ELECTRIC WERNER
Inventing Innovation...

Living Industrial Partnerships

PRODUCT SPECIFICATION

General Purpose Relays

21

Series

Technical Data 1

Specifications 2

Model Number Structure - General Purpose Relays..... 3

Model Number Selection..... 4 - 7

Accessories 8

Electrical Characteristics 10

Dimensions 11

Instructions 13

Safety Precautions.....14

General Purpose Relays

WERNER`s 21 Series General Purpose & Power Relays represent the most complete line of state-of-the-art high performance electrical switches, designed and manufactured to highest international industry standards. Mechanical lifetimes of up to 10 Million operations and electrical durability of up to 250.000 switching cycles under full load make WERNER Relays your best choice of all.

Features Overview

- All models designed applying MFMS design principles (Max Function Min Space)
- All models designed applying solid modeling and finite elements design methods
- All Power Relay Series are equipped with mechanical operation status indicator
- All models approved under UL, CE, RoHS, CCC and DEMKO standards
- All models design for heavy duty or even vibrating environments
- All models available for use with 50 Hz and 60 Hz cycles

Highlights

- All fixed contacts powered by WERNER AFT (Anti-Fuse-Technology)
- All Power Relays Series provide massive silver blade or pin contacts
- Power Relay Series with up to 10 Ampere Continuous Load Current
- Most models available in 6V, 12V, 24V, 110V & 220V AC or DC
- Most models available in DPDT, 3PDT as well as 4DPT
- Up to 7 types of operation status indication available

21 Series General Purpose & Power Relays by WERNER provide our highly demanding industrial customers out of all industry verticals worldwide with the most reliable devices in the industry. Combined with the vast selection of sockets in our 70 – 75 Product Series you will find an industrial solution exceeding your expectations whilst satisfying you're every need and design requirement.

General Purpose Relays

Features:

Switching Power of 5 A
No Cadmium
Blade & PC Board mounting
Built-in LED
DPDT, 3PDT & 4PDT
Compact & small in size

Over voltage category

III, as per EN IEC 60947-5-1

Approvals

Approbations and Declaration of conformity

UL	
CE	
RoHS	
CCC	
Demko	

AC Coil Ratings

Voltage (V)	Rated Current (mA)		Coil Resistance (Ω)	Operation Properties		
	AC 50Hz	AC 60Hz		Released Voltage	Continuos Voltage	Operate Voltage
6V	214.1	183	12.2	30% min.	110% max	80% min.
12V	106.5	91	46			
24V	53.8	46	180			
48V	24.7	21.1	788			
110V	9.9	8.4	4,430			
120V	10.8	9.2	4,430			
220V	4.8	4.2	18,790			
240V	5.3	4.6	18,790			

±15% at 20°C

DC Coil Ratings

Voltage	Rated Current (mA)	Coil Resistance (Ω)	Operation Properties		
			Released Voltage	Continuous Voltage	Operate Voltage
6V	151	39.8	110% max.	80% max.	10% min.
12V	75	160			
24V	37.7	636			
48V	18.8	2560			
110V	9.9	11.100			
120V	–	–			
220V	–	–			
240V	–	–			

±15% at 20°C

Weight

Model No.	21.12 & 21.22 (DPDT)	21.13 & 21.23 (3PDT)	21.14 & 21.24 (4PDT)
Weight (approx.)	35g	37g	39g

Contact Ratings

Model	Continuous Current	Maximum Switching Power		Rated Load		
		Resistive Load	Inductive Load	Voltage (V)	Res. Load	Ind. Load
DPDT	5A	1100VA AC 150W DC	440VA AC 75W DC	110V AC	5A	2.5 A
				220V AC	5A	2 A
				30V DC	5A	2.5 A
3PDT	5A	1200VA AC 150W DC	288VA AC 60W DC	240V AC 30V DC	5A 5A	1.2 A 2 A
4PDT	5A	1200VA AC 150W DC	288VA AC 60W DC	240V AC 30V DC	5A 5A	1.2 A 2 A

Specifications

Operating Temperature	Blade Terminal	DPDT	-25 to +45°C (No freezing)
		3PDT 4PDT	-25 to +55°C (No freezing)
Operating Temperature	PC Board Terminal	DPDT	-25 to +45°C (No freezing)
		3PDT 4PDT	-25 to +55°C (No freezing)
Contact Resistance		DPDT	30mΩ maximum
		3PDT 4PDT	50mΩ maximum
Operating Humidity		–	45 to 85% RH (no condensation)
Insulation Resistance		–	100 MΩ minimum (500V DC megger)
Dielectric Strength		DPDT 3PDT 4PDT	Between live and dead parts: 2,200V AC, 1 minute Between contact and coil: 2,200V AC, 1 minute Between contacts of different poles: 2,200V AC, 1 minute Between contacts of the same pole: 1,000V AC, 1 minute
Vibration Resistance		–	Damage limits: 10 to 60Hz, amplitude 0.5 mm Operating extremes: 10 to 55Hz, amplitude 0.5 mm
Shock Resistance		–	Damage limits: 1,000m/s² Operating extremes: 200m/s²
Mechanical Durability		AC DC	10,000,000 operations minimum
Electrical Durability		DPDT	500,000 operations minimum (220V AC, 5A)
		3PDT 4PDT	100,000 operations minimum (220V AC, 5A) 200,000 operations minimum (220V AC, 3A)
Power Consumption (approx.)		DPDT 3PDT 4PDT	AC: 1.4 VA (50 Hz), 1.2 VA (60 Hz) DC: 0.9W
Operate Time		DPDT 3PDT 4PDT	20ms maximum
Release Time		DPDT 3PDT 4PDT	20ms maximum
Minimum Applicable Load		DPDT	5V DC, 1 mA (reference value)
		3PDT 4PDT	1V DC, 1 mA (reference value)
Contact Material		DPDT 3PDT 4PDT	Silver
Operating Frequency		–	Electrical: 2000 operations/hour maximum Mechanical: 20,000 operations/hour maximum

Measured at 20° C Operating temperature

Model Number Structure - General Purpose Relays

21.14.31.120

Series

21 Series General Purpose Relays

Terminal Type

1	Blade
2	PC Board

Number of Poles

2	DPDT
3	3PDT
4	4PDT

Types

0	Basic	
1	LED	
2	LED & Diode	DC Only
3	LED & Check button	
4	LED & Check button & Diode	DC Only
5	LED & RC	AC Only
6	LED & Check button & RC	AC Only

Voltage

006	6V
012	12V
024	24V
048	48V
110	110V
120	120V
220	220V
240	240V

Coil

1	AC
2	DC

Model Number Selection

Appearance	Terminal Type	Types	Voltage	Model No. DPDT AC	Model No. DPDT DC
 DPDT	Blade	Basic	6V	21.12.01.006	21.12.02.006
			12V	21.12.01.012	21.12.02.012
			24V	21.12.01.024	21.12.02.024
			48V	21.12.01.048	21.12.02.048
			110V	21.12.01.110	21.12.02.110
			120V	21.12.01.120	21.12.02.120
			220V	21.12.01.220	21.12.02.220
			240V	21.12.01.240	21.12.02.240
		LED	6V	21.12.11.006	21.12.12.006
			12V	21.12.11.012	21.12.12.012
			24V	21.12.11.024	21.12.12.024
			48V	21.12.11.048	21.12.12.048
			110V	21.12.11.110	21.12.12.110
			120V	21.12.11.120	21.12.12.120
			220V	21.12.11.220	21.12.12.220
			240V	21.12.11.240	21.12.12.240
		LED & Diode DC Only	6V	–	21.12.22.006
			12V	–	21.12.22.012
			24V	–	21.12.22.024
			48V	–	21.12.22.048
			110V	–	21.12.22.110
			120V	–	21.12.22.120
			220V	–	21.12.22.220
			240V	–	21.12.22.240
 3PDT		LED & Check button	6V	21.12.31.006	21.12.32.006
			12V	21.12.31.012	21.12.32.012
			24V	21.12.31.024	21.12.32.024
			48V	21.12.31.048	21.12.32.048
			110V	21.12.31.110	21.12.32.110
			120V	21.12.31.120	21.12.32.120
			220V	21.12.31.220	21.12.32.220
			240V	21.12.31.240	21.12.32.240
		LED & Diode & Check button DC Only	6V	–	21.12.42.006
			12V	–	21.12.42.012
			24V	–	21.12.42.024
			48V	–	21.12.42.048
			110V	–	21.12.42.110
			120V	–	21.12.42.120
			220V	–	21.12.42.220
			240V	–	21.12.42.240
 4PDT		LED & RC AC Only	6V	21.12.51.006	–
			12V	21.12.51.012	–
			24V	21.12.51.024	–
			48V	21.12.51.048	–
			110V	21.12.51.110	–
			120V	21.12.51.120	–
			220V	21.12.51.220	–
			240V	21.12.51.240	–
		LED & RC & Check button AC Only	6V	21.12.61.006	–
			12V	21.12.61.012	–
			24V	21.12.61.024	–
			48V	21.12.61.048	–
			110V	21.12.61.110	–
			120V	21.12.61.120	–
			220V	21.12.61.220	–
			240V	21.12.61.240	–

Model Number Selection

Model No.		Model No.	
3PDT		4PDT	
AC	DC	AC	DC
21.13.01.006	21.13.02.006	21.14.01.006	21.14.02.006
21.13.01.012	21.13.02.012	21.14.01.012	21.14.02.012
21.13.01.024	21.13.02.024	21.14.01.024	21.14.02.024
21.13.01.048	21.13.02.048	21.14.01.048	21.14.02.048
21.13.01.110	21.13.02.110	21.14.01.110	21.14.02.110
21.13.01.120	21.13.02.120	21.14.01.120	21.14.02.120
21.13.01.220	21.13.02.220	21.14.01.220	21.14.02.220
21.13.01.240	21.13.02.240	21.14.01.240	21.14.02.240
21.13.11.006	21.13.12.006	21.14.11.006	21.14.12.006
21.13.11.012	21.13.12.012	21.14.11.012	21.14.12.012
21.13.11.024	21.13.12.024	21.14.11.024	21.14.12.024
21.13.11.048	21.13.12.048	21.14.11.048	21.14.12.048
21.13.11.110	21.13.12.110	21.14.11.110	21.14.12.110
21.13.11.120	21.13.12.120	21.14.11.120	21.14.12.120
21.13.11.220	21.13.12.220	21.14.11.220	21.14.12.220
21.13.11.240	21.13.12.240	21.14.11.240	21.14.12.240
–	21.13.22.006	–	21.14.22.006
–	21.13.22.012	–	21.14.22.012
–	21.13.22.024	–	21.14.22.024
–	21.13.22.048	–	21.14.22.048
–	21.13.22.110	–	21.14.22.110
–	21.13.22.120	–	21.14.22.120
–	21.13.22.220	–	21.14.22.220
–	21.13.22.240	–	21.14.22.240
21.13.31.006	21.13.32.006	21.14.31.006	21.14.32.006
21.13.31.012	21.13.32.012	21.14.31.012	21.14.32.012
21.13.31.024	21.13.32.024	21.14.31.024	21.14.32.024
21.13.31.048	21.13.32.048	21.14.31.048	21.14.32.048
21.13.31.110	21.13.32.110	21.14.31.110	21.14.32.110
21.13.31.120	21.13.32.120	21.14.31.120	21.14.32.120
21.13.31.220	21.13.32.220	21.14.31.220	21.14.32.220
21.13.31.240	21.13.32.240	21.14.31.240	21.14.32.240
–	21.13.42.006	–	21.14.42.006
–	21.13.42.012	–	21.14.42.012
–	21.13.42.024	–	21.14.42.024
–	21.13.42.048	–	21.14.42.048
–	21.13.42.110	–	21.14.42.110
–	21.13.42.120	–	21.14.42.120
–	21.13.42.220	–	21.14.42.220
–	21.13.42.240	–	21.14.42.240
21.13.51.006	–	21.14.51.006	–
21.13.51.012	–	21.14.51.012	–
21.13.51.024	–	21.14.51.024	–
21.13.51.048	–	21.14.51.048	–
21.13.51.110	–	21.14.51.110	–
21.13.51.120	–	21.14.51.120	–
21.13.51.220	–	21.14.51.220	–
21.13.51.240	–	21.14.51.240	–
21.13.61.006	–	21.14.61.006	–
21.13.61.012	–	21.14.61.012	–
21.13.61.024	–	21.14.61.024	–
21.13.61.048	–	21.14.61.048	–
21.13.61.110	–	21.14.61.110	–
21.13.61.120	–	21.14.61.120	–
21.13.61.220	–	21.14.61.220	–
21.13.61.240	–	21.14.61.240	–

Model Number Selection

Appearance	Terminal Type	Types	Voltage	Model No. DPDT AC	Model No. DPDT DC
 DPDT	PC Board	Basic	6V	21.22.01.006	21.22.02.006
			12V	21.22.01.012	21.22.02.012
			24V	21.22.01.024	21.22.02.024
			48V	21.22.01.048	21.22.02.048
			110V	21.22.01.110	21.22.02.110
			120V	21.22.01.120	21.22.02.120
			220V	21.22.01.220	21.22.02.220
			240V	21.22.01.240	21.22.02.240
		LED	6V	21.22.11.006	21.22.12.006
			12V	21.22.11.012	21.22.12.012
			24V	21.22.11.024	21.22.12.024
			48V	21.22.11.048	21.22.12.048
			110V	21.22.11.110	21.22.12.110
			120V	21.22.11.120	21.22.12.120
			220V	21.22.11.220	21.22.12.220
			240V	21.22.11.240	21.22.12.240
		LED & Diode DC Only	6V	–	21.22.22.006
			12V	–	21.22.22.012
			24V	–	21.22.22.024
			48V	–	21.22.22.048
			110V	–	21.22.22.110
			120V	–	21.22.22.120
			220V	–	21.22.22.220
			240V	–	21.22.22.240
 3PDT		LED & Check button	6V	21.22.31.006	21.22.32.006
			12V	21.22.31.012	21.22.32.012
			24V	21.22.31.024	21.22.32.024
			48V	21.22.31.048	21.22.32.048
			110V	21.22.31.110	21.22.32.110
			120V	21.22.31.120	21.22.32.120
			220V	21.22.31.220	21.22.32.220
			240V	21.22.31.240	21.22.32.240
		LED & Diode & Check button DC Only	6V	–	21.22.42.006
			12V	–	21.22.42.012
			24V	–	21.22.42.024
			48V	–	21.22.42.048
			110V	–	21.22.42.110
			120V	–	21.22.42.120
			220V	–	21.22.42.220
			240V	–	21.22.42.240
 4PDT		LED & RC AC Only	6V	21.22.51.006	–
			12V	21.22.51.012	–
			24V	21.22.51.024	–
			48V	21.22.51.048	–
			110V	21.22.51.110	–
			120V	21.22.51.120	–
			220V	21.22.51.220	–
			240V	21.22.51.240	–
		LED & RC & Check button AC Only	6V	21.22.61.006	–
			12V	21.22.61.012	–
			24V	21.22.61.024	–
			48V	21.22.61.048	–
			110V	21.22.61.110	–
			120V	21.22.61.120	–
			220V	21.22.61.220	–
			240V	21.22.61.240	–

Model Number Selection

Model No.		Model No.	
3PDT		4PDT	
AC	DC	AC	DC
21.23.01.006	21.23.02.006	21.24.01.006	21.24.02.006
21.23.01.012	21.23.02.012	21.24.01.012	21.24.02.012
21.23.01.024	21.23.02.024	21.24.01.024	21.24.02.024
21.23.01.048	21.23.02.048	21.24.01.048	21.24.02.048
21.23.01.110	21.23.02.110	21.24.01.110	21.24.02.110
21.23.01.120	21.23.02.120	21.24.01.120	21.24.02.120
21.23.01.220	21.23.02.220	21.24.01.220	21.24.02.220
21.23.01.240	21.23.02.240	21.24.01.240	21.24.02.240
21.23.11.006	21.23.12.006	21.24.11.006	21.24.12.006
21.23.11.012	21.23.12.012	21.24.11.012	21.24.12.012
21.23.11.024	21.23.12.024	21.24.11.024	21.24.12.024
21.23.11.048	21.23.12.048	21.24.11.048	21.24.12.048
21.23.11.110	21.23.12.110	21.24.11.110	21.24.12.110
21.23.11.120	21.23.12.120	21.24.11.120	21.24.12.120
21.23.11.220	21.23.12.220	21.24.11.220	21.24.12.220
21.23.11.240	21.23.12.240	21.24.11.240	21.24.12.240
–	21.23.22.006	–	21.24.22.006
–	21.23.22.012	–	21.24.22.012
–	21.23.22.024	–	21.24.22.024
–	21.23.22.048	–	21.24.22.048
–	21.23.22.110	–	21.24.22.110
–	21.23.22.120	–	21.24.22.120
–	21.23.22.220	–	21.24.22.220
–	21.23.22.240	–	21.24.22.240
21.23.31.006	21.23.32.006	21.24.31.006	21.24.32.006
21.23.31.012	21.23.32.012	21.24.31.012	21.24.32.012
21.23.31.024	21.23.32.024	21.24.31.024	21.24.32.024
21.23.31.048	21.23.32.048	21.24.31.048	21.24.32.048
21.23.31.110	21.23.32.110	21.24.31.110	21.24.32.110
21.23.31.120	21.23.32.120	21.24.31.120	21.24.32.120
21.23.31.220	21.23.32.220	21.24.31.220	21.24.32.220
21.23.31.240	21.23.32.240	21.24.31.240	21.24.32.240
–	21.23.42.006	–	21.24.42.006
–	21.23.42.012	–	21.24.42.012
–	21.23.42.024	–	21.24.42.024
–	21.23.42.048	–	21.24.42.048
–	21.23.42.110	–	21.24.42.110
–	21.23.42.120	–	21.24.42.120
–	21.23.42.220	–	21.24.42.220
–	21.23.42.240	–	21.24.42.240
–	–	21.24.51.006	–
–	–	21.24.51.012	–
–	–	21.24.51.024	–
–	–	21.24.51.048	–
–	–	21.24.51.110	–
–	–	21.24.51.120	–
–	–	21.24.51.220	–
–	–	21.24.51.240	–
21.23.61.006	–	21.24.61.006	–
21.23.61.012	–	21.24.61.012	–
21.23.61.024	–	21.24.61.024	–
21.23.61.048	–	21.24.61.048	–
21.23.61.110	–	21.24.61.110	–
21.23.61.120	–	21.24.61.120	–
21.23.61.220	–	21.24.61.220	–
21.23.61.240	–	21.24.61.240	–

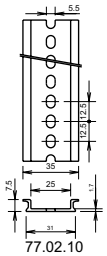
UL - Voltage Ratings

Model	Resistive			General		
	DPDT	3PDT	4PDT	DPDT	3PDT	4PDT
240V AC	5A	5A	5A	2A	5A	5A
120V DC	–	–	–	2.5A	–	–
110V DC	0.4A	0.2A	0.2A	–	0.2A	0.2A
30V DC	5A	5A	5A	–	5A	5A

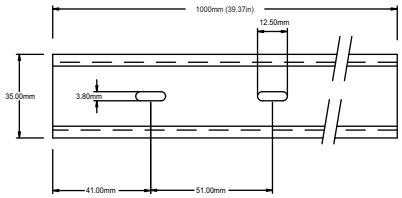
Accessories

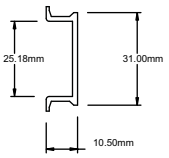
DIN Rails

77.02.10



77.02.10





DIN Rail No.	Material	Length	Weight	Width
77.02.10	Aluminum	1000 mm	200 g	35 mm

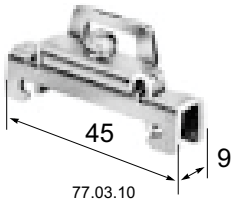
Sockets - Blade Terminal Models

Socket Specifications

Mounting Type		Terminal	Torque	Wire Size	Model No.		
					2 Poles	3 Poles	4 Poles
DIN Rail	With Finger-safe	M3 screws - coil M3.5 screws - contact	5.5 - 9in•lbs	up to 2 - 14AWG	71.12.01	71.13.01	71.14.01
	Without Finger-safe	M3 screws - coil M3.5 screws - contact	5.5 - 9in•lbs	up to 2 - 14AWG	71.12.00	71.13.00	71.14.00
PCB Mount Socket	–	–	–	–	71.22	71.23	71.24

Poles	2 Poles			3 Poles			4 Poles		
	No Finger-safe	Finger-safe	PCB	No Finger-safe	Finger-safe	PCB	No Finger-safe	Finger-safe	PCB
Voltage	250V	250V	250V	250V	250V	250V	250V	250V	250V
A	7	10	7	7	10	7	7	10	7

Mounting Clips



Mounting Clips No.	Rails	Width	Weight
77.03.10	77.02.10	45 mm	15.2 g

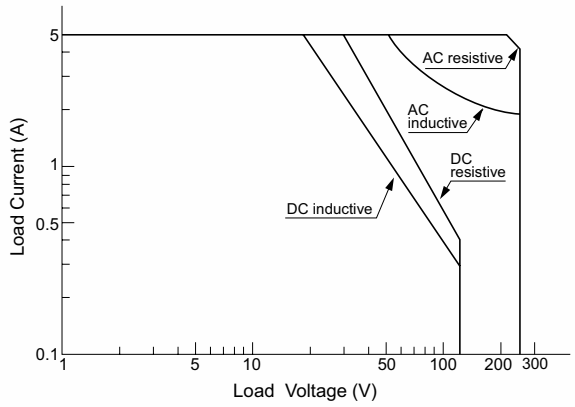
Applicable Clips

Appearance	Description	Relay	Suitable For DIN Mount Socket	Suitable For PCB Mount Socket
	Leaf Spring (top latch)	21.12 & 21.22 (DPDT)	71.03.01	71.03.02
		21.13 & 21.23 (3PDT)		
		21.14 & 21.24 (4PDT)		
	Wire Spring	21.12 & 21.22 (DPDT)	71.02.01	71.02.02
		21.13 & 21.23 (3PDT)		
		21.14 & 21.24 (4PDT)		

* For suitable relay please check Sockets catalogue

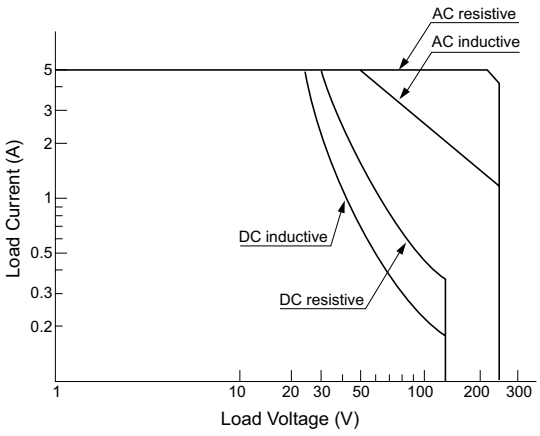
Switching Capacity

DPDT



21.12 & 21.22
DPDT

3PDT & 4PDT

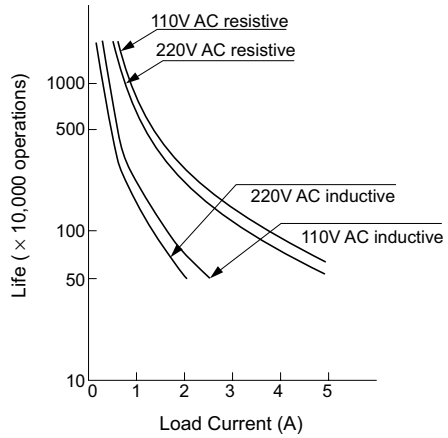


21.13 & 21.23 | 21.14 & 21.24
3PDT 4PDT

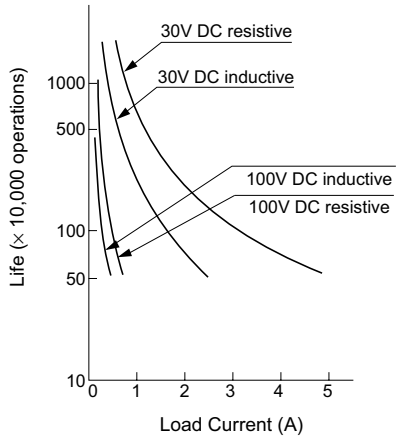
Electrical Characteristics

21.12 & 21.22 (DPDT)

AC

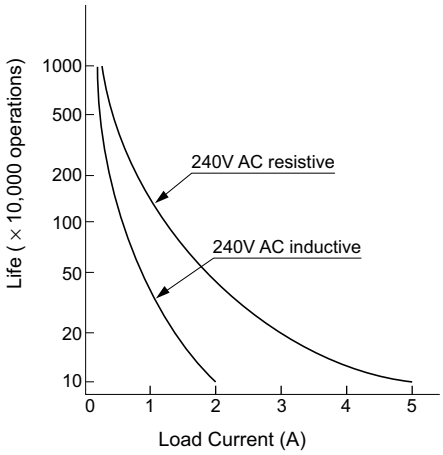


DC

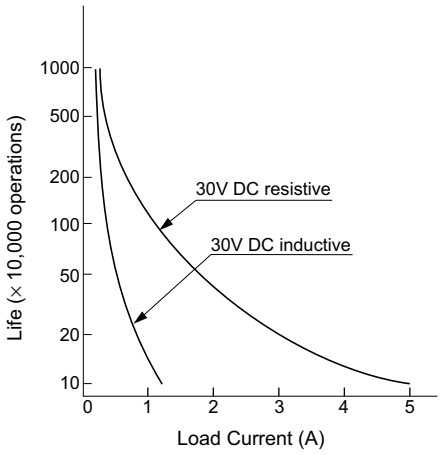


21.13 & 21.23 (3PDT)

AC

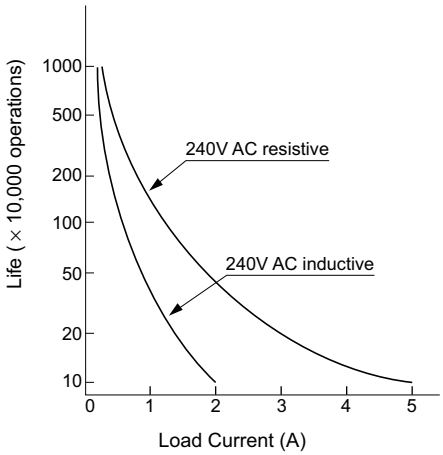


DC

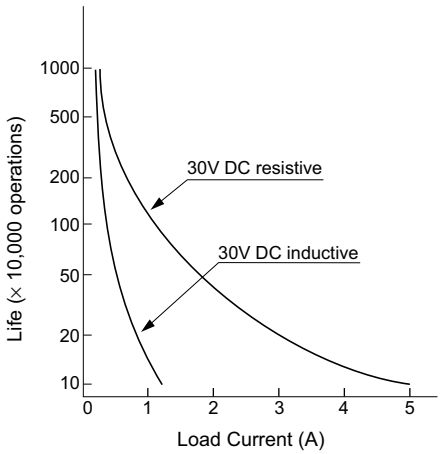


21.14 & 21.24 (4PDT)

AC



DC

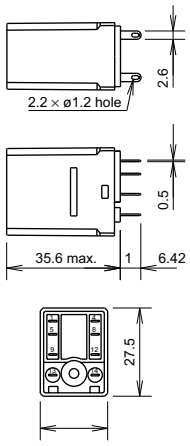


Dimensions

Blade Terminal

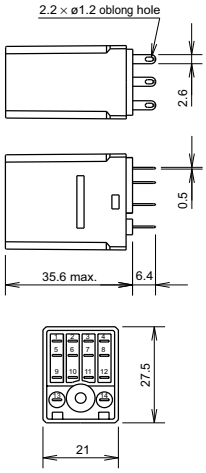
21.12 (DPDT)

DPDT



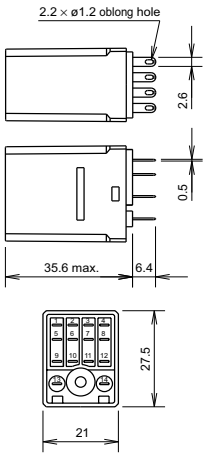
21.13 (3PDT)

3PDT



21.14 (4PDT)

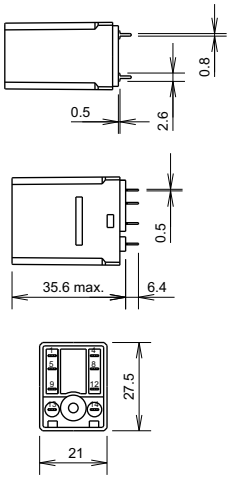
4PDT



PC Board Terminal

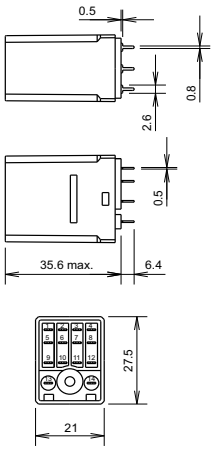
21.22 (DPDT)

DPDT



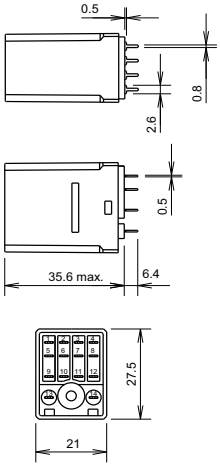
21.23 (3PDT)

3PDT

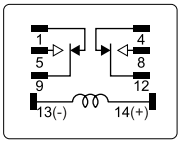
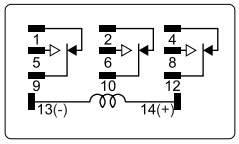
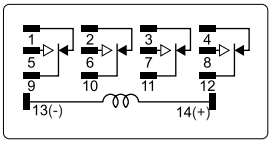


21.24 (4PDT)

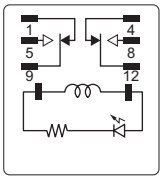
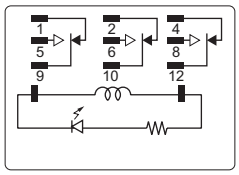
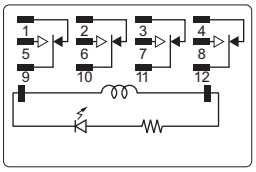
4PDT



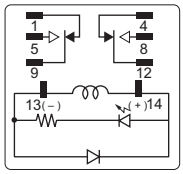
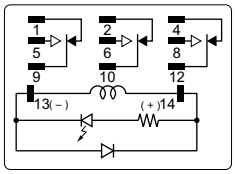
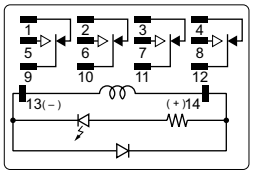
Basic Type - Internal Connection (Bottom View)

DPDT	3PDT	4PDT
		

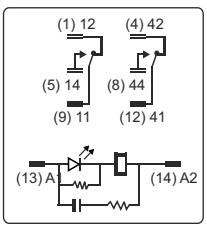
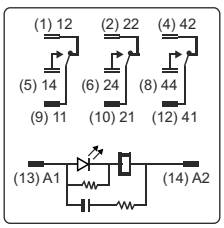
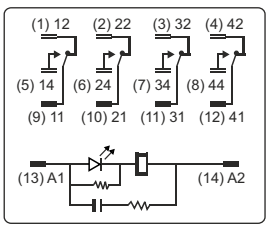
LED Type - Internal Connection (Bottom View)

DPDT	3PDT	4PDT
		

LED & Diode Type - Internal Connection (Bottom View)

DPDT	3PDT	4PDT
		

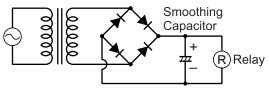
LED & RC Type - Internal Connection (Bottom View)

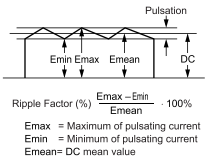
DPDT	3PDT	4PDT
		

* Measured below 24V AC/DC

Instructions

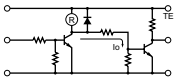
Apply rated voltage to the relay coil to ensure correct relay type.
When using a power supply containing a ripple voltage, suppress the ripple factor within 6% however, a complete DC voltage is best for the coil power to make sure of stable relay operation.
Pickup voltage and dropout voltage depend on the ripple factor when power is supplied through a rectification circuit. Include a smoothing capacitor for better operation.



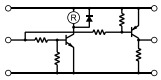


Special consideration should be taken when driving an element at the same time as the relay operation for the circuit design. Leakage current (Io) flows through the relay coil while the relay is off. Leakage current causes coil release failure or adversely affects the vibration resistance and shock resistance. It is advisable to design a circuit as shown.

Incorrect

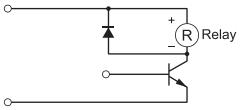


Correct



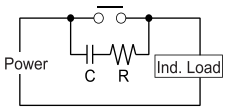
Connecting a diode to suppress at the back electromotive force prevents a high-voltage pulse which is generated when the relay coil is turned off, causing transistor to deteriorate or break, make sure the coil release time is slightly longer. To shorten the coil release time, connect a Zener diode which is slightly higher than the power voltage, between the collector and emitter of the transistor.

Back emf suppressing diode

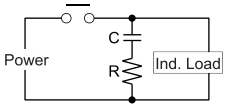


Protection

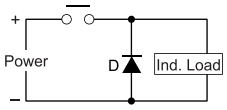
When an inrush current flows through the load, the contact may become welded. The contact ratings show maximum values, Make sure that these values are not exceeded. Contact a contact protection circuit, such as a current limiting resistor as a optional solution.



This protection circuit can be used when the load impedance is smaller than the RC impedance in an AC load power circuit.
R: Resistor of approximately the same resistance value as the load
C: 0.1 to 1 μF

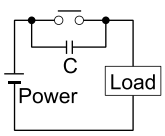
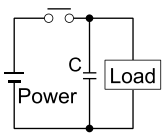


This protection circuit can be used for both AC and DC load power circuits.
R: Resistor of approximately the same resistance value as the load
C: 0.1 to 1 μF



This protection circuit can be used for DC load power circuits. Use a diode with the following ratings.
Reverse withstand voltage: Power voltage of the load circuit x 10
Forward current: More than the load current.

Prevents

	This protection circuit is very effective in arc suppression when opening the contact however, the capacitor is charged while the contacts are opened else the capacitor is discharged through the contacts, increasing the possibility of contact welding.
	This protection circuit is very effective in arc suppression when opening the contact however, a current flows to charge the capacitor, causing contact welding when the contacts are closed.

Safety Precautions

Do not drop, shock or remove the relay cover to maintain the initial characteristics.
The relay cover cannot be removed from the base during normal operation.
Use the relay in environments free from dust, condensation, dioxide or hydrogen sulfide.

Make sure that the coil voltage does not exceed applicable coil voltage range.
Prevent usage of relays in the vicinity of strong magnetic field, as that my cause in malfunctioning of relays.

Failure to turn off power before wiring, installation, removal and
maintenance may cause electrical shock or fire hazard.

Attention on specifications and rated values to prevent electrical shock or fire hazard.
Use wires of the proper size to meet voltage and current requirements.

Tighten the terminal screws on the relay socket to the proper tightening torque.

Prevent using the check button as a switch.
The durability of the check button is a minimum of 200 operations.
It is advisable to apply a positive voltage to terminals of neighboring poles and a negative voltage to the other terminals of neighboring poles when using DC loads on 4PDT relays to prevent the possibility of short circuits.

A soldering iron of 30 to 60W would be recommended when soldering the relay terminals and the preferred
time to complete soldering is within 4 seconds approximately.

Terms And Conditions

Please read this catalog before purchasing any products. Please consult your *WERNER* representative for any clarifications or comments.

Application Considerations

WERNER shall not be responsible for conformity with any regulations, codes or standards that apply to use of the products. *WERNER* shall provide applicable third party certification documents identifying ratings and limitations of use that apply to the products in case of the customer's request.

Prevent use the products for an application involving risk to life or property. Be sure that the *WERNER's* products are properly rated and installed for the overall system or equipment.

WERNER shall not be responsible for the user's programming of a programmable products.

Warranty

WERNER's warranty represents that the products are free from defects in materials and workmanship for a period of one year.

WERNER shall not be responsible for any special loss of profit, commercial loss, indirect or consequential damages relevant to products.

WERNER shall not be responsible for repair, warranty or any claims regarding the products unless *WERNER's* Analysis conform that the products were properly stored, installed, handled, maintained and not a the results from accident, insufficient, abuse, misuse, natural disaster, improper installation excessive electrical supply, environmental conditions or abnormal mechanical.

Disclaimers

WERNER shall practice to change type/model numbers when published ratings or features are changed, however some specifications of the products may be changed without any notice.

When in doubt, please consult with your *WERNER* representative to confirm actual specifications of products.

WERNER shall change product specifications and accessories at any time based on improvements and other reasons.

The information in this catalog has been carefully checked. However, *WERNER* take no responsibilities for clerical, typographical or proofreading errors.

WERNER Electric | Inventing Innovation

Product specifications are subject to change without notice.

Thank you for choosing *WERNER* products.

Living Industrial Partnerships

Werner Electric GmbH
Otto-Brenner-Str. 209
D-33604 Bielefeld
Germany
T: +49 521 9276307
F: +49 521 9276102
E: info@wernerelectric.de
W: www.wernerelectric.de

WE Electric India (P) Ltd.
#278-B, Hootagalli,
Hebbal Industrial area
Mysore-570018, India
T: +91 821-425 4500
F: +91 821-425 4599
E: info@in.wernerelectric.de
W: www.wernerelectric.de