Safety module **CS AR-04**



Module for emergency stop, gate monitoring 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 or monitored start
- Connection of the input channels to opposite potentials
- Small 22.5 mm housing
- 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)
Ue (V) 230
Ie (A) 3
Direct current: DC13 (6 op. cycles/minute)
Ue (V) 24
Ie (A) 4

Markings, quality marks and certificates:

UL approval:	E131787
EC type examination certificate:	IMQ CP 432 DM
EAC approval:	RU C-IT ДМ94.B.01024
CCC approval:	2013010305640211

In conformity with the requirements of:
Low Voltage Directive 2006/95/EC,
Machinery Directive 2006/42/EC,
EMC Directive 2004/108/EC

Technical data

Housing

PA 6.6 polyamide housing, self-extinguishing, V0 acc. to UL 94	
Protection degree:	IP40 (housing), IP20 (terminal strip)
Dimensions:	see page 283, design A

General data

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 333
Ambient temperature:	-25°C...+55°C
Mechanical endurance:	>10 million operating cycles
Electrical endurance:	>100,000 operating cycles
Pollution degree:	external 3, internal 2
Impulse voltage (Uimp):	4 kV
Rated insulation voltage (Ui):	250 V
Overvoltage category:	II
Weight:	0.3 kg

Supply

Rated supply voltage (Un):	24 Vac/dc; 50...60 Hz 120 Vac; 50…60 Hz 230 Vac; 50…60 Hz
DC maximum residual ripple:	10%
Supply voltage tolerance:	±15% of Un
AC consumption:	< 5 VA
DC consumption:	< 2 W

Control circuit

Protection against short circuits:	resistance PTC, Ih=0.5 A
PTC timing:	intervention > 100 ms, reset > 3 s
Maximum input resistance:	≤ 50 Ω
Input current:	< 30 mA
Min. duration of start impulse t_{MIN}:	> 100 ms
Operating time t_A:	< 50 ms
Releasing time t_{R1}:	< 20 ms
Releasing time in absence of power supply t_R:	< 70 ms
Simultaneity time t_C:	infinite

In conformity with standards:
EN 60204-1, EN ISO 13855, EN 1037, EN ISO 12100, EN ISO 13850, EN 60529, EN 61000-6-2, EN 61000-6-3, EN 62326-1, EN 60664-1, EN 60947-1, EN ISO 13849-1, EN ISO 13849-2, EN 62061, UL 508, CSA C22.2 n° 14-95

Output circuit

Output contacts:	3 NO safety contacts 1 NC auxiliary contact
Contact type:	forcibly guided
Contact material:	gold-plated silver alloy
Maximum switching voltage:	230/240 Vac; 300 Vdc
Max. current per contact:	6 A
Conventional free air thermal current Ith:	6 A
Max. total current Σ Ith^2:	64 A^2
Minimum current:	10 mA
Contact resistance:	≤ 100 mΩ
External protection fuse:	4 A

The number and the load capacity of output contacts can be increased by using expansion modules or contactors. See pages 231-240.

Code structure

CS AR-04V024

Connection type		Supply voltage		
V	screw terminals	**024**	24 Vac/dc	±15%
M	connector with screw terminals	**120**	120 Vac	±15%
X	connector with spring terminals	**230**	230 Vac	±15%

Stock items

CS AR-04V024

Characteristics approved by UL

Rated supply voltage (Un):	24 Vac/dc; 50...60 Hz 120 Vac; 50…60 Hz 230 Vac; 50…60 Hz
AC consumption:	< 5 VA
DC consumption:	< 2 W
Maximum switching voltage:	230 Vac
Max. current per contact:	6 A
Utilization category	C300

Notes:
- Use 60° or 75 °C copper (Cu) conductor, rigid or flexible, wire size AWG 30-12.
- 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. (Supply from Remote Class 2 Source or limited voltage limited energy).