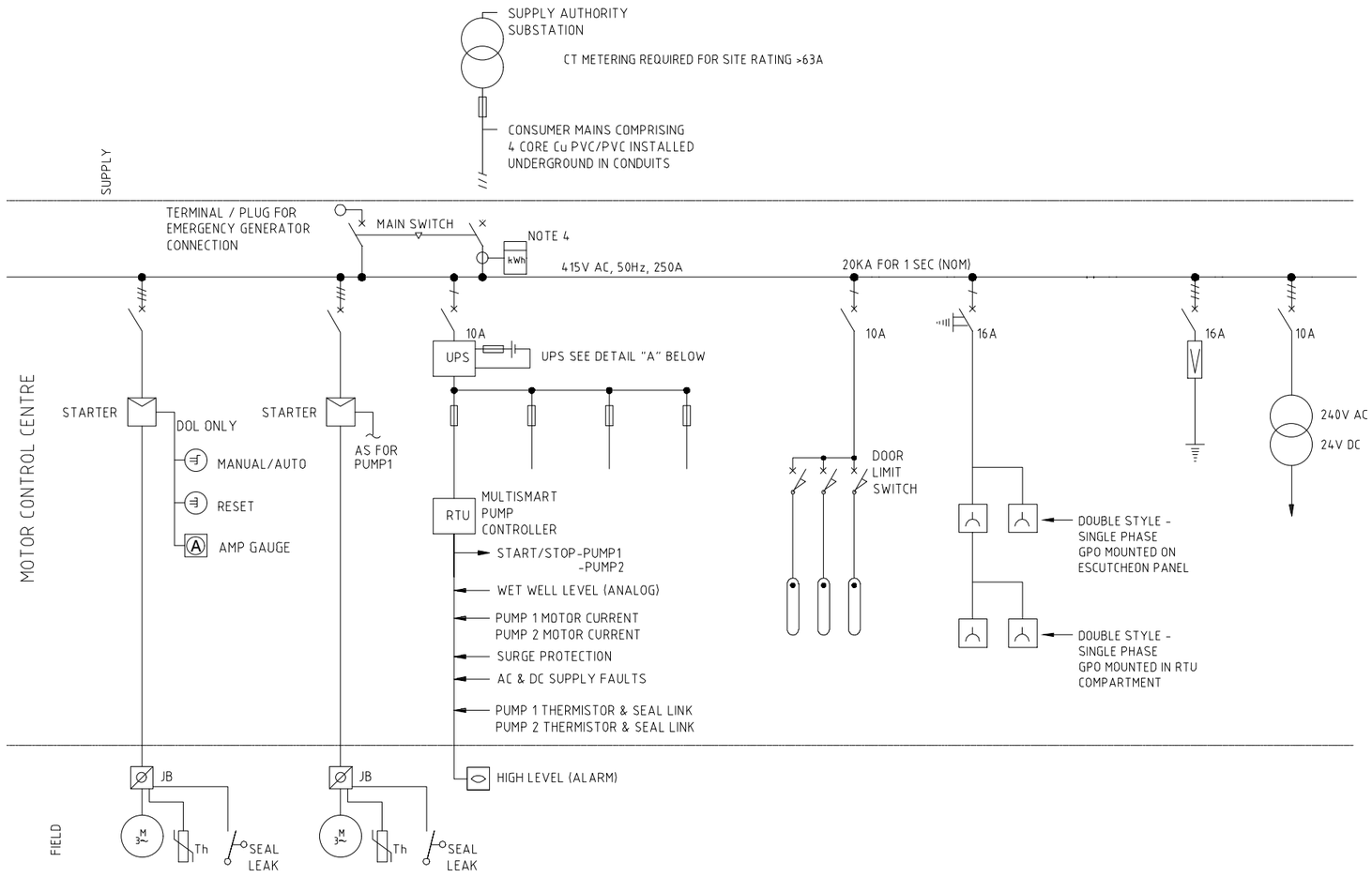
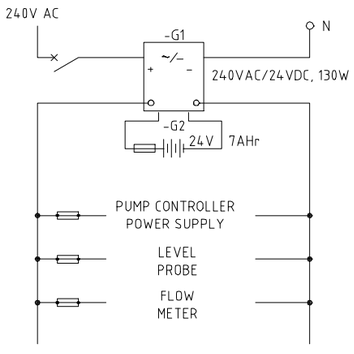


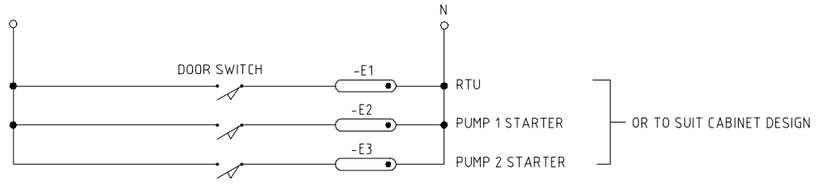




UPS

DETAIL - A

NOTE: UPS TO PROVIDE 12 HRS BACKUP POWER

SYSTEM DIAGRAM




CUBICLE LIGHTING CIRCUIT

(No. OF LIGHTING FITTINGS TO SUIT)

NOTES:

1. REFER TO FUNCTIONAL SPECIFICATION FOR PUMP START,STOP, STANDBY START AND HIGH LEVELS
2. ALL ANALOG/DIGITAL INPUTS TO AND OUTPUTS FROM THE PUMP CONTROLLER SHALL BE INDIVIDUALLY FUSED WITHIN THE TERMINAL BLOCKS.
3. UPS SHALL BE SIZED TO PROVIDE 12Hrs BACKUP FOR THE RTU AND INSTRUMENTATION
4. SUPPLY AUTHORITY POWER METERING SHALL BE DIRECT CONNECT TYPE, FOR SITES WHERE MAX. DEMAND IS LESS THAN 63A. CT METERING SHALL BE USED WHERE MAX. DEMAND EXCEEDS 63A.
5. ALL DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH EAST GIPPSLAND WATER ELECTRICAL SPEC

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS

| No. | BY | DATE | DESCRIPTION | APPD |
|---|---|---|---|---|
| C. | S.G. | 03-11-21 | UPDATED STANDARD DRAWINGS. | |
| B. | S.G. | 05-06-20 | UPDATED STANDARD DRAWINGS. | |
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| DRAWN | A.M.M XCO | CHECKED | SG XCO |
| APPROVED | | DATE | |

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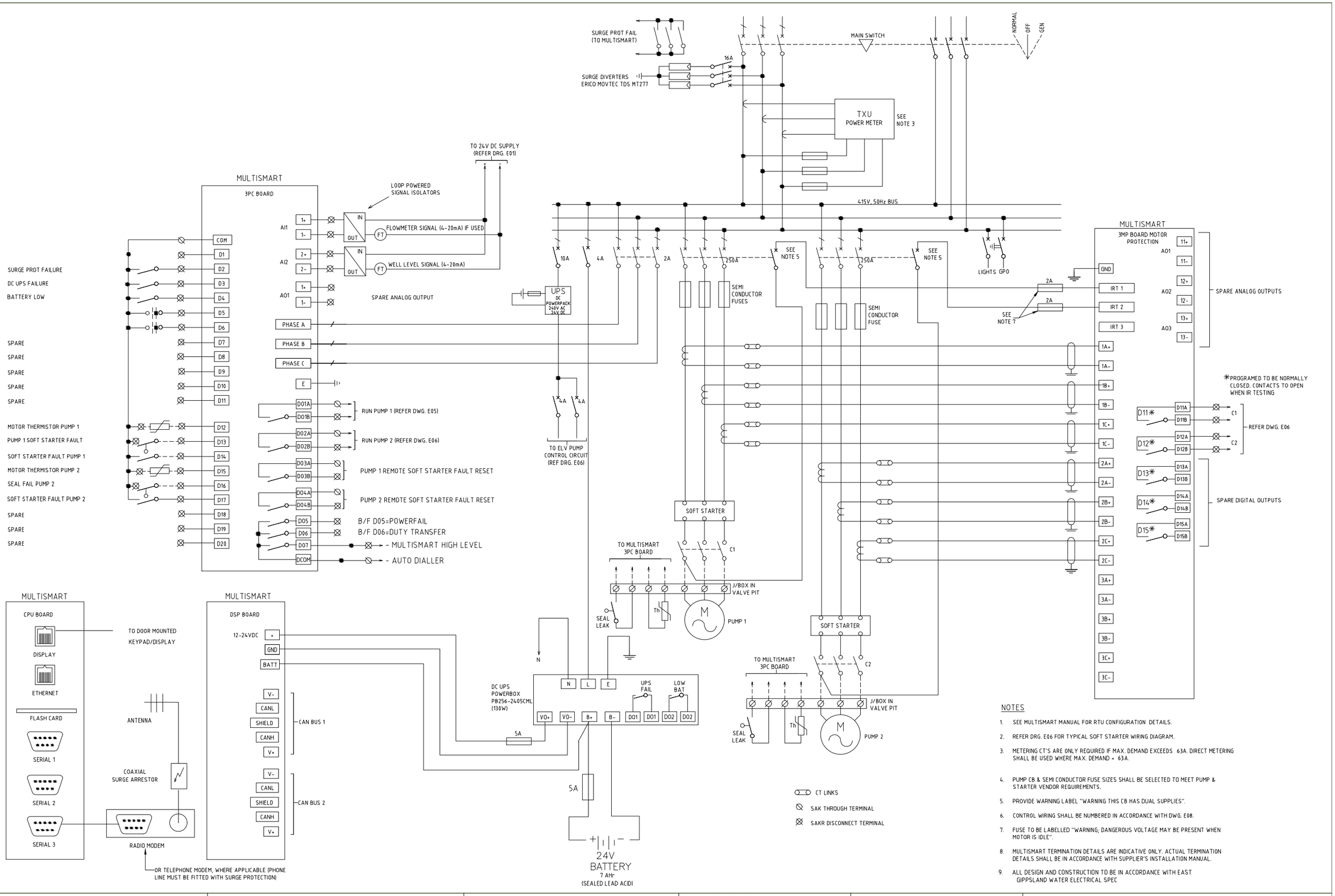
East Gippsland Water

EGW SUBMERSIBLE SEWER PUMP STATION

TYPICAL SINGLE LINE POWER DIAGRAM
FOR SUBMERSIBLE SEWER
PUMP STATIONS

| Status | Drg No. | Rev. |
|---|---|---|
| STANDARD DRAWING | SPS -ELEC-E01 | D. |




## NOTES

1. SEE MULTISMART MANUAL FOR RTU CONFIGURATION DETAILS.
2. REFER DRG. E06 FOR TYPICAL SOFT STARTER WIRING DIAGRAM.
3. METERING CT'S ARE ONLY REQUIRED IF MAX. DEMAND EXCEEDS 63A. DIRECT METERING SHALL BE USED WHERE MAX. DEMAND < 63A.
4. PUMP CB & SEMI CONDUCTOR FUSE SIZES SHALL BE SELECTED TO MEET PUMP & STARTER VENDOR REQUIREMENTS.
5. PROVIDE WARNING LABEL "WARNING THIS CB HAS DUAL SUPPLIES".
6. CONTROL WIRING SHALL BE NUMBERED IN ACCORDANCE WITH DWG. E08.
7. FUSE TO BE LABELLED "WARNING; DANGEROUS VOLTAGE MAY BE PRESENT WHEN MOTOR IS IDLE".
8. MULTISMART TERMINATION DETAILS ARE INDICATIVE ONLY. ACTUAL TERMINATION DETAILS SHALL BE IN ACCORDANCE WITH SUPPLIER'S INSTALLATION MANUAL.
9. ALL DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH EAST GIPPSLAND WATER ELECTRICAL SPEC

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| C. | S.G. | 03-11-21 | UPDATED STANDARD DRAWINGS. | |
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| DRAWN | A.M.M XCO | CHECKED | SG XCO |
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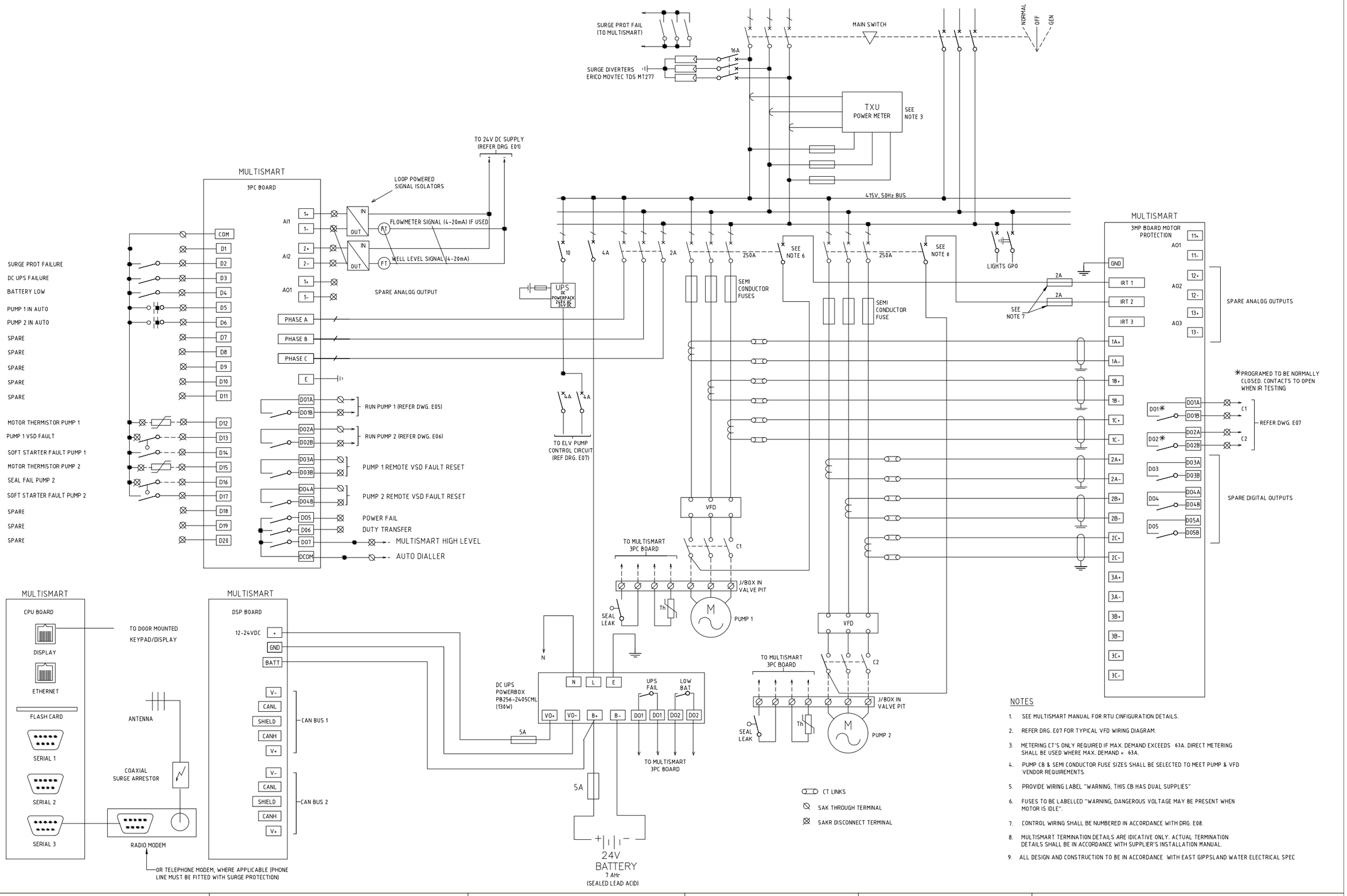
East Gippsland Water

# EGW SUBMERSIBLE SEWER PUMP STATION

## TYPICAL MULTISMART RTU SCHEMATIC WIRING DIAGRAM FOR SUBMERSIBLE SEWER PUMP STATIONS (WITH SOFT STARTERS)

| Status | Drg No. | Rev. |
|---|---|---|
| STANDARD DRAWING | SPS -ELEC-E02 | D. |




## NOTES

1. SEE MULTISMART MANUAL FOR RTU CINFIGURATION DETAILS.
2. REFER DRG. E07 FOR TYPICAL VFD WIRING DIAGRAM.
3. METERING CT'S ONLY REQUIRED IF MAX. DEMAND EXCEEDS 63A. DIRECT METERING SHALL BE USED WHERE MAX. DEMAND < 63A.
4. PUMP CB & SEMI CONDUCTOR FUSE SIZES SHALL BE SELECTED TO MEET PUMP & VFD VENDOR REQUIREMENTS.
5. PROVIDE WIRING LABEL "WARNING, THIS CB HAS DUAL SUPPLIES"
6. FUSES TO BE LABELLED "WARNING, DANGEROUS VOLTAGE MAY BE PRESENT WHEN MOTOR IS IDLE".
7. CONTROL WIRING SHALL BE NUMBERED IN ACCORDANCE WITH DRG. E08.
8. MULTISMART TERMINATION DETAILS ARE IDICATIVE ONLY. ACTUAL TERMINATION DETAILS SHALL BE IN ACCORDANCE WITH SUPPLIER'S INSTALLATION MANUAL.
9. ALL DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH EAST GIPPSLAND WATER ELECTRICAL SPEC

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REVISIONS

| No. | BY | DATE | DESCRIPTION | APPD |
|---|---|---|---|---|
| C. | S.G. | 03-11-21 | UPDATED STANDARD DRAWINGS. | |
| B. | S.G. | 05-06-20 | UPDATED STANDARD DRAWINGS. | |
| A | SS | 19.08.09 | TENDER ISSUE | |

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| DRAWN | A.M.M XCO | CHECKED | SG XCO |
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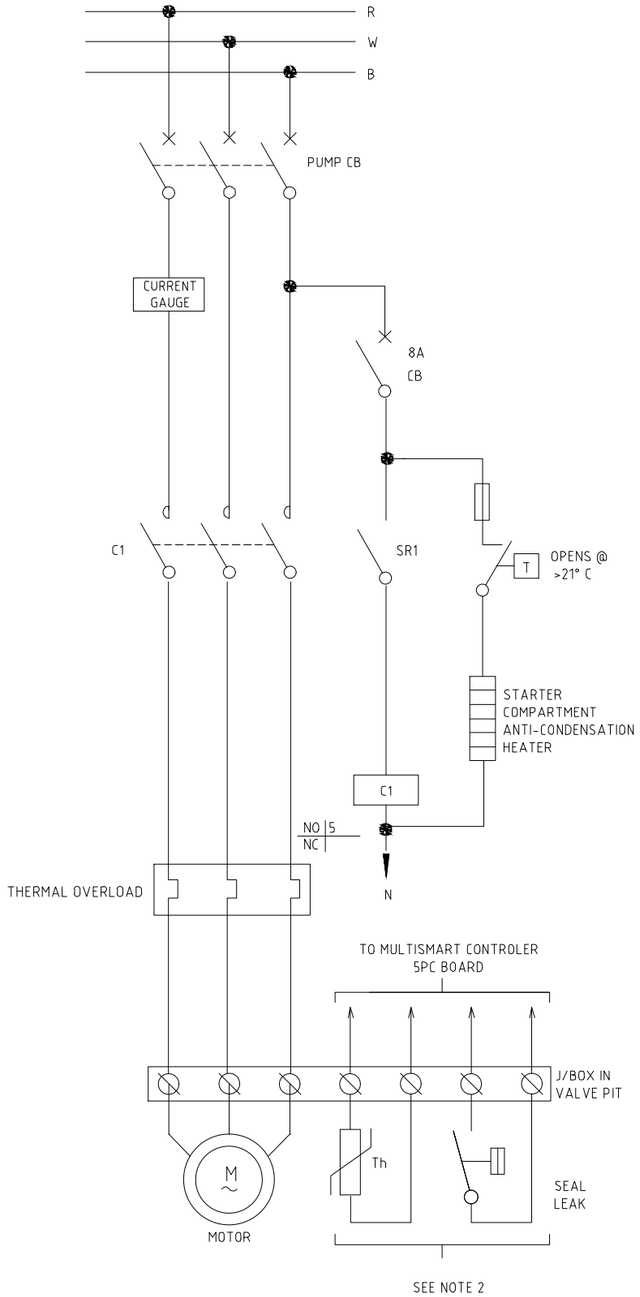
East Gippsland Water

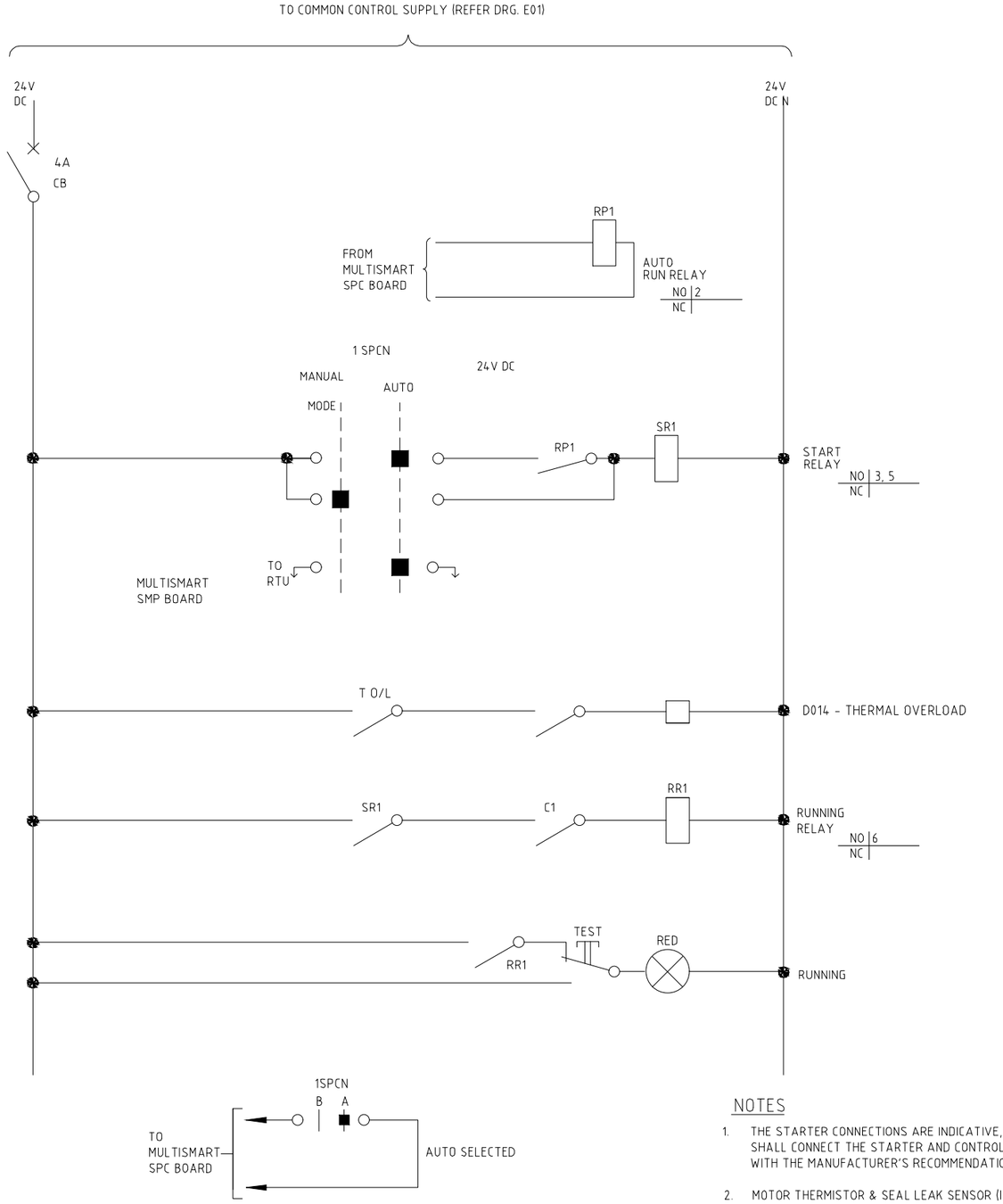
# EGW SUBMERSIBLE SEWER PUMP STATION

## TYPICAL MULTISMART RTU SCHEMATIC WIRING DIAGRAM FOR SUBMERSIBLE SEWER PUMP STATIONS (WITH VFD'S)

| Status | Drg No. | Rev. |
|---|---|---|
| STANDARD DRAWING | SPS -ELEC-E03 | D. |

DOL LESS THAN 7.5KW




## NOTES

1. THE STARTER CONNECTIONS ARE INDICATIVE, THE CONTRACTOR SHALL CONNECT THE STARTER AND CONTROLS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
2. MOTOR THERMISTOR & SEAL LEAK SENSOR (IF FITTED) SHALL BE WIRED DIRECTLY TO THE MULTISMART CONTROLLER.
3. CONTROL WIRING SHALL BE NUMBERED IN ACCORDANCE WITH DRG. E04.
4. REFER TO DRG. 04 FOR MULTISMART RTU WIRING CONNECTIONS.
5. ALL DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH EAST GIPPSLAND WATER ELECTRICAL SPEC

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REVISIONS

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| B. | S.G. | 05-06-20 | UPDATED STANDARD DRAWINGS. | |
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| DRAWN | A.M.M XCO | CHECKED | SG XCO |
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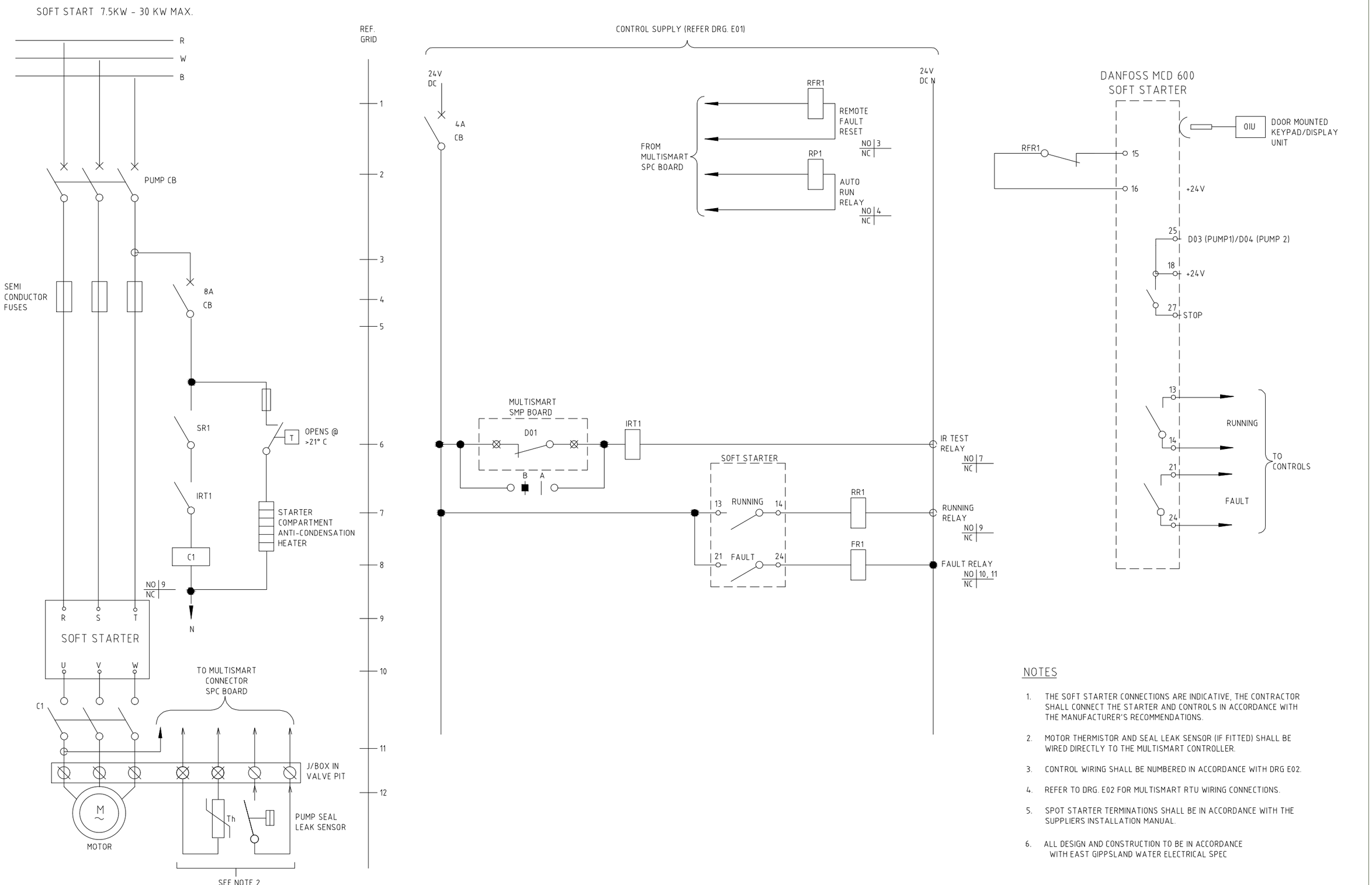
East Gippsland Water

EGW SUBMERSIBLE SEWER PUMP STATION

TYPICAL DOL STARTER SCHEMATIC FOR SUBMERSIBLE SEWER PUMP STATIONS

| Status | Drg No. | Rev. |
|---|---|---|
| STANDARD DRAWING | SPS -ELEC-E05 | D. |




## NOTES

1. THE SOFT STARTER CONNECTIONS ARE INDICATIVE, THE CONTRACTOR SHALL CONNECT THE STARTER AND CONTROLS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
2. MOTOR THERMISTOR AND SEAL LEAK SENSOR (IF FITTED) SHALL BE WIRED DIRECTLY TO THE MULTISMART CONTROLLER.
3. CONTROL WIRING SHALL BE NUMBERED IN ACCORDANCE WITH DRG E02.
4. REFER TO DRG. E02 FOR MULTISMART RTU WIRING CONNECTIONS.
5. SPOT STARTER TERMINATIONS SHALL BE IN ACCORDANCE WITH THE SUPPLIERS INSTALLATION MANUAL.
6. ALL DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH EAST GIPPSLAND WATER ELECTRICAL SPEC

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REVISIONS

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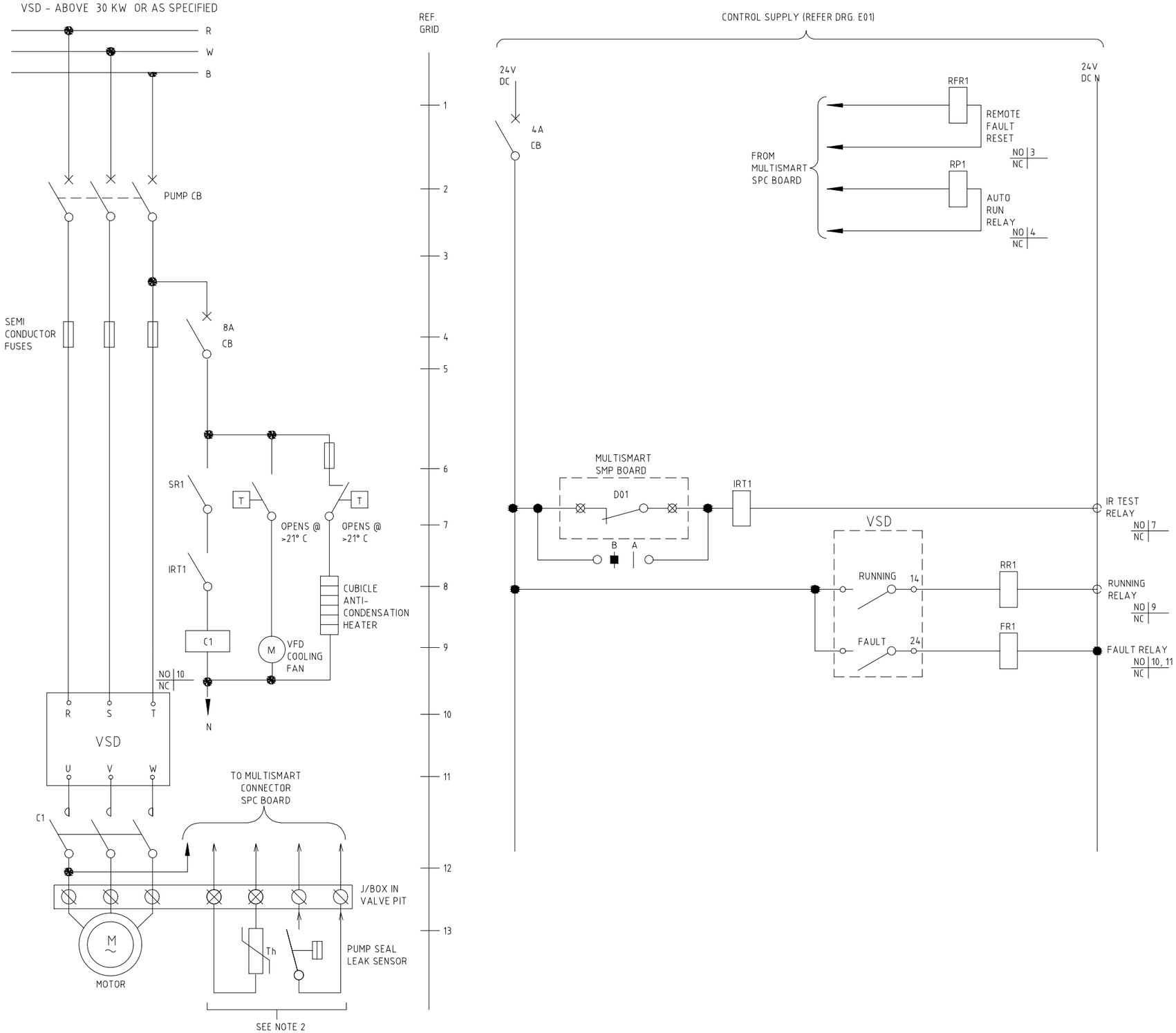
East Gippsland Water

# EGW SUBMERSIBLE SEWER PUMP STATION

## TYPICAL SOFT STARTER SCHEMATIC FOR SUBMERSIBLE SEWER PUMP STATIONS

| Status | Drg No. | Rev. |
|---|---|---|
| STANDARD DRAWING | SPS -ELEC-E06 | D. |




## NOTES

1. THE VFD CONNECTIONS ARE INDICATIVE, THE CONTRACTOR SHALL CONNECT THE VFD AND CONTROLS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
2. MOTOR THERMISTOR AND SEAL LEAK SENSOR (IF FITTED) SHALL BE WIRED DIRECTLY TO THE MULTISMART CONTROLLER.
3. CONTROL WIRING SHALL BE NUMBERED IN ACCORDANCE WITH DRG E08.
4. REFER TO DRG. E03 FOR MULTISMART RTU WIRING CONNECTIONS.
5. VFD TERMINATIONS SHALL BE IN ACCORDANCE WITH THE SUPPLIERS INSTALLATION MANUAL.
6. ALL DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH EAST GIPPSLAND WATER ELECTRICAL SPEC

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REVISIONS

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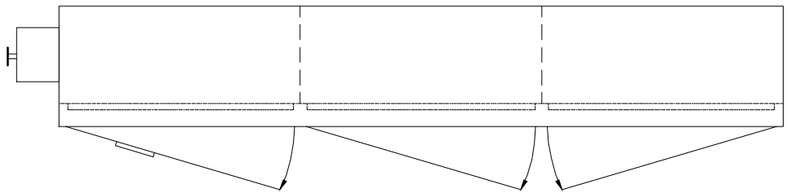
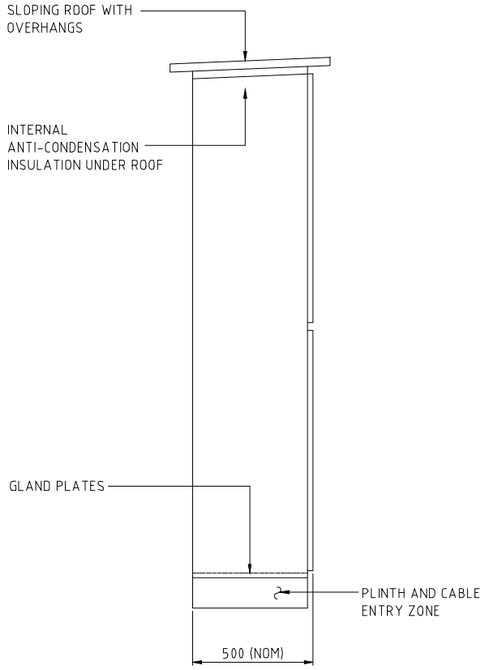
# EGW SUBMERSIBLE SEWER PUMP STATION

## TYPICAL VFD SCHEMATIC FOR SUBMERSIBLE SEWER PUMP STATIONS

| Status | Drg No. | Rev. |
|---|---|---|
| STANDARD DRAWING | SPS -ELEC-E07 | D. |



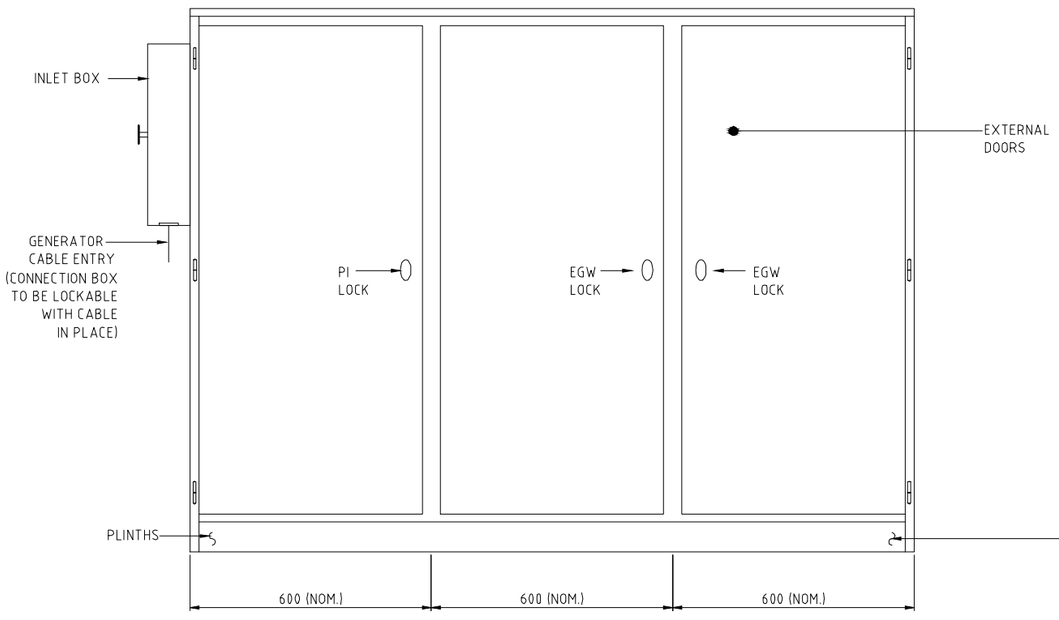
PLAN



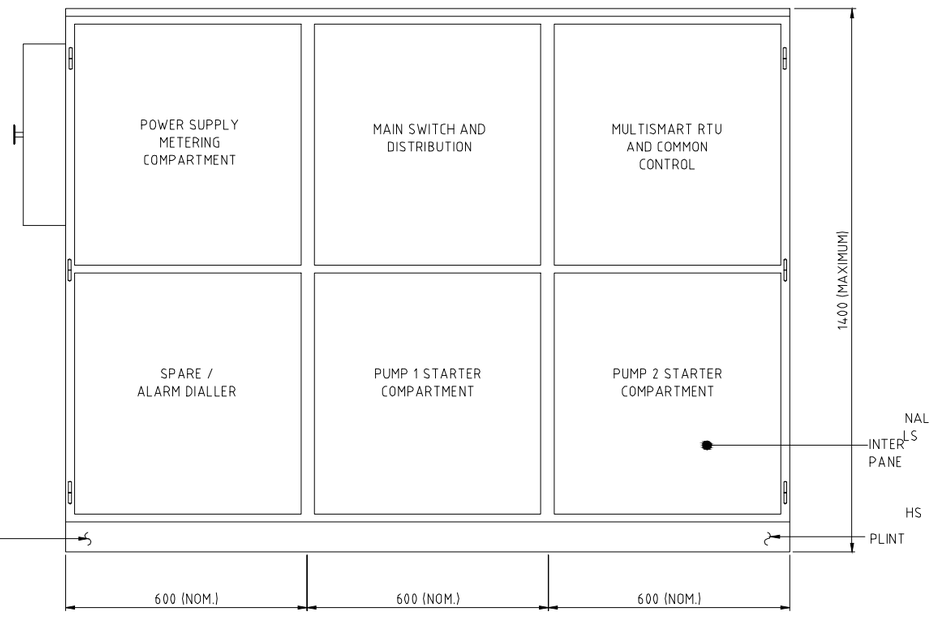

SIDE ELEVATION

NOTES:

1. REFER TO SPECIFICATION FOR DETAILED CONSTRUCTION INFORMATION.
2. LAYOUT AND SWITCHBOARD ORIENTATION SHOWN IS INTENDED AS A GUIDE ONLY. DIMENSIONS OF SWITCHBOARDS AND ORIENTA IION SHALL SUIT EQUIPMENT OFFERED AND SWITCHBOARD LOCATION.
3. SWITCHBOARDS SHALL BE FABRICATED FROM 3mm MINIMUM MARINE GRADE ALUMINIU
4. NO PENETRATION SHALL BE MADE IN OUTER CUBICLE FACES OTHER THAN FOR DOOR FASTENINGS AND ALARM LIGHT. ALL VENTS, FAN COWLINGS AND ANY OTHER PENETRATIONS SHALL BE CAST IN OR FULLY WELDED (NOT SCREWED, RIVETED, ETC.)
5. GALVANISED PLINTHS SHALL BE INSULATED FROM ALUMINIUM.
6. INTERNAL DOORS OR PANELS SHALL BE "DEAD FRONT".
7. SWITCHBOARD WIRING SHALL BE COLOUR-CODED AS FOLLOWS:- SE
   - POWER CIRCUITS: -RED, WHITE, BLUE ACCORDING TO PHA; -BLACK NEUTRAL
   - CONTROL CIRCUITS: -ORANGE 240 V ACTIVE; -BLACK 240 V NEUTRAL; -GREY 24 V ACTIVE; -BLACK 24 V NEUIRAL; - PURPLE 24V DC; - PINK 0V DC
8. SWITCHBOARD CONTROL WIRING SHALL BE 32/0.2mm. $(1.0mm)^2$
9. CIRCUIT BREAKERS SHALL BE "TERASAKI" OR EQUIVALENT. CONTROL FUSES SHALL BE "DIN SAFE" OR EQUIVALENT.
10. SWITCHBOARD SHALL BE FITTED WITH A GENERATOR CABLE TERMINATION PANEL, FITTED WITH TERMINALS FOR CONNECTION OF EMERGENCY GENERATOR WITH ACCESS HINGED LOCKABLE DOOR & BOTTOM ENTRY FOR GENERATOR CABLE.
11. EXTERNAL DOOR HANDLES SHALL BE "L" OR "T" TYPE CHROME FINISH WITH "POWEP INDUSTRY LOCK" KEYING SYSTEM TO CURRENT "VICTORIAN SERVICE AND INSTALLA~ RULES REQUIREMENTS.
12. THE DIMENSIONS AND PROVISIONS OF THE METERING COMPARTMENT SHALL COMPLY THE CURRENT EDITION OF THE "VICTORIAN SERVICE AND INSTALLATION RULES IN AL RESPECTS.
13. IF PUMP MOTOR RATING EXCEEDS 50KW, AN ADDITIONAL TIER WILL BE REQUIRED FO METERING.
14. ESCUTCHEON PANELS TO BE FITTED IN ALL CUBICLES
15. ALL DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH EAST GIPPSLAND WATER ELECTRICAL SPEC




FRONT ELEVATION (EXTERNAL DOORS)




FRONT ELEVATION (INTERNAL COMPARTMENTS)

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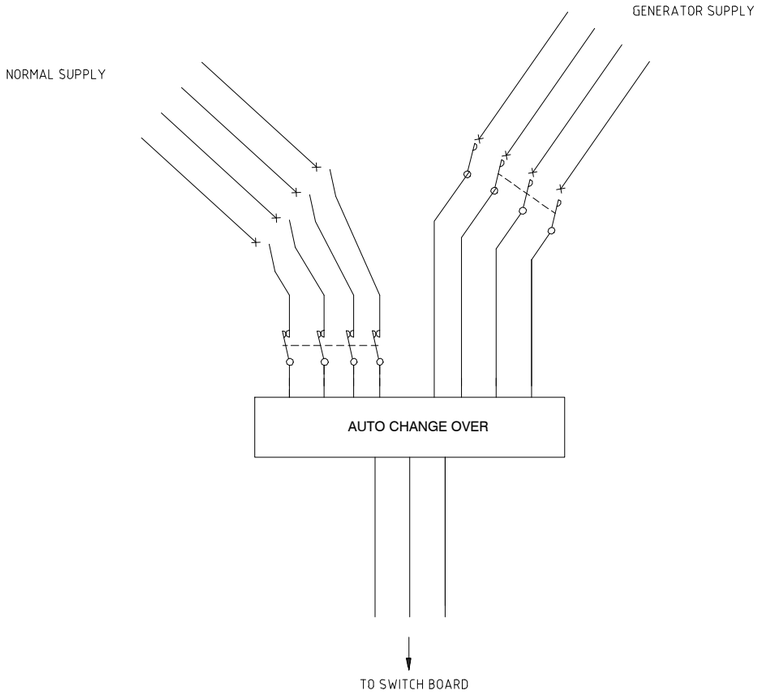
EGW SUBMERSIBLE SEWER PUMP STATION

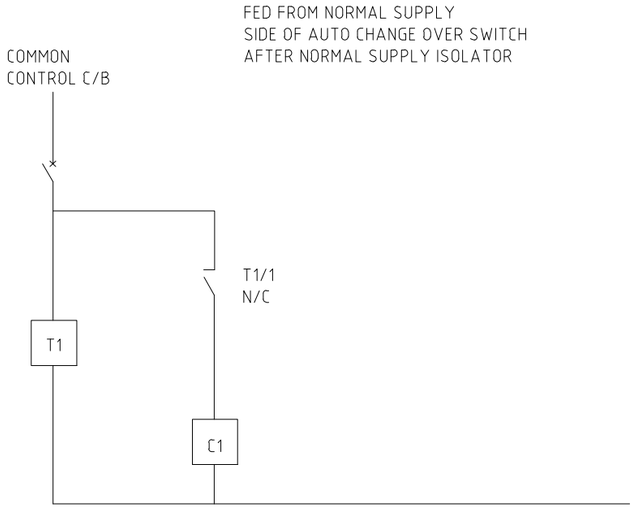
SWITCH BOARD LAYOUT FOR TYPICAL SUBMESIBLE SEWER PUMP STATIONS (10 - 22kW)

| Status | Drg No. | Rev. |
|---|---|---|
| STANDARD DRAWING | SPS -ELEC-E09 | C. |

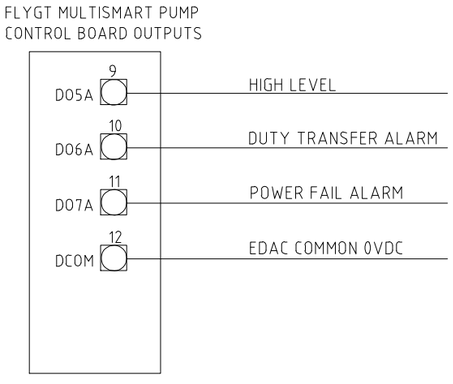



AUTO CHANGE OVER DETAIL

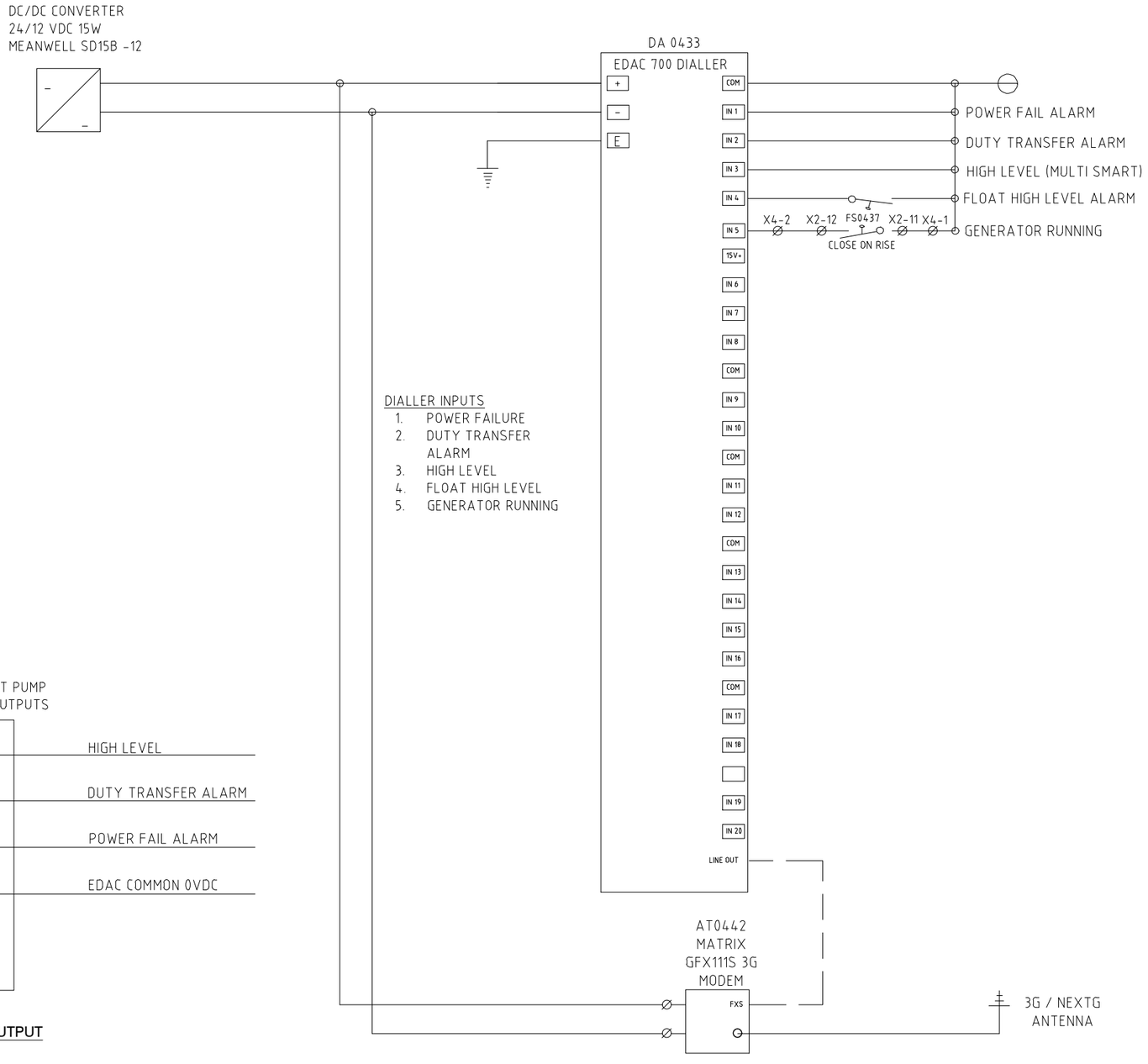
NOTE: GENERATOR AUTO CHANGEOVER SWITCH WITH TIMER
(GENERATOR WITH TIMER AUTO CHANGEOVER SWITCH AUTOMATICALLY TEST RUN EACH WEEK)




AUTO CHANGE OVER - SUPPLY ISOLATION




MULTISMART OUTPUT




AUTO DIALLER EDAC 700 SCHEMATIC

PARTS

EG103E HAGER DIGITAL TIMER CONDUCTOR - SIZE TO SUIT MD
CABLE 30 - SIZE TO SUIT MD
C/B 4 AMP C CURVE

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REVISIONS

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| DRAWN | A.M.M XCO | CHECKED | SG XCO |
| APPROVED | | DATE | |

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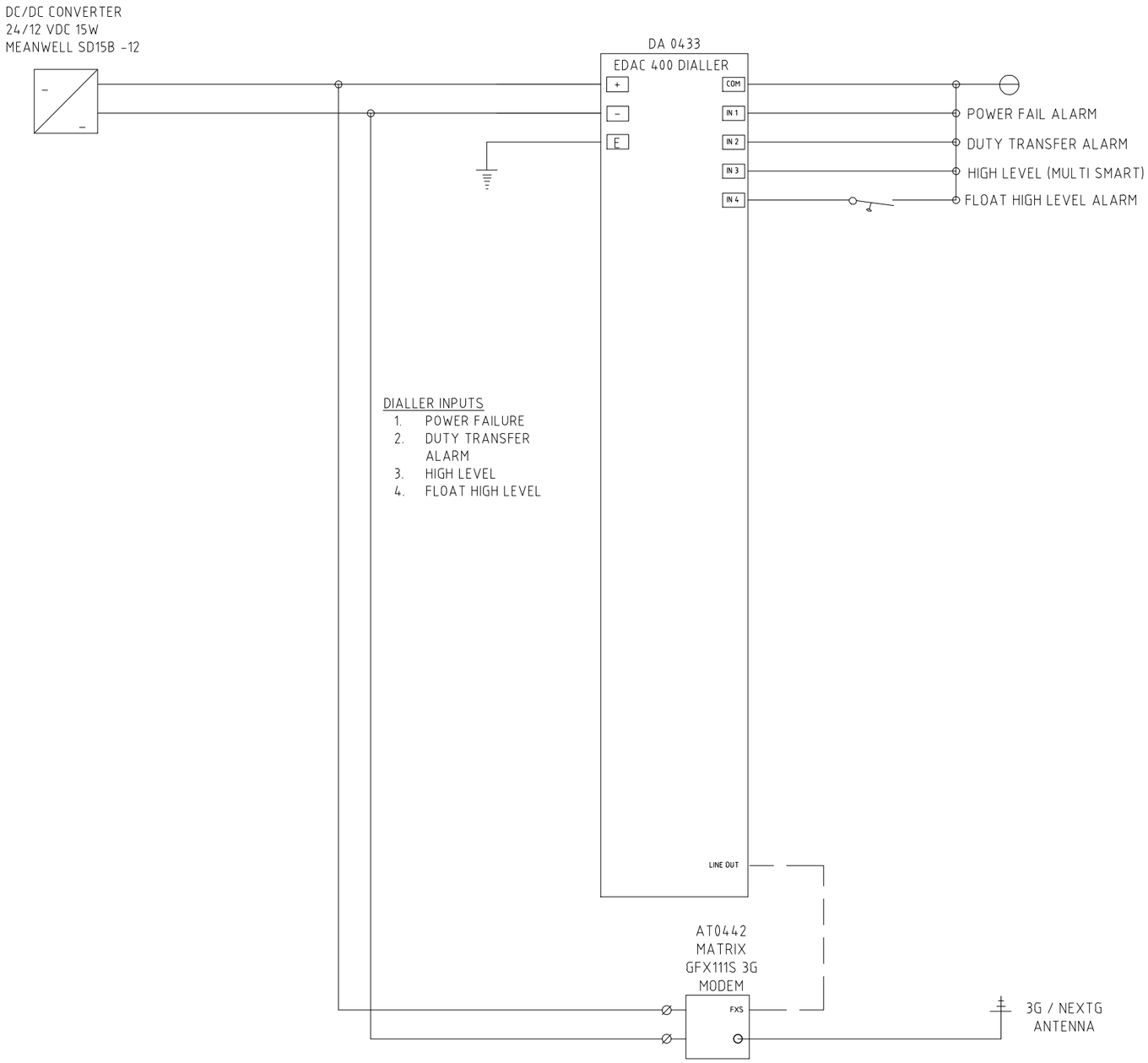
East Gippsland Water

EGW SUBMERSIBLE SEWER PUMP STATION

FIXED GENERATOR CONNECTION
AUTOMATIC TRANSFER SWITCH & TIMER

Status: STANDARD DRAWING
Drg No.: SPS -ELEC-E010.
Rev.: D.




AUTO DIALLER EDAC 400 SCHEMATIC

This drawing is confidential and shall only be used for the purposes of this project.

| REVISIONS | | | | | |
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| C. | S.G. | 03-11-21 | UPDATED STANDARD DRAWINGS. | | |
| B. | S.G. | 05-06-20 | UPDATED STANDARD DRAWINGS. | | |
| A | SS | 19.08.09 | TENDER ISSUE | | |
| No. | BY | DATE | DESCRIPTION | APPD | |

Scale: NOT TO SCALE

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

| | | | |
|---|---|---|---|
| DESIGNED | RC | CHECKED | W.MITCHELL (EGW) |
| DRAWN | A.M.M XCO | CHECKED | SG XCO |
| APPROVED | | DATE | |

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East Gippsland Water

EGW SUBMERSIBLE SEWER PUMP STATION

FIXED GENERATOR CONNECTION
AUTOMATIC TRANSFER SWITCH & TIMER

| Status | Drg No. | Rev. |
|---|---|---|
| STANDARD DRAWING | SPS -ELEC-E011. | D. |