

Dold Series Force Guided Relays



HC3096N-48-900-24



HL3096N-18-900-24



HC3096N-102-24



HL3096N-102-24



OA5611-48-24



OA5612-18-24

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 NC contact set and one NO contact set. If an NO contact fails when trying to open, the associated NC 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 NC 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 Relay Selection Guide							
Part Number	Price	Type	Coil Voltage	Configuration	Contact Rating	Compatible Relay Socket	
HC3096N-48-900-24	\$31.00	Module	24VDC	4PST	5A	-	
HC3096N-52-900-24	\$31.00	Module		4PST			
OA5611-48-24	\$13.50	Relay		4PST			HC3096N-102-24
OA5611-52-24	\$13.50	Relay		4PST			
HL3096N-18-900-24	\$39.50	Module		6PST			-
HL3096N-50-900-24	\$39.50	Module		6PST			
HL3096N-54-900-24	\$39.50	Module		6PST			
HL3096N-60-900-24	\$39.50	Module		6PST			
OA5612-18-24	\$18.50	Relay		6PST	HL3096N-102-24		
OA5612-50-24	\$18.50	Relay		6PST			
OA5612-54-24	\$18.50	Relay		6PST			
OA5612-60-24	\$18.50	Relay		6PST			

Relay Sockets					
Part Number	Price	Type	Maximum Screw Torque	Maximum Wire Sizes	Weight
HC3096N-102-24	\$20.50	Socket	All terminals: 4.4 in-lbs/0.5 N-m	All terminals: 12 to 24 AWG	45g (1.59 oz)
HL3096N-102-24	\$22.50	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	HC3096N-48-900-24	HC3096N-52-900-24	OA5611-48-24	OA5611-52-24
General Specifications				
Service Life	Mechanical: 50 million operations Electrical: 200,000 operations @ rated resistive load			
Temperature Rating	Operating	-40°C to 55°C (-40°F to 131°F)		
	Storage	-40°C to 70°C (-40°F 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	71g (2.5 oz)		33g (1.16 oz)	
Agency Approvals and Standards	UL file E146415			
NEMA B300 Pilot Duty Rated	Yes			
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 NO / 1 NC	2 NO / 2 NC	3 NO / 1 NC	2 NO / 2 NC
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: IP 40 IEC/EN 60 529 Terminals: IP 20 IEC/EN 60 529			
Housing Material	Thermoplastic			

Force Guided Relay Contact Ratings (current)			
Contact Type	Voltage	AC15	DC13
NC	24VDC	-	4A
NO	24VDC	-	4A
NC	230VAC	2A	-
NO	230VAC	3A	-

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°C to 55°C (-40°F to 131°F)						
	Storage	-40°C to 70°C (-40°F 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)			
Agency Approvals and Standards	UL file E146415							
NEMA B300 Pilot Duty Rated	Yes							
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 NO / 3 NC	2 NO / 4 NC	4 NO / 2 NC	5 NO / 1 NC	3 NO / 3 NC	2 NO / 4 NC	4 NO / 2 NC	5 NO / 1 NC
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: IP 40 IEC/EN 60 529 Terminals: IP 20 IEC/EN 60 529							
Housing Material	Thermoplastic							

Force Guided Relay Contact Ratings (current)			
Contact Type	Voltage	AC15	DC13
NC	24VDC	-	4A
NO	24VDC	-	4A
NC	230VAC	2A	-
NO	230VAC	3A	-

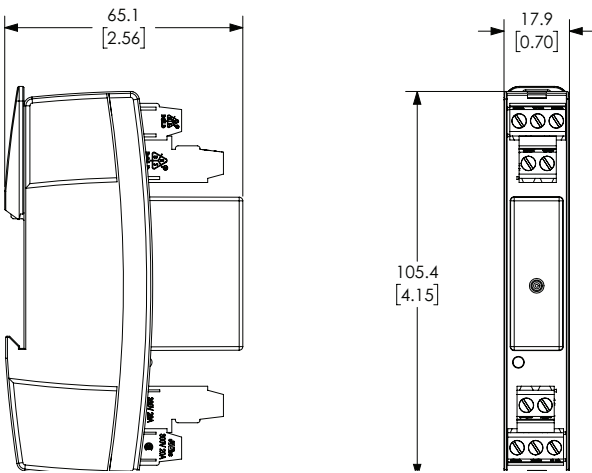
Dold Force Guided Relays Dimensions

Dimensions

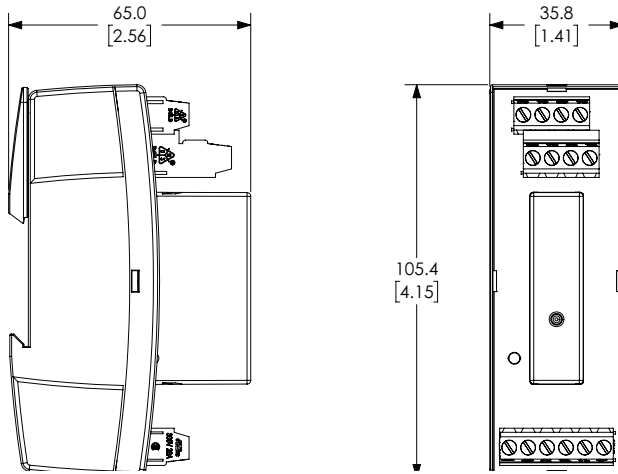
mm [inches]

Integrated Modules

HC3096N-xx-900-24

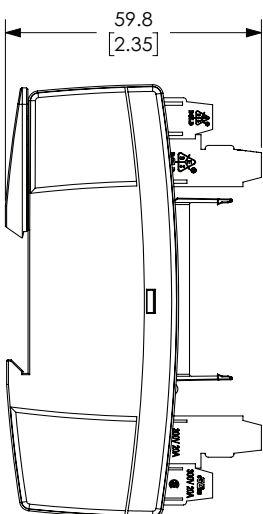


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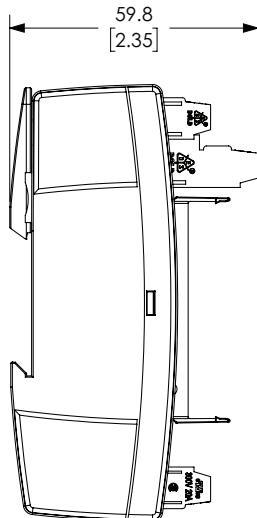


Sockets

HC3096N-102-24

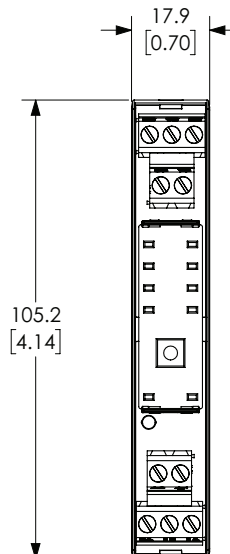


HL3096N-102-24



Relays

OA5611-xx-24



OA5612-xx-24

