Zelio Time - timing relays

Industrial single-function relays, relay output, width 22.5 mm, optimum

Presentation

560953

The RE8 range of relays is designed for simple and repetitive applications, providing basic functions.

Each relay comprises:
- a single timing range,
- a C/O output relay.

These products have a transparent, hinged flap on their front face to avoid any accidental alteration of the settings. This flap can be directly sealed.

Environment

Conforming to standards			IEC 61812-1, EN 61812-1
Approvals			CSA, GL pending, UL
CE marking			Zelio Time timing relays conform to European regulations relating to CE marking
Ambient air temperature around the device	Storage	**°C**	- 40…+ 85
	Operation	**°C**	- 20…+ 60
Permissible relative humidity range	Conforming to IEC 60721-3-3		15…85 % Environmental class 3K3
Vibration resistance	Conforming to IEC 6068-2-6, 10 to 55 Hz		a = 0.35 ms
Shock resistance	Conforming to IEC 6068-2-27		15 gn - 11 ms
Degree of protection	Casing		IP 50
	Terminals		IP 20
Degree of pollution	Conforming to IEC 60664-1		3
Overvoltage category	Conforming to IEC 60664-1		III
Rated insulation voltage	Conforming to IEC	**V**	250
	Conforming to CSA	**V**	300
Test voltage for insulation tests	Dielectric test	**kV**	2.5
	Shock wave	**kV**	4.8
Voltage limits	Power supply circuit		0.9…1.1 Uc
Frequency limits	Power supply circuit	**Hz**	50/60 ± 5 %
Disconnection value	Power supply circuit		> 0.1 Uc
Mounting position without derating	In relation to normal vertical mounting plane		Any position
Connection maximum c.s.a.	Flexible cable without cable end	**mm²**	2 x 2.5
	Flexible cable with cable end	**mm²**	2 x 1.5
Tightening torque		**N.m**	0.6…1.1

Immunity to electromagnetic interference (EMC) (Application class 2 conforming to EN 61812-1)

Electrostatic discharge	Conforming to IEC 61000-2-6	Level 3 (6 kV contact, 8 kV air)
Electromagnetic fields	Conforming to IEC 61000-4-3	Level 3 (10 V/m)
Fast transients	Conforming to IEC 61000-4-4	Level 3 (2 kV)
Shock waves	Conforming to IEC 61000-4-5	Level 3 (2 kV)
Radiated and conducted emissions	CISPR11	Group 1 class A
	CISPR22	Class A

Consumption

Consumption			~ 24 V	~ 110 V	~ 240 V	~ 380 V	~ 415 V		⎓ 24 V
RE8-TA, RA, CL, PE, PU, PT	**VA**		0.7	1.8	8.5	–	–	**W**	0.5
RE8-YG, RB	**VA**		0.9	2.5	13	–	–	**W**	0.5
RE8-YA	**VA**		0.9	2.5	13	8	9	**W**	0.7

References : pages 28507/2 to 28508/3
Dimensions: pages 28507/2 and 28508/2
Schemes : pages 28507/2 and 28507/3

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Timing characteristics

Setting accuracy	As % of the full-scale value		± 20 %
Repeat accuracy			< 1 %
Influence of voltage	In the voltage range, 0.9…1.1 Un		< 2.5 %
Influence of temperature			<0.2 %/°C
Immunity to microbreaks		**ms**	3
Minimum control pulse		**ms**	26 (except **RE8-YG** : 60)
Reset time		**ms**	50

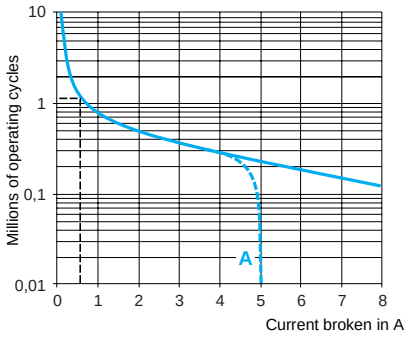
Output circuit characteristics

Maximum switching voltage		**V**	≂ 250		
Mechanical durability	In millions of operating cycles		20		
Current limit Ith		**A**	8		
Rated operational limits at 70 °C			24 V	115 V	250 V
Conforming to IEC 60947-5-1/1991	AC-15	**A**	3	3	3
and VDE 0660	DC-13	**A**	2	0.2	0.1
Minimum switching capacity			12 V/10 mA		
Contact material			90/10 nickel silver		

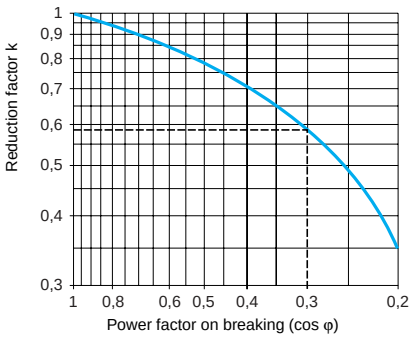
Remote control input characteristics

Signal delivered by control input Y1	No-load voltage		Supply voltage
	Switching current	**mA**	< 10
⚠ No galvanic insulation between this input and the supply	Maximum distance	**m**	50
	Compatibility		2-wire sensors ⎓ with leakage current < 1 mA

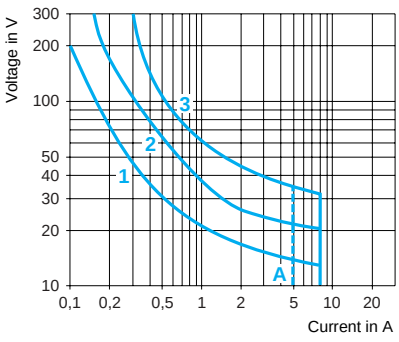
a.c. load
Curve 1
Electrical durability of contacts on resistive load in millions of operating cycles



Curve 2
Reduction factor k for inductive loads (applies to values taken from the durability curve opposite)



d.c. load
Load limit curve



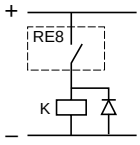
A **RE8-RB●●BUTQ**

Example :

An LC1-F185 contactor supplied with 115 V/50 Hz for a consumption of 55 VA or a current consumption equal to 0.1 A and cos φ = 0.3.
For 0.1 A, curve 1 indicates a durability of approximately 1.5 million operating cycles.
As the load is inductive, it is necessary to apply a reduction coefficient k to this number of cycles as indicated by curve 2.

For cos φ = 0.3 : k = 0.6
The electrical durability therefore becomes:
1.5 10^6 operating cycles x 0.6 = 900 000 operating cycles.

A **RE8-RB●●BUTQ**
1 L/R = 20 ms
2 L/R with load protection diode
3 Resistive load



References : pages 28507/2 to 28508/3 | **Dimensions:** pages 28507/2 and | **28508/2 Schemes :** | pages 28507/2 and 28507/3