

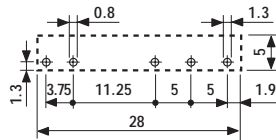
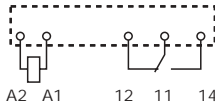
34

- Ultra-slim, 5 mm wide
- Sensitive DC coil, 170mW
- 6/8 mm clearance/creepage distance
- 6kV (1.2/50 μs) between coil and contacts

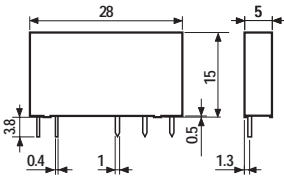
## 34.51



- 5 mm wide
- P.C.B. mounting



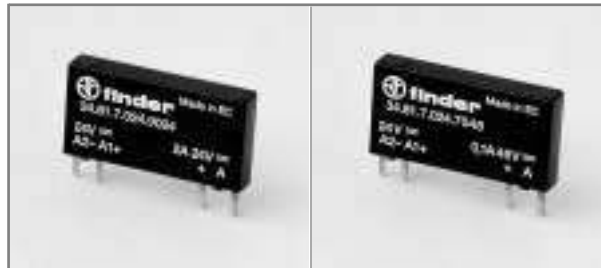
Copper side view



\* For 400 V applications, where requirements for pollution degree 2 are met.

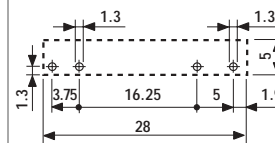
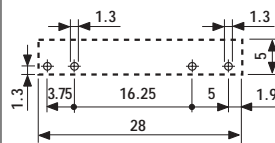
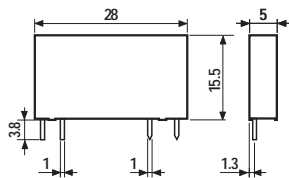
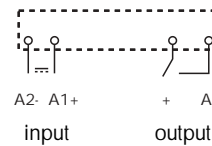
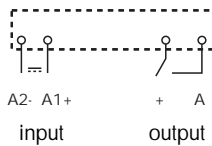
Contact specifications		
Contact configuration		1 CO
Rated current/Maximum peak current	A	6/10
Rated voltage/Maximum switching voltage	V AC	250/400*
Rated load in AC1	VA	1,500
Rated load in AC15 (230 VAC)	VA	300
Single phase motor rating (230 VAC)	kW	—
Breaking capacity in DC1: 30/110/220V	A	6/0.2/0.12
Minimum switching load	mW (V/mA)	500 (12/10)
Standard contact material		AgNi
Coil specifications		
Nominal voltage (U <sub>N</sub> )	V AC (50/60 Hz)	—
	V DC	5 · 12 · 24 · 48 · 60
Rated power AC/DC	VA (50 Hz)/W	—/0.17
Operating range	AC	—
	DC	(0.7... 1.5)U <sub>N</sub>
Holding voltage	AC/DC	—/0.4 U <sub>N</sub>
Must drop-out voltage	AC/DC	—/0.05 U <sub>N</sub>
Technical data		
Mechanical life AC/DC	cycles	—/10 · 10 <sup>6</sup>
Electrical life at rated load AC1	cycles	60 · 10 <sup>3</sup>
Operate/release time	ms	5/3
Insulation according to EN 61810-5		4 kV/3
Insulation between coil and contacts (1.2/50μs)	kV	6 (8 mm)
Dielectric strength between open contacts	V AC	1,000
Ambient temperature range	°C	-40...+85
Environmental protection		RT II
<b>Approvals:</b> (according to type)		GOST

- Ultra-slim, 5 mm wide
- High switching speed and endurance
- Silent switching

**34.81....9024**
**34.81....7048**


- Switching current 2A -  
24 V DC  
- P.C.B. mounting

- Switching current 0.1A -  
48 V DC  
- P.C.B. mounting



Copper side view

Copper side view

Output circuit					
Rated current/Maximum peak current (10 ms)	A	2/20		0.1/0.5	
Rated voltage/Maximum blocking voltage	V DC	24/33		48/60	
Switching voltage range	V DC	1.5...24		1.5...48	
Minimum switching current	mA	1		0.05	
Max "OFF-state" leakage current	µA	1		1	
Max "ON-state" voltage drop	V	0.12		1	
Input circuit					
Nominal voltage	V DC	24	60	24	60
Operating range	V DC	16...30	35...72	16...30	35...72
Control current	mA	7	3	7	3
Release voltage	V DC	10	20	10	20
Impedance	Ω	3,200	21,300	3,200	21,300
Technical data					
Operate/release time	µs	90/280		18/90	
Dielectric strength between input/output	V	2,500		2,500	
Ambient temperature range	°C	-30...+60		-30...+60	
Environmental protection		RT III		RT III	
<b>Approvals:</b> (according to type)		—		—	

## ORDERING INFORMATION

### 34 ELECTROMECHANICAL RELAY

Example: a 34 series slim electromechanical relay, 1 CO - 6 A, with 24 V sensitive DC coil.

	<b>3</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	
<b>Series</b>													
<b>Type</b>	5 = Electromechanical type												
<b>No. of poles</b>	1 = 1 pole, 6 A												
<b>Coil version</b>	7 = Sensitive DC												
<b>Coil voltage</b>	see coil specifications												
									<b>A: Contact material</b>		<b>D: Special versions</b>		
									0 = Standard AgNi		0 = Flux proof (RT II)		
									4 = AgSnO <sub>2</sub>		9 = Flat version		
									5 = AgNi + Au				
									<b>B: Contact circuit</b>		<b>C: Options</b>		
									0 = CO		1 = None		
									3 = NO				

**Only combinations in the same row are possible**

Preferred versions

	coil version	A	B	C	D
34.51	sens. DC	0	0	1	0

All versions

	coil version	A	B	C	D
34.51	sens. DC	0 - 4 - 5	0 - 3	1	0
34.51	sens. DC	0 - 4 - 5	0	1	9

### SOLID STATE RELAY

Example: a 34 series SSR relay, 2A, with 24VDC supply.

	<b>3</b>	<b>4</b>	<b>8</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>9</b>	<b>0</b>	<b>2</b>	<b>4</b>	
<b>Series</b>													
<b>Type</b>	8 = SSR type												
<b>Output</b>	1 = 1 NO												
<b>Input circuit</b>	see input specifications												
									<b>Output circuit</b>				
									9024 = 2 A - 24 VDC				
									7048 = 0.1A - 48 VDC				

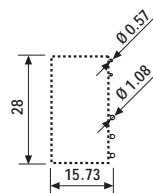
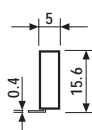
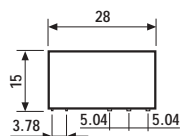
Note: All technical data are referred using the relay directly on PCB or PCB socket mounted type 93.11.

If the relay is use with 35 mm rail socket types 93.01 or 93.51, referer to the technical data of 38 Series, page 87

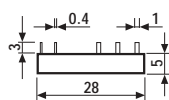
## POSSIBLE OPTIONS



Option = 34.51.7xxx.x019



Copper side view



## ELECTROMECHANICAL RELAY

### TECHNICAL DATA

#### INSULATION

INSULATION according to EN 61810-5	insulation rated voltage	V	250
	rated impulse withstand voltage	kV	4
	pollution degree		3
	overvoltage category		III

#### IMMUNITY

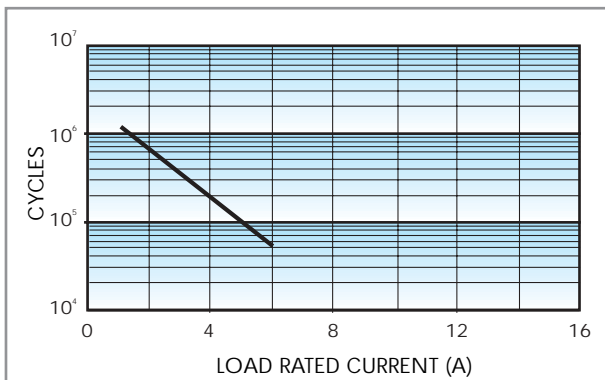
CONDUCTED DISTURBANCE IMMUNITY	BURST (according to EN 61000-4-4)	level 4 (4 kV)
	SURGE (according to EN 61000-4-5)	level 3 (2 kV)

#### OTHER DATA

BOUNCE TIME: NO/NC	ms	1/6	
VIBRATION RESISTANCE (10...55Hz): NO/NC	g/g	10/5	
POWER LOST TO THE ENVIRONMENT	without contact current	W	0.2
	with rated current	W	0.5
RECOMMENDED DISTANCE between RELAYS mounted on P.C.B.s	mm	≥5	

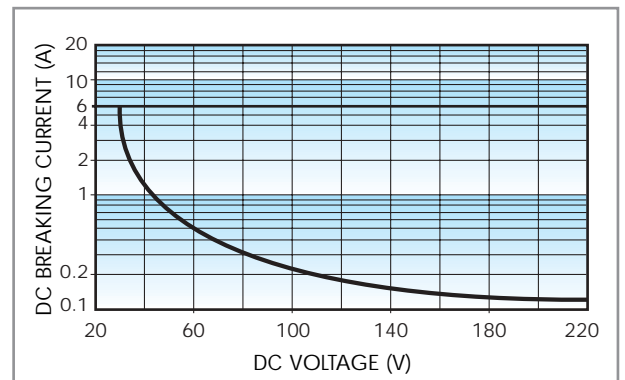
## CONTACT SPECIFICATIONS

### F 34



Electrical life vs AC1 load.

### H 34



Breaking capacity in DC1 load.

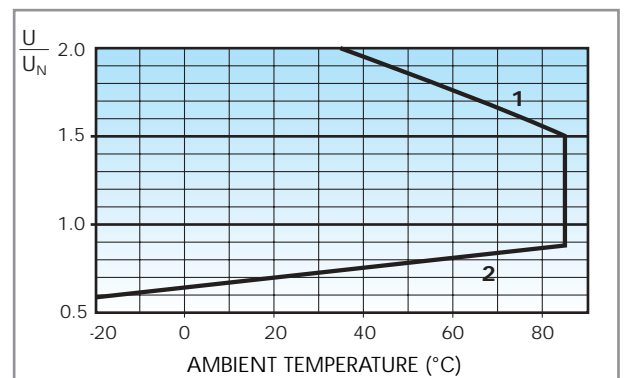
- When switching a resistive load (DC1) having voltage and current values under the curve the expected electrical life is  $\geq 100 \cdot 10^3$  cycles.
  - In case of DC13 loads the connection of a diode in parallel with the load will permit the same electrical life as for a DC1 load.
- Note:** the release time of load will be increase.

## COIL SPECIFICATIONS

#### DC VERSION DATA

Nominal voltage $U_N$ V	Coil code	Operating range		Resistance R $\Omega$	Rated coil consumption I at $U_N$ mA
		$U_{min}$ V	$U_{max}$ V		
5	7.005	3.5	7.5	130	38.4
12	7.012	8.4	18	840	14.2
24	7.024	16.8	36	3,350	7.1
48	7.048	33.6	72	12,300	3.9
60	7.060	42	90	19,700	3

### R 34 DC



Operating range vs ambient temperature.

- 1 - Max coil voltage permitted.
- 2 - Min pick-up voltage with coil at ambient temperature.

# SOLID STATE RELAY

## 34 TECHNICAL DATA

### OTHER DATA

POWER LOST TO THE ENVIRONMENT	without output current W	0.17
	with rated current W	0.4

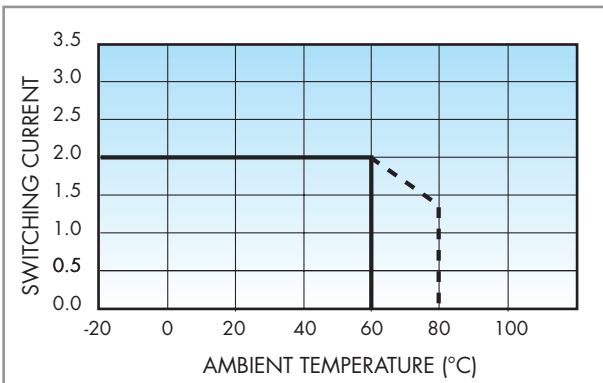
## INPUT SPECIFICATION

### DC VERSION DATA

Nominal voltage $U_N$	Input code	Operating range		Release voltage	Control current I at $U_N$
		$U_{min}$	$U_{max}$		
V		V	V	V	mA
24	7.024	16	30	10	7
60	7.060	35	72	20	3

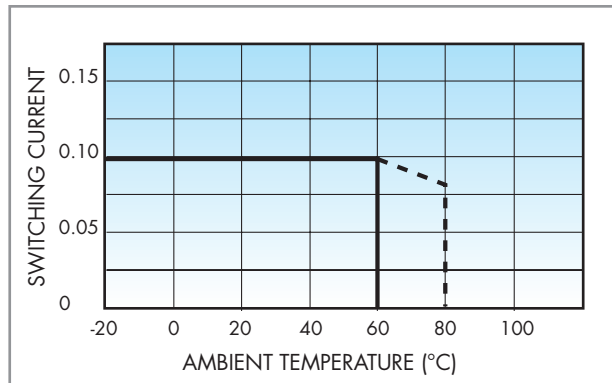
## OUTPUT SPECIFICATION

### L 34/2A



**Type 34.81 (2A-24VDC)**  
Switching current vs ambient temperature

### L 34/0.1A

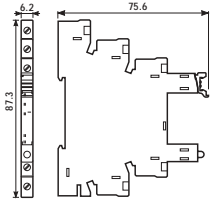


**Type 34.81 (100mA-48VDC)**  
Switching current vs ambient temperature



93.01

Approvals  
(according to type):

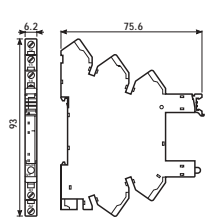


Relay type	34.51, 34.81	
Screw terminal socket: 35 mm (EN 50022) mounting		
Supply voltage	Relay type	Socket type
12 VAC/DC	34.51.7.012.xx10	93.01.0.024
24 VAC/DC	34.51.7.024.xx10	93.01.0.024
48 VAC/DC	34.51.7.048.xx10	93.01.0.060
60 VAC/DC	34.51.7.060.xx10	93.01.0.060
110...125 VAC/DC	34.51.7.060.xx10	93.01.0.125
220...240 VAC/DC	34.51.7.060.xx10	93.01.0.240
110...125 VAC/DC*	34.51.7.060.xx10 or 34.81.7.060.xxxx	93.01.3.125*
220...240 VAC*	34.51.7.060.xx10 or 34.81.7.060.xxxx	93.01.3.240*
6 VDC	34.51.7.005.xx10	93.01.7.024
12 VDC	34.51.7.012.xx10	93.01.7.024
24 VDC	34.51.7.024.xx10 or 34.81.7.024.xxxx	93.01.7.024
48 VDC	34.51.7.048.xx10	93.01.7.060
60 VDC	34.51.7.060.xx10 or 34.81.7.060.xxxx	93.01.7.060



93.51

Approvals  
(according to type):



Relay type	34.51, 34.81	
Screwless terminal socket: 35 mm (EN 50022) mounting		
Supply voltage	Relay type	Socket type
12 VAC/DC	34.51.7.012.xx10	93.51.0.024
24 VAC/DC	34.51.7.024.xx10	93.51.0.024
110...125 VAC/DC	34.51.7.060.xx10	93.51.0.125
220...240 VAC/DC	34.51.7.060.xx10	93.51.0.240
110...125 VAC/DC*	34.51.7.060.xx10 or 34.81.7.060.xxxx	93.51.3.125*
220...240 VAC*	34.51.7.060.xx10 or 34.81.7.060.xxxx	93.51.3.240*
12 VDC	34.51.7.012.xx10	93.51.7.024
24 VDC	34.51.7.024.xx10 or 34.81.7.024.xxxx	93.51.7.024
60 VDC	34.51.7.060.xx10 or 34.81.7.060.xxxx	93.51.7.060

\* Leakage current suppression



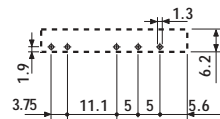
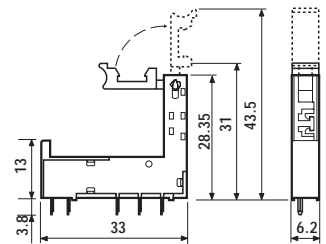
93.11

Approvals  
(according to type):



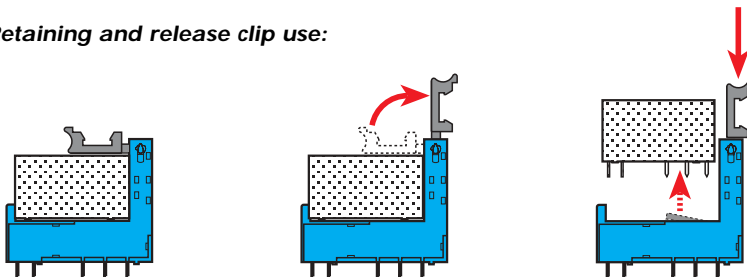
- RATED VALUES: 6A - 250 V
- INSULATION:  $\geq 6$  kV (1.2/50 $\mu$ s) between coil and contacts
- PROTECTION CATEGORY: IP 20
- AMBIENT TEMPERATURE: (-40...+70) °C

Relay type	34.51/34.81
Colour	BLUE
P.C.B. sockets with retaining and release clip	93.11



Copper side view

**Retaining and release clip use:**



## ACCESSORIES

34

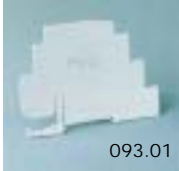
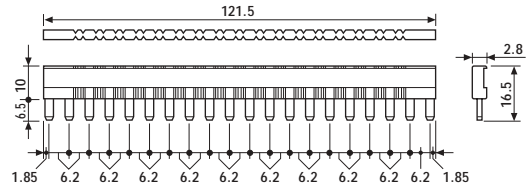


Approvals  
(according to type):



<b>20-way jumper link</b> for 38 series	093.20
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- RATED VALUES: 36 A - 250 V



<b>Plastic separator</b>	093.01
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Thickness 2mm, required at the start and the end of a group of interfaces.

Can be used for visual separation group, must be used for:

- protective separation of different voltages of neighbouring PLC interfaces according to VDE 0106-101
- protection of cut jumper links



<b>Sheet of marker tags</b> (64 tags): 6x10 mm	093.64
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