

PCB Relay with forcibly guided contacts 8 A

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50 SERIES Forcibly guided contacts relay 8 A



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SERIES

PCB Relay with forcibly guided contacts according to EN 61810-3 (previously EN 50.20) 50.121000 50.121000 - contact ApNI - for medium duty witching, suggested for DC loads - for medium duty witching					
Type 5 2 CO contact* Type 50.12000 	PCB Relay with forcibly guide	d contacts	50.121000	50.125000	
2 concarts* Type 50.12000 • 2 pole 8 A • Contact AgN • Pipe 50.12000 • 2 pole 8 A • Contact Maximum Section Secti	-	iously EN 50205)			
Type 50.121000• 2 pole 8 A• Contact AgNIYpe 50.125000• 2 pole 8 A• Contact AgNI + Au• High physical separation between adjacent contacts• Cadiatium Free contact materials• Barm & GAU (250 gu) isolation, coil-contacts• For safery applications, coil-contacts• Far medium duty witching, and the same data (250 gu) isolation, coil-contacts• Far materials• Contact specification• Copper side view• Contact pacification• Contact pacification• Contact configuration• Far data (arrent Maximum peak current A• R/15• Rated current Maximum peak current A• R/15• Rated current Maximum peak current A• R/15• Standard Contrast materials• Signe phase material• AgNi• Colo (DPDT)• Colo (DPDT) <td>* •</td> <td></td> <td></td> <td></td>	* •				
• 2 pole 8 A • Contact AgNI Type 50.125000 • 2 pole 8 A • Contact AgNI + Au • Ligh physical separation between adjacent contacts • Cadmium Fire contact materials • Caming the V(1.2/50 µs) solation, coll-contacts • For medium duty switching, a publications • For sefety applications • Cadmium Fire contact materials • Caming the V(1.2/50 µs) solation, coll-contacts • For sefety applications • CB mounting • PCB mounting • PCB mounting • Contact AgNI • Contact for low leave with high capability • S mm pinning • PCB mounting • PCB mounting • PCB mounting • Copper side view For outline drawing see page 7 Contact onforguation PCD (PDT) Rate load AC1 VA Standard Contacts For add acting load AC1 VA Value duvass Solo Standard contact material AgN1 Rate load AC1 VA Standard Contact material AgN1 Rat					
- Contact AgNi Ype 30.12500 - 2 pole 8 Å - Contact AgNi + Au + High physical separation between adjacent contacts - Cadmium free contact materials - B mm, 6 kV (12/50 µs) isolation, coll-contacts - B mm, 6 kV (12/50 µs) isolation, coll-contacts - Flix proof: RT II - According to EN 61810-3 only 1 NO and 1 NC (11-14 and 21-22 or 11-12 and 21-24) shall be used as fortibly guided contacts. - For UL names ase: - Contact configuration - Contact configuration - Contact Configuration - Contact AgNi by guided contacts. - For UL names ase: - Contact Specification - Contact Configuration - 2 CO (DPDT) - 2 CO (DPDT) - 2 CO (DPDT) - Contact Configuration - 2 CO (DPDT) - 2 CO (DPDT) <tr< td=""><td>••</td><td></td><td></td><td></td></tr<>	••				
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$\begin{tabular}{ c c c c c } \hline Coil specification & V AC (50/60 Hz) & & & & & & & & $		mW (V/mA)	500 (10/10)	50 (5/5)	
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$\begin{array}{ c c c c c c } Operating range & AC (50 Hz) & & \\ & DC & (0.7512)U_N & (0.7512)U_N \\ \hline Holding voltage & AC/DC & -/0.4 U_N & -/0.4 U_N \\ \hline Must drop-out voltage & AC/DC & -/0.1 U_N & -/0.1 U_N \\ \hline \textbf{Must drop-out voltage & AC/DC & -/0.1 U_N & -/0.1 U_N \\ \hline \textbf{Technical data} & & & \\ \hline \textbf{Mechanical life AC/DC & cycles &/10 \cdot 10^6 &/10 \cdot 10^6 \\ \hline \textbf{Electrical life at rated load AC1 & cycles & 100 \cdot 10^3 & 100 \cdot 10^3 \\ \hline \textbf{Operate/release time & ms & 10/4 & 10/4 \\ \hline \textbf{Insulation between coil and contacts (1.2/50 \mus) & kV & 6 (8 mm) & 6 (8 mm) \\ \hline \textbf{Dielectric strength & between open contacts & V AC & 1500 & 1500 \\ \hline \textbf{Ambient temperature range & ^C & -40+70 & -40+70 \\ \hline \textbf{Environmental protection & RT II & RT II \\ \hline \end{array}$					
DC $(0.751.2)U_N$ $(0.751.2)U_N$ Holding voltageAC/DC $-/0.4 U_N$ $-/0.4 U_N$ Must drop-out voltageAC/DC $-/0.1 U_N$ $-/0.1 U_N$ Technical data $-/0.1 U_N$ $-/10 \cdot 10^6$ Mechanical life AC/DCcycles $-/10 \cdot 10^6$ $-/10 \cdot 10^6$ Electrical life at rated load AC1cycles $100 \cdot 10^3$ $100 \cdot 10^3$ Operate/release timems $10/4$ $10/4$ Insulation between coil and contacts ($1.2/50 \mu$ s)kV $6 (8 mm)$ $6 (8 mm)$ Dielectric strength between open contactsV AC 1500 1500 Ambient temperature range°C $-40+70$ $-40+70$ Environmental protectionRT IIRT IIRT II	· · · · · · · · · · · · · · · · · · ·		—/0.7	—/0.7	
Holding voltageAC/DC $/0.4 U_N$ $/0.4 U_N$ Must drop-out voltageAC/DC $/0.1 U_N$ $/0.1 U_N$ Technical dataMechanical life AC/DCcycles $/10 \cdot 10^6$ $/10 \cdot 10^6$ Electrical life at rated load AC1cycles $100 \cdot 10^3$ $100 \cdot 10^3$ Operate/release timems $10/4$ $10/4$ Insulation between coil and contacts ($1.2/50 \mu$ s)kV $6 (8 mm)$ $6 (8 mm)$ Dielectric strength between open contactsV AC 1500 1500 Ambient temperature range°C $-40+70$ $-40+70$ Environmental protectionRT IIRT IIRT II	Operating range		-	-	
Must drop-out voltageAC/DC $/0.1 U_N$ $/0.1 U_N$ Technical dataMechanical life AC/DCcycles $/10 \cdot 10^6$ $/10 \cdot 10^6$ Electrical life at rated load AC1cycles $100 \cdot 10^3$ $100 \cdot 10^3$ Operate/release timems $10/4$ $10/4$ Insulation between coil and contacts ($1.2/50 \mu s$)kV $6 (8 mm)$ $6 (8 mm)$ Dielectric strength between open contactsV AC 1500 1500 Ambient temperature range°C $-40+70$ $-40+70$ Environmental protectionRT IIRT IIRT II					
Technical dataImage: Constraint of the systemMechanical life AC/DCcycles/10 · 106Mechanical life AC/DCcycles100 · 103Electrical life at rated load AC1cycles100 · 103Operate/release timems10/4Insulation between coil and contacts (1.2/50 µs)kV6 (8 mm)Dielectric strength between open contactsV ACDielectric strength between open contactsV ACInsulation temperature range°C-40+70Environmental protectionRT IIRT II					
Mechanical life AC/DCcycles/10 · 106/10 · 106Electrical life at rated load AC1cycles100 · 103100 · 103Operate/release timems10/410/4Insulation between coil and contacts (1.2/50 µs)kV6 (8 mm)6 (8 mm)Dielectric strength between open contactsV AC15001500Ambient temperature range°C-40+70-40+70Environmental protectionRT IIRT IIRT II		AC/DC	—/0.1 U _N	—/0.1 U _N	
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Operate/release timems10/410/4Insulation between coil and contacts (1.2/50 µs)kV6 (8 mm)6 (8 mm)Dielectric strength between open contactsV AC15001500Ambient temperature range°C-40+70-40+70Environmental protectionRT IIRT IIRT II	/ /				
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and contacts (1.2/50 μs)kV6 (8 mm)6 (8 mm)Dielectric strength between open contactsV AC15001500Ambient temperature range°C-40+70-40+70Environmental protectionRT IIRT II	· · · · · · · · · · · · · · · · · · ·	ms	10/4	10/4	
Dielectric strength between open contactsV AC1500Ambient temperature range°C-40+70-40+70Environmental protectionRT IIRT II		kV	6 (8 mm)	6 (8 mm)	
Ambient temperature range°C-40+70-40+70Environmental protectionRT IIRT II	· · ·		. ,		
Environmental protection RT II RT II	between open contacts		1500	1500	
	Ambient temperature range	°C	-40+70	-40+70	
Approvals (according to type)	Environmental protection				
	Approvals (according to type)		🖗 ERE 🌚		

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SERIES







Ordering information

Example: 50 series forcibly guided contacts, 2 CO (DPDT) 8 A contacts, 24 V DC coil.



See coil specifications

Technical data

Insulation according to EN 61810-	1			
Nominal voltage of supply system	V AC	230/400		
Rated insulation voltage	V AC	250	400	
Pollution degree		3	2	
Insulation between coil and conta	oct set			
Type of insulation		Reinforced (8 mm)		
Overvoltage category		Ш		
Rated impulse voltage	kV (1.2/50 μs)	6		
Dielectric strength	V AC	4000		
Insulation between adjacent cont	acts			
Type of insulation		Basic		
Overvoltage category		Ш		
Rated impulse voltage	kV (1.2/50 μs)	4		
Dielectric strength (50.12, 50.16)	V AC	3000		
Dielectric strength (50.14)	V AC	2500		
Insulation between open contacts	5			
Type of disconnection		Micro-disconnection		
Dielectric strength	V AC/kV (1.2/50 μs)	1500/2.5		
Insulation between coil terminals				
Rated impulse voltage (surge) different (according to EN 61000-4-5)	ential mode kV (1.2/50 μs)	2		
Other data				
Bounce time: NO/NC	ms	2/10		
Vibration resistance (10200)Hz: No	O/NC g	20/6		
Shock resistance NO/NC	g	20/5		
Power lost to the environment	without contact current W	0.7		
	with rated current W	1.2		
Recommended distance between re	elays mounted on PCB mm	≥ 5		

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SERIES



Contact specification

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SERIES

F 50 - Electrical life (AC) v contact current (type 50.12)



H 50 - Maximum DC1 breaking capacity (type 50.12)



 When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of ≥ 100 · 10³ can be expected.

 In the case of DC13 loads, the connection of a diode in parallel with the load will permit a similar electrical life as for a DC1 load.
 Note: the release time for the load will be increased.



Alternative selection of NO and NC contacts to provide Forcibly guided (mechanically linked) contacts, in accordance with EN 61810-3 (type B).

Coil specifications

DC coil data (type 50.12)

Nominal voltage	Coil code	Operating range		Resistance	Rated coil consumption
U _N		U _{min}	U _{max}	R	I at U_N
V		V	V	Ω	mA
5	9 .005	3.8	6	35	143
6	9 .006	4.5	7.2	50	120
12	9 .012	9	14.4	205	58.5
24	9 .024	18	28.8	820	29.3
48	9 .048	36	57.6	3280	14.4
60	9 .060	45	72	5140	11.7
110	9 .110	82.5	131	17250	6.4
125	9 .125	93.7	150	22300	5.6

DC coil data (type 50.14/16)

Nominal voltage	Coil code	Operating range		Resistance	Rated coil consumption
U _N		U _{min}	U _{max}	R	I at U _N
V		V	V	Ω	mA
12	9 .012	9	14.4	180	66.6
24	9 .024	18	28.8	720	33.3
48	9 .048	36	57.6	2880	16.6
110	9 .110	82.5	131	15125	7.7

R 50 - DC coil operating range v ambient temperature Standard coil (type 50.12)



1 - Max. permitted coil voltage.

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



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Contact specification

F 50 - Electrical life (AC) v contact current (type 50.14)



F 50 - Electrical life (AC) v contact current (type 50.16)



H 50 - Maximum DC1 breaking capacity (type 50.14)



• When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of $\geq 100 \cdot 10^3$ can be expected.

• In the case of DC13 loads, the connection of a diode in parallel with the load will permit a similar electrical life as for a DC1 load. Note: the release time for the load will be increased.





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

Outline drawings

Types 50.12...1000/50.12...5000



Type 50.14





