

Owner's Manual

ASCO® 917 & 918 Remote Control Switches

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⚠ DANGER

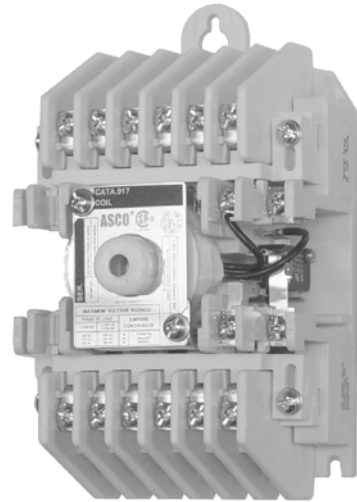
DANGER is used in this manual to warn of high voltages capable of causing shock, burns, or death.

⚠ WARNING

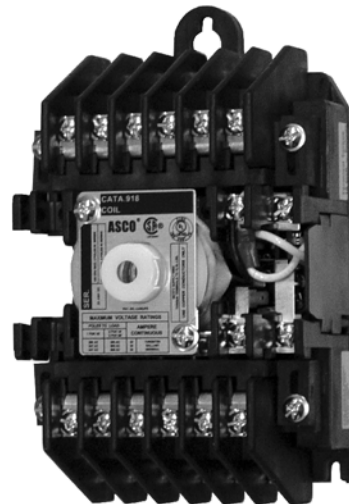
WARNING is used in this manual to warn of possible personal injury.

⚠ CAUTION

CAUTION is used in this manual to warn of possible equipment damage.



917



918

ASCO 917 Remote Control (RC) Switches are rated 20 amperes non-HID lighting loads and 30 amperes general purpose. ASCO 918 RC Switches are preferred for HID (high intensity discharge) loads such as sodium vapor, mercury vapor, and metal halide lighting (control voltage is limited to 277 V). ASCO 918 RC Switches are rated 30 amperes for standard ballast loads.

Catalog Number Identification with Elements Explained

Typical ASCO 917 catalog no. for 12 pole 208 volt 60 Hz control in an enclosure:

917 12 20 6 1 C

Product	Pole Combinations		Control Voltage	Accessories	Enclosure
917	Standard	N/O & N/C	3 110 – 120 V	X – if accessories ordered	C –
918	2		6 208 – 240 V		
	3	22 = 2+2	7 265 – 277 V	blank – none	blank – open type
	4	33 = 3+3	9 440 – 480 V		
	6	44 = 4+4	X 347 V		
	8	66 = 6+6	50 – 60 Hz		
	10				
	12				

277 V maximum control voltage for ASCO 918

ASCO Power Technologies® 50 Hanover Road, Florham Park, New Jersey 07932-1591 USA
For sales or service call 1 800 800-2726 (ASCO) www.ascopower.com

381333-006 D

ASCO POWER TECHNOLOGIES CANADA PO Box 1238, 17 Airport Road, Brantford, Ontario, Canada N3T 5T3
telephone 519 758-8450, fax 519 758-0876, for service call 1 888 234-2726 (ASCO) www.asco.ca



These RC Switches are UL-508 listed and are available in 2 to 12 pole single throw double break and 2 to 6 pole normally open and normally closed configurations. Control voltages are from 120 to 480 V ac. See tables A, B, and C for contact ratings.

⚠ WARNING

Do not exceed these values. Exceeding the rating can cause personal injury or serious equipment damage.

Table A – Maximum AC Voltage and Current Ratings for ASCO 917 & 918 Main Contacts (open or closed)

Load Type	Amperes Continuous		Poles to Load	
	917	918	1 for 1 phase	2 for 1 phase 3 for 3 phase
General	30	30	347 V ac	600 V ac
Standard Ballast*	20	30	347 V ac	600 V ac
Tungsten	20	20	250 V ac	250 V ac

* ASCO 918 is preferred for HID and metal halide loads

Table B – Maximum DC Voltage and Current Ratings for ASCO 917 & 918 Main Contacts (open or closed)

Load Type	Amperes Continuous	Poles to Load	
		2 in Series	3 in Series
General	20	125 V dc	250 V dc

Table C – Withstand Current Ratings for ASCO 917 & 918 Remote Control Switches

Available Symmetrical Amperes RMS		
At AC Service Voltage	When Used with Molded-Case Circuit Breakers	
	Withstand Current Rating (amperes)	Maximum Breaker Size (amperes)
250 V	22,000	30
480 V	14,000	30
600 V	10,000	30

Drawing Index

Drawing Description	Standard RC Switch	N/O & N/C RC Switch	Page
RC Switch Outline & Mounting	361069	383826	6
Outline & Mounting with Accessories	363164	383897	7 & 8
Wiring Diagram	361068	383825	9
Wiring Diagram with Accessories	363165	383880	10 & 11
Enclosure Outline & Mounting	363104	363104	12

Installation

ASCO 917 & 918 Remote Control (RC) Switches are pre-tested and ready to use. Installation requires mounting and connection of service cables and control circuit wires. An experienced licensed electrician should install the RC Switch.

Each RC Switch has a ratings / identification label defining load types and maximum voltage ratings. Use the switch only within the limits shown on this label.

⚠ WARNING

Do not exceed the values on the rating label. Exceeding the rating can cause personal injury or serious equipment damage.

⚠ CAUTION

To prevent malfunction or shortened life, protect the switch from construction grit and metal chips.

Mounting: Five *Outline and Mounting Diagrams* are furnished. Select the appropriate diagram and mount the RC Switch. All mounting details and instructions are shown on the diagrams.

The RC switch can be mounted in any position but is usually mounted vertically. Mounting holes in open-type RC Switches accept #10 screws (3/8-inch minimum length). Enclosure mounting holes accept 1/4-inch diameter screws.

Line and Load Connections

⚠ WARNING

Deenergize the branch circuit to be connected to the RC Switch and the control line too.

Four *Wiring Diagrams* are furnished. Line and load terminals are reversible. The RC switch is UL listed for use with 60 or 75 degrees C cable. All power wires should enter enclosure adjacent to the RC switch terminals. Combination knockouts are provided on NEMA Type 1 enclosures. Line and load connections are supplied with clamp-type terminals. These terminals accept the wire sizes #18–10 AWG Cu. Insert appropriate line and load wires and tighten clamp screws to 18 inch-pounds.

Control Line Connections

Control circuit connections designated *L*, *O*, *C* on the right side are supplied with clamp-type terminals. These terminals accept wire sizes #18–10 AWG Cu. Insert appropriate control wires and tighten terminal clamp screws to 18 inch-pounds. See the *Wiring Diagrams*.

⚠ CAUTION

Tighten all electrical connections to 18 inch-pounds.

⚠ CAUTION

Install overcurrent protective devices for the control circuit in accordance with applicable electrical codes.

Table D lists the maximum distances and minimum wire sizes that can be run between a control station and one ASCO 917 or 918 Remote Control Switch.

Table D – Line Run

Wire Size (AWG)	Maximum Distance (feet) at ac control voltage				
	120 V	240 V	277 V	347 V	480 V
14	700	2,000	2,600	3,400	5,500
12	1,050	3,100	4,100	5,600	8,800
10	1,670	5,000	6,600	9,000	14,000

⚠ CAUTION

Do not exceed these distances for proper switch operation.

Line run can be extended by use of Control Modules.

Table E lists the ASCO 917 & 918 coil inrush current and minimum control circuit fuse sizes.

Table E – Inrush Current / Minimum Fuse

Amps	Inrush Current / Fuse Size (amps RMS) at ac control voltage				
	120 V	240 V	277 V	347 V	480 V
Inrush	5.0	2.5	2.2	1.8	1.3
Fuse	2.0	1.0	1.0	0.75	0.5

Auxiliary Contacts – Optional Accessories 14H, 14HA

These auxiliary contacts, if furnished, are installed on the left side of the RC switch. The auxiliary contacts operate along with the main contact to provide remote indication of RC switch position (closed or open).

Each auxiliary contact provides a form C, spdt (single pole double throw) contact rated 10 amps at 277 V ac.

Accessory 14H is one auxiliary contact, and Accessory 14HA is two auxiliary contacts. A connector with leads is provided for each auxiliary contact. See *Wiring Diagram* 363165 (page 10) or 383880 (page 11) for contact configuration, additional ratings, and wiring.

Control Modules – Optional Accessories 47, 48, 49

These control modules, if furnished, are connected and mounted on the bottom or right side of the RC switch depending on the number of RC switch poles or n/o and n/c contact configuration. A control module can be field installed by ordering the appropriate module kit. Contact ASCO. Refer to *Wiring Diagram* 363165 (page 10) or 383880 (page 11).

Operation

Accessory 47 control modules are for two-wire control of the RC switch only. The module must be energized to close the RC switch, and de-energized to open the RC switch. Therefore, use a single-pole, maintained-type control station to operate the module.

Accessory 48 control modules are for three-wire control of the RC switch. One terminal must be energized to close the RC switch; another terminal must be energized to open the RC switch. If neither or both terminals are

energized, no output will occur. Therefore, use a single-pole, double-throw, momentary-type control station to operate the module.

Accessory 49 control modules are for Form 3 (start-stop) control of the RC switch. The modules must be energized to close the RC switch, and de-energized to open the RC switch. Therefore, use one normally-closed and one normally-open separate control stations to operate the module.

There are four different control modules for each Accessory 47, 48, and 49. Each module is suitable only for the control voltage marked on it. Refer to Table F. Ratings for the control modules are listed in Table H.

Table F – Accessory 47, 48, 49 module numbers

Module Control Voltage	2-Wire Control Accessory 47 Modules	3-Wire Control Accessory 48 Modules	Form 3 Control Accessory 49 Modules
120 V ac	429447-001	429448-001	429449-001
24 V ac & dc	429447-002	429448-002	429449-002
240/277 V ac	429447-003	429448-003	429449-003
12 V ac & dc	429447-004	429448-004	429449-004

Table G – Connections to Control Modules

Module Terminal	Connect To
1	not used
2	control station for Acc. 48, 49
3	control station for Acc. 47, 48, 49
4	module control voltage*
5	RC switch control voltage
O	pre-connected to O on RC switch
C	pre-connected to O on RC switch

* For dc control modules connect terminal 4 to negative (-).

Connections

Connections to the Accessory 47, 48, and 49 control modules are shown in Table G. Also refer to the labels in Figure 1 and to Wiring Diagram 363165 or 383880. Barrier screw type terminals accept #22-12 AWG Cu control wiring. Tighten terminals to 12 inch-pounds.

The control modules have two colored leads pre-connected to the O and C terminal bus on the RC switch. A

yellow wire runs between the O terminals; and orange/black wire runs between the C terminals.

Connect your control wiring for the module to terminals 2, 3, and 4 on the modules. Terminal 2 is not used on Accessory 47 and terminal 1 is never used.

⚠ CAUTION

For dc modules be sure to connect terminal 4 to negative (-).

Connect your control wiring for the RC switch (coil voltage) to terminal 5 on the control module and terminal L on the RC switch. If the line voltage (service) is the same as the coil voltage, the control voltage can come directly from the poles of the RC switch.

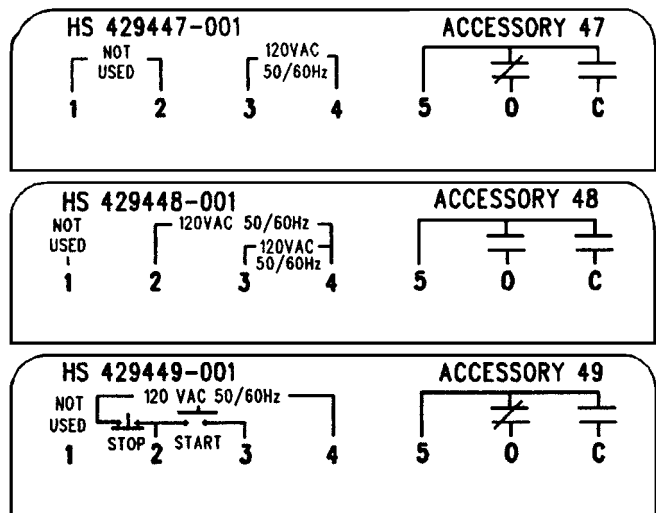


Figure 1. Typical labels on control modules.

Table H – Rating for Control Modules

Control Module	Acc. 47		Acc. 48		Acc. 49	
	AC	DC	AC	DC	AC	DC
120 V ac	1.90	—	1.60	—	3.70	—
24 V ac & dc	0.85	0.36	0.34	0.38	0.70	0.72
240 / 277 V ac	4.00	—	2.50	—	6.00	—
12 V ac & dc	0.60	0.32	0.34	0.36	0.68	0.70

Trouble-Shooting

⚠ WARNING
The RC switch is energized. Proceed with care!

Problem	Check Control Voltage	Check Control Station, Wiring, Supply
RC switch does not close when control station is closed.	Measure control voltage between RC switch terminals L and C.	If no voltage is present, check control station contacts, control wiring, supply fuses, and optional accessories.
RC switch does not close when control station is opened.	Measure control voltage between RC switch terminals L and O.	If no voltage is present, check control station contacts, control wiring, supply fuses, and optional accessories.
RC switch tries to open or close, but cannot.	Measure at least 90% control voltage (nameplate coil voltage) between RC switch terminals L and C, or L and O.	If voltage is low, check control wire size and line run distance; see Table D on page 5. If a transformer is used in the control line, make sure it can handle the VA burden required; see Table E on page 5.
RC switch closes and opens repeatedly.	—	Check control station for overlapping contacts, and correct. Control station cannot call on RC switch to close and open at the same time.
RC switch closes or opens very quickly with excessive noise.	Measure no more than 110% control voltage (nameplate coil voltage) between RC switch terminals L and C, or L and O.	If voltage is high, change control supply or change RC switch.

Manual Operation

A #8–32 screw 1 1/2 inches long can be used to manually operate the RC switch. One is supplied in all replacement parts kits that require manual operation. The screw should be used for maintenance purposes only. Remove the screw after maintenance.

⚠ WARNING
Do not manually operate the RC switch until all power and control circuits are disconnected.

Open circuit breakers, then use a voltmeter to verify no voltage is present at the RC switch at both control and line terminal screws.

Insert the operating screw into the center of the coil and carefully turn it clockwise until the threads engage the cam/core.

Pull the screw outward to open the RC switch contacts; push it in to close the contacts. Observe the buttons in the contact block (buttons out means contacts open).

Replacement Parts

The main contact blocks and the operator coil are available in kit form. When ordering parts, provide the Serial No. and Catalog No. from the RC switch nameplate. Contact your local ASCO Authorized Representative, Sales Office, or ASI.

Included in each kit are instructions that explain how to replace the parts. These instructions are also available separately:

Service Bulletin 381339–021

Note: ASCO 918 RC Switches are provided with a coil circuit specifically designed for HID lighting applications. Do not disconnect or remove this circuit component.

Conversion Kits

Conversion kits are available for field or distributor modification of ASCO 917 and 918 Remote Control Switches to allow changes in pole configuration, control voltage, control modules, and auxiliary contacts.

Standard RC Switches

REFERENCE NUMBER DENOTES POLE LOCATION (REFER TO CHART)

MOUNTING HOLES ACCEPT #10 SCREWS

2-6 POLES

8-12 POLES

LINE

LOAD

LINE

LOAD

2.85
72.4
MAX.

3.50
89.0
MAX.

GENERAL NOTES

1. LINE, LOAD, AND CONTROL CONNECTIONS L, C, & O WILL ACCEPT #10 TO #18 AWG COPPER WIRE.
2. NET WEIGHT, POUNDS (KG), 2-6 POLES-2 (.91) 8-12 POLES-2.7 (1.2) (DOES NOT INCLUDE SHIPPING CARTON)

CONTACT POLE LOCATION CHART

POLES	LOCATION
2	2 & 5
3	2, 3 & 5
4	2, 3, 4 & 5
6	1 THRU 6
8	1 THRU 6, 8 & 11
10	1 THRU 6, 8, 9, 10 & 11
12	1 THRU 12

CATALOG NUMBER _____
CERTIFIED TO **ASCO** S.O. _____
DATE _____ BY _____

PROJECT NAME: **OUTLINE MOUNTING 917/918 REMOTE CONTROL SWITCH**

SCALE: 1:1 ACAD FILE

SIZE: DWG NO. **BS361069**

ASCO Power Technologies, L.P.
FLORHAM PARK, NEW JERSEY 07932 U.S.A.

N/O & N/C RC Switches

REFERENCE NUMBER DENOTES POLE LOCATION (REFER TO CHART)

MOUNTING HOLES ACCEPT #10 SCREWS

2-6 POLES

8-12 POLES

LINE

LOAD

LINE

LOAD

2.85
72.4
MAX.

3.50
89.0
MAX.

GENERAL NOTES

1. LINE, LOAD, AND CONTROL CONNECTIONS L, C, & O WILL ACCEPT #10 TO #18 AWG COPPER WIRE.
2. NET WEIGHT: 2.7 LBS.MAX.(1.2 KG.MAX.)
3. "C" & "O" DESIGNATIONS REFER TO THE ACTION OF LOWER CONTACTS.(7 THRU 12)
4. CONTACTS ARE SINGLE THROW, DOUBLE BREAK, WITH MOMENTARILY ENERGIZED SINGLE COIL OPERATOR MECHANICALLY HELD IN BOTH OPEN AND CLOSED POSITION.
5. FOR ENCLOSED TYPE DIMENSIONS REFER TO ENCLOSURE DRAWING 363104.
6. FOR WIRING DIAGRAM REFER TO DRAWING 383825.

SWITCH CONTACT LOCATION CHART

CONTACT COMB.	CONTACT LOCATIONS	
N/O N/C	TOP	BOTTOM
2 2	2 & 5	8 & 11
3 3	2, 3 & 5	8,10 & 11
4 4	2, 3, 4 & 5	8, 9, 10 & 11
6 6	1 THRU 6	7 THRU 12

CONTACTS 1-6 WILL BE OPENED BY APPLYING VOLTAGE TO "L"&"C"
CONTACTS 1-6 WILL BE CLOSED BY APPLYING VOLTAGE TO "L"&"O"
CONTACTS 7-12 WILL BE OPENED BY APPLYING VOLTAGE TO "L"&"O"
CONTACTS 7-12 WILL BE CLOSED BY APPLYING VOLTAGE TO "L"&"C"

CATALOG NUMBER _____
CERTIFIED TO **ASCO** S.O. _____
DATE _____ BY _____

PROJECT NAME: **OUTLINE MOUNTING 917/918 R C SWITCH N/O & N/C**

SCALE: 1:1 ACAD FILE

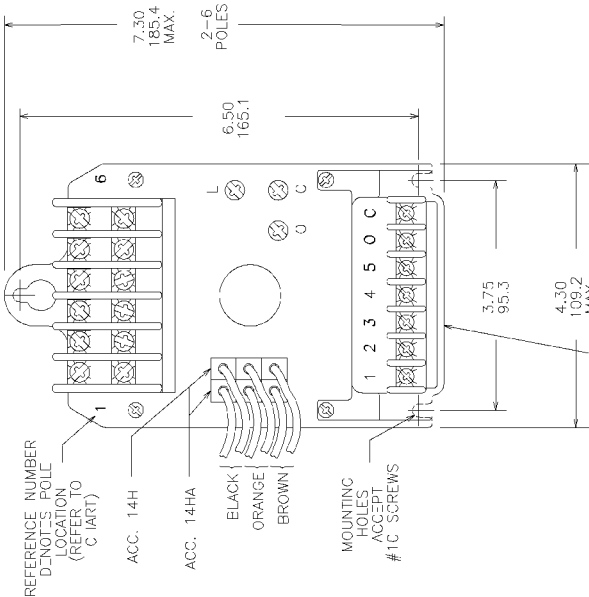
SIZE: DWG NO. **BS383826**

ASCO Power Technologies, L.P.
FLORHAM PARK, NEW JERSEY 07932 U.S.A.

Standard RC Switches with Accessories

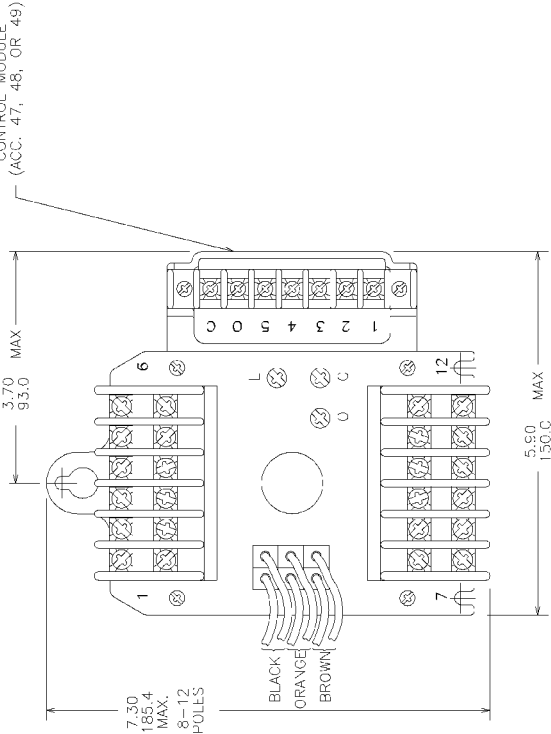
2-6 POLE

WITH ACC. 14H, 14HA, 47, 48, OR 49



8-12 POLE

WITH ACC. 14H, 14HA, 47, 48, OR 49

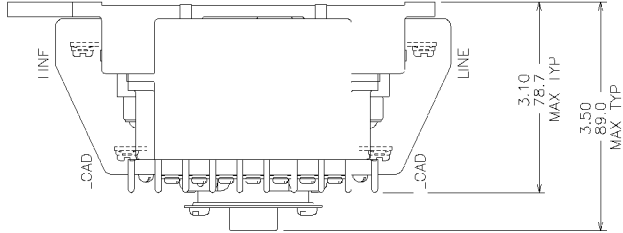


CONTROL MODULE
(ACC. 47, 48, OR 49)

GENERAL NOTES:

1. CUSTOMER CONNECTIONS TO LINE AND LOAD WILL ACCEPT NO. 10 AWG TO 18 AWG COPPER WIRE.
2. CUSTOMER CONNECTIONS TO CONTROL MODULE (ACC. 47, 48, OR 49) WILL ACCEPT NO. 12 AWG TO 22 AWG COPPER WIRE.
3. LEADS ON CONNECTORS FOR 14H & 14HA ARE NO. 18 AWG (17" LONG).
4. WEIGHT: 2-6 POLES: 2.3 LBS. MAX (1.05 KG) 8-12 POLES: 3.0 LBS. MAX (1.36 KG) (DOES NOT INCLUDE SHIPPING CARTON)
5. FOR ENCLOSED TYPE DIMENSIONS REFER TO COMPOSITE ENCLOSURE DRAWING 363104.
6. FOR WIRING DIAGRAM REFER TO COMPOSITE DRAWING 363165.

POLES	LOCATION
2	2 & 5
3	2, 3 & 5
4	2, 3, 4 & 5
6	1 THRU 6
8	1 THRU 6, 8 & 11
10	1 THRU 6, 8, 9, 10 & 11
12	1 THRU 12



PROJECT NAME: PROJECT	DATE	DATE	DATE
OUTLINE	10/12/06	10/12/06	10/12/06
917/918 R/MOTIF CONTROL SWITCH	FORM	REV	DATE
WITH OP. ACC. 14H, 14HA, 47, 48, OR 49			
THIRD ANGLE PROJECTION	BY	BY	DATE
	JTW	JTW	11/23/06
	APPROVAL	APPROVAL	

CATALOG NUMBER	210684	DATE	10/16/06
ASCO		BY	JTW
DATE	7/30/06	DATE	10/12/06
		DATE	11/23/06

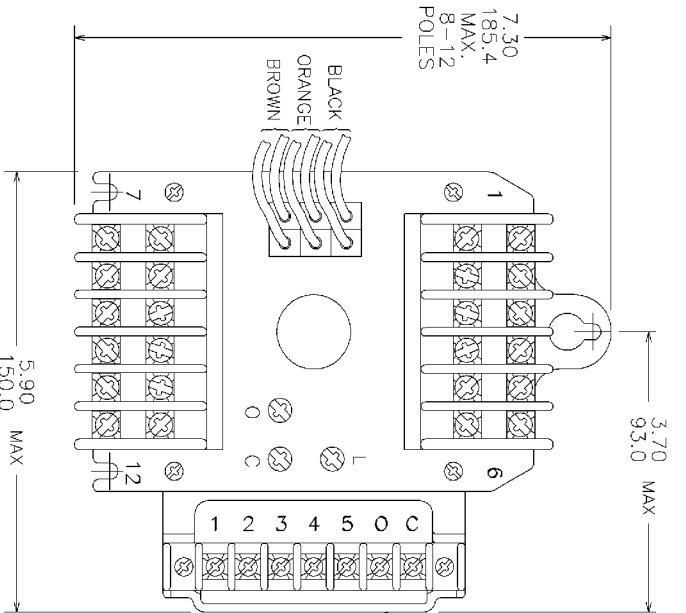
PROJECT NAME	PROJECT	SCALE	1:1
DATE	10/12/06	REV	1
FORM		DATE	11/23/06
BY	JTW	DATE	11/23/06
REV		DATE	
DATE		DATE	

ASSEMBLY DESCRIPTION	ACAD	FILE
AC		
AM		
AN		
AO		
AP		
AQ		
AR		
AS		
AT		
AV		
AW		
AX		
AY		
AZ		
BA		
BB		
BC		
BD		
BE		
BF		
BG		
BH		
BI		
BJ		
BK		
BL		
BM		
BN		
BO		
BP		
BQ		
BR		
BS		
BT		
BU		
BV		
BW		
BX		
BY		
BZ		

N/O & N/C RC Switches with Accessories

N/O & N/C COMBINATIONS

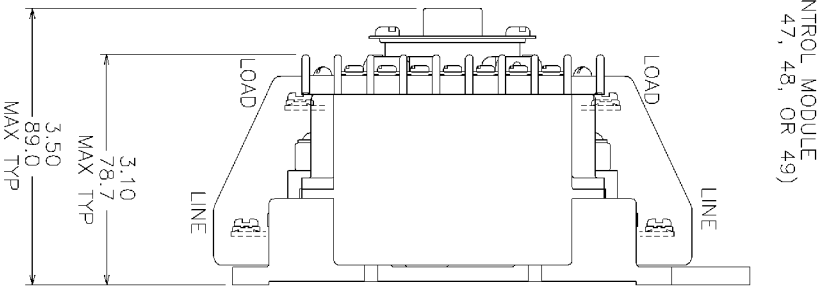
WITH
ACC. 14H, 14HA, 47, 48, OR 49



SWITCH CONTACT LOCATION CHART

CONTACT COMB.	CONTACT LOCATIONS		
N/O	N/C	TOP	BOTTOM
2	2	2 & 5	8 & 11
3	3	2, 3 & 5	8, 10 & 11
4	4	2, 3, 4 & 5	8, 9, 10 & 11
6	6	1 THRU 6	7 THRU 12

CONTACTS 1-6 WILL BE OPENED BY APPLYING VOLTAGE TO "N" & "C"
CONTACTS 1-6 WILL BE CLOSED BY APPLYING VOLTAGE TO "L" & "O"
CONTACTS 7-12 WILL BE OPENED BY APPLYING VOLTAGE TO "L" & "O"
CONTACTS 7-12 WILL BE CLOSED BY APPLYING VOLTAGE TO "N" & "C"



GENERAL NOTES:

1. LINE AND LOAD CONNECTIONS WILL ACCEPT #10 TO #18 AWG COPPER WIRE.
2. CUSTOMER CONNECTIONS TO CONTROL MODULE (ACC. 47, 48, OR 49) WILL ACCEPT #12 TO #22 AWG COPPER WIRE
3. LEADS ON CONNECTORS FOR 14H & 14HA ARE #18 AWG (12" LONG)
4. WEIGHT: 3.0 LBS. MAX. (1.36 KG.) (DOES NOT INCLUDE SHIPPING CARTON)
5. CONTACTS ARE SINGLE THROW, DOUBLE BREAK, WITH MOMENTARILY ENERGIZED SINGLE COIL OPERATOR MECHANICALLY HELD IN BOTH OPEN AND CLOSED POSITION.
6. FOR ENCLOSED TYPE DIMENSIONS REFER TO ENCLOSURE DRAWING 363104
7. FOR WIRING DIAGRAM REFER TO DRAWING 383580

PROJECT NAME:	OUTLINE	MOUNTING	DATE	BY
917/918 R C SWITCH N/O & N/C WITH OP. ACC. 14H, 14HA, 47, 48 OR 49				
DESIGNED BY: N/J/H 10/17/96	CHECKED BY: N/J/H 10/13/96	ASSEMBLY NO.	DATE	BY
DRAWN BY: N/J/H 10/17/96	MANUFACTURING TOLERANCES TO BE AS SHOWN UNLESS OTHERWISE SPECIFIED	THIRD ANGLE PROJECTION		
SCALE: 1:1	PROPERTY OF ASCO POWER TECHNOLOGIES. USE RESTRICTED TO THE WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.	COMPUTER GENERATED DRAWING		
ASCO Federal Ave., Kenilworth, NJ 07033 U.S.A.				

CATALOG NUMBER _____
CERTIFIED TO **ASCO** S.O. _____
DATE _____ BY _____

210884	14H	17/10/75/96
101442	14HA	17/20/97
101442	47	17/20/97
101442	48	17/20/97
101442	49	17/20/97

Standard RC Switches

REFERENCE NUMBER DENOTES POLE LOCATION (REFER TO CHART)

CONTROL LINE

TYPICAL CONTROL STATION

GENERAL NOTES

- WHEN RC COIL AND LINE VOLTAGE ARE THE SAME THE RC CONTROL VOLTAGE CAN BE DERIVED FROM THE LINE POLES OF THE RC SWITCH.
- MAIN CONTACTS ARE SHOWN IN OPEN POSITION WITH CONTROL LINE DE-ENERGIZED. (SWITCH SHIPPED WITH CONTACTS CLOSED)
- LINE AND LOAD TERMINALS ARE REVERSIBLE.
- CONTACTS ARE SINGLE THROW, DOUBLE BREAK, WITH MOMENTARILY ENERGIZED SINGLE COIL OPERATOR MECHANICALLY HELD IN BOTH OPEN AND CLOSED POSITIONS.
- REFER TO OWNER'S MANUAL 381333-006 FURNISHED WITH EACH REMOTE CONTROL SWITCH, PRIOR TO INSTALLATION OPERATION AND FOR RC INRUSH AND LINE RUN FOR THE SWITCH.
- CUSTOMER CONNECTIONS TO LINE AND LOAD WILL ACCEPT NO.10 AWG. TO 18 AWG. COPPER WIRE.
- 918 COIL CIRCUIT INCLUDES ELECTRONIC CIRCUIT BOARD.

FOR OPEN TYPE DIMENSIONS REFER TO COMPOSITE OUTLINE DRAWING 361069, FOR ENCLOSED TYPE DIMENSIONS REFER TO COMPOSITE ENCLOSURE DRAWING 363104.

BASIC CATALOG NUMBERS	VOLT CODE	ACC. GRP. CODE	OPT. ACC. CODE	ENCLOSURE CODE	CONTROL VOLTAGE CODE DESCRIPTION OPERATING FREQUENCIES 50-60 HZ
ASCO 2					3 110-120V
3					6 208-240V
7					7 265-277V
9					9 440-480V (917 ONLY) *
X					X 347V (917 ONLY) *
917	2				
	3				
918	4				
	6				
	20				
	7	I	X	C	
	9*				
	X*				
	10				
	12				

CATALOG NUMBER CERTIFIED TO **ASCO** S.O. DATE _____ BY _____

REV. TO SHEET ECN NO. BY APP. DATE

WIRING _____ DIAGRAM _____

917/918 REMOTE CONTROL SWITCH

THIRD ANGLE PROJECTION

BY	DATE	MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-005.	ASSM. REF. NO.	COMPUTER GENERATED DRAWING
DRAWN BY MJH	10/12/06			SCALE 1:1 SIZE BS
CHECKED NRM	10/13/06	PROPERTY OF ASCO POWER TECHNOLOGIES. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.		DWG. NO. 361068
PROJECT APPROVAL				DRAWING REV. H ECN NO. 216159 SHEET 1 OF 1
FINAL APPROVAL JTW	10/17/06			

CONTACT POLE LOCATION CHART

POLES	LOCATION
2	2 & 5
3	2, 3 & 5
4	2, 3, 4 & 5
6	1 - 6
8	1 - 6, 8 & 11
10	1-6, 8, 9, 10 & 11
12	1 - 12

MAIN CONTACTS MAXIMUM VOLTAGE AND AMP RATINGS OPEN OR CLOSED

AMPERE CONTINUOUS	POLES TO LOAD			
	1 FOR 1Ø	2 FOR 1Ø 3 FOR 3Ø		
GENERAL	30	30	347 AC	600 AC
STD. BALLAST	20	30	347 AC	600 AC
TUNGSTEN	20	20	250 AC	250 AC

20 AMP. DC GENERAL | 125V DC MAX. 2 POLES IN SERIES | 250V DC MAX. 3 POLES IN SERIES

SWITCH IS SUITABLE FOR USE IN A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN THE RMS SYMMETRICAL CURRENT AT THE MAXIMUM VOLTAGE SHOWN BELOW, WHEN PROTECTED BY A 30 AMP. CIRCUIT BREAKER HAVING AN INTERRUPTING RATING NOT LESS THAN VALUES SHOWN.

MAX. RMS AMPERES	MAX. AC VOLTS
22000	250
14000	480
10000	600

N/O & N/C RC Switches

REFERENCE NUMBER DENOTES CONTACT LOCATION (REFER TO CHART)

"O" & "C" DESIGNATIONS REFER TO ACTION OF LOWER SET OF CONTACTS

CONTROL LINE

TYPICAL CONTROL STATION

GENERAL NOTES

- WHEN RC COIL AND LINE VOLTAGE ARE THE SAME THE RC CONTROL VOLTAGE CAN BE DERIVED FROM THE LINE POLES OF THE RC SWITCH.
- MAIN CONTACTS ARE SHOWN WITH LOWER CONTACTS IN OPEN POSITION WITH CONTROL LINE DE-ENERGIZED. (SWITCH SHIPPED WITH LOWER CONTACTS IN CLOSED POSITION)
- LINE AND LOAD TERMINALS ARE REVERSIBLE.
- CONTACTS ARE SINGLE THROW, DOUBLE BREAK, WITH MOMENTARILY ENERGIZED SINGLE COIL OPERATOR MECHANICALLY HELD IN BOTH OPEN AND CLOSED POSITIONS.
- REFER TO OWNER'S MANUAL 381333-006 FURNISHED WITH EACH REMOTE CONTROL SWITCH, PRIOR TO INSTALLATION OPERATION AND FOR RC INRUSH AND LINE RUN FOR THE SWITCH.
- LINE, LOAD AND CONTROL CONNECTIONS L, C & O WILL ACCEPT NO.10 AWG. TO 18 AWG. COPPER WIRE.
- 918 COIL CIRCUIT INCLUDES ELECTRONIC CIRCUIT BOARD.

FOR OPEN TYPE DIMENSIONS REFER TO COMPOSITE OUTLINE DRAWING 383826, FOR ENCLOSED TYPE DIMENSIONS REFER TO COMPOSITE ENCLOSURE DRAWING 363104.

BASIC CATALOG NUMBERS	VOLT CODE	ACC. GRP. CODE	OPT. ACC. CODE	ENCLOSURE CODE	CONTROL VOLTAGE CODE DESCRIPTION OPERATING FREQUENCIES 50-60 HZ
ASCO 917	22				3 110-120V
	6				6 208-240V
	7				7 265-277V
	9				9 440-480V (917 ONLY) *
	X				X 347V (917 ONLY) *
918	33	20			
	44				
	66				

CATALOG NUMBER CERTIFIED TO **ASCO** S.O. DATE _____ BY _____

REV. TO SHEET ECN NO. BY APP. DATE

WIRING _____ DIAGRAM _____

917/918 REMOTE CONTROL SWITCH

THIRD ANGLE PROJECTION

BY	DATE	MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-005.	ASSM. REF. NO.	COMPUTER GENERATED DRAWING
DRAWN BY MJH	10/13/06			SCALE 1:1 SIZE BS
CHECKED NRM	10/16/06	PROPERTY OF ASCO POWER TECHNOLOGIES. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.		DWG. NO. 383826
PROJECT APPROVAL				DRAWING REV. D ECN NO. 216159 SHEET 1 OF 1
FINAL APPROVAL JTW	10/17/06			

SWITCH CONTACT LOCATION CHART

CONTACT COMB.	CONTACT LOCATIONS	
	TOP	BOTTOM
N/O		
N/C		
2	2	2 & 5
3	3	2, 3 & 5
4	4	2, 3, 4 & 5
6	6	1 THRU 6
		8 & 11
		8, 10 & 11
		8, 9, 10 & 11
		7 THRU 12

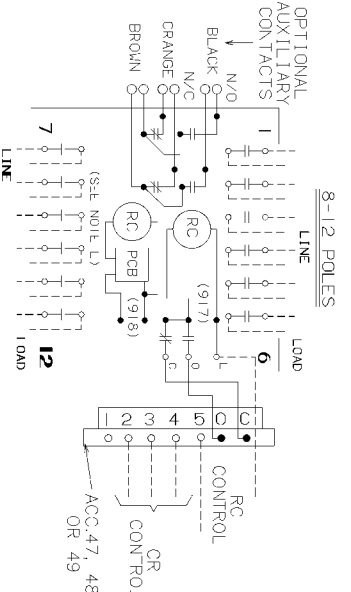
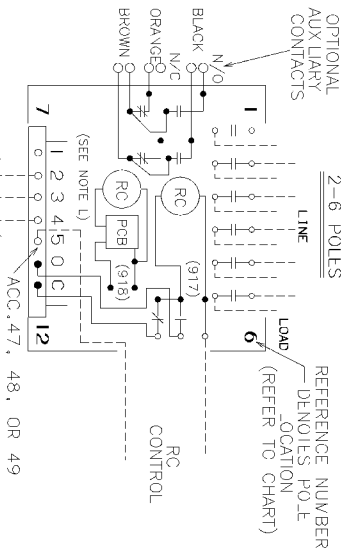
MAIN CONTACTS MAXIMUM VOLTAGE AND AMP RATINGS OPEN OR CLOSED

AMPERE CONTINUOUS	POLES TO LOAD			
	1 FOR 1Ø	2 FOR 1Ø 3 FOR 3Ø		
GENERAL	30	30	347 AC	600 AC
STD BALLAST	20	30	347 AC	600 AC
TUNGSTEN	20	20	250 AC	250 AC

20AMP DC GENERAL | 125VDC MAX. 2 POLES IN SERIES | 250VDC MAX. 3 POLES IN SERIES

CONTACTS 1-6 WILL BE OPENED BY APPLYING VOLTAGE TO "L" & "C"
 CONTACTS 1-6 WILL BE CLOSED BY APPLYING VOLTAGE TO "L" & "O"
 CONTACTS 7-12 WILL BE OPENED BY APPLYING VOLTAGE TO "L" & "O"
 CONTACTS 7-12 WILL BE CLOSED BY APPLYING VOLTAGE TO "L" & "C"

Standard RC Switches with Accessories



CONTACT POLE LOCATION CHART

POLES	LOCATION
2	2 & 5
3	2, 3 & 5
4	2, 3, 4 & 5
6	1 - 6
8	1 - 6, 8 & 11
10	1 - 6, 8, 9, 10 & 11
12	1 - 12

MAIN CONTACT MAXIMUM VOLTAGE AND AMP RATINGS OPEN OR CLOSED

AMPERE CONTINUOUS	POLES 10 LOAD	POLES 10 FOR 10
APPLICABLE 917/918	1 FOR 10	5 FOR 30
GENERAL	30 AC	347 AC
STD BALLAST	20 AC	347 AC
TUNGSTEN	20 AC	250 AC

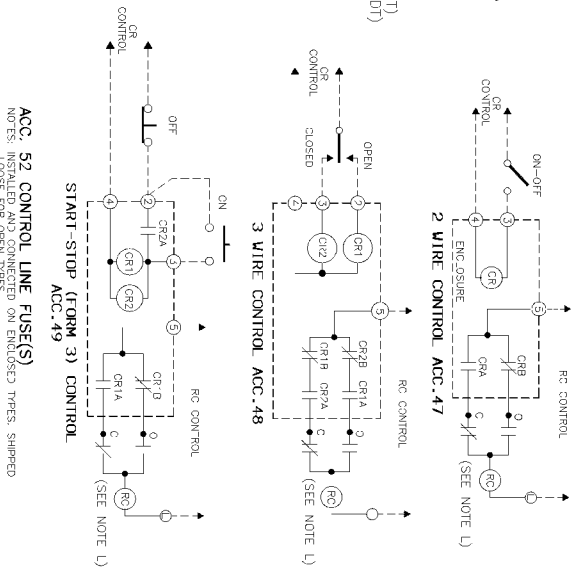
SWITCH IS SUITABLE FOR USE IN A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN THE RMS SYMMETRICAL CURRENT AT THE MAXIMUM VOLTAGE SHOWN BELOW, WHEN PROTECTED BY A 30 AMP CIRCUIT BREAKER HAVING AN INTERRUPTING RATING OF NOT LESS THAN VALUES SHOWN.

AMPERES	VOLTS	MAXIMUM AC
22,000	250	250
14,000	480	480
10,000	600	600

GENERAL NOTES

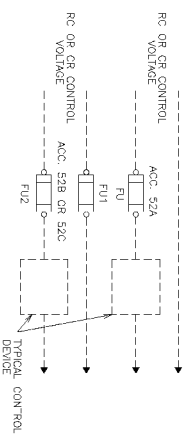
- WHEN RC COIL AND LINE VOLTAGE ARE THE SAME THE RC CONTROL VOLTAGE CAN BE DERIVED FROM THE LINE POLES OF THE RC SWITCH.
- MAIN CONTACTS ARE SHOWN IN OPEN POSITION WITH CONTROL LINE DE-ENERGIZED. SEE RATINGS BELOW. (SWITCH SHIPPED WITH CONTACTS CLOSED)
- LINE AND LOAD TERMINALS ARE REVERSIBLE.
- CONTACTS ARE SINGLE THROW, DOUBLE BREAK, WITH MOMENTARILY ENERGIZED SINGLE COIL OPERATOR MECHANICALLY HELD IN BOTH OPEN AND CLOSED POSITIONS.
- INDICATES CUSTOMER CONNECTION POINTS.
- INDICATES FACTORY CONNECTION POINTS.
- CONNECTION POINTS THAT HAVE BOTH CUSTOMER AND FACTORY CONNECTIONS ARE SHOWN AS CUSTOMER CONNECTIONS.
- REFER TO OWNER'S MANUAL 381333-006 FURNISHED WITH EACH REMOTE CONTROL SWITCH PRIOR TO INSTALLATION OPERATION AND FOR RC INRUSH AND JLE RUN FOR THE SWITCH.
- CUSTOMER CONNECTIONS TO LINE AND LOAD WILL ACCEPT NO.10AWG TO 18AWG COPPER WIRE.
- CUSTOMER CONNECTIONS TO CONTROL MODULE (ACC.47, 48, OR 49) WILL ACCEPT NO.12AWG TO 22AWG COPPER WIRE. (12' LONG).
- LEADS ON CONNECTORS FOR ACC.14H & 14HA ARE NO. 8AWG. CR CONTROL SUPPLIED BY CUSTOMER.
- 918 COIL CIRCUIT INCLUDES ELECTRONIC CIRCUIT BOARD.

BASIC CATALOG NUMBERS	VOLT CODE	QPT CODE	ENCLOSURE CODE	CONTROL VOLTAGE CODE	DESCRIPTION
ASCO POLES (AMPS)	ACC. CODE	ACC. CODE			OPERATING FREQUENCIES 50-60 HZ
2	3	3	ADD	31 T10-120V	
3	6	6	208-240V	7	
4	20	7	265-277V	9	
6	7	1	440-480V (917 ONLY) *	X	
8	9*	C	347V (917 ONLY) *		
10	X*		CATALOG NUMBER		
12			CERTIFIED		



ACC. 52 CONTROL LINE FUSES(S)

NOTES: INSTALLED AND CONNECTED ON ENCLOSED TYPES, SHIPPED CONTROL LINE FUSES(S) SUITABLE FOR AC ONLY. ACC. 52A ONE 15A 300V/TYPE 5C FUSE FOR 30V MAXIMUM-GROUNDED. ACC. 52B TWO 15A 300V/TYPE 5C FUSES FOR 30V MAXIMUM-UNGROUND. ACC. 52C-TWO 15A 600V T-YE KTK FUSES FOR 301-600V MAXIMUM-UNGROUND.



PROJECT NAME: PROJECT

WIRING DIAGRAM

917/918 REMOTE CONTROL SWITCH

THIRD ANGLE PROJECTION

DATE: 10/13/08

DESIGNED BY: JIM

CHECKED BY: JIM

ASCO PROJECT TRANSMISSIONS, INC. 218159

SCALE: 1" = 1"

COMPUTER GENERATED DRAWING

DATE: 10/13/08

SIZE: 363 x 65

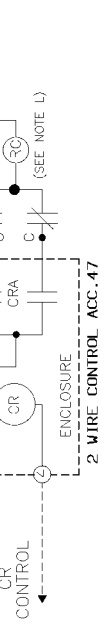
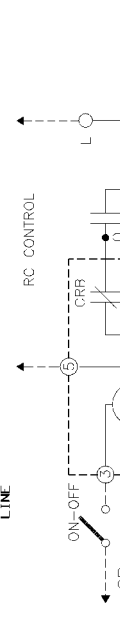
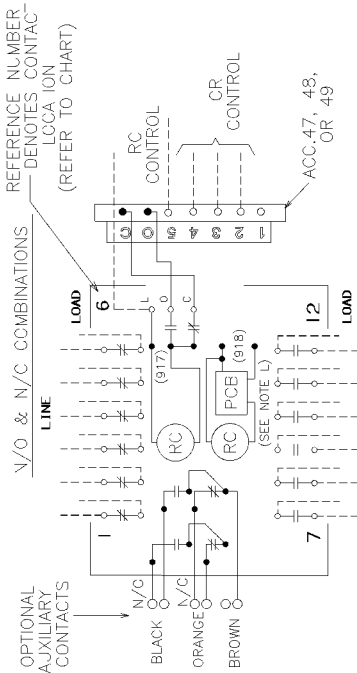
DRAWN BY: JIM

DATE: 10/13/08

ASCO PROJECT TRANSMISSIONS, INC. 218159

SHEET 1 OF 1

N/O & N/C RC Switches with Accessories



GENERAL NOTES

- A. WHEN RC COIL AND LINE VOLTAGE ARE THE SAME THE RC CONTROL VOLTAGE CAN BE DERIVED FROM THE LINE POLES OF THE RC SWITCH.
- B. MAIN CONTACTS ARE SHOWN WITH LOWER CONTACTS IN OPEN POSITION WITH CONTROL LINE DE-ENERGIZED. (SWITCH SHIPPED WITH LOWER CONTACTS IN CLOSED POSITION.)
- C. LINE AND LOAD TERMINALS ARE REVERSIBLE.
- D. CONTACTS ARE SINGLE THROW; DOUBLE BREAK, WITH MOMENTARILY ENERGIZED SINGLE COIL OPERATOR MECHANICALLY HELD IN BOTH OPEN AND CLOSED POSITIONS.
- E. \circ INDICATES CUSTOMER CONNECTION POINTS.
- F. \bullet INDICATES FACTORY CONNECTION POINTS.
- G. CONNECT ON POINTS THAT HAVE BOTH C-JUSTOVER AND FACTORY CONNECTIONS ARE SHOWN AS CUSTOMER CONNECTIONS.
- H. REFER TO OWNER'S MANUAL 381333-006, FURNISHED WITH EACH REMOTE CONTROL SWITCH, PRIOR TO INSTALLATION, OPERATION AND FOR RC INRUSH AND LINE RUN FOR THE SWITCH.
- I. CUSTOMER CONNECTIONS TO LINE AND LOAD WILL ACCEPT NO.10AWG TO 18AWG COPPER WIRE.
- J. LEADS ON CONNECTIONS FOR ACC.14H & 14HA ARE NO.18AWG. (12" LONG).
- K. CR CONTROL SUPPLIED BY CUSTOMER.
- L. 918 COIL CIRCUIT INCLUDES ELECTRONIC CIRCUIT BOARD.

SWITCH CONTACT LOCATION CHART

CONTACT COMB.	CONTACT LOCATIONS
N/O/N/C	TOP
	BOTTOM
3	2 & 5
2	8 & 11
3	2, 3 & 5
4	8, 10 & 11
4	2, 3, 4 & 5
6	8, 9, 10 & 11
6	1 THRU 6
	7 THRU 12

CONTACTS 1-6 WILL BE OPENED BY APPLYING VOLTAGE TO "L" & "C".
 CONTACTS 1-6 WILL BE CLOSED BY APPLYING VOLTAGE TO "L" & "O".
 CONTACTS 7-12 WILL BE OPENED BY APPLYING VOLTAGE TO "L" & "O".
 CONTACTS 7-12 WILL BE CLOSED BY APPLYING VOLTAGE TO "L" & "C".

MAIN CONTACT MAXIMUM VOLTAGE AND AMP RATINGS - OPEN OR CLOSED

AMPERE RATING	POLES TO LOAD		
	1 FOR 10	2 FOR 10	3 FOR 30
CONTINUOUS	1 FOR 10	2 FOR 10	3 FOR 30
GENERAL	30	30	54 / AC
STD BALLAST	20	30	347 AC
TUNGSTEN	20	20	250 AC
			250 AC

GENERAL	125V DC MAX.2 POLES IN SERIES		250V DC MAX.3 POLES IN SERIES	
	MAXIMUM RMS	MAXIMUM AC	MAXIMUM RMS	MAXIMUM AC
AMPERES		VOLTS		VOLTS
22,000		250	14,000	480
10,000		600		

SWITCH IS SUITABLE FOR USE IN A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN THE RMS SYMMETRICAL CURRENT AT THE MAXIMUM VOLTAGE SHOWN BELOW, WHEN PROTECTED BY A 30 AMP CIRCUIT BREAKER HAVING AN INTERRUPTING RATING OF NOT LESS THAN VALUES SHOWN.

BASIC CATALOG NUMBERS	ASCO POLES / AMPS	VOLT CODE	ACC. GRP. CODE	OPT. ACC. CODE	ENCLOSURE CODE	CONTROL VOLTAGE CODE		DESCRIPTION	
						OPERATING FREQUENCIES	50-60 HZ		
22	33	3			A3D	3	110-120V		
917	41	6			SUFFIX LETTER	7	208-240V		
918	66	7	1	X	C	9	265-277V		
		9*				X	440-480V (917 ONLY) *		
		X*				X	347V (917 ONLY) *		
						CATALOG NUMBER	CERTIFIED TO ASCO S.O.		
						TYPE	DATE		

PROJECT NAME: PROJECT _____

WIRING DIAGRAM: 9-7/918 R C SWITCH N/O & N/C THIRD ANGLE PROJECTION

BY: MUI DATE: 10/12/08
 CHECKED: NRM DATE: 10/12/08
 DRAWN BY: MUI DATE: 10/12/08
 APPROVED: JTW DATE: 10/12/08
 FINAL APPROVAL: JTW DATE: 10/12/08

FOR OPEN TYPE DIMENSIONS REFER TO COMPOSITE-OUTLINE DRAWING 383897. FOR ENCLOSED TYPE DIMENSIONS REFER TO COMPOSITE-ENCLOSURE DRAWING 363-04

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASME Y14.5-2003.
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ASCO POWER TECHNOLOGIES LP
 FLORHAM PARK, NEW JERSEY 07932 U.S.A.

ASSEMBLY NO. DS 383880
 PART NO. 2' 6159

DATE: 11/7/30/07
 UPDATED AMP CONTINUOUS: F
 UPDATED TB ADDED 918: E
 109842: D
 BALLAST: D

ASSEMBLY NO. DS 383880
 PART NO. 2' 6159

Enclosure Outline & Mounting

