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!

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BM2R
Timers
Syrline
17.5 mm - 2 Relay 8A

› Multi-function or mono-function
› Multi-range (12 function)
› Multi-voltage 12 →240 V AC/DC
› LED status indicator (relay version)
› Possibility of external load connection in parallel to the control input
› 3-wire PNP sensor compatible

SYR-LINE

Specifications

Functions	Delay	Output	Nominal rating	Connections	Supply voltage	Code
A - Ac - At - B - C - D - Di - H - Ht -N - TL - Tt	0,5 s →10 days	2 changeover relays	2 x 8 A	Screw terminals	12 →240 V ∿/⎓	BM2R08MV1

Output relay

Contact arrangement	2 CO (SPDT) (ChangeOver -Simple Pole Double Throw-) R1: Follow timing function R2: Follow timing function / Instantaneous
Maximum switching voltage	250 VAC/ 8 A resistive / 250 VDC / 0.3 A resistive
Switching current rate (resistive)	NO / NC : 8A 250 V AC / 8 A 30 VDC @ 25°C NO / NC : 5A 250 V AC / 5 A 30 VDC @ 60°C
Minimum switching contact	10 mA / 5 VDC
Maximum switching power (resistive)	2000 VA / 80 W @ 25°C
Electrical life	10^5 cycles min at 250 VAC/ 8 A resistive
Maximum rate (at max switching power)	360 cycles /hour
Mechanical life	10×10^6 cycles
Rated impulse voltage	5 kV (1.2/50µs)
Dielectric strength between coil / contacts	IEC 60664-1: 5 kV /1 min / 1 mA / 50 Hz
Dielectric strength between open contacts	2.5 kV /1 min / 1 mA / 50 Hz

Timing

Timing ranges (7 ranges)	0.5→10s, 0.05→1min, 0.5→10min, 0.05→1h, 0.5→10h, 0.05→1day, 0.5→10days
Minimum pulse duration typically (relay version)	IEC 1812-1: 30 ms 100 ms with load
Maximum reset time by de-energisation typically (relay version)	IEC 1812-1: 120 ms
Repeatability	IEC 1812-1: ≤ ± 0,5 %
Repetition accuracy with constant parameters	IEC 1812-1: ≤ ± 10 %
Drift Temperature	≤ ± 0.05 % / °C
Voltage-dependent drift	≤ ± 0.2 % / V

CROUZET CONTROL

Supply	
Multi-voltage power supply	12→240 V∿/⎓
Operating range	15%, +10%
Operating frequency (Hz)	50 / 60 Hz ± 5%
Galvanic isolation	No
Max. absorbed power	Approx. 3 VA (V∿) 1.5 W (V⎓)
Immunity from micro power cuts	10 ms

General characteristics	
Insulation voltage, IEC 60664-1	300 V
Installation category (acc. to IEC/EN 60664-1)	Overvoltage category III; pollution degree 2
Impulse voltage CEI/EN 60664-1	4 kV (1,2 / 50 µs)
Clearance / Creepage distances	IEC 60664-1: 3 mm / 3.2 mm
Breakdown voltage	EN-61812-1: 2,5 kV / 1 min / 1 mA / 50 Hz
Insulation resistance	NFC 93050: > 500 MΩ / 250 V⎓ / 1min
Status indication	Un: green LED blinks when count, continuous ON when supplied
	R: yellow LED continuous ON when the relay is ON
Casing	DIN 43880: 17,5 mm
Fixing: Symmetrical DIN rail	EN 50022: 35 mm
Mounting position	All positions
Housing material	Enclosure plastic type UL94 - V0
Protection (IEC/EN 60529)	Housing: IP40 / Terminal block: IP20
Terminal capacity Single-wire without ferrule	IEC 60947-1
	1 x 0.5 →3.3 mm² (AWG 20 →AWG 12)
	2 x 0.5 →1.5 mm² (AWG 20 →AWG 16)
Max. tightening torque (Nm)	IEC 60947-1: 0,5 N.m / 4,4 lbf.in
Operating temperature range (°C)	IEC 60068-2: -20 °C →+60 °C
Storage temperature range (°C)	IEC 60068-2: -40 °C →+70 °C
Relative humidity no condensation acc. to IEC/EN 60068-2-30	93% without condensation
Vibration resistance according to IEC/EN 60068-2-6	± 0.15 mm from 10 Hz →60 Hz 2g from 60 Hz →150 Hz
Impact resistance	IEC 60068-2-27
	15gn - 11ms; 3 x 6 axis (output OFF)
	5gn - 11ms; 3 x 6 axis (Output ON)
Drop to concrete floor	IEC 60068-2-32
	High: 0.75m
Weight: casing 17,5 mm	70 g
	80 g with packaging
Directives	2014/30/EU: EMC
	2014/35/EU: low voltage
Certifications	CE - cULus Listed Industrial Control Equipment - CCC
Conformity to standards	CEI 60664-1: Insulation coordination for equipment within low-voltage systems
	CEI 61812-1/ Specified time relays for industrial use
	UL 60947-4-1/ Industrial Control Equipment (NRNT- Industrial Control Switches)
Conformity with environmental directives	2015/863/UE: RoHS
	1907/2006: Reach
	2012/19/UE: WEEE
Electromagnetic compatibility IEC 61000-6-2, IEC 61000-6-3, IEC 61000-6-4	Immunity for industrial environment
	Emission residential environment
	Emission industrial environment
Electromagnetic compatibility - Immunity to electrostatic discharges acc to IEC/EN 61000-4-2	Level III Air ± 8 KV / Contact ± 6 KV

CROUZET CONTROL

General characteristics

Immunity to radiated, radio-frequency, electromagnetic field acc. IEC/EN 61000-4-3	Level III 10 V/m (80 M Hz to 1 G Hz) 80 % AM (1 k Hz) 3 V/m (1,4 →2 G Hz) 80 % AM (1K Hz) 1V/m (2 →2.7 G Hz) 80 % AM (1K Hz)
Immunity to rapid transient bursts acc. to IEC/EN 61000-4-4	Level III direct ± 2 kV (power supply) / capacitive coupling clamp ± 1 KV (command input and outputs)
Immunity to shock waves on power supply acc. to IEC/EN 61000-4-5	Level III line-to-earth ± 2 kV / line-to-line ± 1kV
Immunity to radio frequency in common mode acc. to IEC/EN 61000-4-6	Level III 10 Vrms (0,15 →80 M Hz) 80 % AM (1 k Hz)
Immunity to voltage dips and breaks acc. to IEC/EN 61000-4-11	Industrial Class II: 0 % residual voltage during 1cycle a.c. power ports 70 % residual voltage during 25/30 cycles a.c. power ports 0 % residual voltage, 250/300 cycles a.c. power ports Residential: 0 % residual voltage during 10 cycle a.c.power ports 40 % residual voltage during 10 cycles a.c. power ports 70 % residual voltage during 10 cycles a.c. power ports 0 % residual voltage, 250/300 cycles a.c. power ports
Mains-borne and radiated emissions acc. to EN 55022 (CISPR22), EN55011 (CISPR11)	EN 55022 / CISPR22 Class B (IT equipment) EN 55011 / CISPR11 Class B, Group 1 (Medical equipment)

Dimensions
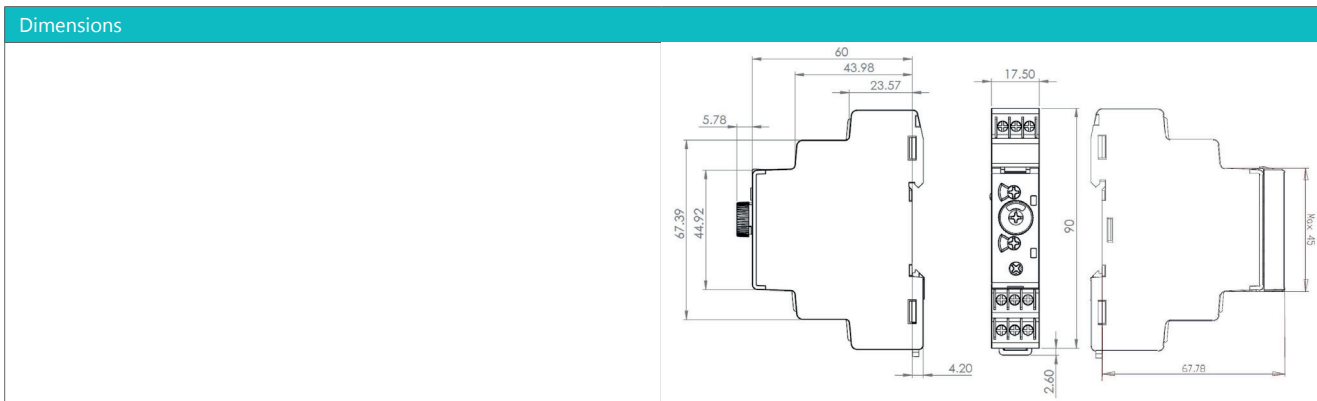
Curves

Function A Delay on energisation R1: Follow timing function R2: Follow timing function / Instantaneous	
Function Ac Timing after closing and opening of control contact R1: Follow timing function R2: Follow timing function / Instantaneous	
Function At Timing on energisation with memory R1: Follow timing function R2: Follow timing function / Instantaneous	
Function B Timing on impulse one shot R1: Follow timing function R2: Follow timing function / Instantaneous	
Function C Timing after impulse R1: Follow timing function R2: Follow timing function / Instantaneous	

CROUZET CONTROL

Curves

Function D Flip-flop Pause start R1: Follow timing function R2: Follow timing function / Instantaneous	
Function Di Flip-flop Pulse start R1: Follow timing function R2: Follow timing function / Instantaneous	
Function H Timing on energisation R1: Follow timing function R2: Follow timing function / Instantaneous	
Function Ht Delay on energisation with memory R1: Follow timing function R2: Follow timing function / Instantaneous	
Function N Watchdog R1: Follow timing function R2: Follow timing function / Instantaneous	
Function TL Impulse relay R1: Follow timing function R2: Follow timing function	

Connections

2 changeover relay output	