Alternating Relays

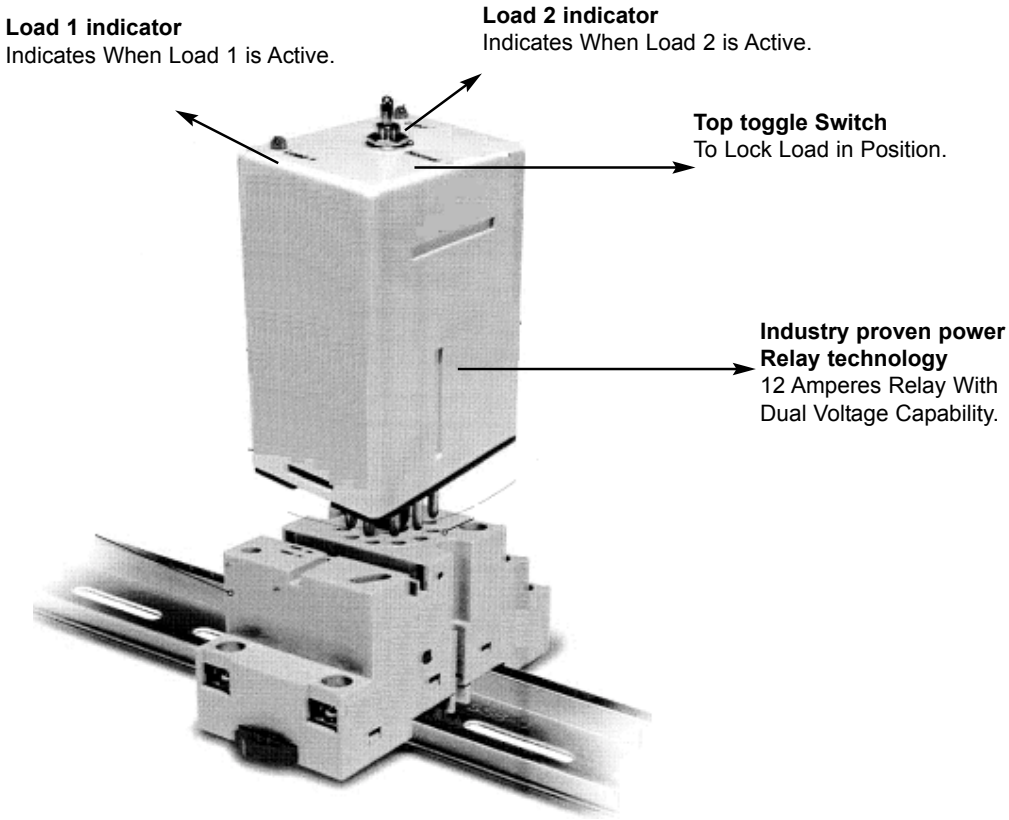
MCY98 Series

Features:

RoHS Compliant

- Two LED status indicators ; indicate status of the separate loads independently.
- Dual voltage coils eliminate the need to specify AC or DC (AC only for 240 V).
- Only 36 mm's wide ; does not take up any additional room on the DIN rail.
- Colour and appearance designed for high visibility in all environments.

Designed for duplex pumping systems where it is desirable to equalize pump run time. The solid state alternating circuit drives an internal electromechanical relay. A continuous power source and control switch are required.
The control switch (Float, pressure or other isolated contact) is connected between the L1 terminal and the control terminal. Each time the control switch is opened the output contacts will change status, Indicator lights on the case show the internal relay status. Setting the top toggle switch to load 1 or load 2 will lock the relay in position, preventing alternation.



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General Specifications

Contact Characteristics		Units	MCY98
Contact Materials	-	-	Silver Alloy
Thermal (Carrying Current)	-	A	12
Maximum Switching Voltage	-	V	300
Current Rating	-	Resistive	124 at 240 V 50 / 60 Hz
Switching Voltage	-	Resistive	12 A at 30 V
	-	HP	1/3 at 120 V ac
	-	HP	1/2 at 240 V ac
	-	Pilot Duty	B300
Minimum Switching Requirement	-	mA	100 at 5 V dc (0.5 W)
Coil Characteristics			
Operating Rage	% of Nominal	V	80% to 110%
	-	V	
Average Consumption	-	V	1.8
	-	W	1.8
Drop-out Voltage Threshold	-	V	15%
	-	V dc	10%
Timing Characteristics			
Time delay - Fixed	-	s	0.5
Reset Time	-	ms	100
Alternating Action	Maximum	-	Release of Control Switch
Performance Characteristics			
Electrical Life	-	(Resistive)	100,000
	Operations at	-	-
Mechanical Life	Rated Current	-	10,000,000
Rated Insulation Voltage	Unpowered	$V_{(rms)}$	1,500
	Between Coil	$V_{(rms)}$	-
Dielectric Strength rms Voltage	and Contact	$V_{(rms)}$	500
	Between Poles	$V_{(rms)}$	1,500
	Between Contacts	-	-
Environment			
Ambient Air Temperature Around The Device	Standard Version	°C	-30 +70
	Storage	°C	-20 +60
Degree of Protection	Operation	-	IP 40
Weight	-	g	120

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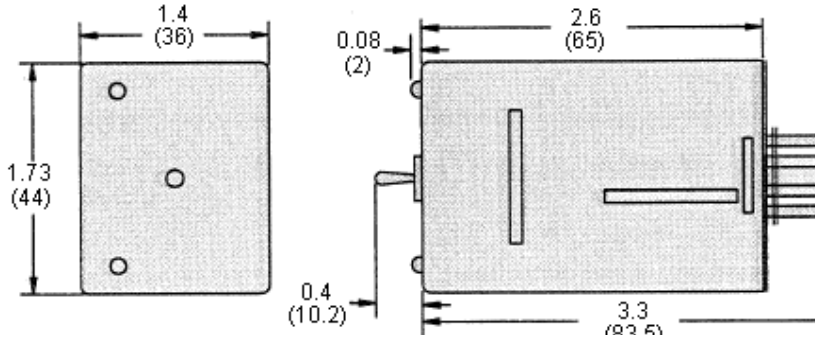


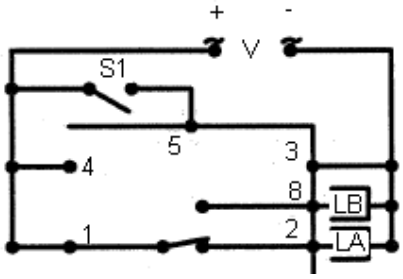
Dimensions : Inches (Millimetres)

Specification Table

Description	Input Voltage	Timing Range	Contact Configuration	Rated Load Current	Part Number
8 Pin Octal Base, SPDT	120 V ac / dc	0.5s Fixed	SPDT	12 Amperes	MCY98-57-120A
8 Pin Octal Base, DPDT (Cross Wired)	120 V ac / dc	0.5s Fixed	DPDT	12 Amperes	MCY98-53-120A
11 Pin Octal Base, DPDT (PIN 11 NO)	120 V ac / dc	0.5s Fixed	DPDT	12 Amperes	MCY98-54-120A
11 Pin Octal Base, DPDT (PIN 11 NC)	120 V ac / dc	0.5s Fixed	DPDT	12 Amperes	MCY98-55-120A

Operation

Wiring Diagram :
MCY98-57
8 Pin Octal with an SPDT
Contact Configuration.

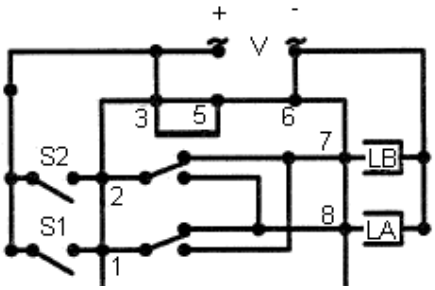


A

V is Input Voltage
LA is Load #1
LB is Load #2
S1 is Control Switch #1

If the top toggle switch is in " Alternate" position closing switch S1 will alternate the loads between LA and LB.
If the top toggle switch is in "Lock 1" position load LA is On and load LB is OFF. Switch S1 is not used in the mode.
If the top toggle switch is in "Lock 2" position load LA is OFF and load LB is ON. Switch S1 is not used in the mode.

Wiring Diagram :
MCY98-53
8 Pin Octal with an DPDT
Contact Configuration.
Duplex Capabilities.



B

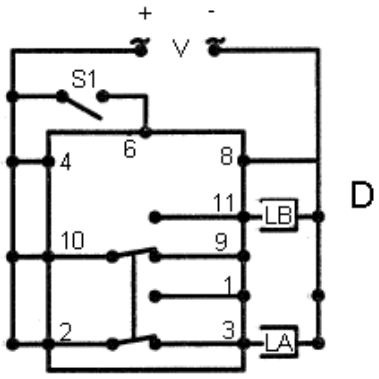
V is Input Voltage
LA is Load #1
LB is Load #2
S1 is Control Switch #1
S2 is Control Switch #2

If the top toggle switch is in " Alternate" position closing switch S1 will alternate the loads between LA and LB while switch S2 will only control LA.
If the top toggle switch is in "Lock 1" position switch S1 will control LA while switch S2 will control LB.
If the top toggle switch is in "Lock 2" position switch S1 will control LA while switch S2 will control LA.

Duplex (cross wired) functionality : This model operates the same as alternating relays except when both the control Switches S1 and S2 are closed, load A and load B energize simultaneously. The DPDT 8-pin, cross wired option, allows extra system load capacity through simultaneous operation of both motors when needed. Relay contacts are not isolated.

Operation

Wiring Diagram :
MCY98-54
11 Pin Octal with a DPDT Contact Configuration.
Pin 9 is Normally Closed and Pin 11 is Normally Open.

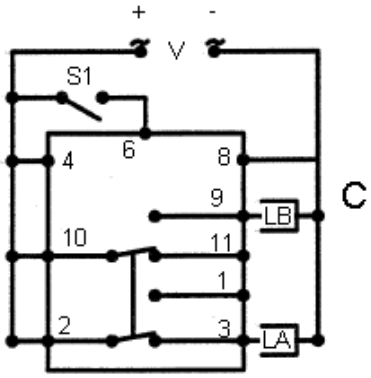


V is Input Voltage
LA is Load #1
LB is Load #2
S1 is Control Switch #1

If the top toggle switch is in " Alternate" position closing switch S1 will alternate the loads between LA and LB.
If the top toggle switch is in "Lock 1" position load LA is On and load LB is OFF. Switch S1 is not used in the mode.
If the top toggle switch is in "Lock 2" position load LA is OFF and load LB is ON. Switch S1 is not used in the mode.

Note : Input voltage must be applied at all times for proper alternation. The use of a solid state control switch for S1 or S2 may not initiate alternation correctly. S1 or S2 voltage must be from the same supply as the unit's input voltage (see wiring diagrams). Loss of input voltage resets unit; Load a becomes the lead for the next operation.

Wiring Diagram :
MCY98-55
11 Pin Octal with a DPDT Contact Configuration.
Pin 9 is Normally Closed and Pin 11 is Normally Open.



V is Input Voltage
LA is Load #1
LB is Load #2
S1 is Control Switch #1

If the top toggle switch is in " Alternate" position closing switch S1 will alternate the loads between LA and LB.
If the top toggle switch is in "Lock 1" position load LA is On and load LB is OFF. Switch S1 is not used in the mode.
If the top toggle switch is in "Lock 2" position load LA is OFF and load LB is ON. Switch S1 is not used in the mode.