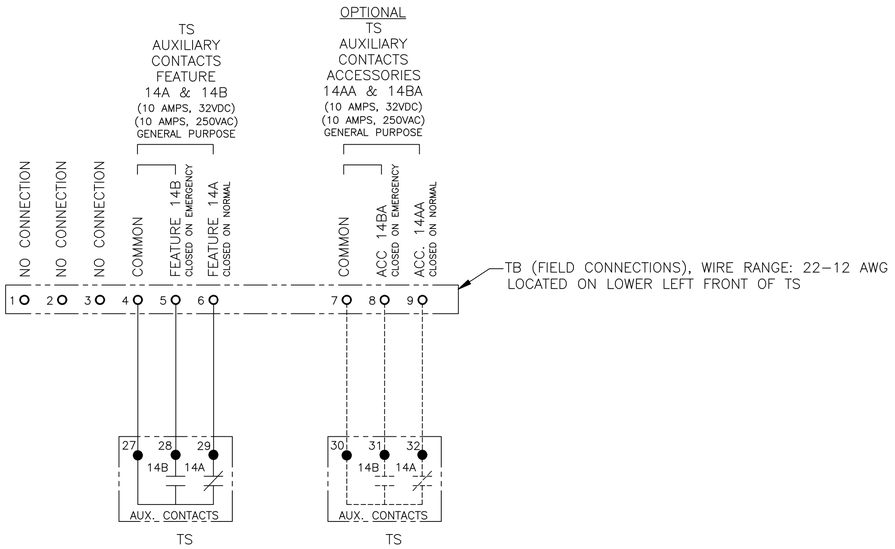
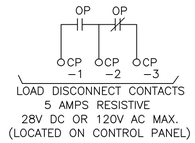
SINGLE PHASE WIRING FOR ASCO® SERIES H386 NON-AUTOMATIC TRANSFER SWITCHES RATED 600, 800, 1000 & 1200 AMPERES WITH GROUP 1 CONTROLS

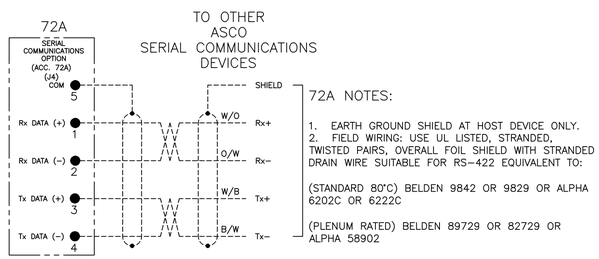
FIELD CONNECTIONS





ACC. 72A SERIAL COMMUNICATIONS OPTION

COMMUNICATING WITH GROUP 1 CONTROL PANEL (CP)



72A NOTES:

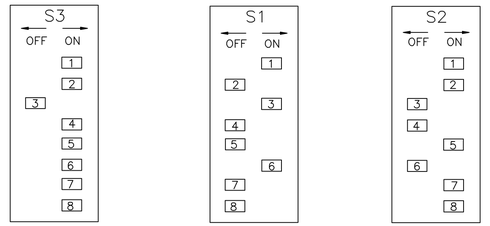
1. EARTH GROUND SHIELD AT HOST DEVICE ONLY.
2. FIELD WIRING: USE UL LISTED, STRANDED, TWISTED PAIRS, OVERALL FOIL SHIELD WITH STRANDED DRAIN WIRE SUITABLE FOR RS–422 EQUIVALENT TO:

(STANDARD 80°C) BELDEN 9842 OR 9829 OR ALPHA 6202C OR 6222C

(PLENUM RATED) BELDEN 89729 OR 82729 OR ALPHA 58902

STANDARD FACTORY SETTINGS FOR CONTROL PANEL

1. FACTORY SETTINGS FOR DIP SWITCH S1, S2 & S3



2. P1 (TIMER E/N) SET UP FOR FULL CCW.
3. P2 (TIMER N/E) SET UP FOR FULL CCW.
4. NORMAL SOURCE VOLTAGE (PU/N) PICKUP FACTORY SETTING IS 90% (S1–ACTUATOR 3 ON). SETTING S1–ACTUATOR 3 OFF IS FOR 95% NORMAL SOURCE VOLTAGE PICKUP.
5. EMERGENCY SOURCE VOLTAGE PICKUP FACTORY SETTING 90% (NON ADJUSTABLE). EMERGENCY SOURCE VOLTAGE DROPOUT FACTORY SETTING 75% (NON ADJUSTABLE). EMERGENCY SOURCE FREQUENCY PICKUP FACTORY SETTING 95% (NON ADJUSTABLE).

! WARNING:
ANY CHANGE IN THESE SETTINGS MAY AFFECT THE NORMAL OPERATION OF THE TRANSFER SWITCH.

GENERAL NOTES

1. SWITCH SHOWN DE–ENERGIZED AND CONNECTED TO THE NORMAL SOURCE.
2. DEVICE SYMBOLS AND DESIGNATIONS ARE IN ACCORDANCE WITH NEMA PUBLICATION ICS 1–1983, PART 1–101A.
3. ALL WIRING IS #16 AWG, TINNED, STRANDED COPPER UNLESS OTHERWISE INDICATED.
4. O ON TERMINAL BLOCKS INDICATES AVAILABLE FIELD CONNECTION POINT.
5. ● ON TERMINAL BLOCKS INDICATES FACTORY CONNECTION POINT.
6. CONTROL AND ACCESSORY WIRING IS ROUTED IN ACCORDANCE WITH ASCO ASSEMBLY PROCEDURE GS451261.
7. AN OPERATOR'S MANUAL IS FURNISHED WITH EACH TRANSFER SWITCH. REFER TO THIS PUBLICATION PRIOR TO INSTALLATION AND OPERATION OF THE UNIT.
8. GROUND STRAP ON CONTROL PANEL IS AFFIXED TO CHASSIS (ENCLOSURE) AT LOWER LEFT CONTROL PANEL MOUNTING STUD.

FEATURES

A. SELECTOR SWITCH (SS) FOR MANUAL TRANSFER TO NORMAL AND EMERGENCY. THREE POSITION, MOMENTARY, SPRING RETURN TO CENTER SELECTOR SWITCH.

B. FEATURES 14A & 14B – TRANSFER SWITCH AUXILIARY POSITION INDICATING CONTACTS. ONE (1) FORM C CONTACT TO INDICATE CONNECTION OF THE TRANSFER SWITCH TO NORMAL (14A) AND ONE (1) FOR EMERGENCY (14B). CONTACT CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB). CONTACTS RATED 10 AMPS, 32 VDC, 250 VAC.

C. SIGNAL LIGHT PL1, (GREEN LED), INDICATES WHEN TRANSFER SWITCH IS CONNECTED TO NORMAL SOURCE. (STD. FEAT. 9A)

D. SIGNAL LIGHT PL2, (RED LED), INDICATES WHEN TRANSFER SWITCH IS CONNECTED TO EMERGENCY SOURCE. (STD. FEAT. 9B)

E. ONE SET OF FORM C CONTACTS (1 N/O & 1 N/C) THAT CHANGE POSITION ON EXPIRATION OF THE NORMAL SOURCE OUTAGE DELAY AND RESET ON EXPIRATION OF THE UNLOADED RUNNING (ENGINE COOL DOWN) DELAY. OUTPUT CONTACTS (NR) ARE RATED 6 AMPS RESISTIVE AT 28V DC OR 120V AC MAXIMUM.

OPTIONAL ACCESSORIES

ACC. 6Q– KEY OPERATED TRANSFER CONTROL SWITCH. FOR TRANSFERRING TO NORMAL OR EMERGENCY. THREE POSITION MOMENTARY SPRING RETURN TO CENTER. KEY REMOVABLE IN CENTER POSITION.

ACC. 9C– SIGNAL LIGHT (PL3 GREEN LED) INDICATES NORMAL SOURCE AVAILABLE.

ACC. 9D– SIGNAL LIGHT (PL4 RED LED) INDICATES EMERGENCY SOURCE AVAILABLE.

ACC. 14AA (2) AUXILIARY CONTACT CLOSED ON NORMAL.

ACC. 14BA (2) AUXILIARY CONTACT CLOSED ON EMERGENCY.

ACC. 27 – INPHASE TRANSFER CONTROL LOGIC TO INITIATE AN INPHASE TRANSFER OF LOADS BETWEEN LIVE SOURCES. USED TO PREVENT NUISANCE TRIPPING OF CIRCUIT BREAKERS AND POSSIBLE DAMAGE TO MECHANICAL LOADS CAUSED BY OUT OF PHASE TRANSFER. ACTIVATED BY SETTING A DIP SWITCH ON THE CONTROL PANEL. (FACTORY SET AS DISABLED). (REFER TO OPERATOR'S MANUAL FURNISHED WITH EACH TRANSFER SWITCH REGARDING CONTROL PANEL SETTINGS).

ACC. 31 – ONE SET OF FORM C CONTACTS (1 N/O & 1 N/C) THAT CHANGE POSITION ON ACTIVATION OF A SELECTABLE TIME DELAY BEFORE TRANSFER (LD TDBT) AND RESET EITHER IMMEDIATELY FOLLOWING TRANSFER OR FOR THE SAME DELAYS SET FOR PRE–SIGNAL BEFORE TRANSFER. SELECTABLE AS 0, 3, 10 OR 20 SECONDS. FACTORY SET AT 0. (REFER TO THE OPERATOR'S MANUAL FURNISHED WITH EACH TRANSFER SWITCH REGARDING CONTROL PANEL SETTINGS). OUTPUT CONTACTS (OP) ARE RATED 5 AMPS RESISTIVE AT 28V DC OR 120V AC MAXIMUM.

ACC. 37B– EXTENSION HARNESS FOR UNITS SHIPPED OPEN TO ACCOMMODATE CUSTOMER MOUNTING OF CONTROLS AND SWITCH. EXTENSION IS 72IN (1828mm) LONG.

ACC. 43M– PROVISIONS FOR CUSTOMER SUPPLIED 3–POSITION SELECTOR SWITCH.
POSITION 1– LOCAL CONTROL ENABLE
POSITION 2– REMOTE CONTROL TRANSFER TO NORMAL
POSITION 3– REMOTE CONTROL TRANSFER TO EMERGENCY

ACC. 72A– SERIAL COMMUNICATIONS INTERFACE. RS–485 SERIAL INTERFACE TO CONTROL PANEL. FOR REMOTE MONITORING AND CONTROL FROM ASCO COMMUNICATIONS BASED PRODUCTS.

BASE CATALOG NUMBER					CATALOG NUMBER SUFFIXES			
TS FRAME	CATALOG TYPE	NEUTRAL TYPE	PHASE POLES	AMPS	VOLT CODE	CONTROLLER	OPTIONAL ACCESSORY	ENCLOSURE CODE
H	386	A B C BLANK FOR NONE	2	600 800 1000 1200	C D E F H J K L M N P Q R	1	X BLANK FOR NONE	C F G L BLANK FOR OPEN TYPE

EXPLANATION OF CATALOG NUMBER CODES						
NEUTRAL TYPE		VOLTAGE CODES 1 PHASE (2 OR 3 WIRE) 50 OR 60 Hz		ENCLOSURE CODES		
CODE	DESCRIPTION	CODE	NOMINAL VOLTAGE	CODE	TYPE	DESCRIPTION
BLANK	NONE			BLANK		OPEN TYPE (NO ENCLOSURE)
A	SOLID			C	1	GENERAL PURPOSE, INDOOR
B	SWITCHING	C	208			
C	OVERLAPPING	D	220	F	3R	OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT
		E	230	G	4	INDOOR/OUTDOOR, WATERTIGHT & DUSTTIGHT
		F	240			
		H	380			
		J	400	L	12	INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUSTTIGHT
		K	415			
		L	440			
		M	460			
		N	480			
		P	550			
		Q	575			
		R	600			

CATALOG NUMBER _____
ASCO® CERTIFIED TO S.O. _____
BY _____
DATE _____
FORM REV H

REV.				
H	212659 SEE ECN	WK	BK	03/30/07
G	203916 SEE ECN	TR	BK	03/31/05
F	166900 SEE ECN	SDH	SDH	04/26/04
E	166704 SEE ECN	BWM	WK	04/01/04
D	166172 SEE ECN	AJM	BK	02/17/04
C	162498 SEE ECN	BWM	WK	1/03

REV. TO SHEET	ECN NO.	BY	APP.	DATE

PROJECT NAME:
WIRING DIAGRAM
SERIES H386 TS 1PH 600–1200 AMPS
"H" FRAME, GROUP 1 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	BWM	4/01
CHECKED	BK	5/30/01
PROJECT APPROVAL		
FINAL APPROVAL	WK	5/30/01

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP–1–003. FOR PLASTIC PARTS SEE MP–1–055
ASSEM. REF. NO.

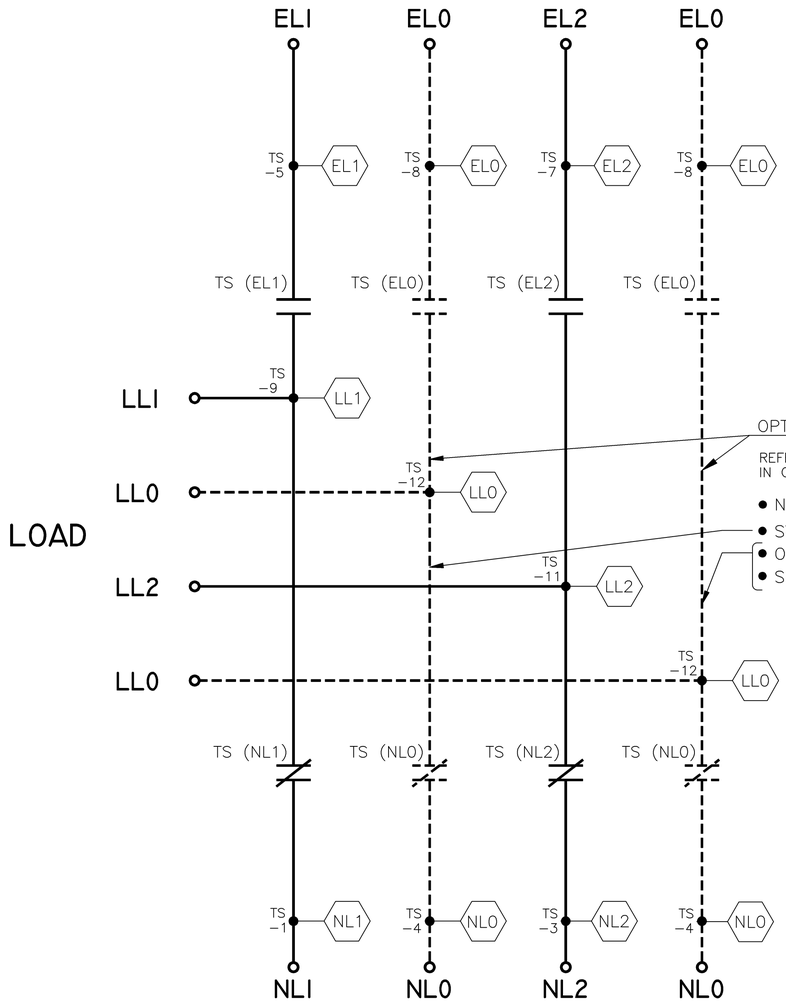
ASCO® ASCO POWER TECHNOLOGIES, L.P. FLORHAM PARK, NEW JERSEY 07932 U.S.A.

COMPUTER GENERATED DRAWING
SCALE 1:1 SIZE DS
DWG. NO. 713506
DRAWING REV. H ECN NO. 212659 SHEET 1OF4

MAIN POWER POLES

TS OPERATOR CIRCUIT

EMERGENCY



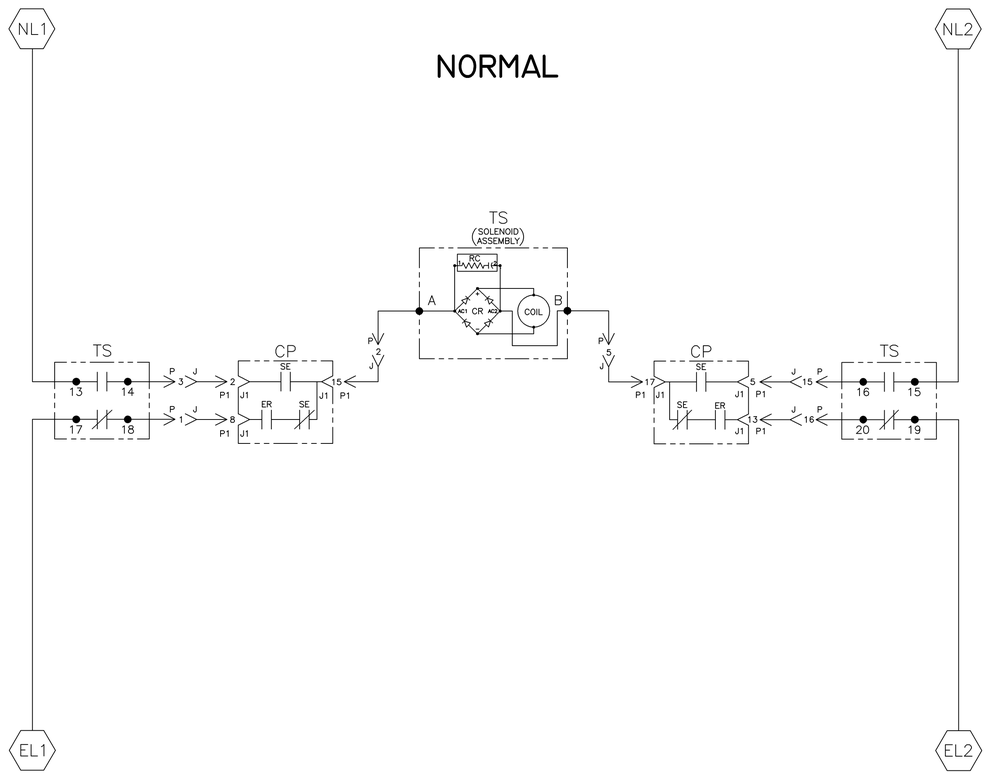
NORMAL

OPTIONAL NEUTRAL TYPES

REFER TO "EXPLANATION OF CATALOG NUMBER CODES" IN CATALOG NUMBER CHART ON SHEET 1.

- NONE
- SWITCHING CONTACTS
- OVERLAPPING CONTACTS
- SOLID BUS PLATE

NOTE:
TS SHOWN CLOSED ON NORMAL SOURCE.



EMERGENCY

TS CONTROL CONTACTS						
TS	SOLENOID POSITION					
	CLOSED NORMAL	BEFORE TDC	>	<	BEFORE TDC	CLOSED EMERG
13–14					X	X
15–16					X	X
17–18	X	X				
19–20	X	X				

TDC (TOP DEAD CENTER)
TRANSFER SWITCH TEST & ADJUSTMENT PROCEDURE SPECIFIES CONTROL CUT-OFF (CONTACT OPENING) SETTING.

REV.	TO SHEET	ECN NO.	BY	APP.	DATE
H		212659 SEE ECN	WK	BK	03/30/07
G		203916 SEE ECN	TR	BK	03/31/05
F		166900 SEE ECN	SDH	SDH	04/26/04
E		166704 SEE ECN	BWM	WK	04/01/04
D		166172 SEE ECN	AJM	BK	02/17/04
C		162498 SEE ECN	BWM	WK	1/03

PROJECT NAME:

WIRING DIAGRAM

SERIES H386 TS 1PH 600–1200 AMPS
"H" FRAME, GROUP 1 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	BWM	4/01
CHECKED	BK	5/30/01
PROJECT APPROVAL		
FINAL APPROVAL	WK	5/30/01

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-055

ASSEM. REF. NO.

ASCO® ASCO POWER TECHNOLOGIES, L.P.
FLORHAM PARK, NEW JERSEY 07932 U.S.A.

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SCALE 1:1 SIZE DS

DWG. NO. 713506

DRAWING REV. H ECN NO. 212659 SHEET 2OF4

WIRE RUN LISTING

◇1 ◄—HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.	713082 (P) MAIN TS	AWG CLR
1	P-1,TS-18	16
2	P-2,TS-A	
3	P-3,TS-14	
4	P-4,TS-3	
4	TS-3,TS-15	
5	P-5,TS-B	
6	P-6,TS-7	
6	TS-7,TS-19	
7	P-7,TS-5	
7	TS-5,TS-17	
8	P-8,TS-24	
8	TS-24,TB-1	
9	P-9,TS-25	
9	TS-25,TB-2	
10	P-10,TS-21	
11	P-11,TS-2	
12	P-12,TS-1	
12	TS-1,TS-13	
13	P-13,TS-22	
14	P-14,TS-23	
15	P-15,TS-16	
16	P-16,TS-20	
17	P-17,TB-3	
18	P-18,TS-6	
19	P-19,TS-9	
20	P-20,TS-10	
21	P-21,TS-11	
22	P-22,TS-4	
23	P-23,TS-8	
24	P-24,TS-12	
25	TS-27,TB-4	
26	TS-28,TB-5	
27	TS-29,TB-6	
	DEAD END WIRES	
11	P-11,TS-2	
18	P-18,TS-6	
20	P-20,TS-10	

◇2 ◄—HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.	HARNESS 619510-037 (P3) DOOR CONTROLS & INDICATORS	AWG CLR
140	P3-5,PL1(-)	22
141	P3-8,PL1(+)	
142	P3-6,PL2(-)	
143	P3-7,PL2(+)	
144	P3-9,PL3(-) * SEE NOTE	
145	P3-10,PL4(-) *	
146	P3-11,PL3(+) *	
146	PL3(+),PL4(+) *	
147	CP-6,SS-13	
148	CP-10,SS-23	
149	CP-7,SS-14	
149	SS-14,SS-24	

* NOTE: CONNECTIONS ARE OPTIONAL FOR ACC. 9C, 9D

	HARNESS 619510-037 WITH 6Q KEY OPTION REMOVE WIRES	
147	CP-6,SS-13	
148	CP-10,SS-23	
149	CP-7,SS-14	
149	SS-14,SS-24	
	ADD WIRES	
147	CP-6,SS-1NO	
148	CP-10,SS-2NO	
149	CP-7,SS-1COM	
149	SS-1COM,SS-2COM	

◇3 ◄—HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.	HARNESS 483763 (J,P1,P1) CONTROL PANEL	AWG CLR
1	J-1,P1-8	16
2	J-2,P1-15	
3	J-3,P1-2	
4	J-4,P1-4	
5	J-5,P1-17	
6	J-6,P1-12	
7	J-7,P1-7	
8	J-8,P2-2	
9	J-9,P2-3	
10	J-10,P2-8	
11	J-11,P1-10	
12	J-12,P1-1	
13	J-13,P2-9	
14	J-14,P2-10	
15	J-15,P1-5	
16	J-16,P1-13	
17	J-17,P2-1	
18	J-18,P1-14	
	ADD WIRES	
19	J-19	
20	J-20	
21	J-21	
22	J-22	
23	J-23	
24	J-24	

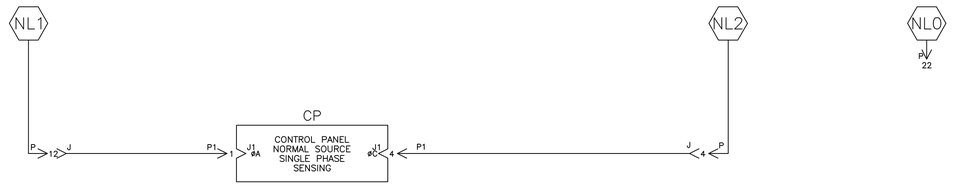
OPTIONAL ACCESSORIES

◇4 HARNESS LOCATOR

WIRE No.	OPTIONAL ACC. 14AA & 14BA	AWG CLR
32	TS-30,TB-7	16
33	TS-31,TB-8	
34	TS-32,TB-9	

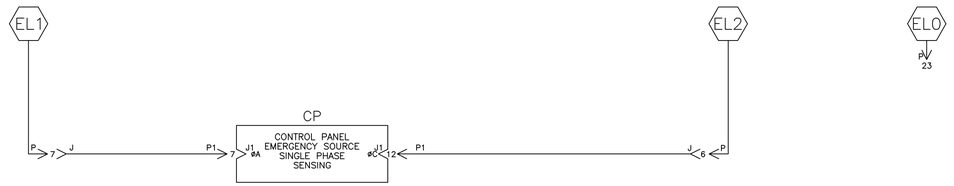
NORMAL SOURCE CIRCUITS

NORMAL



EMERGENCY SOURCE CIRCUITS

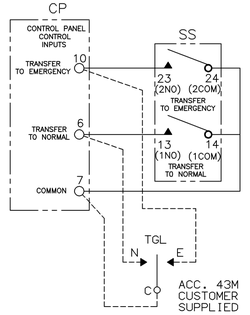
EMERGENCY



LOAD TERMINAL CIRCUITS

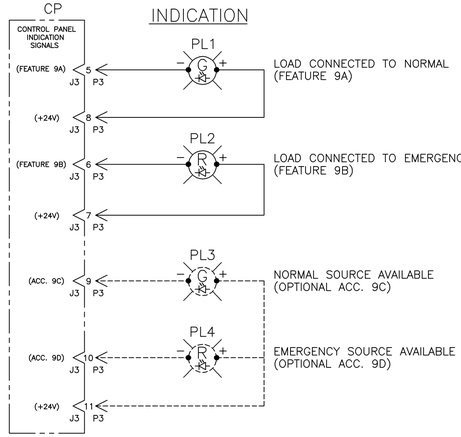
LOAD

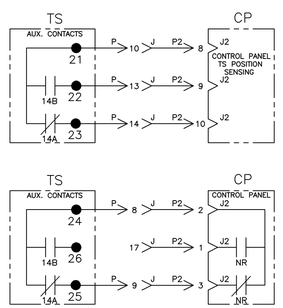
CONTROL SIGNALS & INDICATION



TO NORMAL	TO EMER.	SS	TO NORMAL	CENTER	TO EMER.
		23-24 (2NO-2COM)			
		13-14 (1NO-1COM)			

(K)- FOR 6Q WITH KEY OPERATED (OPTIONAL)





FACTORY REFERENCE ONLY

REV.	ECN NO.	BY	APP.	DATE
H	212659	WK	BK	03/30/07
	SEE ECN			
G	203916	TR	BK	03/31/05
	SEE ECN			
F	166900	SDH	SDH	04/26/04
	SEE ECN			
E	166704	BWM	WK	04/01/04
	SEE ECN			
D	166172	AJM	BK	02/17/04
	SEE ECN			
C	162498	BWM	WK	1/03
	SEE ECN			

PROJECT NAME:

WIRING DIAGRAM

SERIES H386 TS 1PH 600-1200 AMPS
"H" FRAME, GROUP 1 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	BWM	4/01
CHECKED	BK	5/30/01
PROJECT APPROVAL		
FINAL APPROVAL	WK	5/30/01

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-11-003. FOR PLASTIC PARTS SEE MP-11-055

ASSEM. REF. NO.

ASCO® ASCO POWER TECHNOLOGIES, L.P. FLORHAM PARK, NEW JERSEY 07932 U.S.A.

COMPUTER GENERATED DRAWING

SCALE 1:1 SIZE DS

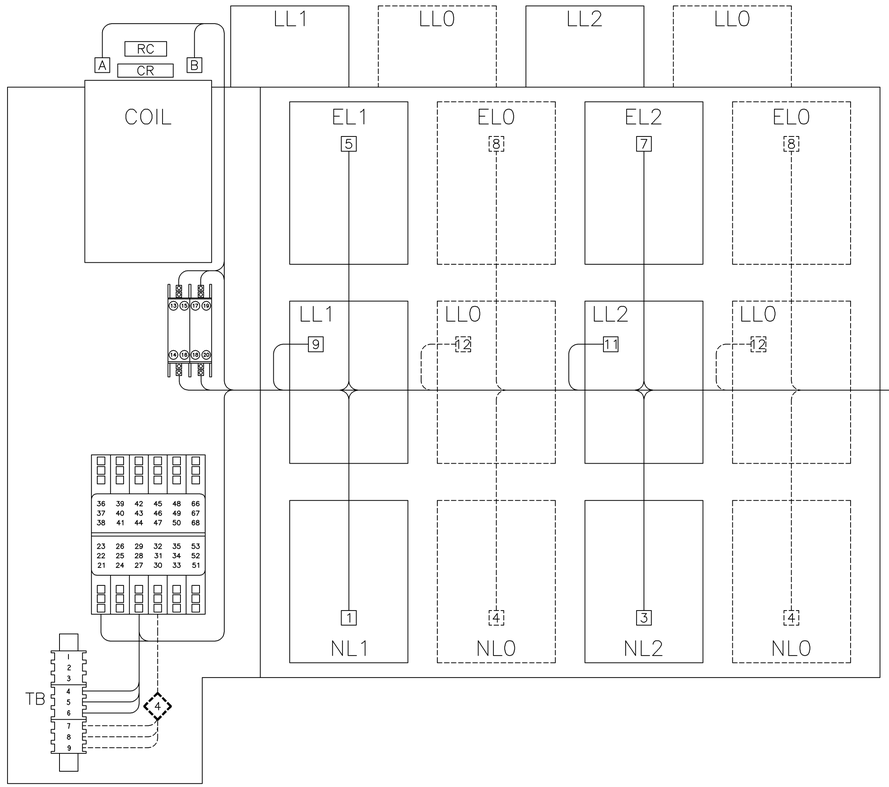
DWG. NO. 713506

DRAWING REV. H ECN NO. 212659 SHEET 30F4

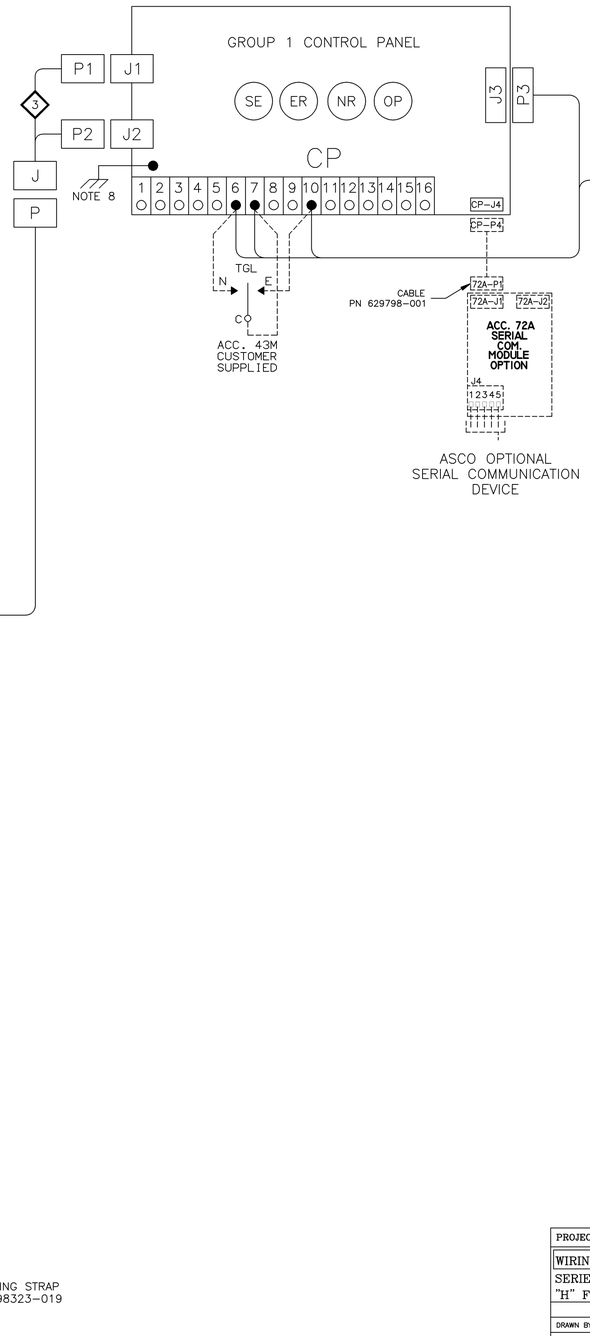
PHYSICAL DIAGRAM

ENCLOSURE

TS (TRANSFER SWITCH) VIEW FROM INSIDE FRONT



DOOR (INSIDE)



OPERATOR CONTROLS

ID	DESCRIPTION
PL1	TS CONNECTED TO NORMAL (GREEN)
PL2	TS CONNECTED TO EMERGENCY (RED)
PL3	NORMAL SOURCE AVAILABLE (GREEN)
PL4	EMERGENCY SOURCE AVAILABLE (RED)
SS	TRANSFER CONTROL (TEST – TD BYPASS)

DOOR HINGE

BONDING STRAP PN 098323–019

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H	212659 SEE ECN	WK	BK	03/30/07
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F	166900 SEE ECN	SDH	SDH	04/26/04
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PROJECT NAME:

WIRING DIAGRAM

SERIES H386 TS 1PH 600–1200 AMPS
"H" FRAME, GROUP 1 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	BWM	4/01
CHECKED	BK	5/30/01
PROJECT APPROVAL		
FINAL APPROVAL	WK	5/30/01

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP–I–003. FOR PLASTIC PARTS SEE MP–I–055

ASSEM. REF. NO.

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COMPUTER GENERATED DRAWING

SCALE 1:1 SIZE DS

DWG. NO. 713506

DRAWING REV. H ECN NO. 212659 SHEET 4 OF 4