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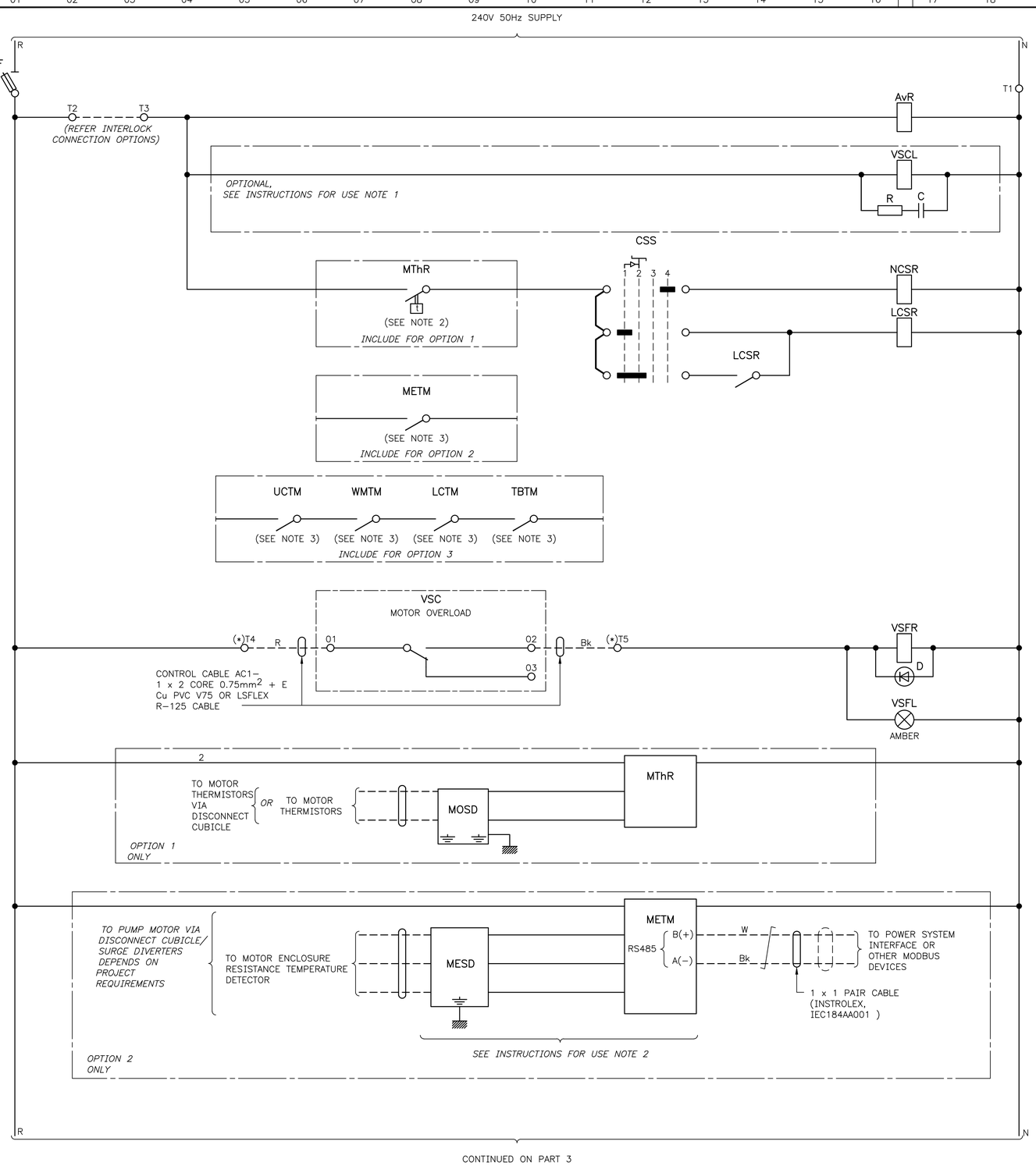


CONTINUED ON PART 3

CONTROL SELECTOR SWITCH

POSITION	FUNCTION
1	LOCAL START
2	LOCAL RUN
3	OFF
4	NORMAL

CODE SCHEDULE

AvR	AVAILABLE RELAY
C	CAPACITOR
CF	CONTROL FUSE
CR	CONTROL RELAY
CSS	CONTROL SELECTOR SWITCH
D	DIODE
LCSR	LOCAL CONTROL SELECTED RELAY
LCTM	LOWER CROWN OF WINDING TEMPERATURE MONITOR
MESD	MOTOR ENCLOSURE TEMPERATURE SURGE DIVERTER
METM	MOTOR ENCLOSURE TEMPERATURE MONITOR
MOSD	MOTOR OVERTEMPERATURE SURGE DIVERTER
MThR	MOTOR THERMISTOR RELAY
NCSR	NORMAL CONTROL SELECTED RELAY
R	RESISTOR
TBTM	THRUST BEARING TEMPERATURE MONITOR
UCTM	UPPER CROWN OF WINDING TEMPERATURE MONITOR
VSC	VARIABLE SPEED CONTROLLER
VSCL	VARIABLE SPEED CONTROLLER LINE CONTACTOR
VSFL	VARIABLE SPEED CONTROLLER FAULT INDICATING LIGHT
VSFR	VARIABLE SPEED CONTROLLER FAULT RELAY
VSRR	VARIABLE SPEED CONTROLLER REMOTE RESET RELAY
WMTM	WINDING MOTOR FRAME TEMPERATURE MONITOR

RTD PARAMETERS

PARAMETER	DESCRIPTION	SETTING	COMMENTS
INITIAL SETTING LEVEL			
iN–t	INPUT TYPE	1 (Pt100)	–199.9 TO 500 ° C
d–U	TEMPEARTURE INPUT UNIT	C	
oREV	DIRECT/REVERSE OPERATION	oR–D (DIRECT)	OUTPUT TURNS ON IF TEMP GREATER THAN SET POINT
CNtL	CONTROL METHOD	oNoF	ON/OFF CONTROL (DEFAULT)
ALT1	ALARM TYPE 1	8	ABSOLUTE VALUE UPPER–LIMIT
PV/SP	SET POINT	** (° C)	–1999 TO 9999 EU *SET AT 105% OF MOTOR MANUFACTURERS RECOMENDED SETTING*
AL–1	ALARM VALUE 1	** (° C)	–1999 TO 9999 EU *SET AT 105% OF MOTOR MANUFACTURERS RECOMENDED SETTING*
ALH1	ALARM 1 HYSTERESIS	** °C	0.1 TO 999.9 *SET AT 80% OF MOTOR MANUFACTURERS RECOMENDED SETTING*
A1oF	ALARM 1 OFF DELAY	** (SECONDS)	0 TO 999
ADVANCED SETTING LEVEL			
oUT 1	CONTROL OUTPUT 1	ALM1	ALARM 1 (NORMALLY OPEN (N/O) CLOSE IN ALARM)
SUb 1	AUXILIARY OUTPUT 1 ASSIGNMENT	ALM1	ALARM 1
Sb1N	AUXILIARY OUTPUT 1 OPEN IN ALARM	N–C	NORMALLY CLOSED (N/C) OPEN IN ALARM
COMMUNICATIONS SETTING LEVEL			
PSEL	PROTOCOL	Mod	MODBUS
U–No	COMMUNICATIONS UNIT No	**	0 TO 99
bPS	COMMUNICATIONS BAUD RATE	** kbps	9.6, 19.2, 38.4 OR 57.6
SPoS	SP OFFSET	–199.9 TO 999	

OPTION TABLE

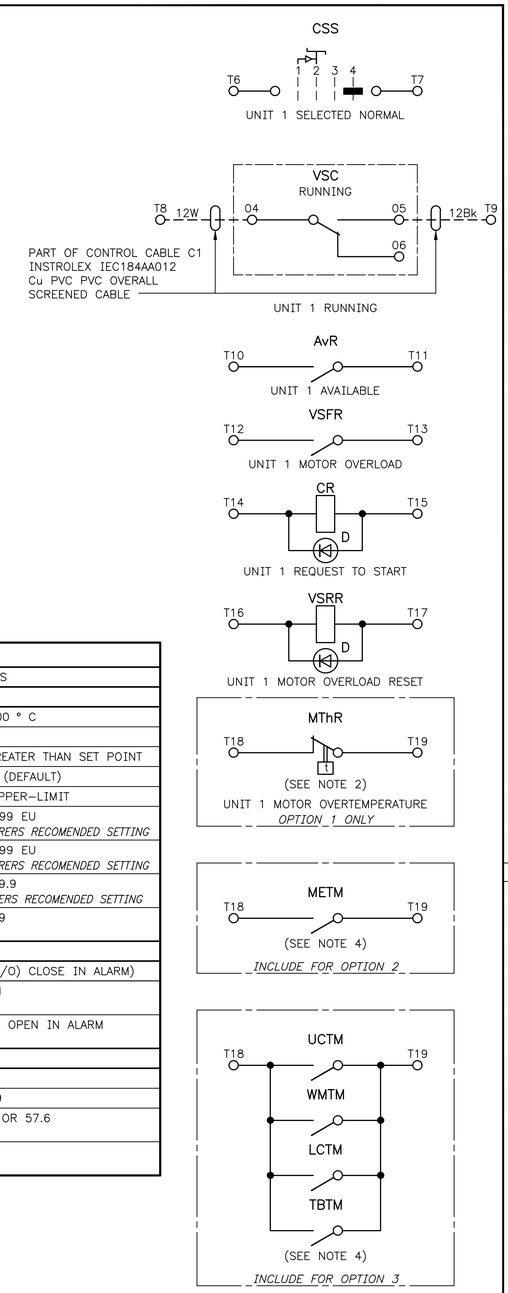
No	DESCRIPTION
1	MOTOR WITH THERMISTORS
2	MOTOR WITH ONE RESISTANCE TEMPERATURE DETECTOR
3	MOTOR WITH FOUR RESISTANCE TEMPERATURE DETECTORS

INSTRUCTIONS FOR USE

1. *INCLUDE VARIABLE SPEED CONTROLLER LINE CONTACTOR FOR APPLICATIONS REQUIRING MOTOR DECONTACTORS AND/OR EMERGENCY STOP PUSHBUTTONS, OTHERWISE LINE CONTACTOR NOT INSTALLED AND THE VSC TO REMAIN CONTINUOUSLY ENERGISED*
2. *IF THE RTD SENSOR LOCATED WITHIN THE MOTOR ENCLOSURE (OPTION 2) IS IN A SPECIFIC LOCATION AND ITS LOCATION IS REQUIRED TO BE IDENTIFIED FOR PROJECT PURPOSES. THE METM AND MESD CODES AND DESCRIPTIONS CAN BE RENAMED INLINE WITH CODES AND DESRIPTIONS ASSIGNED FOR FOUR RTD MOTOR APPLICATIONS (OPTION 3). TO BE DETERMINED BY THE PROJECT DESIGNER*

GENERAL NOTES

1. DRAWN NO POWER CONDITION
2. MOTOR THERMISTOR RELAY CONTACTS CHANGE STATE ON ENERGIZATION
3. MOTOR CONTROL CONTACTS UCTM, WMTM, LCTM, TBTM AND METM CHANGE STATE ON ENERGIZATION
4. CONTROL INTERCONNECTION CONTACTS UCTM, WMTM, LCTM, TBTM AND METM DO NOT CHANGE STATE ON ENERGIZATION



CONTROL INTERCONNECTIONS

REFERENCE EXPLANATION

(P)WXYZ
41#1.1#AB34

- PANEL LETTER
- CODE
- HORIZONTAL LOCATION
- VERTICAL LOCATION
- PART Nº (IF REQUIRED)
- SHEET Nº
- BUNDLE Nº

ISSUE	DATE	GRID	REVISION	DRN	REC	APPD

DESIGN SURVEY NONE | VERTICAL DATUM NONE | COORDINATE SYS NONE | ASCON SURVEY NONE | DES REF

DES CALC S GILMOUR | DES CHD T LIU | DRN SA MEMORY | Q.C. CHD P HARVEY

NORTH POINT

SUBMITTED 16/06/2023 SA MEMORY (SIGNED) SENIOR TECHNICAL ADVISOR – ELECT

RECOMMENDED 16/06/2023 S GILMOUR (SIGNED) SENIOR ENGINEER – ELECTRICAL

APPROVED 16/06/2023 T LIU (SIGNED) PRINCIPAL ENGINEER – ELECTRICAL

ENGINEERING

WATER CORPORATION

ELECTRICAL STANDARD SWITCHBOARD DESIGNS
SMALL PUMP STATIONS
MOTOR STARTER REFERENCE – BORE
VARIABLE SPEED CONTROLLER – CONTROL DIAGRAM – PART 2

FILE | PROJECT | PLAN MN01–24–6.2 | CAD | ISSUE A | ORIGINAL SHEET SIZE A1 | MF

566 810

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