



### Expansion module with delayed contacts at de-energizing

#### Main functions

- 4 delayed time 0,5 - 1 - 2 and 3 s
- Possibility of control with 1 or 2 channels
- Small 22,5 mm housing
- Output contacts:
  - 4 NO safety contacts,
  - 2 NC auxiliary contact,
  - 1 NC feedback contact
- Supply voltages: 24 VDC

#### Utilization categories

Alternate current: AC15 (50...60 Hz)

U<sub>e</sub> (V) 230

I<sub>e</sub> (A) 3

Direct current: DC13 (6 operations/minute)

U<sub>e</sub> (V) 24

I<sub>e</sub> (A) 6

#### Markings, quality marks and certificates:



Approval UL: E131787

#### Complying with the requirements requested by:

Low Voltage Directive 2006/95/EC,

Machinery Directive 2006/42/EC,

Electromagnetic Compatibility 2004/108/EC

#### Technical data

##### Housing

Made of polyamide PA 6.6 self-extinguishing, class V0 (UL94)

Protection degree:

IP40 (housing), IP20 (terminals)

Dimensions:

see page 4/141, shape A

##### General data

Safety category:

up to category 4 according to EN 954-1 (dependent on the base module)

Ambient temperature:

from -25°C to +55°C

Mechanical endurance:

>10 millions of operations

Electrical endurance:

>100.000 operations

Pollution degree:

outside 3, inside 2

Rated impulse with stand voltage (U<sub>imp</sub>):

4 KV

Rated insulation voltage (U<sub>i</sub>):

250 V

Over-voltage category:

III

Weight:

0,2 Kg

##### Power supply

Rated operating voltage (U<sub>n</sub>):

24 VDC

Max residual ripple in DC:

10%

Supply voltage tolerance:

±15% of U<sub>n</sub>

Rated power consumption DC:

< 2 W

##### Control circuit

Max input resistance:

≤ 50 Ω

Operating time t<sub>A</sub>:

< 100 ms

Releasing time in absence of power supply t<sub>R</sub>:

see Code structure

#### In conformity with standards:

IEC 60947-1, EN 60947-1, IEC 60204-1, EN 60204-1, EN ISO 13849-1, EN 999, EN 1037, EN ISO 12100-1, EN ISO 12100-2, EN ISO 13850, IEC 529, EN 60529, EN 61000-6-2, EN 61000-6-3, EN 62326-1, EN 60664-1, UL 508, CSA C22.2 n° 14-95

##### Output circuit

Output contacts:

4 NO safety contacts,  
2 NC auxiliary contact,  
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

Conventional free air thermal current I<sub>th</sub>:

6 A

Contacts resistance:

≤ 100 mΩ

Contact protection fuse:

6 A

#### Code structure

## CS ME-20VU24-TF1

Kind of connection

**V** screw terminals

**M** connector with screw terminals

**X** connector with spring terminals

Releasing time on de-energisation (t<sub>R</sub>)

**TF05** fixed 0,5 s

**TF1** fixed 1 s

**TF2** fixed 2 s

**TF3** fixed 3 s

#### Data type approved by UL

Rated operating voltage (U<sub>n</sub>): 24 VDC

Rated power consumption DC: < 2 W

Max switching voltage: 230 VAC

Max switching current per contact: 6 A

Utilization category C300

#### Notes:

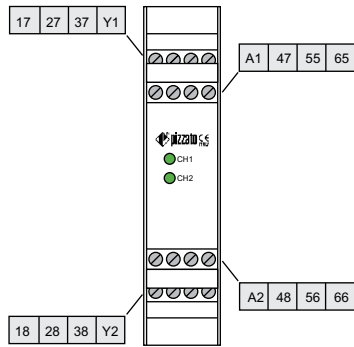
- Use 60° or 75 °C copper (Cu) conductor and wire size No. 30-12 AWG.

- Terminal tightening torque of 5-7 Lb-In.

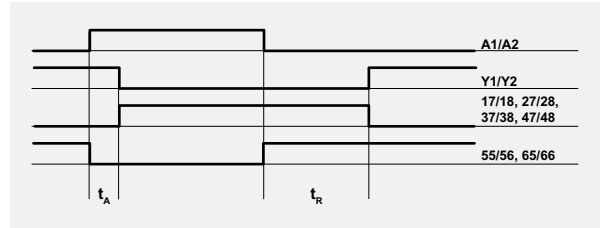
- Supply from remote class 2 source or limited voltage and limited energy.

**Expansion module CS ME-20**

**Terminals layout**

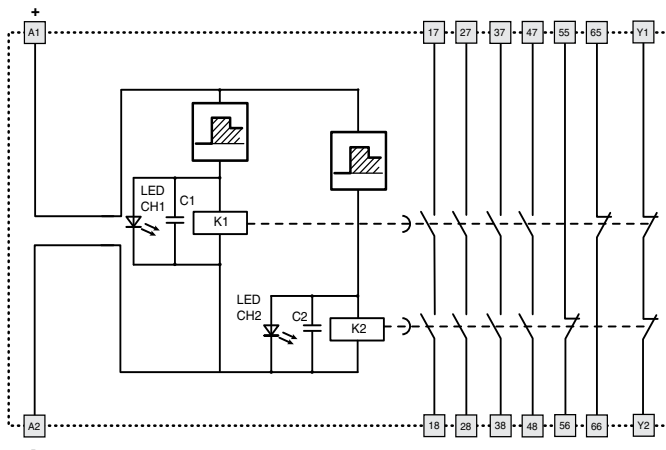


**Operations diagram**

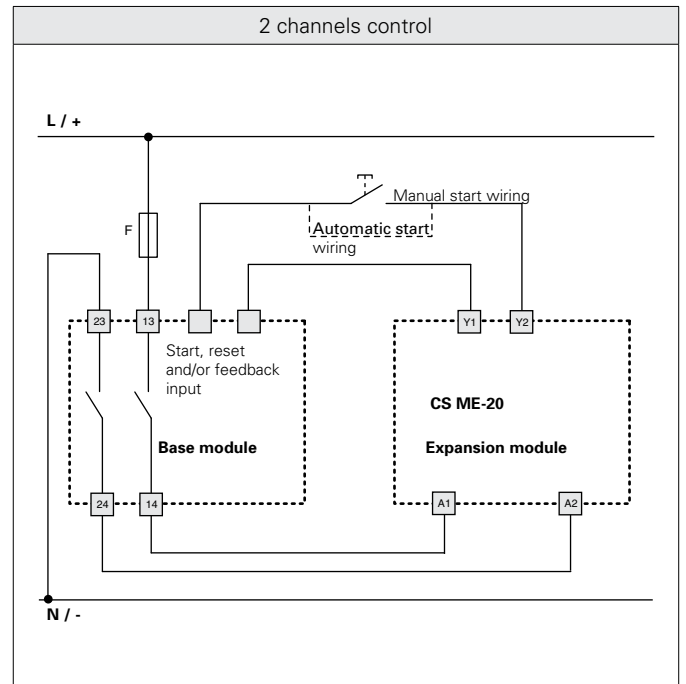
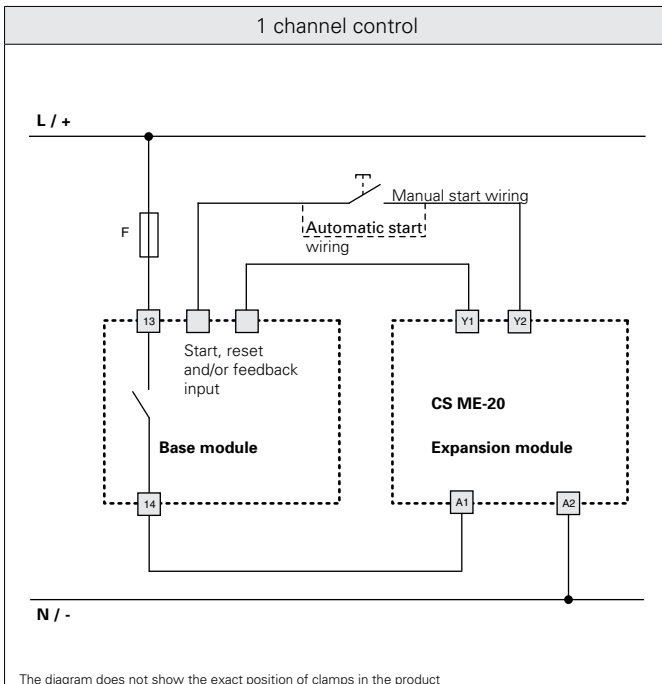


Legend:  
 $t_A$ : Operating time  
 $t_R$ : Releasing time in absence of power supply (see "Code structure")

**Internal wiring diagram**



**Inputs configuration**



The diagram does not show the exact position of clamps in the product