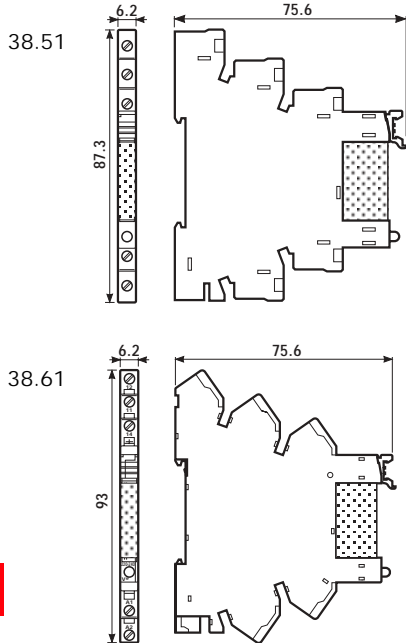
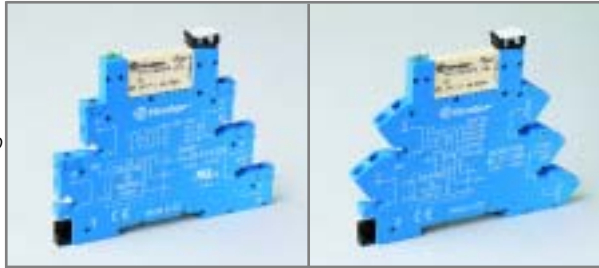
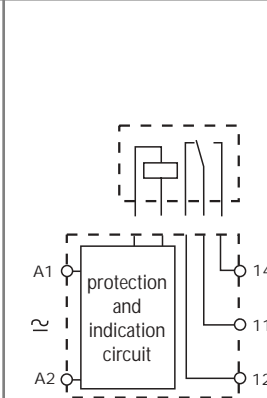
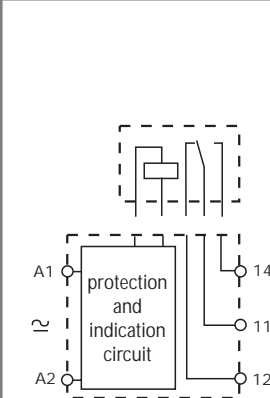


- Relay interface modules for use with PLC systems, 6.2 mm wide
- Sensitive DC coil or AC/DC coil version
- Supplied with integral coil indication and protection circuit
- Instant removal of relay using plastic retaining clip
- 35 mm rail (EN 50022) mounting


**38.51**
**38.61**


- Screw terminal
- Electromechanical relay
- 35 mm rail mounting

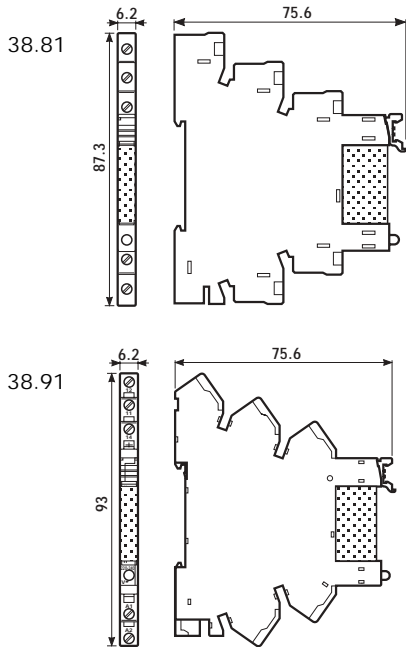
- Screw less terminal
- Electromechanical relay
- 35 mm rail mounting


38

Contact specifications			
Contact configuration		1 CO	1 CO
Rated current/Maximum peak current	A	6/10	6/10
Rated voltage/Maximum switching voltage	V AC	250/400*	250/400*
Rated load in AC1	VA	1,500	1,500
Rated load in AC15 (230 VAC)	VA	300	300
Single phase motor rating (230 VAC)	kW	—	—
Breaking capacity in DC1: 30/110/220V	A	6/0.2/0.15	6/0.2/0.15
Minimum switching load	mW (V/mA)	500 (12/10)	500 (12/10)
Standard contact material		AgNi	AgNi
Coil specifications			
Nominal voltage (U <sub>N</sub> )	V DC/AC (50/60 Hz)	12 · 24 · 48 · 60 · 110...125 · 230...240	
	V DC	6 · 12 · 24 · 48 · 60	
Rated power AC/DC	VA (50 Hz)/W	see table page 81	see table page 81
Operating range	AC/DC (50 Hz)	see table page 81	see table page 81
	DC	see table page 81	see table page 81
Holding voltage	AC/DC	0.6 U <sub>N</sub> /0.6 U <sub>N</sub>	0.6 U <sub>N</sub> /0.6 U <sub>N</sub>
Must drop-out voltage	AC/DC	0.1 U <sub>N</sub> /0.05 U <sub>N</sub>	0.1 U <sub>N</sub> /0.05 U <sub>N</sub>
Technical data			
Mechanical life AC/DC	cycles	—/10 · 10 <sup>6</sup>	—/10 · 10 <sup>6</sup>
Electrical life at rated load AC1	cycles	60 · 10 <sup>3</sup>	60 · 10 <sup>3</sup>
Operate/release time (bounce included)	ms	7/11	7/11
Insulation according to EN 61810-5		3.6 kV/3	3.6 kV/3
Insulation between coil and contacts (1.2/50µs)	kV	6 (8mm)	6 (8mm)
Dielectric strength between open contacts	V AC	1,000	1,000
Ambient temperature range (AC/DC)/(DC)	°C	-40...+55/-40...+70	-40...+55/-40...+70
Protection category		IP20	IP20
Approvals (relay): (according to type)			
		GOST	GOST

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

- Relay interface modules for use with PLC systems, 6.2 mm wide
- Sensitive DC coil or AC/DC coil version
- Supplied with integral coil indication and protection circuit
- Instant removal of relay using plastic retaining clip
- 35 mm rail (EN 50022) mounting



	38.81		38.91	
	<ul style="list-style-type: none"> <li>- Screw terminal</li> <li>- SSR relay</li> <li>- 35 mm rail mounting</li> </ul>		<ul style="list-style-type: none"> <li>- Screwless terminal</li> <li>- SSR relay</li> <li>- 35 mm rail mounting</li> </ul>	
<b>Output circuit</b>				
Maximum switching current	A	2	0,1	
Rated voltage	V DC	24	48	
Switching voltage range	V DC	0...24	0...48	
Maximum blocking voltage	V DC	33	60	
<b>Input circuit</b>				
Nominal voltage	V DC	24 - 60		
Operating range	V DC	see table page 80		
Control current	mA	see table page 80		
Release voltage	V DC	see table page 80		
<b>Technical data</b>				
Dielectric strength between input/output	V	2500		
Ambient temperature range	°C	-20...+55		
Protection category		IP20		
<b>Approvals:</b> (according to type)		—		

## ORDERING INFORMATION

### ELECTROMECHANICAL RELAY (EMR)

Example: a 38 series relay interface module with 1 CO contact, with coil rated at 12 V DC.

	<b>3 8 . 5 1 . 7 . 0 1 2 . 0 0 5 0</b>			
<b>Series</b>	3 8	<b>A: Contact material</b>	0 0	<b>D: Special versions</b>
<b>Type</b>	5 1	0 = AgNi Standard 4 = AgSnO <sub>2</sub> 5 = AgNi + Au	0 0	0 = Standard
5 = Electromechanical relay, with screw terminal 6 = Electromechanical relay, with screwless terminal		<b>B: Contact circuit</b>	5 0	<b>C: Options</b>
<b>No. of poles</b>	1	0 = CO		5 = Standard DC (positive A1) 6 = Standard AC/DC
1 = 1 pole, 6 A				
<b>Coil version</b>	7			
0 = AC (50/60 Hz)/ DC 7 = Sensitive DC				
<b>Coil voltage</b>	0 1 2			
see coil specifications				

### SOLID STATE RELAY (SSR)

Example: a 38 series SSR relay interface module with 2 A, with 24 V DC supply.

	<b>3 8 . 8 1 . 7 0 2 4 . 9 0 2 4</b>			
<b>Series</b>	3 8	<b>Output circuit</b>	9 0 2 4	
<b>Type</b>	8 1	9024 = 2 A - 24 V DC 7048 = 100 mA - 48 V DC		
8 = SSR relay, with screw terminal 9 = SSR relay, with screwless terminal				
<b>Output</b>	1			
1 = 1 NO				
<b>Control circuit</b>	7 0 2 4			
see input specifications				

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## SOLID STATE RELAY

### OTHER DATA

POWER LOST TO THE ENVIRONMENT	without contact current	W	0.17	
	with rated current	W	0.4	
WIRE STRIP LENGTH		mm	10	
			<b>38.81</b>	<b>38.91</b>
⊖ SCREW TORQUE		Nm	0.5	
MAX WIRE SIZE			solid cable	stranded cable
		mm <sup>2</sup>	1x2.5 / 2x1.5	1x2.5 / 2x1.5
		AWG	1x14 / 2x16	1x14 / 2x16

## INPUT SPECIFICATION

### DC VERSION DATA

Nominal voltage U <sub>N</sub>	Supply code	Operating range		Release voltage V	Control current I at U <sub>N</sub> mA
		U <sub>min</sub> V	U <sub>max</sub> V		
24	7.024	16.8	30	10	7
60	7.060	35.6	72	20	3

# ELECTROMECHANICAL RELAY

## TECHNICAL DATA

### INSULATION

INSULATION according to EN 61810-5	insulation rated voltage	V	250
	rated impulse withstand voltage	kV	3.6
	pollution degree		3
	overvoltage category		III

### IMMUNITY

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

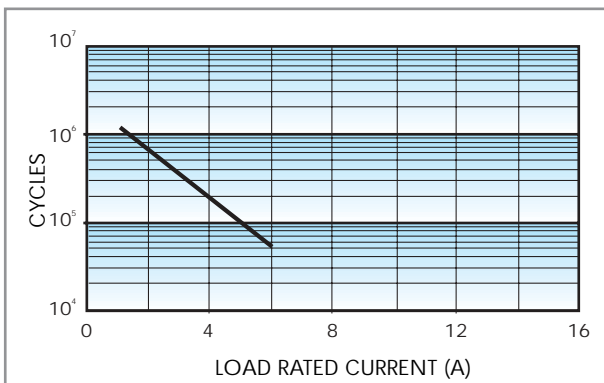
### OTHER DATA

VIBRATION RESISTANCE (10...55Hz): NO/NC	g/g	10/5			
POWER LOST TO THE ENVIRONMENT	without contact current	W	0.2 (12V) - 0.9 (240V)		
	with rated current	W	0.5 (12V) - 1.5 (240V)		
WIRE STRIP LENGTH	mm	10			
			<b>38.51</b>		<b>38.61</b>
⊖ SCREW TORQUE	Nm	0.5		—	
MAX WIRE SIZE		solid cable	stranded cable	solid cable	stranded cable
		mm <sup>2</sup>	1x2.5 / 2x1.5	1x2.5 / 2x1.5	1x2.5 / 1x2.5
		AWG	1x14 / 2x16	1x14 / 2x16	1x14 / 1x14

**38**

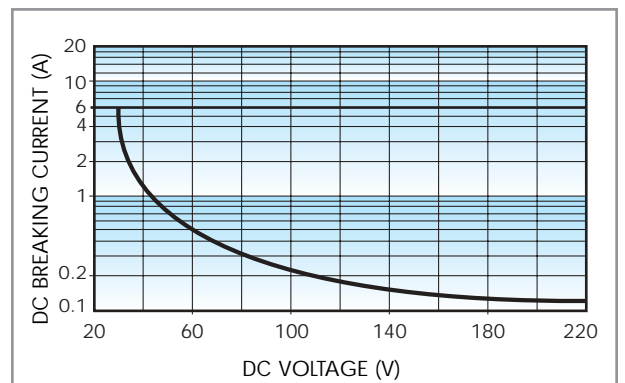
## CONTACT SPECIFICATIONS

### F 38



Electrical life vs AC1 load.

### H 38



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.

## ELECTROMECHANICAL RELAY

### COIL SPECIFICATIONS

#### AC/DC VERSION DATA

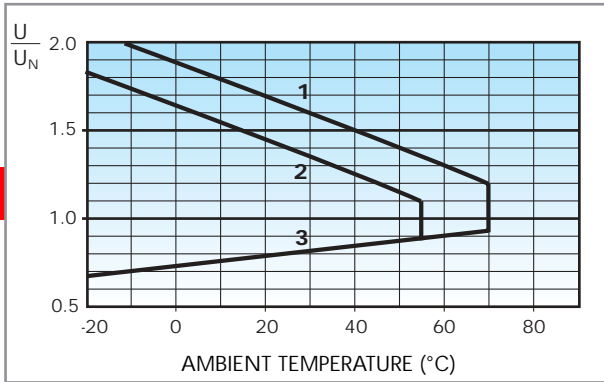
Nominal voltage $U_N$ V	Coil code	Operating range		Rated coil consumption	Power consumption
		$U_{min}$ V	$U_{max}$ V	I at $U_N$ mA	P at $U_N$ W
12	<b>0.012</b>	9.8	13.2	19	0.2
24	<b>0.024</b>	19.2	26.4	12	0.3
48	<b>0.048</b>	38.4	52.8	9	0.4
60	<b>0.060</b>	48	66	7	0.5
110...125	<b>0.125</b>	88	138	5(*)	0.6(*)
230...240	<b>0.240</b>	184	264	4(*)	0.9(*)

(\*) Rated coil consumption and power consumption values relate to  $U_N = 125$  and  $240$  V.

#### DC VERSION DATA (sensitive)

Nominal voltage $U_N$ V	Coil code	Operating range		Rated coil consumption
		$U_{min}$ V	$U_{max}$ V	I at $U_N$ mA
6	<b>7.006</b>	5	7.2	48.1
12	<b>7.012</b>	9.8	14.4	15.2
24	<b>7.024</b>	18.2	28.8	9.4
48	<b>7.048</b>	35	57.6	6.3
60	<b>7.060</b>	43.5	72	5.2

### R 38



Operating range Vs ambient temperature.

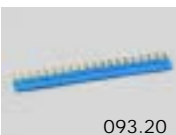
- 1 - Max coil voltage permitted at nominal load (DC version).
- 2 - Max coil voltage permitted at nominal load (AC/DC version).
- 3 - Min pick-up voltage with coil at ambient temperature.



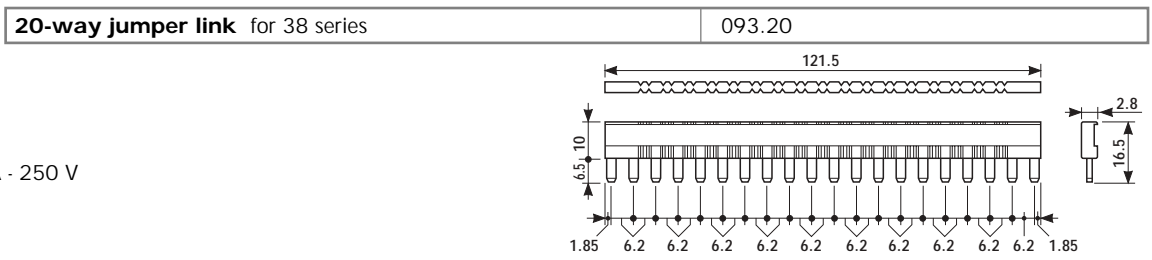
COMBINATION FOR ELECTROMECHANICAL RELAY			
Code	Supply voltage	Type of relay	Type of socket
38.51.0.012.0060	12 V AC/DC	34.51.7.012.0010	93.01.0.024
<b>38.51.0.024.0060</b>	24 V AC/DC	34.51.7.024.0010	<b>93.01.0.024</b>
38.51.0.048.0060	48 V AC/DC	34.51.7.048.0010	93.01.0.060
38.51.0.060.0060	60 V AC/DC	34.51.7.060.0010	93.01.0.060
<b>38.51.0.125.0060</b>	110...125 V AC/DC	34.51.7.060.0010	<b>93.01.0.125</b>
<b>38.51.0.240.0060</b>	220...240 V AC/DC	34.51.7.060.0010	<b>93.01.0.240</b>
38.51.7.006.0050	6 V DC	34.51.7.005.0010	93.01.7.024
<b>38.51.7.012.0050</b>	12 V DC	34.51.7.012.0010	<b>93.01.7.024</b>
<b>38.51.7.024.0050</b>	24 V DC	34.51.7.024.0010	<b>93.01.7.024</b>
38.51.7.048.0050	48 V DC	34.51.7.048.0010	93.01.7.060
38.51.7.060.0050	60 V DC	34.51.7.060.0010	93.01.7.060
38.61.0.012.0060	12 V AC/DC	34.51.7.012.0010	93.11.0.024
<b>38.61.0.024.0060</b>	24 V AC/DC	34.51.7.024.0010	<b>93.11.0.024</b>
<b>38.61.0.125.0060</b>	110...125 V AC/DC	34.51.7.060.0010	<b>93.11.0.125</b>
<b>38.61.0.240.0060</b>	220...240 V AC/DC	34.51.7.060.0010	<b>93.11.0.240</b>
<b>38.61.7.012.0050</b>	12 V DC	34.51.7.012.0010	<b>93.11.7.024</b>
<b>38.61.7.024.0050</b>	24 V DC	34.51.7.024.0010	<b>93.11.7.024</b>
COMBINATION FOR SSR RELAY			
Code	Supply voltage	Type of relay	Type of socket
<b>38.81.7.024.xxxx</b>	24 V DC	34.81.7.024.xxxx	<b>93.01.7.024</b>
38.81.7.060.xxxx	60 V DC	34.81.7.060.xxxx	93.01.7.060
<b>38.91.7.024.xxxx</b>	24 V DC	34.81.7.024.xxxx	<b>93.11.7.024</b>
38.91.7.060.xxxx	60 V DC	34.81.7.060.xxxx	93.11.7.060

In **bold** the preferred versions.

## ACCESSORIES



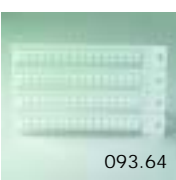
- RATED VALUES: 36 A - 250 V



<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 (64 tags)</b>	093.64
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