

# Dold Series Force Guided Relays



HC3096N-48-900-24



HL3096N-18-900-24



HC3096N-102-24



OA5611-48-24



HL3096N-102-24



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	\$29.00	Module	24VDC	4PST	5A	-	
HC3096N-52-900-24	\$29.00	Module		4PST			
OA5611-48-24	\$12.00	Relay		4PST			HC3096N-102-24
OA5611-52-24	\$12.00	Relay		4PST			
HL3096N-18-900-24	\$36.00	Module		6PST		-	
HL3096N-50-900-24	\$36.00	Module		6PST			
HL3096N-54-900-24	\$36.00	Module		6PST			
HL3096N-60-900-24	\$36.00	Module		6PST			
OA5612-18-24	\$17.00	Relay		6PST		HL3096N-102-24	
OA5612-50-24	\$17.00	Relay		6PST			
OA5612-54-24	\$17.00	Relay		6PST			
OA5612-60-24	\$17.00	Relay		6PST			

Relay Sockets					
Part Number	Price	Type	Maximum Screw Torque	Maximum Wire Sizes	Weight
HC3096N-102-24	\$19.00	Socket	All terminals: 4.4 in-lbs/0.5 N-m	All terminals: 12 to 24 AWG	45g (1.59 oz)
HL3096N-102-24	\$21.00	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
<b>General Specifications</b>				
<b>Service Life</b>	Mechanical: 50 million operations Electrical: 200,000 operations @ rated resistive load			
<b>Temperature Rating</b>	<b>Operating</b>	-40°C to 55°C (-40°F to 131°F)		
	<b>Storage</b>	-40°C to 70°C (-40°F to 158°F)		
<b>Operational Maximum Relative Humidity</b>	93% at 40°C			
<b>Response Time</b>	<b>Operate</b>	20ms		
	<b>Release</b>	6ms		
<b>Vibration Resistance</b>	0.35 mm at 10–55 Hz			
<b>Shock Resistance</b>	Category 1, Class B, IEC/EN 61373			
<b>Weight</b>	71g (2.5 oz)		33g (1.16 oz)	
<b>Agency Approvals and Standards</b>	UL file E146415			
<b>NEMA B300 Pilot Duty Rated</b>	Yes			
<b>Coil Specifications</b>				
<b>Coil Input Voltage</b>	24VDC			
<b>Coil Resistance</b>	820Ω			
<b>Power Consumption</b>	0.6 W			
<b>Dropout Voltage</b>	1.2 VDC			
<b>Pull-in Voltage</b>	19.8 VDC			
<b>Max. Voltage (Max. continuous voltage)</b>	26.4 VDC			
<b>Contact Specifications</b>				
<b>Contacts</b>	3 NO / 1 NC	2 NO / 2 NC	3 NO / 1 NC	2 NO / 2 NC
<b>Contact Material</b>	AgNi + 0.2μ Au			
<b>Minimum Switching Requirement</b>	10V AC/DC - 10mA			
<b>Contact Rating</b>	Refer to Contact Ratings table below			
<b>Dielectric Strength Between Contacts</b>	4kV			
<b>IP Rating</b>	Housing: IP 40 IEC/EN 60 529 Terminals: IP 20 IEC/EN 60 529			
<b>Housing Material</b>	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
<b>General Specifications</b>								
<b>Service Life</b>	Mechanical: 50 million operations Electrical: 200,000 operations @ rated resistive load							
<b>Temperature Rating</b>	<b>Operating</b>	-40°C to 55°C (-40°F to 131°F)						
	<b>Storage</b>	-40°C to 70°C (-40°F to 158°F)						
<b>Operational Maximum Relative Humidity</b>	93% at 40°C							
<b>Response Time</b>	<b>Operate</b>	20ms						
	<b>Release</b>	6ms						
<b>Vibration Resistance</b>	0.35 mm at 10–55 Hz							
<b>Shock Resistance</b>	Category 1, Class B, IEC/EN 61373							
<b>Weight</b>	90g (3.17 oz)				63g (2.22 oz)			
<b>Agency Approvals and Standards</b>	UL file E146415							
<b>NEMA B300 Pilot Duty Rated</b>	Yes							
<b>Coil Specifications</b>								
<b>Coil Input Voltage</b>	24VDC							
<b>Coil Resistance</b>	650Ω							
<b>Power Consumption</b>	0.8 W	1.0 W	0.8 W	0.8 W	0.8 W	1.0 W	0.8 W	0.8 W
<b>Dropout Voltage</b>	1.2 VDC							
<b>Pull-in Voltage</b>	19.8 VDC							
<b>Max. Voltage (Max. continuous voltage)</b>	26.4 VDC							
<b>Contact Specifications</b>								
<b>Contacts</b>	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
<b>Contact Material</b>	AgNi + 0.2μ Au							
<b>Minimum Switching Requirement</b>	10V AC/DC - 10mA							
<b>Contact Rating</b>	Refer to Contact Ratings table below							
<b>Dielectric Strength Between Contacts</b>	4kV							
<b>IP Rating</b>	Housing: IP 40 IEC/EN 60 529 Terminals: IP 20 IEC/EN 60 529							
<b>Housing Material</b>	Thermoplastic							

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

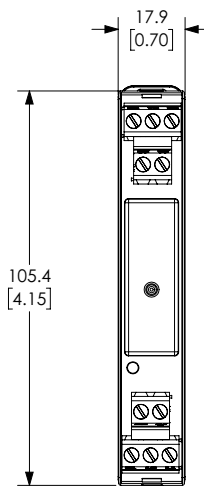
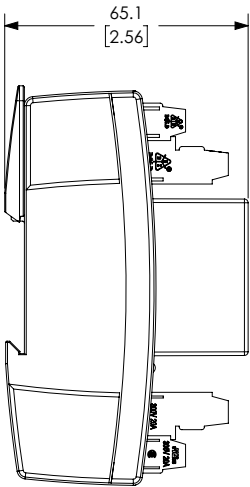
# Dold Force Guided Relays Dimensions

## Dimensions

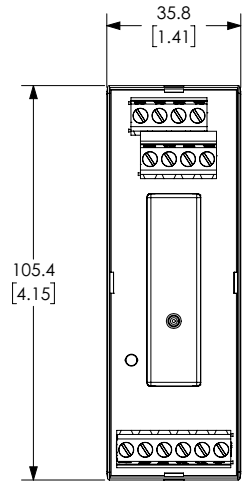
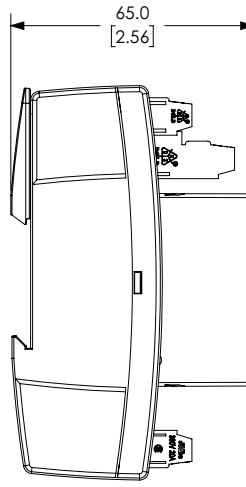
mm [inches]

## Integrated Modules

**HC3096N-xx-900-24**

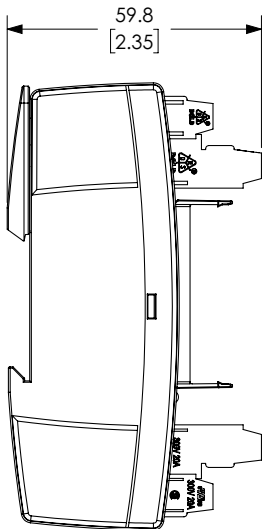


**HL3096N-xx-900-24**

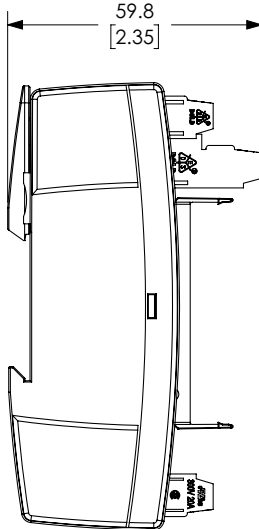


## Sockets

**HC3096N-102-24**

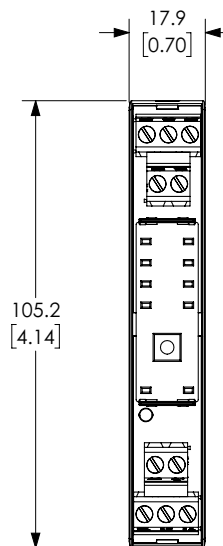


**HL3096N-102-24**



## Relays

**OA5611-xx-24**



**OA5612-xx-24**

