

Dold Series Force Guided Relays



HC3096N-48-900-24



HC3096N-52-900-24



HC3096N-102-24



HL3096N-102-24



OA5611-48-24



OA5612-18-24

Overview

Force guided relays are constructed such that it is not possible for all contacts to be closed at the same time. Dold force guided relays have at least one N.C. contact set and one N.O. contact set. If a N.O. contact fails when trying to open, the associated N.C. contact cannot close when the power supply is switched off.

Force guided relays offer a cost and space saving alternative to contactors while providing simple contact monitoring via a forcibly guided N.C. contact.

Features

- Large wire cross-section (12-24 AWG) reduces thermal load on wires
- Polarity protection diode
- 35mm DIN rail mounting per IEC/EN 60715
- No mounting restrictions
- Available as plug and socket, or integrated module
- Module version possesses LED for indication
- Available in 4PST and 6PST configurations



Force Guided Relays								
Part Number	Price	Drawing Links	Type	Coil Voltage	Configuration	Contact Rating	Compatible Relay Socket	
HC3096N-48-900-24	\$40.50	PDF	Module	24VDC	4PST	5A	NA	
HC3096N-52-900-24	\$37.50	PDF	Module		4PST			
OA5611-48-24	\$16.50	PDF	Relay		4PST		HC3096N-102-24	
OA5611-52-24	\$16.50	PDF	Relay		4PST			
HL3096N-18-900-24	\$51.00	PDF	Module		6PST		NA	
HL3096N-50-900-24	\$51.00	PDF	Module		6PST			
HL3096N-54-900-24	\$51.00	PDF	Module		6PST			
HL3096N-60-900-24	\$51.00	PDF	Module		6PST			
OA5612-18-24	\$23.00	PDF	Relay		6PST			HL3096N-102-24
OA5612-50-24	\$23.00	PDF	Relay		6PST			
OA5612-54-24	\$23.00	PDF	Relay		6PST			
OA5612-60-24	\$23.00	PDF	Relay		6PST			

Relay Sockets						
Part Number	Price	Drawing Links	Type	Maximum Screw Torque	Maximum Wire Sizes	Weight
HC3096N-102-24	\$27.00	PDF	Socket	All terminals: 4.4 in-lbs/0.5 N·m	All terminals: 12 to 24 AWG	45g [1.59 oz]
HL3096N-102-24	\$29.50	PDF	Socket	All terminals: 4.4 in-lbs/0.5 N·m	All terminals: 12 to 24 AWG	63g [2.22 oz]

Dold Force Guided Relays

Force Guided Relay Specifications for 4PST Relays					
Part Number	<u>HC3096N-48-900-24</u>		<u>HC3096N-52-900-24</u>	<u>OA5611-48-24</u>	<u>OA5611-52-24</u>
General Specifications					
Service Life		Mechanical: 50 million operations Electrical: 200,000 operations @ rated resistive load			
Temperature Rating	Operating	-40 to 55°C [-40 to 131°F]			
	Storage	-40 to 70°C [-40 to 158°F]			
Operational Maximum Relative Humidity		93% at 40°C			
Response Time	Operate	20ms			
	Release	6ms			
Vibration Resistance		0.35 mm at 10–55 Hz			
Shock Resistance		Category 1, Class B, IEC/EN 61373			
Weight g(oz)		71 [2.5]			33 [1.16]
NEMA B300 Pilot Duty Rated		Yes			
Agency Approvals and Standards		UL file E146415			
Coil Specifications					
Coil Input Voltage		24VDC			
Coil Resistance		820Ω			
Power Consumption		0.6 W			
Dropout Voltage		1.2 VDC			
Pull-in Voltage		19.8 VDC			
Max. Voltage (Max. Continuous Voltage)		26.4 VDC			
Contact Specifications					
Contacts	3 N.O. / 1 N.C.	2 N.O. / 2 N.C.	3 N.O. / 1 N.C.	2 N.O. / 2 N.C.	
Contact Material	AgNi + 0.2μ Au				
Minimum Switching Requirement	10V AC/DC - 10mA				
Contact Rating	Refer to Contact Ratings table below				
Dielectric Strength Between Contacts	4kV				
IP Rating	Housing: IP40 IEC/EN 60 529 Terminals: IP20 IEC/EN 60 529				
Housing Material	Thermoplastic				

Force Guided Relay Contact Ratings (current)

Contact Type	Voltage	AC15	DC13
N.C.	24VDC	-	4A
N.O.	24VDC	-	4A
N.C.	250 VAC	1A	-
N.O.	250 VAC	2A	-

Dold Force Guided Relays

Force Guided Relay Specifications for 6PST Relays								
Part Number	HL3096N-18-900-24	HL3096N-50-900-24	HL3096N-54-900-24	HL3096N-60-900-24	OA5612-18-24	OA5612-50-24	OA5612-54-24	OA5612-60-24
General Specifications								
Service Life	Mechanical: 50 million operations Electrical: 200,000 operations @ rated resistive load							
Temperature Rating	Operating	-40 to 55°C [-40 to 131°F]						
	Storage	-40 to 70°C [-40 to 158°F]						
Operational Maximum Relative Humidity	93% at 40°C							
Response Time	Operate	20ms						
	Release	6ms						
Vibration Resistance	0.35 mm at 10–55 Hz							
Shock Resistance	Category 1, Class B, IEC/EN 61373							
Weight	90g [3.17 oz]				63g [2.22 oz]			
NEMA B300 Pilot Duty Rated	Yes							
Agency Approvals and Standards	UL file E146415							
Coil Specifications								
Coil Input Voltage	24VDC							
Coil Resistance	650Ω							
Power Consumption	0.8 W	1.0 W	0.8 W	0.8 W	0.8 W	1.0 W	0.8 W	0.8 W
Dropout Voltage	1.2 VDC							
Pull-in Voltage	19.8 VDC							
Max. Voltage (Max. Continuous Voltage)	26.4 VDC							
Contact Specifications								
Contacts	3 N.O. / 3 N.C.	2 N.O. / 4 N.C.	4 N.O. / 2 N.C.	5 N.O. / 1 N.C.	3 N.O. / 3 N.C.	2 N.O. / 4 N.C.	4 N.O. / 2 N.C.	5 N.O. / 1 N.C.
Contact Material	AgNi + 0.2μ Au							
Minimum Switching Requirement	10V AC/DC - 10mA							
Contact Rating	Refer to Contact Ratings table below							
Dielectric Strength Between Contacts	4kV							
IP Rating	Housing: IP40 IEC/EN 60 529 Terminals: IP20 IEC/EN 60 529							
Housing Material	Thermoplastic							

Force Guided Relay Contact Ratings (current)

Contact Type	Voltage	AC15	DC13
N.C.	24VDC	-	4A
N.O.	24VDC	-	4A
N.C.	250VAC	1A	-
N.O.	250VAC	2A	-