

# Relè Series AT

## Relè di Alta Tensione



All-or-Nothing relays specially designed for high voltage switching applications, having one or two changeover contacts rated 5KVA (Max 10A or 5KV AC1).

Ideally suited for arduous duties where performance and reliability are at premium, as usually required inside high voltage applications like transformers, medical appliances, testing equipments, etc.

Featuring an open chassis construction, they have 0.25" Faston terminals (6.3x0.8 mm) fastened to a ceramic base, suiting even extreme safety standards.

## Specification

Insulation resistance @ 5,000 VDC	(all circuits)	> 1 Tohm
Pollution degree / Insulation voltage	(EN 61810-1)	3 / 500 VAC
Environmental protection	(EN 61810-1)	RT 0 (open chassis)
Enclosure classification	(EN 60529)	IP 00
Mechanical life expectancy		5 million operations
Electrical life expectancy		100,000 operations
Max operating frequency @ no load	(AC / DC)	3,600 ops./ hour
Max operating frequency @ rated load	(AC / DC)	600 ops./ hour
Surrounding ambient temperature		- 40... + 55° C
Storage temperature		- 40... + 70° C
Vibration resistance	(10-100 Hz)	12 g (NO) / 5 g ( NC)
Shock resistance	(11 ms)	19 g
Minimum creepage distance / Air gap	(coil-contacts)	19 / 14 mm
Overvoltage class		III
Impulse withstand voltage peak		8 KV
Type of duty		continuous
Minimum mounting distance		15 mm
Mounting position		any
Overall dimensions		60x48x70 mm
Weight	(approx.)	200 grams

Environmental compatibility  
(European Directive 2011/65/EU)



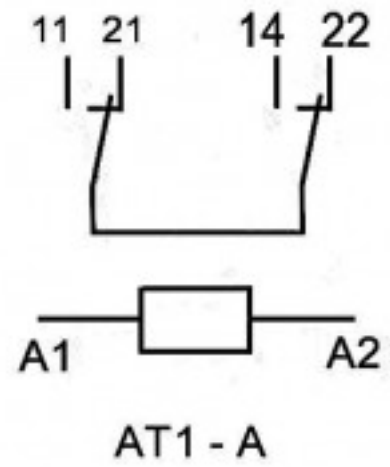
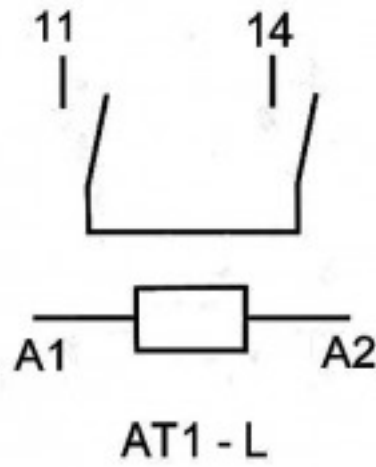
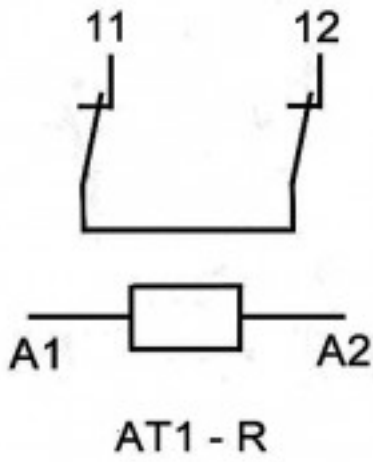
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## Proof Voltage & Times

DIELECTRIC STRENGTH		OPERATING TIMES	@ Rated Voltage	
Coil / contacts	8,000V RMS	Operate (+ bounces)	max 40	milliseconds
Adjacnt contacts	8,000V RMS	Release (+ bounces)	max 30	milliseconds
Open contacts	8,000V RMS	Bounces	max 10	milliseconds
Ground / live parts	2,000V RMS			

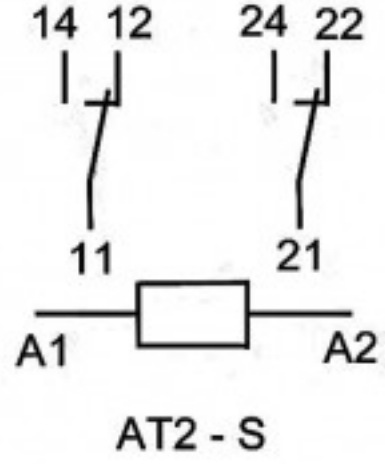
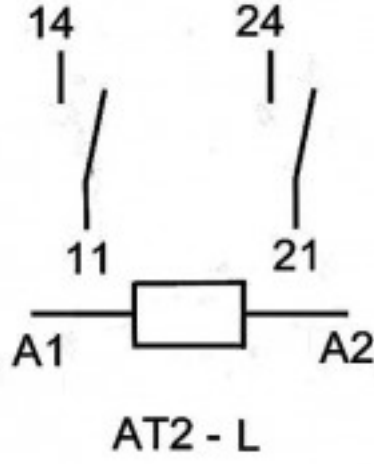
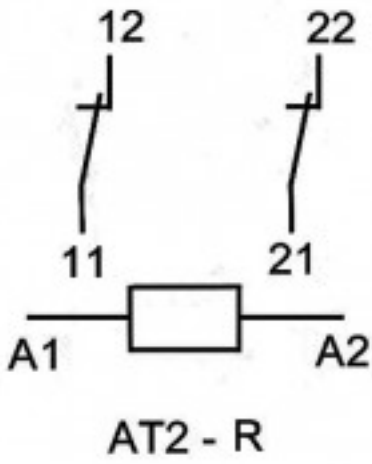
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## Available Types



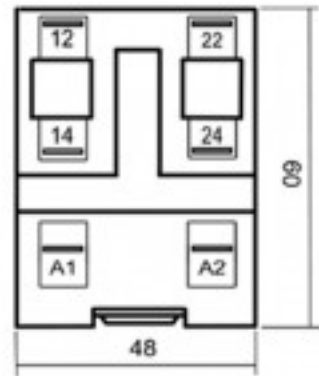
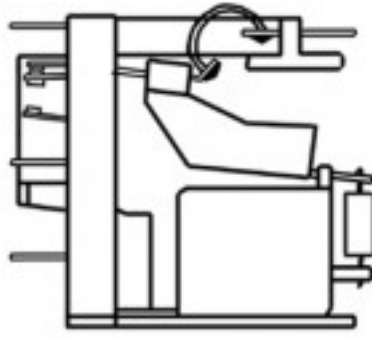
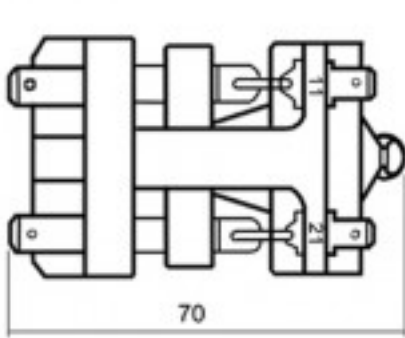
AT1 - Single pole 10A-5KVA (Double-break)  
 Contact arrangements:  
 1 Normally open (NO)  
 1 Normally closed (NC)  
 1 NO+NC contact

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AT2 - Double pole 10A-5KVA  
 Contact arrangements:  
 2 Normally open (NO)  
 2 Normally closed (NC)  
 2 Changeover (CO)

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Overall Dimensions (mm)

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## Coil Data

Nominal Voltage	Direct	Current	Alternating	Current	
	Current I	Resistance R (*)	Current I (50Hz)	Current I (60Hz)	Resistance R (*)
V	mA	ohm	mA	mA	ohm
6	920	7	1840	1340	0,8
12	460	26	920	670	3,4
24	230	105	460	335	13
48	115	420	230	168	52
60	92	650	185	134	80
110	50	2230	100	73	240
220	25	9100	-	-	-
230	-	-	48	35	1200
400	-	-	28	20	4350
(*) Resistance values @ 23° C		Tolerance on R and I:	+/- 10%		

Supply voltages:

6-12-24-48-110-230-400 VAC (50-60Hz) / 6-12-24-48-60-110-220 VDC

Rated power:

11 VA @ 50Hz (AC) / 8 VA @ 60Hz (AC) / 5,5 W (DC)

Operating range:

- 20%... + 10% (DC & AC-50Hz) / - 15%... + 10% (AC-60Hz)

Minimum hold voltage:

> 80% Vn (AC) / > 60% Vn (DC)

Must release voltage:

< 15% Vn (AC) / < 5% Vn (DC)

Thermic insulation class of winding (IEC 317):

F (155°C)

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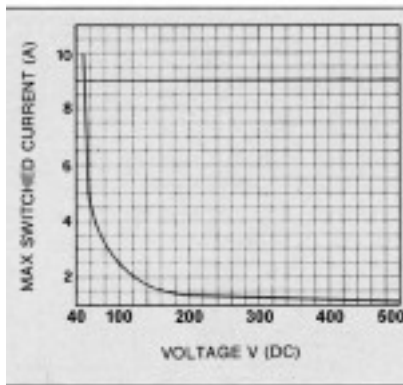
## Contact Data

Power rating (AC1)	5 KVA	Open contact gap	> 5 mm
Rated current (Resistive only)	10 A	Minimum voltage	10 VAC
Max istantaneous current (*)	20 A	Min. switched load	1000 mW
Rated voltage	500 VAC	Min. switched current	10 mA
Max switched voltage	5000 VAC	Initial resistance (***)	Max 100 milliohm
Switching power (DC1) (**)	1 A - 500 V	Standard material	Ag88%-SnO12%

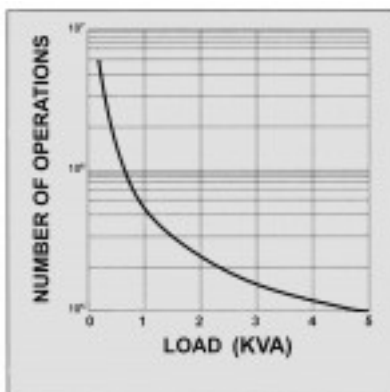
(\*) Maximum admitted time 0.5 seconds - ED = 0.1

(\*\*) L/R = 0 ms - Arc duration <5 ms

(\*\*\*) Contact category (EN 61810-7): CC2 (1A-30V)



Switching Power (DC1)  
@ 360 operations per hour



Contact Life Vs. AC1 Load  
at 360 operations per hour

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Approvals



UL 508 - Industrial Control Equipment  
C22.2 Canadian Standard