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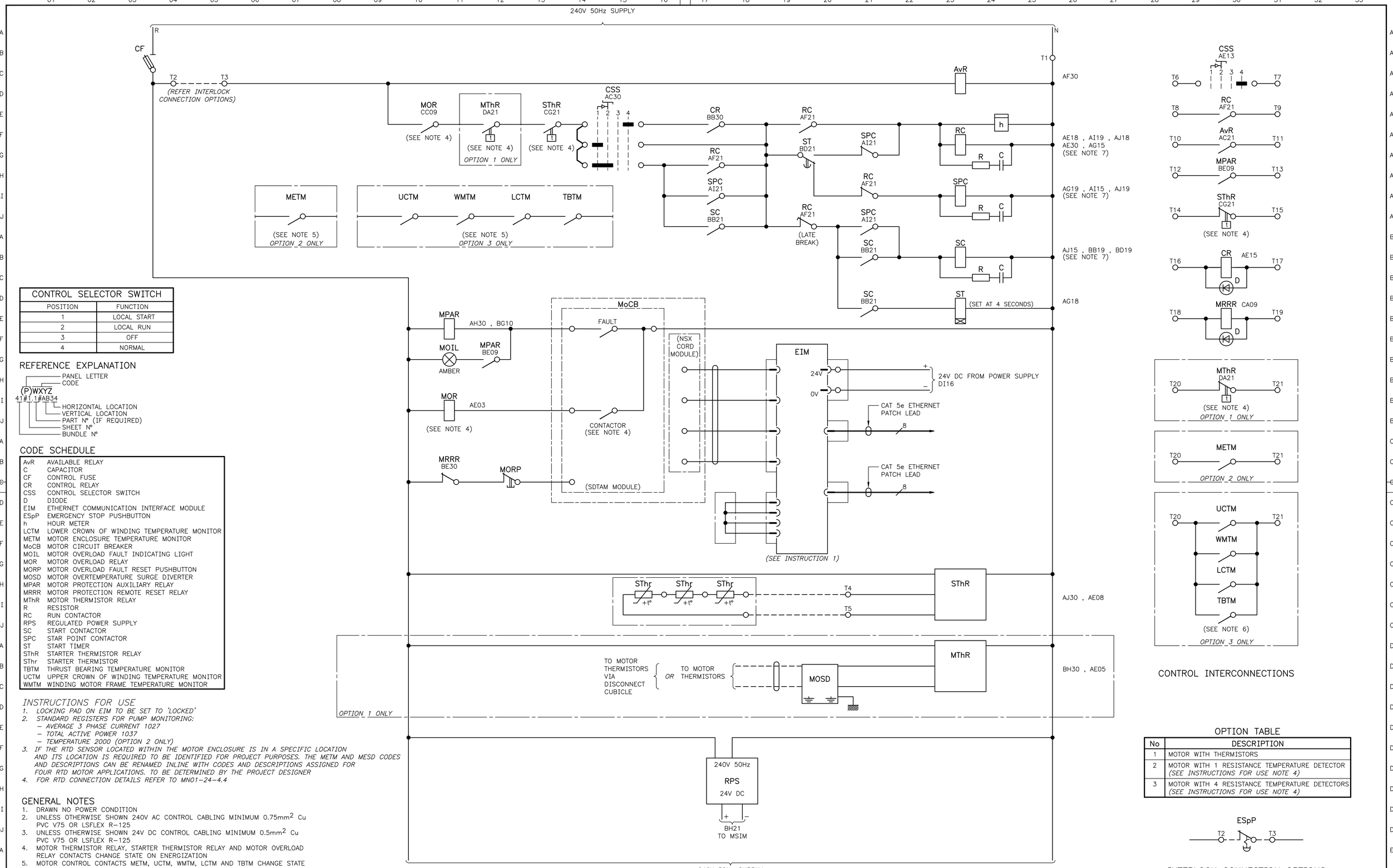


| CONTROL SELECTOR SWITCH | |
|---|---|
| POSITION | FUNCTION |
| 1 | LOCAL START |
| 2 | LOCAL RUN |
| 3 | OFF |
| 4 | NORMAL |

## REFERENCE EXPLANATION

(P)WXYZ
41#1.1#AB34

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

## CODE SCHEDULE

| | |
|---|---|
| AvR | AVAILABLE RELAY |
| C | CAPACITOR |
| CF | CONTROL FUSE |
| CR | CONTROL RELAY |
| CSS | CONTROL SELECTOR SWITCH |
| D | DIODE |
| EIM | ETHERNET COMMUNICATION INTERFACE MODULE |
| ESpP | EMERGENCY STOP PUSHBUTTON |
| h | HOUR METER |
| LCTM | LOWER CROWN OF WINDING TEMPERATURE MONITOR |
| METM | MOTOR ENCLOSURE TEMPERATURE MONITOR |
| MoCB | MOTOR CIRCUIT BREAKER |
| MOIL | MOTOR OVERLOAD FAULT INDICATING LIGHT |
| MOR | MOTOR OVERLOAD RELAY |
| MORP | MOTOR OVERLOAD FAULT RESET PUSHBUTTON |
| MOSD | MOTOR OVERTEMPERATURE SURGE DIVERTER |
| MPAR | MOTOR PROTECTION AUXILIARY RELAY |
| MRRR | MOTOR PROTECTION REMOTE RESET RELAY |
| MThR | MOTOR THERMISTOR RELAY |
| R | RESISTOR |
| RC | RUN CONTACTOR |
| RPS | REGULATED POWER SUPPLY |
| SC | START CONTACTOR |
| SPC | STAR POINT CONTACTOR |
| ST | START TIMER |
| SThR | STARTER THERMISTOR RELAY |
| SThr | STARTER THERMISTOR |
| TBTM | THRUST BEARING TEMPERATURE MONITOR |
| UCTM | UPPER CROWN OF WINDING TEMPERATURE MONITOR |
| WMTM | WINDING MOTOR FRAME TEMPERATURE MONITOR |

## *INSTRUCTIONS FOR USE*

1. *LOCKING PAD ON EIM TO BE SET TO 'LOCKED'*
2. *STANDARD REGISTERS FOR PUMP MONITORING:*
   - *AVERAGE 3 PHASE CURRENT 1027*
   - *TOTAL ACTIVE POWER 1037*
   - *TEMPERATURE 2000 (OPTION 2 ONLY)*
3. *IF THE RTD SENSOR LOCATED WITHIN THE MOTOR ENCLOSURE 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 DESCRIPTIONS ASSIGNED FOR FOUR RTD MOTOR APPLICATIONS. TO BE DETERMINED BY THE PROJECT DESIGNER*
4. *FOR RTD CONNECTION DETAILS REFER TO MN01-24-4.4*

## GENERAL NOTES

1. DRAWN NO POWER CONDITION
2. UNLESS OTHERWISE SHOWN 240V AC CONTROL CABLING MINIMUM 0.75mm$^2$ Cu PVC V75 OR LSFLEX R-125
3. UNLESS OTHERWISE SHOWN 24V DC CONTROL CABLING MINIMUM 0.5mm$^2$ Cu PVC V75 OR LSFLEX R-125
4. MOTOR THERMISTOR RELAY, STARTER THERMISTOR RELAY AND MOTOR OVERLOAD RELAY CONTACTS CHANGE STATE ON ENERGIZATION
5. MOTOR CONTROL CONTACTS METM, UCTM, WMTM, LCTM AND TBTM CHANGE STATE ON ENERGIZATION
6. CONTROL INTERCONNECTION CONTACTS UCTM, WMTM, LCTM AND TBTM DO NOT CHANGE STATE ON ENERGIZATION
7. FOR CONTACTOR MAIN POLES REFER MN01-24-3.2

## OPTION TABLE

| No | DESCRIPTION |
|---|---|
| 1 | MOTOR WITH THERMISTORS |
| 2 | MOTOR WITH 1 RESISTANCE TEMPERATURE DETECTOR *(SEE INSTRUCTIONS FOR USE NOTE 4)* |
| 3 | MOTOR WITH 4 RESISTANCE TEMPERATURE DETECTORS *(SEE INSTRUCTIONS FOR USE NOTE 4)* |

| ISSUE | DATE | GRID | REVISION | DRN | REC | APPD |
|---|---|---|---|---|---|---|
| E | 04/2023 | | PROTECTION OPTIONS REVISED | PH | TL | EG |
| D | 05/2021 | | MoCB CONNECTIONS REVISED; MOAR CONTACT ADDED | PH | TL | EG |
| C | 03/2021 | | AvR CONTROL WIRING AND CONTROL INTERLOCKS REVISED | PH | TL | EG |
| B | 10/2020 | | AvR CONTROL WIRING AND MoCB REVISED | PH | EG | NJ |

SUPERSEDED

| | | | |
|---|---|---|---|
| DESIGN SURVEY NONE | VERTICAL DATUM NONE | DES CALC T LIU | NORTH POINT |
| | COORDINATE SYS NONE | DES CHD E GLIWSKI | |
| ASCON SURVEY NONE | DES REF | DRN P HARVEY | |
| | | Q.C. CHD S MEMORY | |

SUBMITTED 29/11/2019
T LIU (SIGNED)
SENIOR ENGINEER – ELECTRICAL

RECOMMENDED 29/11/2019
E GLIWSKI (SIGNED)
PRINCIPAL ENGINEER – ELECTRICAL

APPROVED 28/11/2019
N JOHNSON (SIGNED)
SNR PRINCIPAL ENGINEER – ELECT

**ENGINEERING**

WATER CORPORATION

ELECTRICAL STANDARD SWITCHBOARD DESIGNS
SMALL PUMP STATIONS
MOTOR STARTER REFERENCE – BORE
ATr STARTER – CONTROL DIAGRAM 100.1A – 263A

FILE
PROJECT
PLAN MN01-24-4.3
CAD
ISSUE E
ORIGINAL SHEET SIZE A1
MF

566
810

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