs
2 dual channel outputs

MOR4S8
As MOR4, with 8 status outputs (PNP 100 mA)

new M1S
Enhanced Master Unit

8 digital inputs
4 inputs for Start/Restart interlock and EDM
4 single (or 2 pairs) OSSD safety outputs (PNP 400 mA)
4 status outputs (PNP 100 mA)
4 test outputs (for short-circuits monitoring)

M1
Standard Master Unit

8 digital inputs
2 inputs for Start/Restart interlock and EDM
2 pairs OSSD safety outputs (PNP 400 mA)
2 status outputs (PNP 100 mA)
4 test outputs (for short-circuits monitoring)

New operators

Timer and delay with longer limits.

2 steps restart.

Multi-level thresholds for speed monitor, timers, etc. (comparators).

New restart including signal for the push button light (flashing for restart request, off for other conditions).

I/O

4 single (or 2 double) safety outputs (PNNP 400 mA).

Status outputs can be converted in feedback inputs (up to 4 feedback input for the 4 single-channel outputs).

New footprint map for fieldbus modules.

Features*	M1	M1S
Fieldbus inputs	8	32
Safety outputs	16	32
Status outputs	32	48
MSD Operators	64	128
Timer	32	48
Muting	4	8
Safety guard lock	4	8
Probes	16	32

** Features of the System composed by M1/M1S + 14 expansion units*

MI8O2/MI8O4
Input/Output unit

MI8O2
8 digital inputs
2 inputs for Start/Restart interlock and EDM
2 pairs OSSD safety outputs (PNP 400 mA)
2 status outputs (PNP 100 mA)
4 test outputs (for short-circuits monitoring)

MI8O4
8 digital inputs
4 inputs for Start/Restart interlock and EDM
4 single (or 2 pairs) OSSD safety outputs (PNP 400 mA)
4 status outputs (PNP 100 mA)
4 test outputs (for short-circuits monitoring)

MO2/MO4
Output units

MO2
2 pairs OSSD safety outputs (PNP 400 mA)
2 inputs for Start/Restart interlock and EDM
2 status outputs (PNP 100 mA)

MO4
4 pairs OSSD safety outputs (PNP 400 mA)
4 inputs for Start/Restart interlock and EDM
4 status outputs (PNP 100 mA)

MI8/MI16/MI12T8
Input units

MI8
8 digital inputs
4 test outputs (for short-circuits monitoring)

MI16
16 digital inputs
4 test outputs (for short-circuits monitoring)

MI12T8
12 digital inputs
8 test outputs (for short-circuits monitoring)

Can manage up to 4 independent safety mats/edges

MO4L HC S8
High current output unit

4 single (or 2 pairs) OSSD safety outputs (PNP 2,0 A)
4 inputs for Start/Restart interlock and EDM
8 status outputs (PNP 100 mA)

POWER 2A

MOS8/MOS16
Non-safety output units

MOS8
8 status outputs (PNP 100 mA)

MOS16
16 status outputs (PNP 100 mA)

MCM

Mosaic Configuration Memory

Removable memory card. Ideal for saving Mosaic configuration data for subsequent transfer to a new device (without connecting to a PC) or for backup

MSC

Mosaic Safety Communication

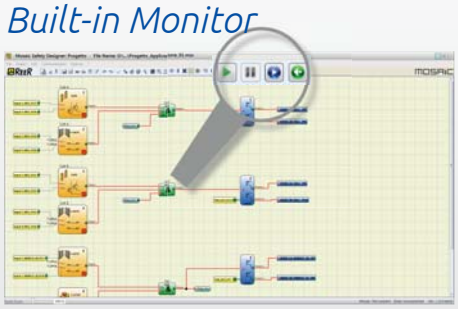
Allows communication between the various units through a proprietary high-speed safety bus

MSD

Mosaic Safety Designer

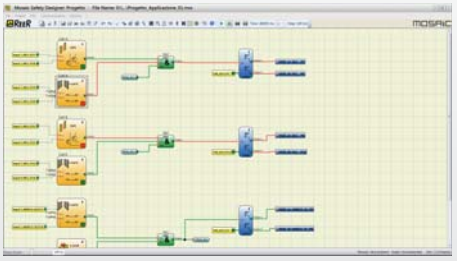
Easy-to-use designer software included with M1 and M1S Master Units. Drag & Drop functionality allows to easily create all logic scenarios in a machine directive compliant environment.

Built-in Monitor



Built-in Simulator

new



Drag & Drop
User-frendly
Real-time monitor
Design validation
Simulation
Security password
Reports and log files
Project information

MTB

Screw Terminal Blocks

Removable terminal blocks with screw contacts

MTBC

new

Clamp Terminal Blocks

Removable terminal blocks with clamp contacts

MCT

Remote Interface Units

Interface module allowing the connection of remote expansion units via the MSC safety bus

Your future's safe!

More than 50 years of quality and innovation

Founded in Turin, Italy in 1959, ReeR distinguished itself for its strong commitment to innovation and technology.

A steady growth throughout the years allowed ReeR to become a point of reference in the safety automation industry at a worldwide level.

The Safety Division is in fact today a world leader in the development and manufacturing of safety optoelectronic sensors and controllers.

ReeR is ISO 9001, ISO 14001 and BS OHSAS 18001 certified.

Made in Italy
since 1959

Distributed in the USA by

PowerSafe Automation
129 N Main St.
Wolcottville, IN 46795

P: 844-520-7233 F: 844-662-4359
psa365@powersafeautomation.com
www.powersafeautomation.com

ReeR SpA
Via Carcano, 32
10153 Torino, Italy

T +39 011 248 2215
F +39 011 859 867

www.reersafety.com | info@reer.it

Issue 2 - Rev. 1.0
July 2018
8946239
Brochure MOSAIC - English

Printed in Italy