The ARP Series is used in systems where equal run time for two motors is desirable. The selector switch allows selection of alternation of either load for continuous operation. LED's indicate the status of the output relay. This versatile series may be front panel mounted (BZ1 accessory required) or 35 mm DIN rail mounted with an accessory socket.

For more information see:
Appendix B, page 167, Figure 31 for dimensional drawing.
Appendix C, 170, Figure 29 for connection diagram.

Features:

- Provides equal run time for two motors
- Alternating or electrically locked operation
- Low profile selection switch
- 10A output contacts
- LED status indication
- Industry standard base connection

Approvals:

Auxiliary Products:

- **Hold-down clips (sold in pairs):**
  P/N: PSC8 (NDS-8)
  P/N: PSC11 (NDS-11)
- **Panel mount kit:** P/N: BZ1
- **11-pin socket:** P/N: NDS-11
- **8-pin socket:** P/N: NDS-8
- **DIN rail:** P/N: C103PM

Available Models:

ARP23S	ARP43S
ARP41	ARP61S
ARP41S	ARP63
ARP42S	ARP63S
ARP43	

If desired part number is not listed, please call us to see if it is technically possible to build.

Operation

Alternating: When the rotary switch is in the "alternate" position, alternating operation of Load A and Load B occurs upon the opening of the control switch S1. To terminate alternating operation and cause only the selected load to operate, rotate the switch to position "A" to lock Load A or position "B" to lock Load B. The LEDs indicate the status of the internal relay and which load is selected to operate.

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

Duplexing (Cross Wired): Duplexing models operate the same as alternating relays and when both the Control (S1) and Lag Load (S2) Switches 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.

Order Table:

ARP	X	X	X
	Input	**Output Form**	**Switch Operation**
	2 - 24VAC	**1** - SPDT, 8-pin	**Blank** - No Switch
	4 - 120VAC	**2** - DPDT, 11-pin	**S** - Rotary Switch
	6 - 230VAC	**3** - DPDT, 8-pin cross wired	

Specifications

Input

Voltage . . . . . 24, 120, or 230VAC
Tolerance
24VAC . . . . . -15% - 20%
120 & 230VAC . . . . . -20% - 10%
AC Line Frequency 50/60Hz

Output

Type . . . . . Electromechanical relay
Form . . . . . SPDT, DPDT, or cross wired DPDT
Rating . . . . . 10A resistive @ 120/240VAC & 28 VDC; 1/3 hp @ 120/240VAC
Maximum Voltage 250VAC
Life . . . . . Mechanical - 1 x 10^7; Electrical - 1 x 10^6

Protection

Isolation Voltage . . . . . ≥ 1500V RMS input to output

Mechanical

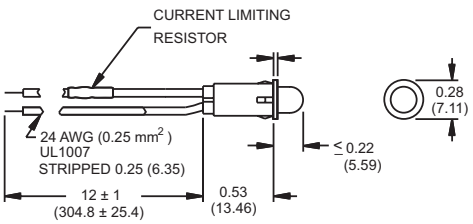
Mounting . . . . . Plug-in socket
Dimensions . . . . . 3.2 x 2.39 x 1.78 in. (81.3 x 60.7 x 45.2 mm)
Termination . . . . . Octal 8-pin or magnal 11-pin

Environmental

Operating / Storage Temperature . . . . . -20° to 60°C / -30° to 85°C
Weight . . . . . ≅ 5.6 oz (159 g)

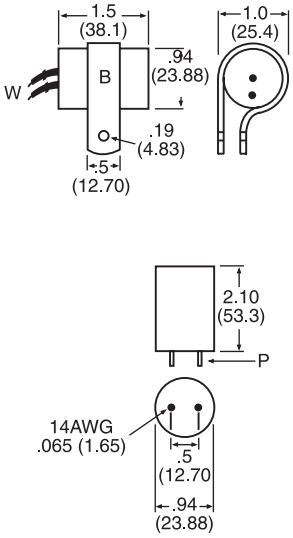
NOTE: Unit does not have debounce time delay.

FIGURE 24



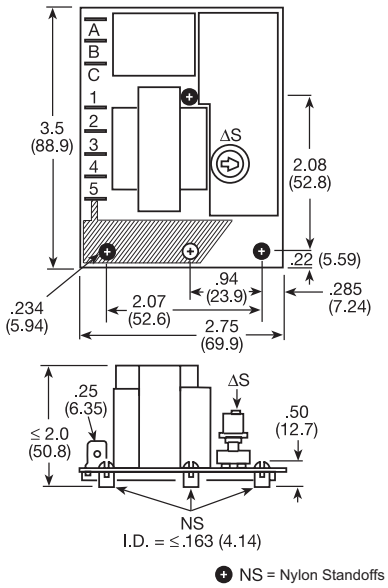
LPM

FIGURE 25



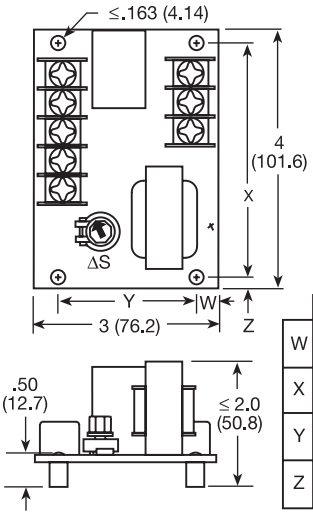
MSM

FIGURE 26



LLC1

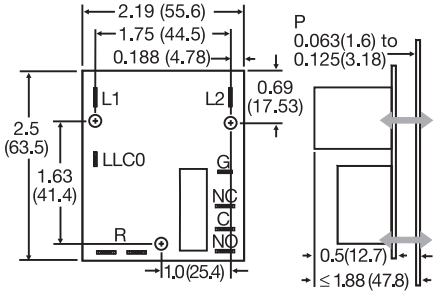
FIGURE 27



	N	C
W	.44 (11.35)	.25 (6.35)
X	3.62 (91.9)	3.5 (88.9)
Y	2.12 (53.8)	2.5 (63.5)
Z	.19 (4.83)	.25 (6.35)

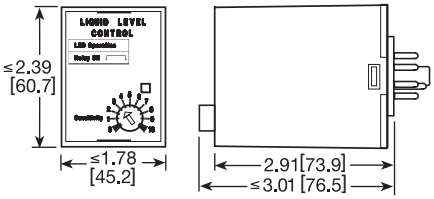
LLC2

FIGURE 28



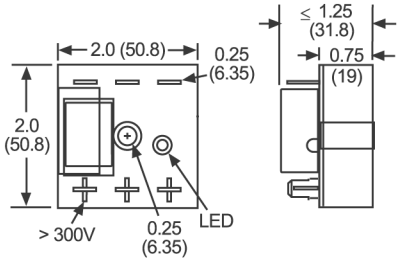
LLC8

FIGURE 29



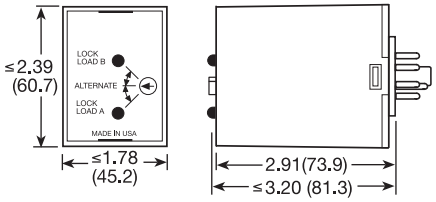
LLC5

FIGURE 30



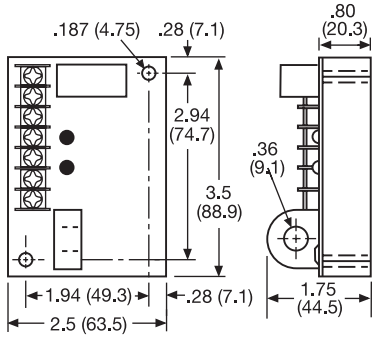
TVM; TVW

FIGURE 31



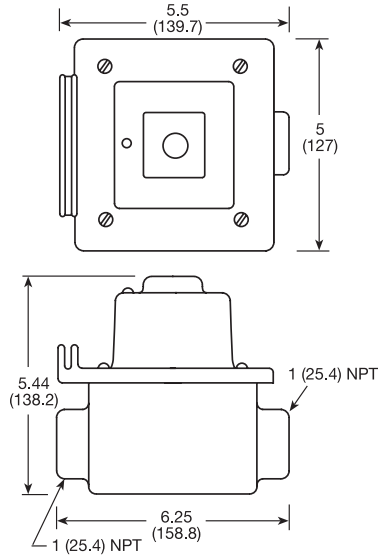
ARP

FIGURE 32



FB; SCR

FIGURE 33

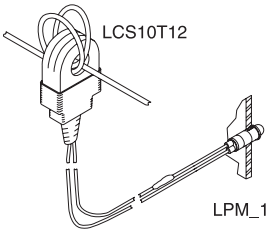


PCR

inches (millimeters)

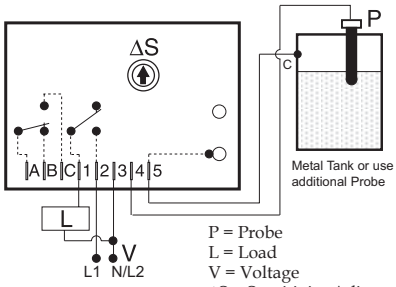
Appendix C - Connection Diagrams

FIGURE 22 - LCS10T12



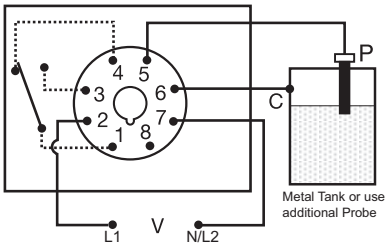
Wire Length: 500 ft. (152.4m) max. (Customer Supplied)
CAUTION: The LCS10T12 must be connected to the LPM12 or LPMG12 before current flows to prevent damage or shock hazard. Monitored wires must be properly insulated.

FIGURE 23 - LLC1 Series



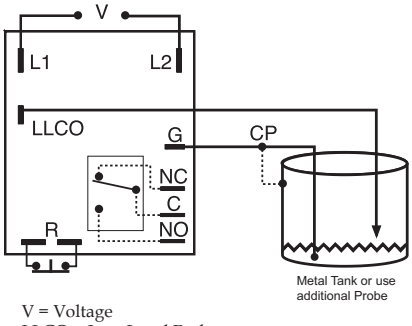
P = Probe
L = Load
V = Voltage
ΔS = Sensitivity Adjustment
Connect common to conductive tank or an additional probe as required.
Contacts A, B & C are isolated.

FIGURE 24 - LLC4 Series



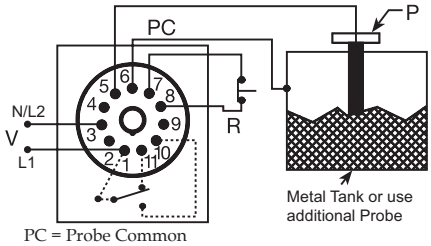
P = Probe
C = Probe Common
V = Voltage
Relay contacts are isolated.
Connect common to conductive tank. Additional probe is necessary for non-conductive or insulated tanks.

FIGURE 25 - LLC8 Series



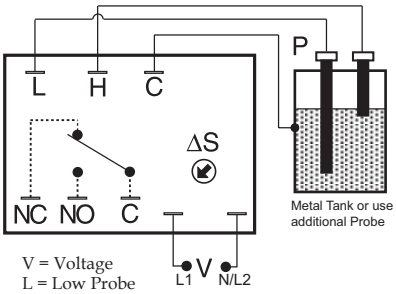
V = Voltage
LLCO = Low Level Probe
G or CP = Ground or Common (Reference) Probe
R = Optional NC Reset Switch (not included)
NO = Normally Open
NC = Normally Closed
C = Common or Transfer Contact
Relay contacts are isolated.
Connect common to conductive tank. Additional probe is necessary for non-conductive or insulated tanks.

FIGURE 26 - LLC6 Series



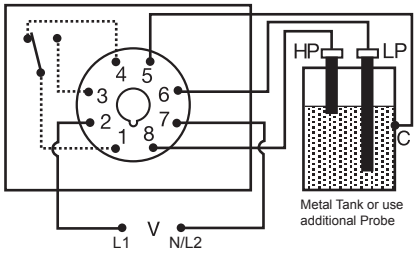
PC = Probe Common
P = Probe
V = Voltage
R = Optional NC Reset Switch
Connect common to conductive tank. Additional probe is necessary for non-conductive or insulated tanks.

FIGURE 27 - LLC2 Series



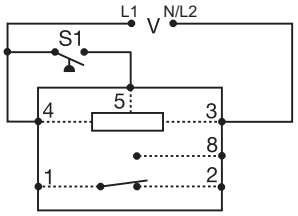
V = Voltage
L = Low Probe
H = High Probe
C = Probe Common
ΔS = Sensitivity Adjustment
NC = Normally Closed
NO = Normally Open
Connect common to conductive tank. Additional probe is necessary for non-conductive or insulated tanks.

FIGURE 28 - LLC5 Series

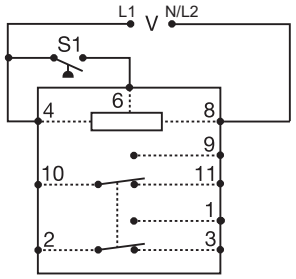


HP = High Level Probe
LP = Low Level Probe
C = Probe Common
V = Voltage
Relay contacts are isolated.
Connect common to conductive tank. Additional probe is necessary for non-conductive or insulated tanks.

FIGURE 29 - ARP Series

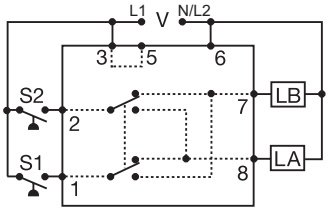


SPDT 8-pin



DPDT 11-pin

Relay contacts in above are isolated.



DPDT 8-pin cross wired

V = Voltage
LA = Load A
LB = Load B
S1 = Primary Control Switch
S2 = Lag Load Switch

Duplexing (Cross Wired): Duplexing models operate the same as alternating relays and when both the Control (S1) and Lag Load (S2) Switches 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.