

ABBREVIATIONS

SYMBOL	DESCRIPTION
AC	ALTERNATING CURRENT
ACK	ACKNOWLEDGE
A/C	AERIAL CABLE
AFG	ABOVE FINISHED GRADE
AFF	ABOVE FINISHED FLOOR
ANN	ANNUNCIATOR
ATS	AUTOMATIC TRANSFER SWITCH
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CM	CENTIMETER
CT	CURRENT TRANSFORMER
CP	CONTROL PANEL
DC	DIRECT CURRENT
DIA	DIAMETER
DP	DISTRIBUTION PANEL
EF	EXHAUST FAN
EMER	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
FT	FEET OR FOOT
FND CON	FOUNDATION CONCRETE
FU	FUSE
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFR	GROUND FAULT RELAY
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
IG	ISOLATED GROUND
JB	JUNCTION BOX
KVA	KILOVOLT AMPERE
KW	KILOWATTS
LP	LIGHTING PANEL
M	METER
MCC	MOTOR CONTROL CENTER
MM	MILLIMETER
MTG HT	MOUNTING HEIGHT
MTS	MANUAL TRANSFER SWITCH
NL	NIGHT LIGHT
NO, #	NUMBER
PB	PUSH BUTTON
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PT	POTENTIAL TRANSFORMER
RECP	RECEPTACLE
RGC	RIGID GALVANIZED CONDUIT
RVS	REDUCED VOLTAGE STARTER
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SEL SW	SELECTOR SWITCH
SF	SUPPLY FAN
SPARE	SPARE
SPACE	SPACE
SS	STAINLESS STEEL
STA	STATION
SWGR	SWITCHGEAR
TMP	TEMPORARY
TEMP	TEMPERATURE
T' STAT	THERMOSTAT
TEFC	FULLY ENCLOSED FAN COOLED
UH	UNIT HEATER
VFD	VARIABLE FREQUENCY DRIVE
WP	WEATHERPROOF
XFER	TRANSFER
XFMR	TRANSFORMER
XP	EXPLOSION-PROOF (CLASS 1, DIV 1, GROUP C & D UNLESS NOTED OTHERWISE)

SYMBOL	DESCRIPTION
(50HP)	SINGLE SPEED ELECTRIC MOTOR (KW OR HP RATING AS INDICATED)
(20HP)	DOUBLE SPEED ELECTRIC MOTOR (KW OR HP RATING AS INDICATED)
(250 KW)	ELECTRIC GENERATOR SET (TYPE & KW RATING AS INDICATED)
(0 0)	TRANSFER SWITCH (TYPE AND RATING AS INDICATED)
(S)	SINGLE SPEED NON-REVERSING MANUAL STARTER (NEMA OR IEC DESIGNATION AS SPECIFIED OR SHOWN)
(S)	SINGLE SPEED NON-REVERSING MAGNETIC STARTER (NEMA OR IEC DESIGNATION AS SPECIFIED OR SHOWN)
(S)	COMBINATION CIRCUIT BREAKER & SINGLE SPEED NON-REVERSING MAGNETIC STARTER (NEMA OR IEC DESIGNATION AS SPECIFIED OR SHOWN)
(S)	COMBINATION DISCONNECT SWITCH & SINGLE SPEED NON-REVERSING MAGNETIC STARTER (NEMA OR IEC DESIGNATION AS SPECIFIED OR SHOWN)
(S)	COMBINATION CIRCUIT BREAKER & SINGLE SPEED REVERSING MAGNETIC STARTER (NEMA OR IEC DESIGNATION AS SPECIFIED OR SHOWN)
(S)	COMBINATION CIRCUIT BREAKER & TWO SPEED NON-REVERSING MAGNETIC STARTER (NEMA OR IEC DESIGNATION AS SPECIFIED OR SHOWN)
(S)	REDUCED VOLTAGE STARTER, AUTO TRANSFORMER TYPE (NEMA OR IEC DESIGNATIONS AS SPECIFIED OR SHOWN)
(S)	REDUCED VOLTAGE STARTER, WYE-DELTA TYPE (NEMA OR IEC DESIGNATIONS AS SPECIFIED OR SHOWN)
(S)	REDUCED VOLTAGE STARTER, PRIMARY-RESISTOR TYPE (NEMA OR IEC DESIGNATIONS AS SPECIFIED OR SHOWN)
(S.S.)	SOLID STATE REDUCED VOLTAGE STARTER

SCHEMATIC DIAGRAM DEVICE DESIGNATIONS

SYMBOL	DESCRIPTION
A	AUTOMATIC
AUTO }	
ACK	ACKNOWLEDGE
CL	CLOSE
F	FAST
FWD	FORWARD
HI	HIGH
H	HAND
INST	INSTANTANEOUS
L	LOW
LOS	LOCKOUT-STOP
LOC	LOCAL
HR	HAND RESET
HS	HIGH SPEED
LSP	LOW SPEED
N	NORMAL
NC	NORMALLY CLOSED
NCTC	NORMALLY CLOSED TIMED CLOSED
NCTO	NORMALLY CLOSED TIMED OPEN
NO	NORMALLY OPEN
NOTC	NORMALLY OPEN TIMED CLOSED
NOTO	NORMALLY OPEN TIMED OPEN
O	OFF
OP	OPEN
REM	REMOTE
REV	REVERSE
S	SLOW
A	AMBER
BL	BLUE
C	CLEAR
G	GREEN
R	RED
W	WHITE
Y	YELLOW

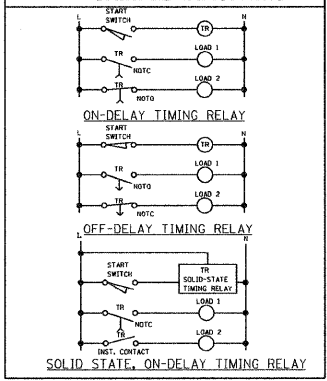
REVISIONS	
NAME	DATE

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SYMBOL	DESCRIPTION
---	POWER CIRCUIT
---	EQUIPMENT ENCLOSURE
---	CONTROL OR INTERLOCK CIRCUIT
---	BUS (RATING AS INDICATED)
+	CONDUCTOR CONNECTION
+	DRAWOUT DEVICE
(M)	DRAWOUT MOLDED CASE CIRCUIT BREAKER (600V, THERMAL-MAGNETIC TYPE, UNLESS NOTED OTHERWISE) 500AT 600AF
(M)	MOLDED CASE CIRCUIT BREAKER (600V, THERMAL-MAGNETIC TYPE, UNLESS NOTED OTHERWISE)
(AIR TRIP FUNCTION)	AIR CIRCUIT BREAKER
(IC TRIP FUNCTION)	INSULATED CASE CIRCUIT BREAKER
(F)	FUSE (RATING AS INDICATED)
(F)	DRAWOUT FUSE (RATING AS INDICATED)
(F)	FUSE - SWITCH (RATING AS INDICATED)
---	NON-FUSIBLE DISCONNECT SWITCH
---	THERMAL OVERLOAD ELEMENT
---	INSTANTANEOUS CONTACT
---	CONNECTION TO GROUND
---	LIGHTNING OR SURGE ARRESTER
---	CURRENT TRANSFORMER-DOUGHNUT TYPE (QUANTITY, RATIO AND RATING AS INDICATED)
---	CURRENT TRANSFORMER-WINDOW TYPE (RATIO AND RATING AS INDICATED)
---	POTENTIAL TRANSFORMER (QUANTITY, RATIO AND RATING AS INDICATED)
---	CAPACITOR
---	BATTERY
(AS)	AMMETER SWITCH
(VS)	VOLTMETER SWITCH
(SS)	SELECTOR SWITCH
(A)	AMMETER (RANGE AS INDICATED)
(V)	VOLTMETER (RANGE AS INDICATED)
(KWH)	KILOWATTHOUR METER
(K)---(K)	KIRK-KEY INTERLOCK
(GF)	GROUND FAULT RELAY

SYMBOL	DESCRIPTION
(S)	LIMIT SWITCH - NORMALLY CLOSED HELD OPEN
(S)	LEVEL SWITCH - CLOSING ON RISING LEVEL
(S)	LEVEL SWITCH - OPENING ON RISING LEVEL
(S)	FLOW SWITCH - CLOSING ON FLOW
(S)	FLOW SWITCH - OPENING ON FLOW
(S)	TRANSFORMER - (TYPE AND RATING AS INDICATED)
(S)	CONNECTION TO GROUND
(S)	LIGHTNING OR SURGE ARRESTER
(S)	THERMAL OVERLOAD ELEMENT
(S)	FUSE
(S)	CIRCUIT BREAKER
(S)	HEATING ELEMENT
(SV)	SOLENOID VALVE
(M)	COIL C - CLOSE CR - CONTROL RELAY F - FAST OR FORWARD M - MOTOR STARTER MX - MOTOR STARTER AUXILIARY RELAY N - NORMAL O - OPEN OL - OVERLOAD RELAY R - REVERSE S - SLOW TD - TIME DELAY RELAY TDAE - TIME DELAY AFTER ENERGIZATION TDAD - TIME DELAY AFTER DE-ENERGIZATION
(R)	INDICATOR LIGHT (SEE SCHEMATIC DIAGRAM DEVICE TABLE FOR COLOR SYMBOLS)
(R)	INDICATOR LIGHT (PUSH TO TEST TYPE)
(ANN)	ANNUNCIATOR
(COUNT)	COUNTER
(ETM)	ELAPSED TIME METER
(TMR)	ELECTRONIC TIMER
(TOT)	TOTALIZER

TIMING RELAY SAMPLE DIAGRAMS



SYMBOL	DESCRIPTION
+	CONDUCTOR CONNECTION
+	NO CONNECTION
o	TERMINAL ON A DEVICE
+	NORMALLY OPEN CONTACT
#	NORMALLY CLOSED CONTACT
(S)	SINGLE POLE, SINGLE THROW SWITCH
(S)	SINGLE POLE, DOUBLE THROW SWITCH
(S)	DOUBLE POLE, SINGLE THROW SWITCH
(S)	DOUBLE POLE, DOUBLE THROW SWITCH
(S)	THREE WAY ROTARY SWITCH
(S)	NORMALLY CLOSED MOMENTARY PUSH BUTTON SWITCH
(S)	NORMALLY OPEN MOMENTARY PUSH BUTTON SWITCH
(S)	2 POSITION PUSH BUTTON (EXTRA CONTACT BLOCK)
(S)	NORMALLY OPEN DOUBLE BREAK SINGLE THROW CONTACT BLOCK
(S)	NORMALLY CLOSE DOUBLE BREAK SINGLE THROW CONTACT BLOCK
(S)	DOUBLE BREAK DOUBLE THROW CONTACT BLOCK
(S)	MUSHROOM HEAD PUSH BUTTON
(S)	MAINTAINED CONTACT PUSHBUTTON
(S)	2 OR 3 POSITIONS SELECTOR SWITCH (CLOSED CONTACTS INDICATED BY "X")
(S)	MULTI-POSITION, MULTI-CONTACT SELECTOR SWITCH (CLOSED CONTACTS INDICATED BY "X")
(S)	TEMPERATURE SWITCH - CLOSING ON RISING TEMPERATURE
(S)	TEMPERATURE SWITCH - OPENING ON RISING TEMPERATURE
(S)	PRESSURE SWITCH - CLOSING ON RISING PRESSURE
(S)	PRESSURE SWITCH - OPENING ON RISING PRESSURE
(S)	DIFFERENTIAL PRESSURE SWITCH - CLOSING WHEN THE DIFFERENTIAL IN PRESSURE BETWEEN TWO DIAPHRAGMS EXCEEDS A SET POINT
(S)	DIFFERENTIAL PRESSURE SWITCH - OPENING WHEN THE DIFFERENTIAL IN PRESSURE BETWEEN TWO DIAPHRAGMS EXCEEDS A SET POINT
(S)	TIME DELAY RELAY SWITCH - CLOSING ON TIME DELAY AFTER ENERGIZATION OF RELAY COIL
(S)	TIME DELAY RELAY SWITCH - OPENING ON TIME DELAY AFTER ENERGIZATION OF RELAY COIL
(S)	TIME DELAY RELAY SWITCH - CLOSING ON TIME DELAY AFTER DE-ENERGIZATION OF RELAY COIL
(S)	TIME DELAY RELAY SWITCH - OPENING ON TIME DELAY AFTER DE-ENERGIZATION OF RELAY COIL
(S)	LIMIT SWITCH - NORMALLY OPEN
(S)	LIMIT SWITCH - NORMALLY CLOSED
(S)	LIMIT SWITCH - NORMALLY OPEN HELD CLOSED

SYMBOL	DESCRIPTION
(F1-2a)	FLUORESCENT FIXTURE (F1 INDICATES FIXTURE TYPE - REFER TO FIXTURE SCHEDULE - 2a INDICATES CIRCUIT No.2 ON SWITCH (J)TYP.)
(F)	FLUORESCENT FIXTURE, WALL MOUNTED
(F)	INCANDESCENT, COMPACT FLUORESCENT OR HID FIXTURE
(F)	WALL MOUNTED INCANDESCENT, COMPACT FLUORESCENT OR HID FIXTURE
(F)	FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT
(F)	INCANDESCENT, COMPACT FLUORESCENT OR HID FIXTURE ON EMERGENCY CIRCUIT
(F)	EXIT SIGN SINGLE SIDED (ABOVE DOOR)
(F)	DIRECTIONAL EXIT SIGN - DOUBLE SIDED (DIRECTION AS INDICATED - TYP.)
(F)	DIRECTIONAL EXIT SIGN - SINGLE SIDED
(F)	BATTERY UNIT FOR EMERGENCY LIGHT
(F)	BATTERY OPERATED EMERGENCY LIGHT
(F)	EMERGENCY LIGHT, REMOTE HEAD
(F)	ELECTRIC PULLBOX
(F)	ELECTRIC JUNCTION BOX
(F)	BARE GROUND CABLE
(F)	EXPOSED CONDUIT
(F)	CONCEALED CONDUIT IN FLOOR OR UNDERGROUND
(F)	CONCEALED CONDUIT IN CEILING OR WALLS
(F)	CONDUIT HOME-RUN TO PANEL AS INDICATED (LP-1-6 DENOTES PANEL DESIGNATION, SLASH LINES INDICATE QUANTITY OF WIRE, GROUND WIRE INDICATED AS LONG LINE WITH DOT, NEUTRAL WIRE INDICATED AS LONG LINE, PHASE WIRE AND SWITCH LEGS INDICATED AS SHORT LINES.)
(F)	CABLE TRAY
(F)	CONDUIT TURNED UP OR DOWN
(F)	CONDUIT TERMINATED OR CAPPED
(F)	SINGLE POLE TOGGLE SWITCH
(F)	DOUBLE POLE TOGGLE SWITCH
(F)	THREE-WAY TOGGLE SWITCH
(F)	FOUR-WAY TOGGLE SWITCH
(F)	KEY OPERATED SWITCH
(F)	MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOAD PROTECTION
(F)	TOGGLE SWITCH WITH PILOT LIGHT
(F)	DIMMER SWITCH
(F)	SINGLE RECEPTACLE
(F)	DUPLEX RECEPTACLE
(F)	QUADRUPLEX RECEPTACLE
(F)	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER
(F)	DUPLEX RECEPTACLE WITH ISOLATED GROUND

SYMBOL	DESCRIPTION
(S)	SPECIAL PURPOSE RECEPTACLE
(S)	TELEPHONE OUTLET
(S)	DATA OUTLET
(S)	FLUSH MOUNTED PANELBOARD (PANEL TYPE (LIGHTING PANEL) LP-1- UNIT NUMBER)
(S)	SURFACE MOUNTED PANELBOARD
(S)	MANUAL DISCONNECT SWITCH NONFUSED (RATING AS INDICATED)
(S)	MANUAL DISCONNECT SWITCH FUSED (RATING AS INDICATED)
(S)	MAGNETIC MOTOR STARTER (RATING AS INDICATED)
(S)	COMBINATION MAGNETIC MOTOR & FUSED DISCONNECT SWITCH (RATING AS INDICATED)
(S)	PUSHBUTTON STATION (1, 2 & 3 BUTTONS SHOWN)
(S)	SINGLE SPEED ELECTRIC MOTOR (KW OR HP RATING AS INDICATED)
(S)	DOUBLE SPEED ELECTRIC MOTOR (KW OR HP RATING AS INDICATED)
(S)	ELECTRIC GENERATOR SET (KW RATING AS INDICATED)
(S)	LIMIT SWITCH
(S)	FLOAT SWITCH
(S)	PRESSURE SWITCH
(S)	FLOW SWITCH
(S)	ELECTRIC - PNEUMATIC SWITCH
(S)	PNEUMATIC - ELECTRIC SWITCH
(S)	TORQUE SWITCH
(S)	TRANSFORMER
(S)	FIRE ALARM PULL STATION
(S)	AUDIO VISUAL ALARM
(S)	SMOKE DETECTOR
(S)	HEAT DETECTOR
(S)	COMBUSTIBLE GAS DETECTOR
(S)	THERMOSTAT
(S)	UNIT HEATER - HORIZONTAL TYPE
(S)	UNIT HEATER - DOWNBLAST TYPE OR CENTRIFUGAL FAN TYPE
(S)	CABINET UNIT HEATER
(S)	ALARM HORN

