

Art. CS ME-03VU24-Y14

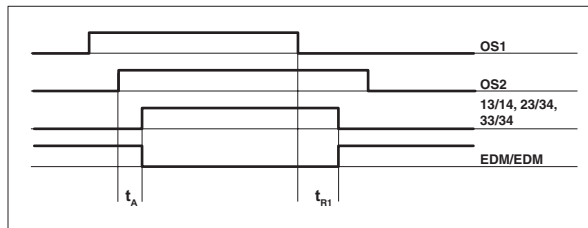
FUNCTION

- Light barrier module (ESPE type 2 and 4);
- 2 OSSD inputs;
- Supply voltage 24VDC;
- Output contacts: 3 NO safety contacts and 1 NC feedback/EDM contact;
- LED indicating the switching state of the channels 1 and 2;
- Small 22,5 mm housing with snap montage on DIN-rail

⚠ WARNING ⚠

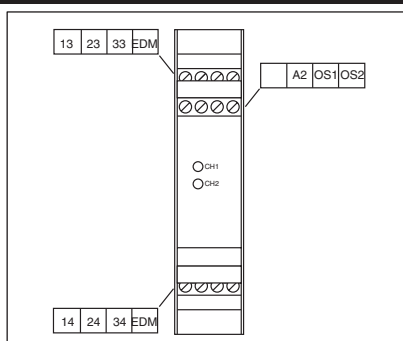
- The installation and the wiring should be carried out only by professional workers.
- Before any kind of operation, it should be checked that this device is disconnect from power supply.
- The safety module should be installed and fixed in the DIN rail, inside an electric panel.
- Verify that the safety module is used inside the operating ranges.
- Check that the safety module does not show evidence of damage suffered during the transport or incorrect storage.
- Install a 6 Amp fuse in series to each output contact to avoid the contacts sticks.
- It is advisable to power the safety module with a separate source respect to the power supply of machine and keep separate the wiring connections of the module from the wiring of main power line.
- Verify the correct operation of the module following the instructions of the operation diagrams.
- If expansion modules are installed, or eventually external contactors, check that the contacts has forced guided contacts and install in feedback function one contact NC for each device on EDM contact.
- The safety category, according to EN 954-1, achieved by the system including the safety module, depends also on the external circuit.
- The improper use of the safety module can lead to hazardous situation.

OPERATION DIAGRAMS



Legend:
 t_A : Operating time
 t_{R1} : Releasing time in absence of power supply

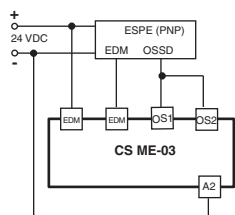
TERMINALS LAYOUT



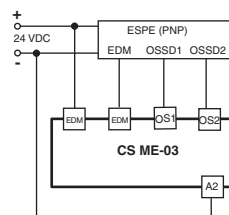
APPLICATION EXAMPLES

Electro-sensitive protection devices ESPE

1 channel



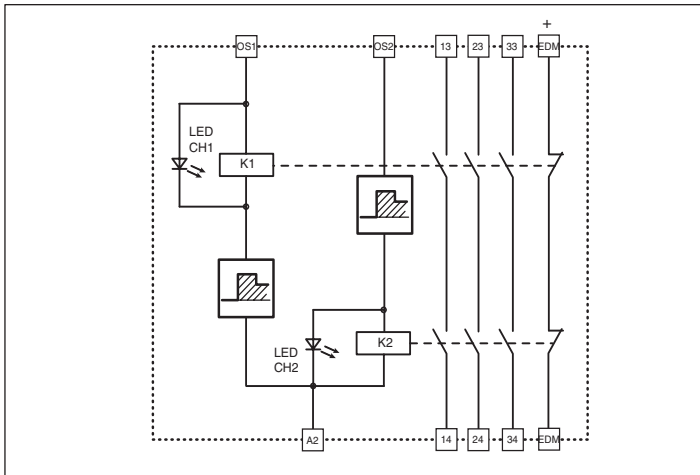
2 channels



FAILURE

Led lights		Possible failure
CH1 Off	CH2 Off	<ul style="list-style-type: none"> • Wrong connection ; • Power wires cut down; • ESPE failure ; • Short circuit between channels; • Failure of expansion module;
CH1 On	CH2 Off	<ul style="list-style-type: none"> • Failure of expansion module; • Wrong connection ; • ESPE failure ;
CH1 Off	CH2 On	<ul style="list-style-type: none"> • Failure of expansion module; • Wrong connection ; • ESPE failure ;

INTERNAL WIRING DIAGRAM



TECHNICAL DATA

Housing

Material:	Polyamide PA 6.6 class V0 (UL94)
Protection degree:	IP 40 (housing), IP 20 (terminal board)
Dimensions (L x H x S):	111,5 x 99,0 x 22,5 mm
Cross section of the conductors:	0,2 ... 2,5 mm ² 24 ... 12 AWG
Terminals driving torque:	0,5 ... 0,6 Nm

General data

Safety category:	up to category 4 according to EN 954-1 (dependent from the base module)
Ambient temperature:	-25°C ... +55°C
Mechanical endurance:	>10 millions of operations
Electrical endurance:	>100.000 operations
Pollution degree:	outside 3, inside 2
Rated impulse withstand voltage U _{imp} :	4KV
Rated insulation voltage U _i :	250 V
Over-voltage category:	II
Insulation type:	Basic insulation
Weight:	0,2 Kg

Supply

Rated operating voltage (U _n):	24 VDC*
Max residual ripple in DC:	10%
Supply voltage tolerance:	±20% of U _n
Rated power consumption DC:	< 2 W *
Start power consumption:	< 3 W

Control circuit

Operating time t _A :	40 ms
Releasing time on de-energisation t _{RT} :	15 ms

Output circuit

Output contacts:	3 NO safety contacts, 1 NC feedback contact
Contacts type:	Forced guided contacts
Contacts material:	Silver alloy, gold plated
Max. switching voltage:	230 */240 VAC; 300 VDC
Max. switching current per contact:	6 A *
Simultaneous currents sum of the three outputs Σ I _{th} :	≤ 12 A
Conventional free air thermal current I _{th} :	6 A
Contacts resistance :	≤ 100 mΩ
Protection fuse outside:	6 A
Max. switching capacity:	1380 VA/W
Utilization category (EN 60947-5-1):	AC15, U _e =230 V, I _e =3 A; DC13, U _e =24 V, I _e =6 A (6 operations/minute)
Utilization category (UL508):	C300

Conforms to the standards

Conforms to the standards:	EN 60204-1, EN 954, EN 999, EN 1037, EN ISO 12100-1, EN ISO 12100-2, EN 418, EN 60529, EN 61000-6-2, EN 61000-6-3, EN 62326-1, EN 60664-1, EN 60947-1, UL 508, CSA C22.2 n° 14-95
Conforms to the directives:	2006/95/EC, 2006/42/EC, 2004/108/EC
Clearance and creepage distances in accordance with:	EN 60947-1
Approvals:	UL file n° E131787

* Data type approved by UL conforms to the standard UL 508 (file E131787)

Notes (data type approved by UL):

- Use 60° or 75 °C copper (Cu) conductor and wire size No. 30-12 AWG.
- The terminal tightening torque of 5-7 Lb-In.
- Only for 24 VAC/DC version, supply from remote class 2 source or limited voltage and limited energy.