

## Sealed DIL Version w/ up to 4.25 kVDC Breakdown Voltage Option



## DESCRIPTION

Several pin out options are possible with the 14 pin DIL series. Suitable for telecommunication applications where breakdown voltages up to 4.25 kVDC is required.

## FEATURES

- Compatible with 14 pin DIL socket
- High resistance coil up to 11 kOhm available.
- Plastic case sealed with PU-resin
- Magnetic shield available
- 4.25 kVDC breakdown voltage available.
- Diode option
- RoHS compliant.

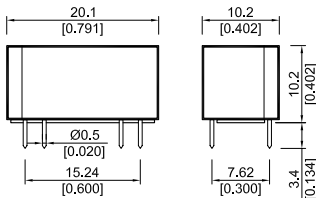
## CHARACTERISTICS

- Telecommunications
- General purposes
- Test and Measurement
- Medical equipment

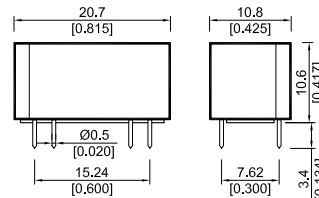
## DIMENSIONS

All dimensions in mm [inch]

Without magnetic shield



With magnetic shield



## ORDER INFORMATION

Series	Nominal Voltage	Contact Form	Switch Model	Pin Out	Option ( ) Version with magnetic Shield	Version
DIL	XX -	XX	XX -	XX	X	XX
Options	05, 12, 24	1A	66, 72, 75	13*, 15	L(M), D(Q), E(R) <sup>1</sup> , F(S) <sup>1</sup>	HR, L
		2A	66, 72, 75	21		L
	05, 12	1C	90	51*		HR, L
	05, 12, 24	2C	90	62, 63		L
* When HR is selected, 24 V coil is not available. L = No Option.					<sup>1</sup> Not available with Pin out 62, 63.	

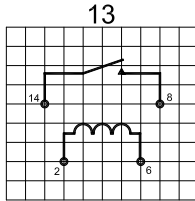
### Part Number Example

DIL12 - 1A72 - 10LHR

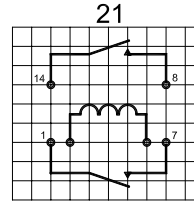
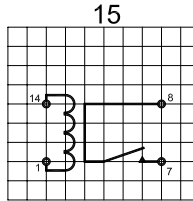
**12** is the nominal voltage  
**1A** is the contact form  
**72** is the switch model  
**13** is the pin out  
**L** is the option  
**HR** is the high resistance version

PIN OUT

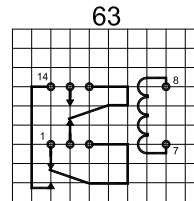
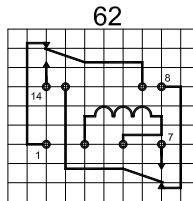
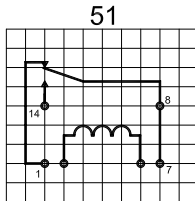
View from top of component  
2.54mm [0.10"] pitch grid



UP ←  
ONLY WHEN USING A MERCURY WETTED (88) SWITCH



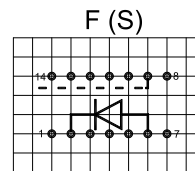
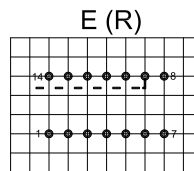
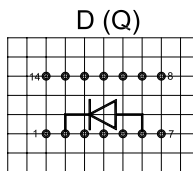
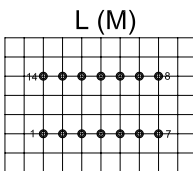
UP ←  
ONLY WHEN USING A MERCURY WETTED (88) SWITCH



OPTIONS

( ) Versions with magnetic shield

View from top of component  
2.54mm [0.10"] pitch grid



Please note: any option can affect the coil resistance, the breakdown voltage or other electrical data. Please contact us.

Special performance: The following special options are available on request:

- Other pinning layout
- Other coil resistance values
- Other switches available

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**RELAY DATA**

All Data at 20° C	Switch Model → Contact Form →	Switch 66 Form A			Switch 72 Form A			Units
	Conditions	Min.	Typ.	Max.	Min.	Typ.	Max.	
Switching Power	Any DC combination of V & A not to exceed their individual max.'s.			10			15	W
Switching Voltage	DC or peak AC			200			200	V
Switching Current	DC or peak AC			0.5			1.0	A
Carry Current	DC or peak AC			1.25			1.25	A
Static Contact Resistance	Measured w/ 0.5 V & 50 mA			150			150	mΩ
Dynamic Contact Resistance	Measured w./ 0.5 V & 50m A, 1.5 ns after closure			200			200	mΩ
Insulation Resistance (100 Volts applied)	Across contacts Contact to coil	10 <sup>10</sup> 10 <sup>12</sup>			10 <sup>12</sup> 10 <sup>12</sup>			Ω
Breakdown Voltage	Across contacts Coil to contact	225 1.5*			250 1.5*			VDC kVDC
Operate Time incl. Bounce	Nominal voltage			0.5			0.5	ms
Release Time	Measured w/ no coil suppression			0.1			0.1	ms
Capacitance	Across contacts Contact to coil		0.2 4.0			0.4 4.0		pF
<b>Life Expectancies</b>								
Switching 5V & 10 mA	DC only & < 10 pF stray cap.		1000			1000		10 <sup>6</sup> Cycles
For other load requirements, see the life test section on P. 120.								
<b>Environmental Data</b>								
Shock Resistance	1/2 sine wave duration for 11 ms			50			50	g
Vibration Resistance	From 10 - 2000 Hz			20			20	g
Ambient Temperature	10°C/ minute max. allowable	-20		70	-20		70	°C
Storage Temperature	10°C/ minute max. allowable	-25		85	-35		95	°C
Soldering Temperature	5 sec. dwell			260			260	°C
* 4.25 kVDC / 3.0 kVRMS for pin outs 13 and 15.								

**RELAY DATA**

<b>All Data at 20° C</b>	<b>Switch Model → Contact Form →</b>	<b>Switch 75 Form A</b>			<b>Switch 90 Form C</b>			
<b>Contact Ratings</b>	<b>Conditions</b>	<b>Min.</b>	<b>Typ.</b>	<b>Max.</b>	<b>Min.</b>	<b>Typ.</b>	<b>Max.</b>	<b>Units</b>
Switching Power	Any DC combination of V & A not to exceed their individual max.'s.			10			10	W
Switching Voltage	DC or peak AC			500			175	V
Switching Current	DC or peak AC			0.5			0.5	A
Carry Current	DC or peak AC			1.0			1.0	A
Static Contact Resistance	Measured w/ 0.5 V & 50 mA			200			150	mΩ
Dynamic Contact Resistance	Measured w./ 0.5 V & 50mA, 1.5 ns after closure			200			250	mΩ
Insulation Resistance (100 Volts applied)	Across contacts Contact to coil	10 <sup>10</sup> 10 <sup>12</sup>			10 <sup>9</sup> 10 <sup>12</sup>			Ω
Breakdown Voltage	Across contacts Coil to contact	1500 1.5*			200 1.5			VDC kVDC
Operate Time incl. Bounce	Nominal voltage			0.5			0.7	ms
Release Time	Measured w/ no coil suppression			0.1			1.5	ms
Capacitance	Across contacts Contact to coil		0.4 4.0			1.0 4.0		pF
<b>Life Expectancies</b>								
Schaltspannung 5V - 10 mA	DC <10 pF Streukapazität		500			100		10 <sup>6</sup> Cycles
For other load requirements, see the life test section on P. 120..								
<b>Allgemeine Daten</b>								
Shock Resistance	1/2 sine wave duration for 11 ms			50			50	g
Vibration Resistance	From 10 - 2000 Hz			20			20	g
Ambient Temperature	10°C/ minute max. allowable	-20		70	-20		70	°C
Storage Temperature	10°C/ minute max. allowable	-25		85	-25		85	°C
Soldering Temperature	5 sec. dwell			260			260	°C
* 4.25 kVDC / 3.0 kVRMS for pin outs 13 and 15.								

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## COIL DATA

Contact Form	Switch Model	Coil Voltage		Coil Resistance			Pull-in Voltage	Drop-out Voltage	Nominal Coil Power
All Data at 20 °C *		VDC		Ω			VDC	VDC	mW
		Nom.	Max.	Min.	Typ.	Max.	Max.	Min.	Typ.
1A	66 72 75	5	7.5	405	450	495	3.5	0.75	55
		12	16	1620	1800	1980	8.4	1.8	80
		24	30	4050	4500	4950	16.8	3.6	130
2A	66 72 75	5	7.5	180	200	220	3.5	0.75	125
		12	16	621	680	748	8.4	1.8	210
		24	30	1800	2000	2200	16.8	3.6	290
1C	90	5	7.5	180	200	220	3.5	0.75	125
		12	16	900	1000	1100	8.4	1.8	145
		24	30	2700	3000	3300	16.8	3.6	190
2C		5	7.5	145	150	165	3.5	0.75	165
		12	16	612	680	748	8.4	1.8	210
		24	30	1800	2000	2200	16.8	3.6	290

\* The pull-in, drop-out voltages and coil resistance will change at the rate of 0,4 % / °C.