
DATA SHEET

Reed Relay - 8CH DPST De-Mux 3041 Series

DESCRIPTION

The 3041 Series is an Eight channel relay board series using through hole DPDT reed relays. This implementation is low cost and targeted at low noise signal switching or isolation. The boards will come with a choice of supply voltages. This datasheet details the demultiplexer implementation of the 3041 series designed for wire pair de-multiplexing



Document ID: 3041OPM001

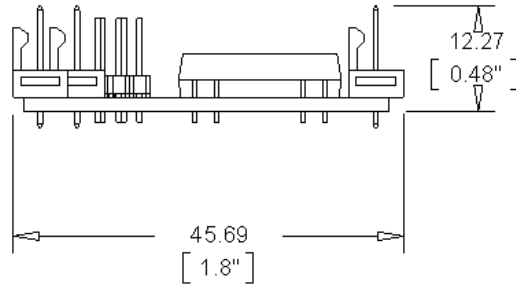
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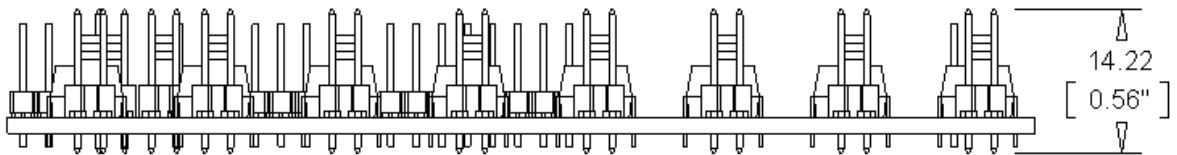
Dimensions and Board Layout

UNITS: mm [inch]

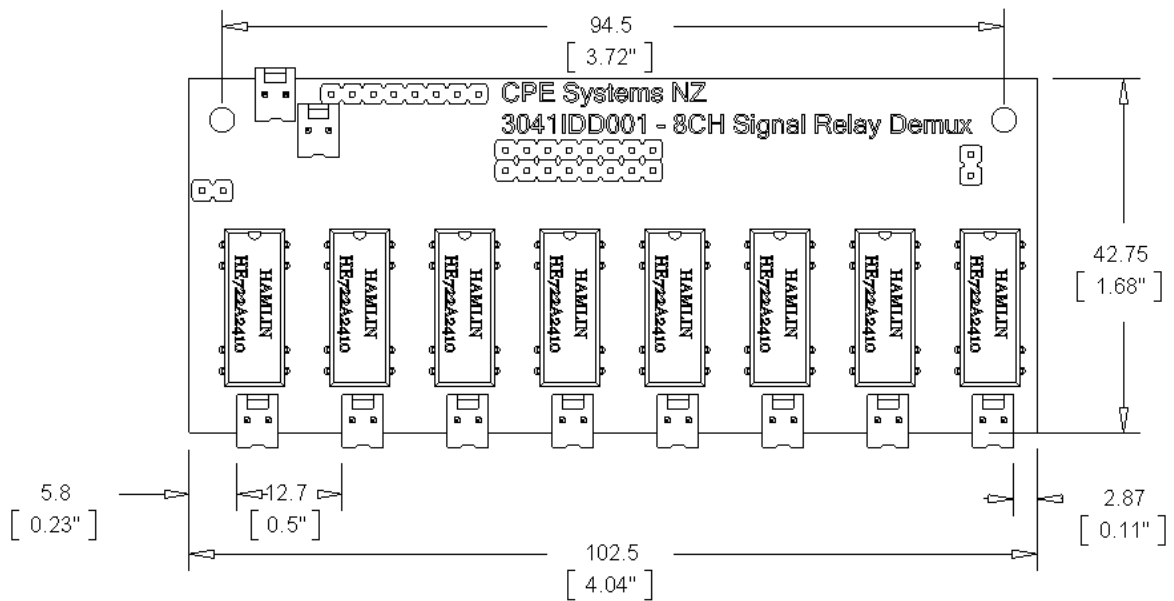
Side View



Front View



Top View



General Specifications

Mechanical		
Board Length	103mm	
Board Width	43mm	
Board Height	15mm	
Mounting Holes	2 @ 3.1mm Dia.	
PCB Thickness	1.6mm	
PCB Material	FR-4	
Electrical		
PCB Header Conductor	Tin Coated Brass	
Relay Contact Arrangement	2 form A	
Relay Type	Reed Contacts	
Board and Relay Switching Ratings	Maximum Rated Power	10W
	Maximum Switching Voltage	200VDC
	Maximum Constant Current	1.2A
	Maximum Switching Current	0.5A
	Operate/ Release Time Max	1ms
	Mechanical Endurance	10x10 ⁶ Operations
Ambient Temperature	-40°C to +85°C	
Shock Resistance (destructive)	490 m/s ² (50G)	
Vibration Resistance (functional)	10 to 2000 Hz (20G)	

Series Specifications

Order Code		3041IDD001
Description Code (Refer Key in Page 6)		24-LR-DPNO-08-D
Board Voltage Input		24V
Max. Board Power Required @ 24V All Channels ON		4.95 W
Leakage Current (All Channels Off)		Leakage Current of Driving Device *8 Channels
Require Min. Driving Current per Channel @ Rated Coil Input Voltage (24V)		25.8mA (Sinking)
Relay Coil	Rated Voltage	24V
	Operate Voltage	16V
	Release Voltage	2V
	Resistance	2150 ohms
	Rated Power	268mW

Order Code		3041IDD002
Description Code (Refer Key in Page 6)		24-LR-DPNO-08-T
Board Voltage Input		24V
Max. Board Power Required @ 24V All Channels ON		4.73 W
Leakage Current (All Channels Off)		500µA per Channel 4mA Total (8 Channel TTL Driver)
Require Min. Driving Current per Channel @ Rated Coil Input Voltage (24V)		24.6mA
TTL Driving Signal Requirements		$I_{ON} = 1\text{mA}$
		$V_I = 3.85\text{V}$
Relay Coil	Rated Voltage	24V
	Operate Voltage	16V
	Release Voltage	2V
	Resistance	2150 ohms
	Rated Power	268mW

Order Code		3041IDD003
Description Code (Refer Key in Page 6)		12-LR-DPNO-08-D
Board Voltage Input		12V
Max. Board Power Required @ 12V All Channels ON		3.70 W
Leakage Current (All Channels Off)		Leakage Current of Driving Device *8 Channels
Require Min. Driving Current per Channel @ Rated Coil Input Voltage (12V)		38.6mA (Sinking)
Relay Coil	Rated Voltage	12V
	Operate Voltage	8V
	Release Voltage	1V
	Resistance	500 ohms
	Rated Power	288mW

Order Code		3041IDD004
Description Code (Refer Key in Page 6)		12-LR-DPNO-08-T
Board Voltage Input		12V
Max. Board Power Required @ 12V All Channels ON		3.37 W
Leakage Current (All Channels Off)		500µA per Channel 4mA Total (8 Channel TTL Driver)
Require Min. Driving Current per Channel @ Rated Coil Input Voltage (12V)		35.1mA (Sinking)
TTL Driving Signal Requirements		I _{ON} = 1mA
		V _I = 3.85V
Relay Coil	Rated Voltage	12V
	Operate Voltage	8V
	Release Voltage	1V
	Resistance	500 ohms
	Rated Power	288mW

Order Code		3041IDD005
Description Code (Refer Key in Page 6)		5-LR-DPNO-08-D
Board Voltage Input		5V
Max. Board Power Required @ 5V All Channels ON		1.61 W
Leakage Current (All Channels Off)		Leakage Current of Driving Device *8 Channels
Require Min. Driving Current per Channel @ Rated Coil Input Voltage (5V)		40.2mA (Sinking)
Relay Coil	Rated Voltage	5V
	Operate Voltage	3.75 V
	Release Voltage	0.5V
	Resistance	200 ohms
	Rated Power	125mW

Order Code		3041IDD006
Description Code (Refer Key in Page 6)		5-LR-DPNO-08-T
Board Voltage Input		5V
Max. Board Power Required @ 5V All Channels ON		1.20 W
Leakage Current (All Channels Off)		500µA per Channel 4mA Total (8 Channel TTL Driver)
Require Min. Driving Current per Channel @ Rated Coil Input Voltage (5V)		29.9mA (Sinking)
TTL Driving Signal Requirements		I _{ON} = 1mA
		V _I = 3.85V
Relay Coil	Rated Voltage	5V
	Operate Voltage	3.75 V
	Release Voltage	0.5V
	Resistance	200 ohms
	Rated Power	125mW

Relay Boards Description Code Key

CODE	Relay Control Voltage	Relay Type	Relay Configuration	Number of Relays per board	Relay Control Signal Type	Additional Options
5 V	05					
12 V	12					
24 V	24					
Mechanical	ME*					
Solid State	SS*					
Low Voltage Reed	LR					
High Voltage Reed	HR*					
Single Pole Single Throw - Normally Closed	SPNC*					
Single Pole Single Throw - Normally Open	SPNO*					
Single Pole Double Throw	SPDT*					
Double Pole Single Throw - Normally Closed	DPNC*					
Double Pole Single Throw - Normally Open	DPNO					
Double Pole Double Throw	DPDT*					
6 Relays	06*					
8 Relays	08					
TTL / DIO Controlled	T					
Relay Driver Controlled	D					
None						
Conformal Coated	CC					
Custom Modifications / Features (On Order)	CM					

* Option not available for this product

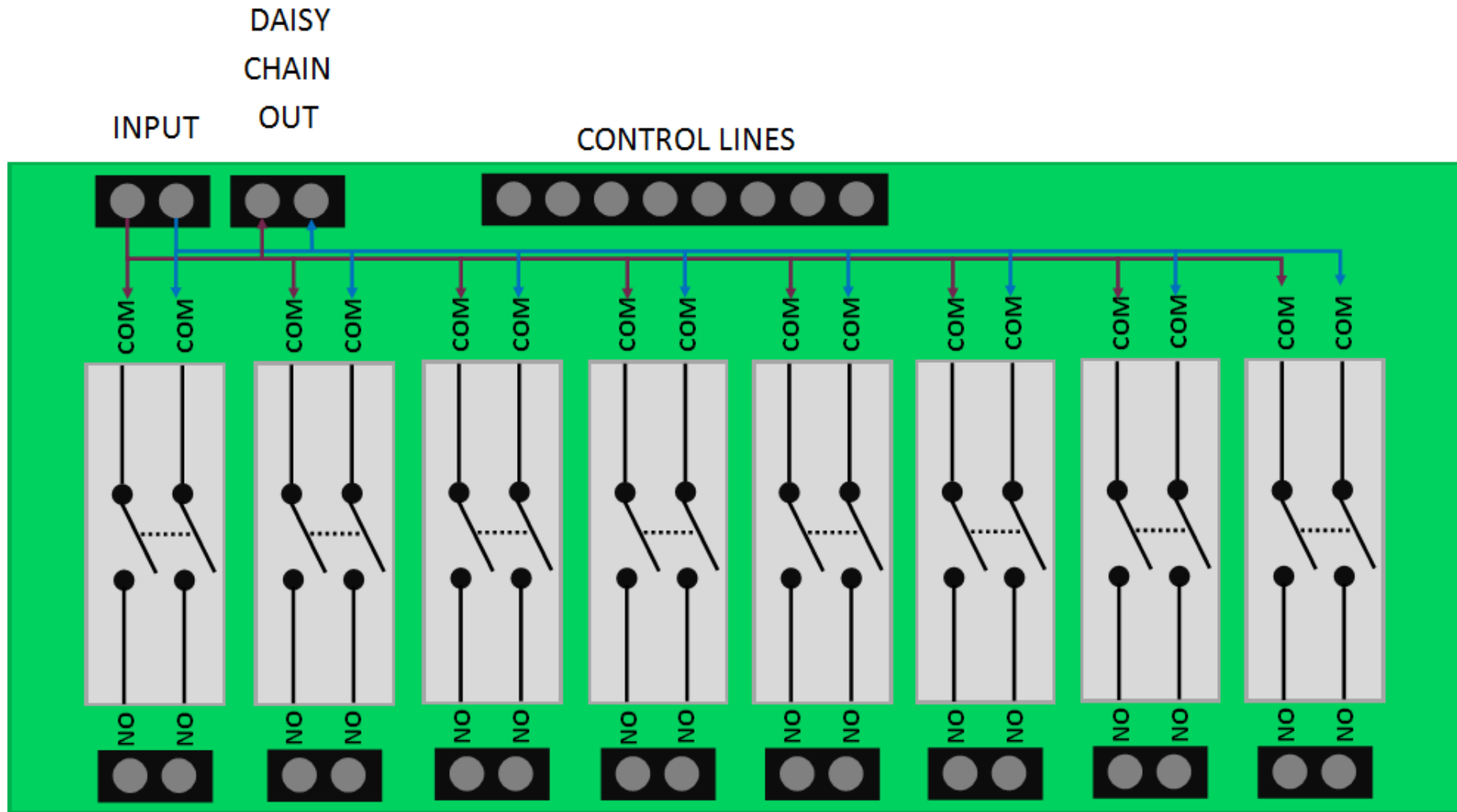


Figure 1 - Board Multiplexer Logic