



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Expansion module for safety relays KZE5-YS Part number 85102956



- "Multiplication of contacts" function for safety relays
- 1- or 2-channel operation
- Security with redundancy and feedback circuit
- 5 "NO" security contacts
- Performance Level (PL) e, safety category 4 to EN ISO 13849-1
- SIL Claimed Level (SIL CL) 3 to IEC/EN 62061

Part numbers

	Type	Terminals	Voltages	Supply frequency range (Hz)	Outputs
85102956	KZE5-YS	Screws	24 VAC/DC	50/60	5 NO

Specifications

Operating characteristics

Functions	Multiplication of the number of contacts for safety relays
Operation	1 or 2 channels
Return loop	X1 - X2
Display of output state by LED	Output : OUT1 (relay K1) Output : OUT2 (relay K2)

Supply

Supply voltage	85 102 956 : 24 VAC/DC 85 102 954 : 110-115 VAC 85 102 955 : 230-240 VAC
Supply frequency range (Hz)	50 / 60
Operating range	AC : - 15 / + 10 % U DC : ± 10 % U (at 10 % residual ripple) DC : - 15 / + 10 % U (at 48 % residual ripple)
Consumption	1,8 VA (24 VAC/DC) 3,0 VA (110, 230 VAC)

Precision

Maximum reset time	20 ms
Maximum response time on emergency stop	35 ms

Output specification

Type	Forcibly guided relays (positively driven)
Number of safety circuits	5 NO
Nominal output voltage	250 VAC max.
Max. thermal current I for each contact	5 A
Maximum power rating	According to AC15 (NO contacts) : 3 A / 230 VAC According to AC15 (NC contacts) : 2 A / 230 VAC According to DC13 (NO contacts) : 4 A / 24 VDC ; 0,5 A / 110 VDC According to DC13 (NC contacts) : 4 A / 24 VDC
Electrical endurance	At 5 A, 230 VAC, $\cos \varphi = 1$: > $1,5 \times 10^5$ switching cycles At 8 A, 24 VDC, according to DC 13 (NO contacts) : > 25×10^3 switching cycles (ON : 0,4 s ; OFF : 9,6 s)
Mechanical life	20×10^6 switching cycles
Maximum rate	1200 switching cycles / h
Protection against short circuits	Max. fuse rating : 10 A gL Line circuit breaker : B 6 A

Climatic environment

Operating temperature (°C)	-15 → +55
Storage temperature (°C)	-25 → +85
Altitude	< 2000 m
Climate resistance according to IEC/EN 60068-1	15 / 055 / 04

Mechanical environment

Vibration resistance according to IEC/EN 60068-2-6	Amplitude : 0,35 mm Frequency : 10 → 55 Hz
--	---

Electromagnetic environment

Immunity to electrostatic discharges acc. IEC/EN 61000-4-2	8 kV (air)
Immunity to radiated, radio-frequency, electromagnetic field acc. IEC/EN 61000-4-3	10 V / m
Immunity to rapid transient bursts acc. to IEC/EN 61000-4-4	4 kV

Immunity to shock waves according to IEC/EN 61000-4-5	Between wires for power supply : 1 kV (AC), 0,5 kV (24 VAC/DC) Between wires and ground : 4 kV
Immunity to radio frequency in common mode acc. to IEC/EN 61000-4-6	10 V
Interference suppression according to IEC/EN 55011	Limit value class B

Housing

Material : self-extinguishing (UL94VO)	Thermoplastic with V0 extinction behaviour
Protection (IEC/EN 60529) - Casing	IP40
Protection (IEC/EN 60529) - Term. block	IP20
Mounting	DIN-rail
Weight (g)	205

Safety standards

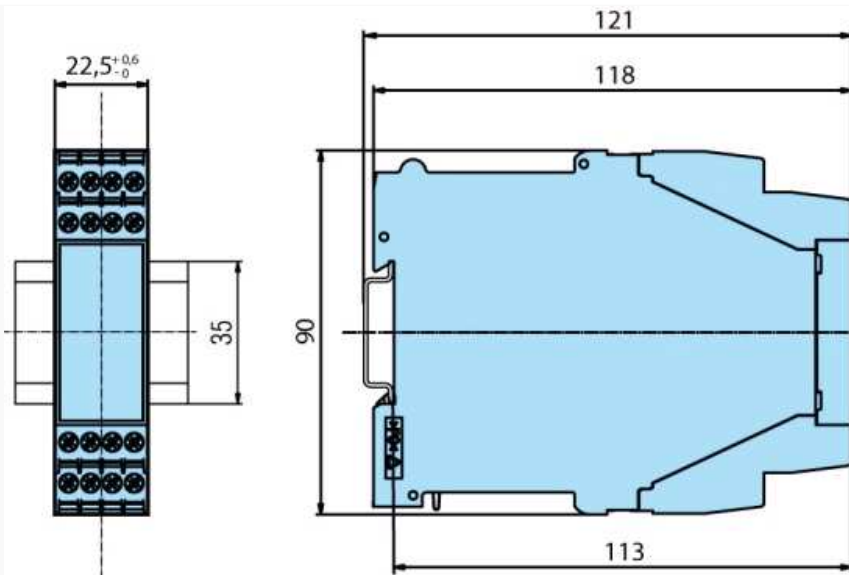
Approvals	CE, TÜV, UL/CSA
Environmental directive 2002/95/CE	RoHs
Environmental regulation 1907/2006	Reach
Security data according to EN ISO 13849-1	Performance Level (PL) : e Category : 4
SIL Claimed Level (SIL CL) to IEC/EN 62061	3
Safety Integrity Level (SIL) according to CEI/EN 61508	3
Safety category to EN 954-1	4

Principles

EN ISO 13849-1:		
Category:	4	
PL:	e	
MTTF _d :	> 100	a (year)
DC _{avg} :	99,0	%
d _{op} :	365	d/a (days/year)
h _{op} :	24	h/d (hours/day)
t _{cycle} :	2,60E+06	s/cycle
	≅ 1	mth (month)

IEC/EN 62061 IEC/EN 61508:		
SIL CL:	3	IEC/EN 62061
SIL	3	IEC/EN 61508
HFT ^{*)} :	1	
DC _{avg} :	99,0	%
SFF	99,7	%
PFH _D :	4,68E-10	h ⁻¹
*) HFT = Hardware failure tolerance		

Dimensions (mm)**Dimensions (mm)****Screw terminals**

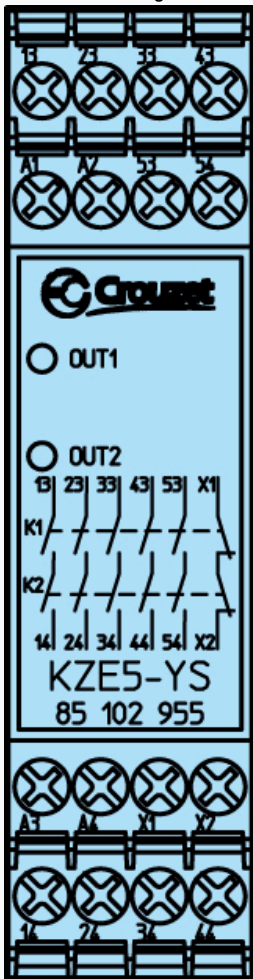


Connections



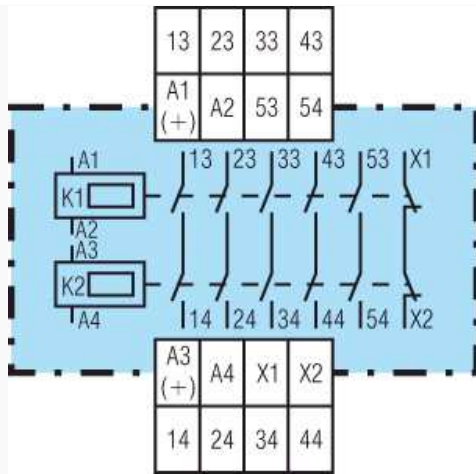
Connections

Front face drawing



Connections

Contacts



A1 (+) : + / L A2 : - / N X1, X2 : Feedback circuit (forcibly guided NC contact) 13, 14, 23, 24, 33, 34, 43, 44, 53, 54 : Safety circuit outputs (forcibly guided NO contacts)



Applications

Multiplication of the contacts of a KNE (C) 3-YS module with a KZE5-YS module

