



### Module for emergency stops, end position monitoring for movable guards, OSSD semiconductor outputs and magnetic safety sensors

#### Main features

- For safety applications up to SIL CL 3/PL e
- Input with 1 or 2 channels
- Choice between automatic start, manual start (CS AR-05 only) or monitored start (CS AR-06 only)
- Can be connected to OSSD semiconductor outputs, to electromechanical contacts or to magnetic safety sensors
- Output contacts:  
3 NO safety contacts,  
1 NC auxiliary contact
- Supply voltage:  
24 Vac/dc, 120 Vac, 230 Vac

#### Utilization categories

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

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

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

Direct current: DC13 (6 oper. cycles/min.)

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

I<sub>e</sub> (A) 4

#### Quality marks:



EC type examination certificate: IMQ CP 432 DM

UL approval: E131787

CCC approval: 2021000305000107

EAC approval: RU C-IT.YT03.B.00035/19

#### Compliance with the requirements of:

Machinery Directive 2006/42/EC,

EMC Directive 2014/30/EC,

RoHS Directive 2011/65/EU.

## Technical data

### Housing

Polyamide housing PA 66, self-extinguishing V0 acc. to UL 94

Protection degree acc. to EN 60529:

IP40 (housing), IP20 (terminal strip)

Dimensions:

see page 415, design A

### General data

SIL level (SIL CL) up to:

SIL CL 3 acc. to EN 62061

Performance Level (PL) up to:

PL e acc. to EN ISO 13849-1

Safety category up to:

cat. 4 acc. to EN ISO 13849-1

Safety parameters:

see page 481

Ambient temperature:

-25°C...+55°C

Mechanical endurance:

>10 million operating cycles

Electrical endurance:

>100,000 operating cycles

Pollution degree:

external 3, internal 2

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

4 kV

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

250 V

Overtoltage category:

II

### Supply

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

24 Vac/dc; 50...60 Hz

120 Vac; 50...60 Hz

230 Vac; 50...60 Hz

Max. DC residual ripple in DC:

10%

Supply voltage tolerance:

±15% of U<sub>n</sub>

Power consumption AC:

< 5 VA

Power consumption DC:

< 2 W

### Control circuit

Protection against short circuits:

PTC resistance, I<sub>h</sub>=0.5 A

PTC times:

response time > 100 ms, release time > 3 s

Maximum resistance per input:

≤ 50 Ω

Current per input:

< 30 mA

Min. duration of start impulse t<sub>MIN</sub>:

> 250 ms

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

< 300 ms

Release time t<sub>R1</sub>:

< 15 ms

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

< 70 ms

Simultaneity time t<sub>c</sub>:

unlimited

### In compliance with standards:

EN 60204-1, EN ISO 13855, EN ISO 14118, EN ISO 12100, EN ISO 13850, EN 60529, EN 61000-6-2, EN 61000-6-3, EN 61326-1, EN 60664-1, EN 60947-1, EN IEC 63000, EN ISO 13849-1, EN ISO 13849-2, EN 62061, UL 508, CSA C22.2 No. 14, GB/T14048.5

### Output circuit

Output contacts:

3 NO safety contacts

1 NC auxiliary contact

forcibly guided

Contact type:

gold-plated silver alloy

Material of the contacts:

230/240 Vac; 300 Vdc

Maximum switching voltage:

6 A

Max. current per contact:

6 A

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

64 A<sup>2</sup>

Max. total current Σ I<sub>th</sub><sup>2</sup>:

10 mA

Minimum current:

≤ 100 mΩ

Contact resistance:

4 A

External protection fuse:

The number and the load capacity of output contacts can be increased by using expansion modules or contactors. See pages 355-364.

## Code structure

# CS AR-05V024

#### Start mode

**05** manual or automatic start

**06** monitored start

#### Connection type

**V** Screw terminals

**M** Connector with screw terminals

**X** Connector with spring terminals

#### Supply voltage

**024** 24 Vac/dc

**120** 120 Vac

**230** 230 Vac

## Features approved by UL

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

24 Vac/dc; 50...60 Hz

120 Vac; 50...60 Hz

230 Vac; 50...60 Hz

Power consumption AC:

< 5 VA

Power consumption DC:

< 4 W

Electrical ratings:

- NO contacts: 230/240 Vac, 6 A general use, C300 pilot duty

- NC contacts: 230/240 Vac, 6 A resistive, B300 pilot duty

Notes:

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

- The terminal tightening torque of 5-7 lb in.

- Only for 24 Vac/dc versions: supply from remote Class 2 source or limited voltage limited energy.

- Utiliser des conducteurs en cuivre (Cu) 60 ou 75°C rigides ou flexibles de section 30-12 AWG.

- Couple de serrage des bornes de 5-7 lb in.

- Seulement pour les versions 24 Vac/dc, alimenter avec sources de classes 2 ou avec tension limitée et énergie limitée.

