

# WIRING DIAGRAM

## REACTOR FEED PUMPS

### MOTOR CONTROL CENTRE

|                 |             |            |                              |     |
|-----------------|-------------|------------|------------------------------|-----|
| Issue/Revisions | Rev 0       | 05.08.2013 | SAMPLE ISSUE                 | I.M |
|                 | ISSUE /REV. | DATE       | ISSUE / REVISION DESCRIPTION | BY  |

**MOTOR CONTROL CENTRE NOTES.**

1. WIRING SHALL BE MULTI-STRANDED COPPER TRI-RATED CONDUCTOR WITH THERMOSETTING INSULATION. TRI-RATED CONDUCTORS SHALL HAVE 600/1000V GRADE INSULATION TO BS6231.
2. CONDUCTORS SHALL BE SIZED TO SUIT CIRCUIT LOAD-CURRENT, MINIMUM CONDUCTOR SIZES SHALL BE AS FOLLOWS ;
 

|                        |                       |
|------------------------|-----------------------|
| 220V AC DISTRIBUTION   | : 4.0mm <sup>2</sup>  |
| 24V DC DISTRIBUTION    | : 1.5mm <sup>2</sup>  |
| 24V DC ALARM & CONTROL | : 0.75mm <sup>2</sup> |
| EARTHING               | : 6.0mm <sup>2</sup>  |
4. CABLE INSULATION COLOURS SHALL BE AS FOLLOWS ;
 

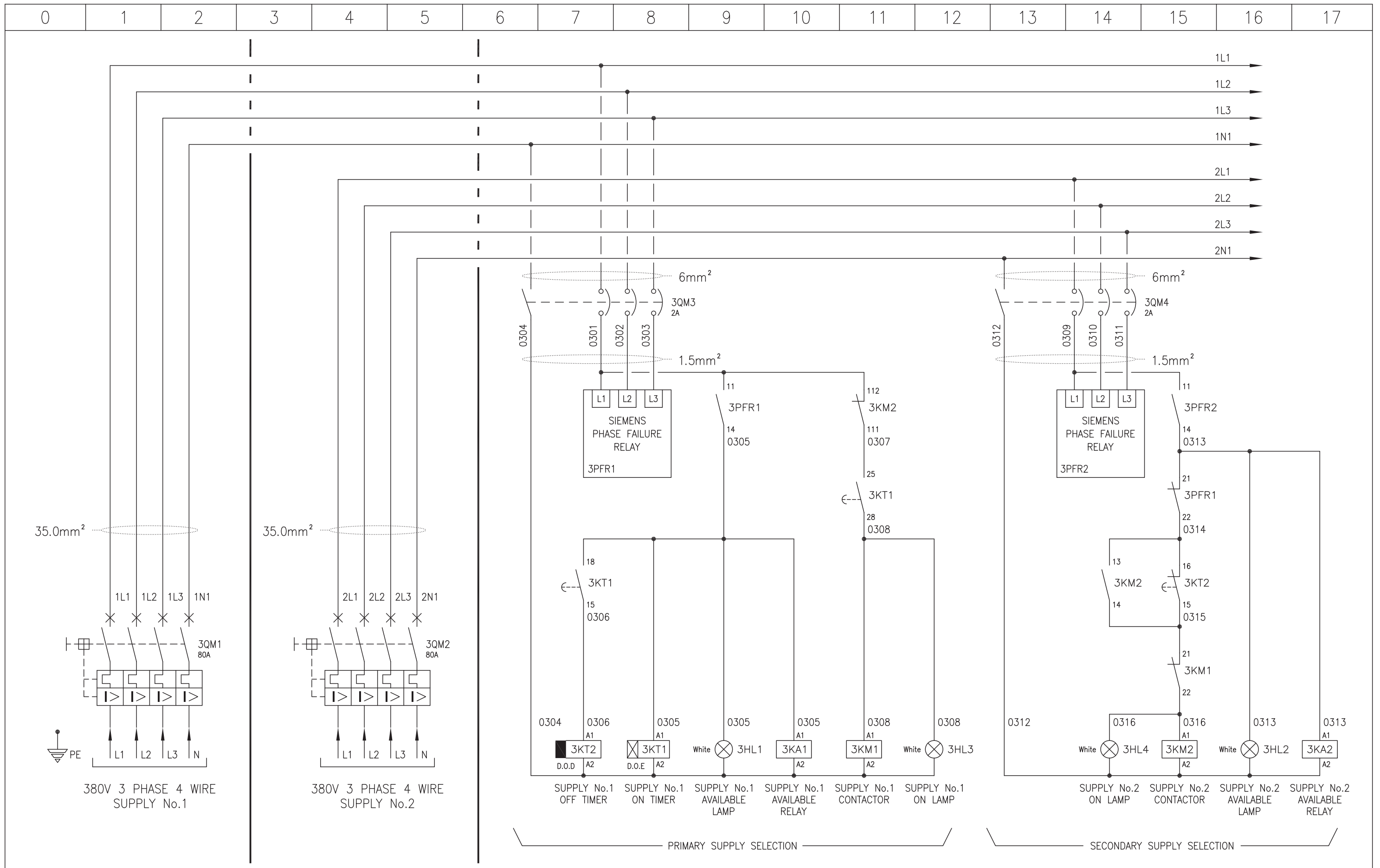
|                   |                |
|-------------------|----------------|
| 380V AC PHASE 1   | : BROWN        |
| 380V AC PHASE 2   | : BLACK        |
| 380V AC PHASE 3   | : GREY         |
| 380V AC NEUTRAL   | : BLUE         |
| 220V AC - LIVE    | : BROWN        |
| 220V AC - NEUTRAL | : BLUE         |
| 24V DC +VE        | : RED          |
| 24V DC -VE        | : BLACK        |
| VOLT FREE         | : ORANGE       |
| PROTECTIVE EARTH  | : GREEN/YELLOW |
5. ALL CONTROL WIRING TO BE TERMINATED USING BOOTLACE CRIMPS WHEREVER POSSIBLE.
6. ALL WIRING SHALL BE IDENTIFIED WHERE TERMINATED WITH COLOUR CODED FERRULES WHICH FULLY WRAP ROUND THE WIRE. WIRE IDENTS SHALL COMPRISE OF (UPTO) A 4 DIGIT NUMBER AS SHOWN ON THE WIRING DIAGRAMS.
7. ALL TERMINALS FOR AC WIRING SHALL BE SHROUDED & MARKED WITH THE DANGEROUS VOLTAGE FLASH - WARNING SYMBOL.
8. CABLE TRUNKING TO BE BETADUCT OPEN SLOT RIGID PVC, SELF EXTINGUISHING, FLAMMABILITY UL94 V-0.
9. EXTERNAL LABELS TO BE TRAFFOLYTE WITH 316 STAINLESS SCREW FIXINGS. ALL LABELLING TO BE IN ENGLISH. EXTERNAL WARNING LABELS TO BE IN ENGLISH. INTERNAL COMPONENT IDENT LABELS TO BE PRINTED CEMBRE MG-TAPW PVC SELF EXTINGUISHING VO (UL94) TAGS MOUNTED ONTO CEMBRE SELF ADHESIVE MOUNTING BAR.
10. SEE TABLE BELOW FOR TORQUE SETTINGS:-

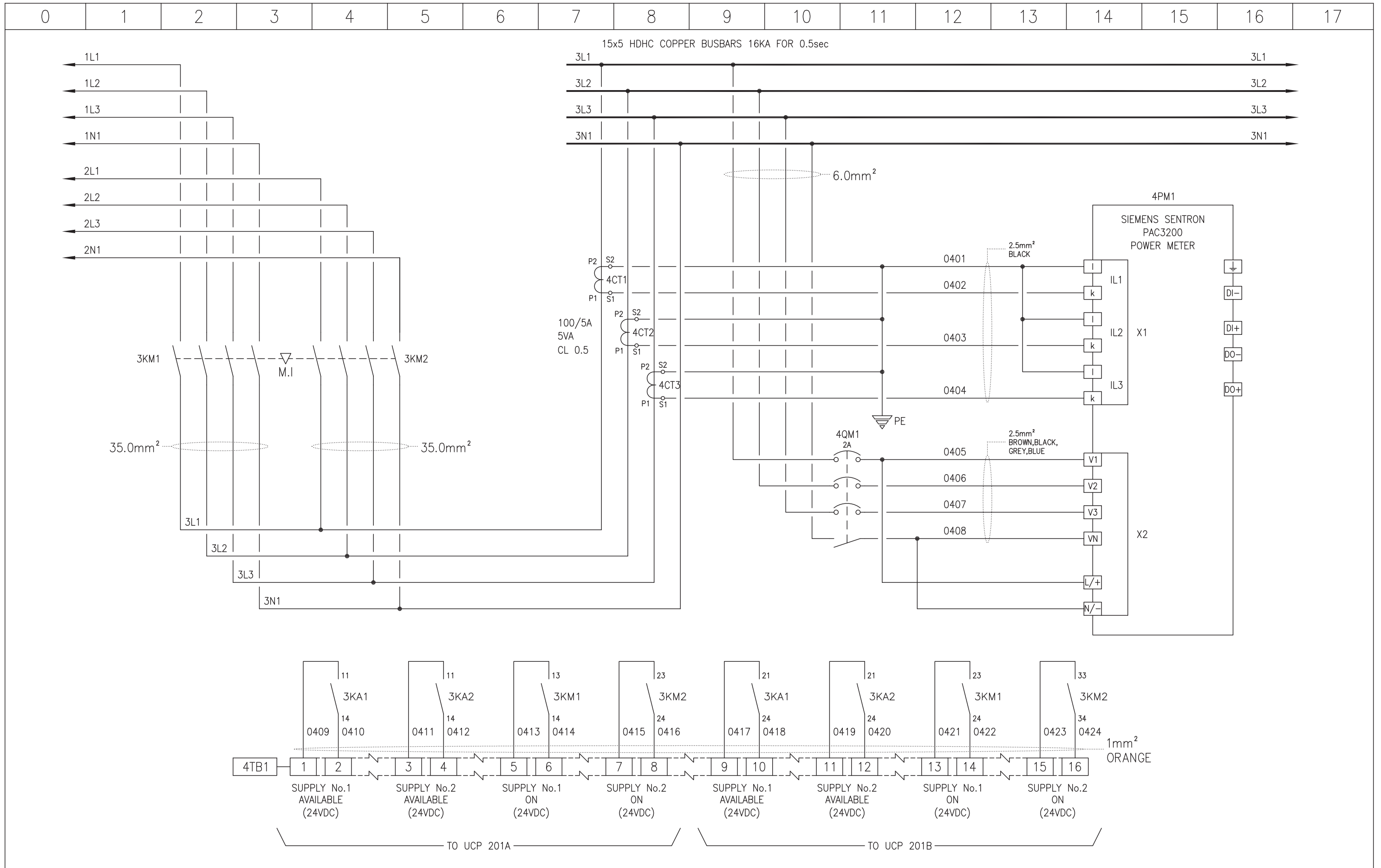
| DECRPTION                            | TORQUE SETTING |
|--------------------------------------|----------------|
| ALL BUSBARS                          | 9Nm            |
| ALL POWER CONNECTIONS TO 3KM1 & 3KM2 | 5Nm            |
| ALL POWER CONNECTIONS TO 3QM1 & 3QM2 | 8Nm            |
| 2.5 - 10mm <sup>2</sup>              | 4Nm            |
| 16 - 70mm <sup>2</sup>               | 8Nm            |

**DRAWING CONVENTION NOTES.**

1. ALL CONTACTS ARE DRAWN IN THE DE-ENERGISED - 'SHELF' STATE.
2. PANEL COMPONENT IDENTIFICATION IS BASED ON THE RESPECTIVE WIRING DIAGRAM SHEET NUMBER, i.e. ALL COMPONENTS ON SHEET '3' THE ALPHA PART OF THE TAG No. IS PREFIXED WITH THE SHEET NUMBER. FOR EXAMPLE THE FIRST ISOLATOR ON SHEET 3 WOULD BE "3QS1" ETC...

DRAWING INDEX IS SHOWN ON SHEET 13.

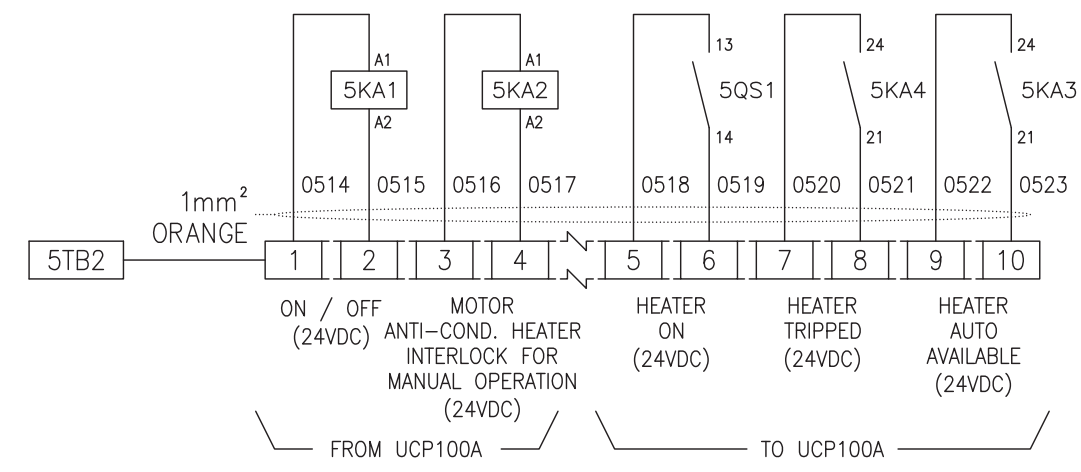
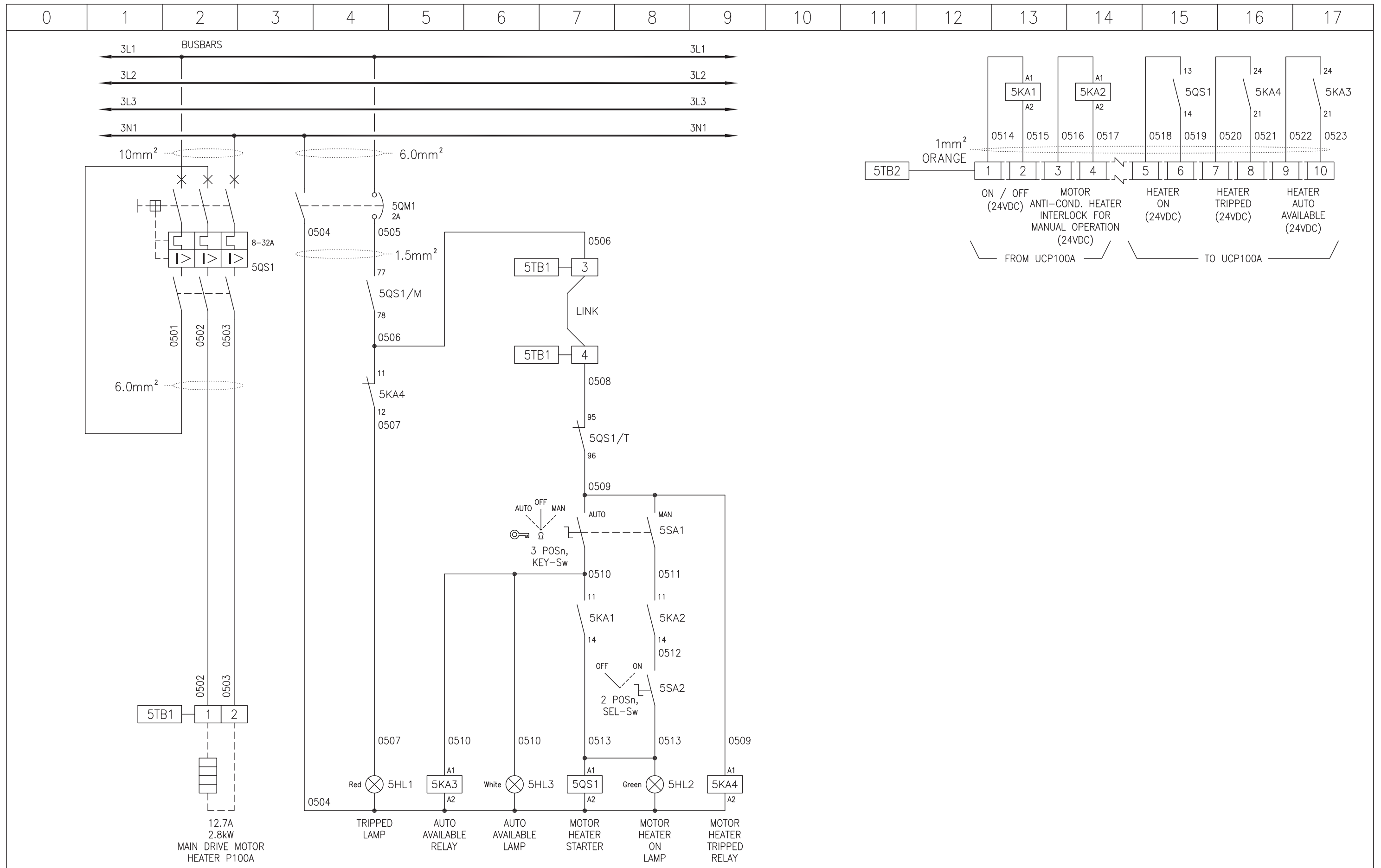




CUBICLE SECTION 'C'

SERVICE

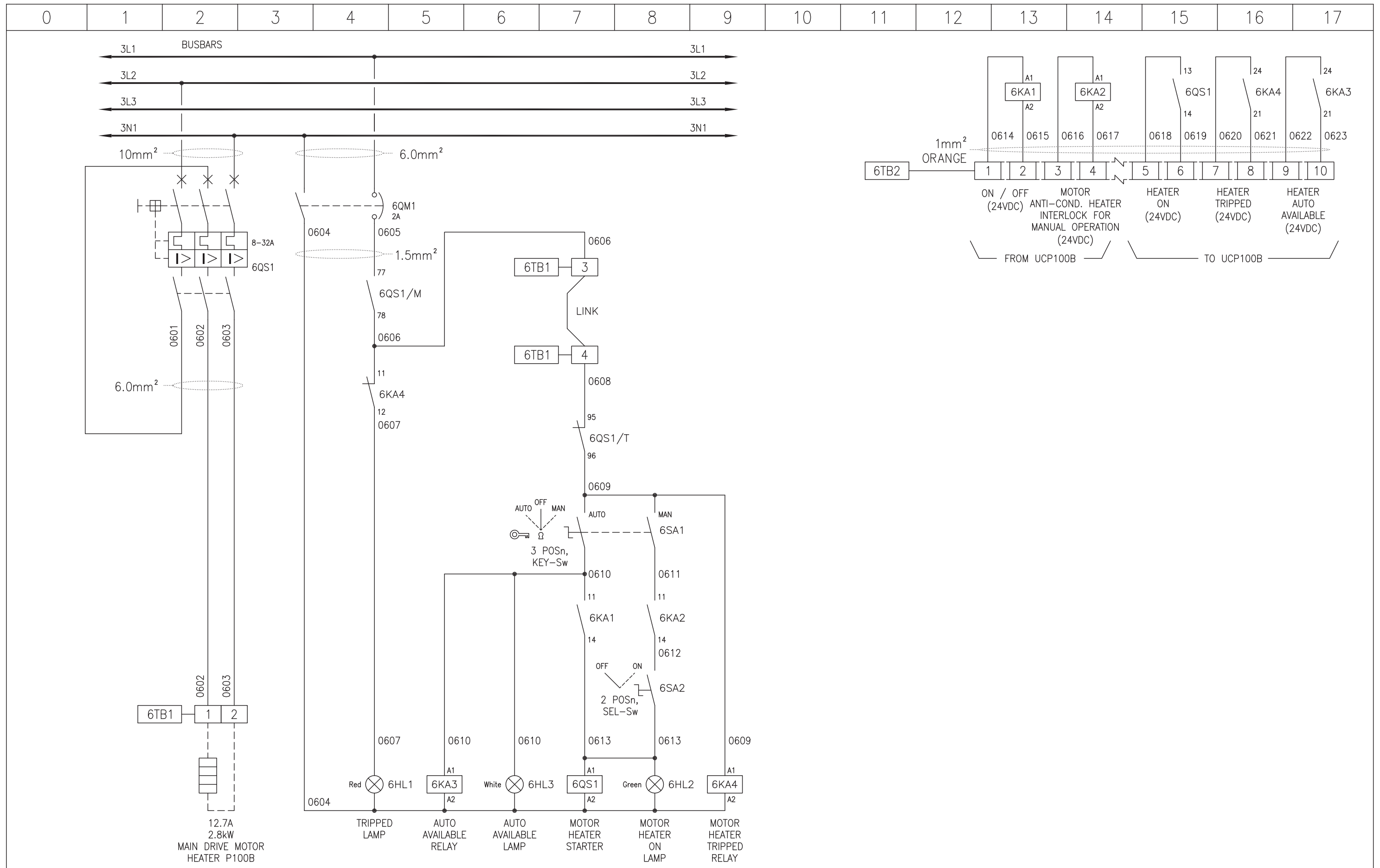
MAINS CHANGEOVER & METERING SECTION



CUBICLE SECTION 'D'

SERVICE

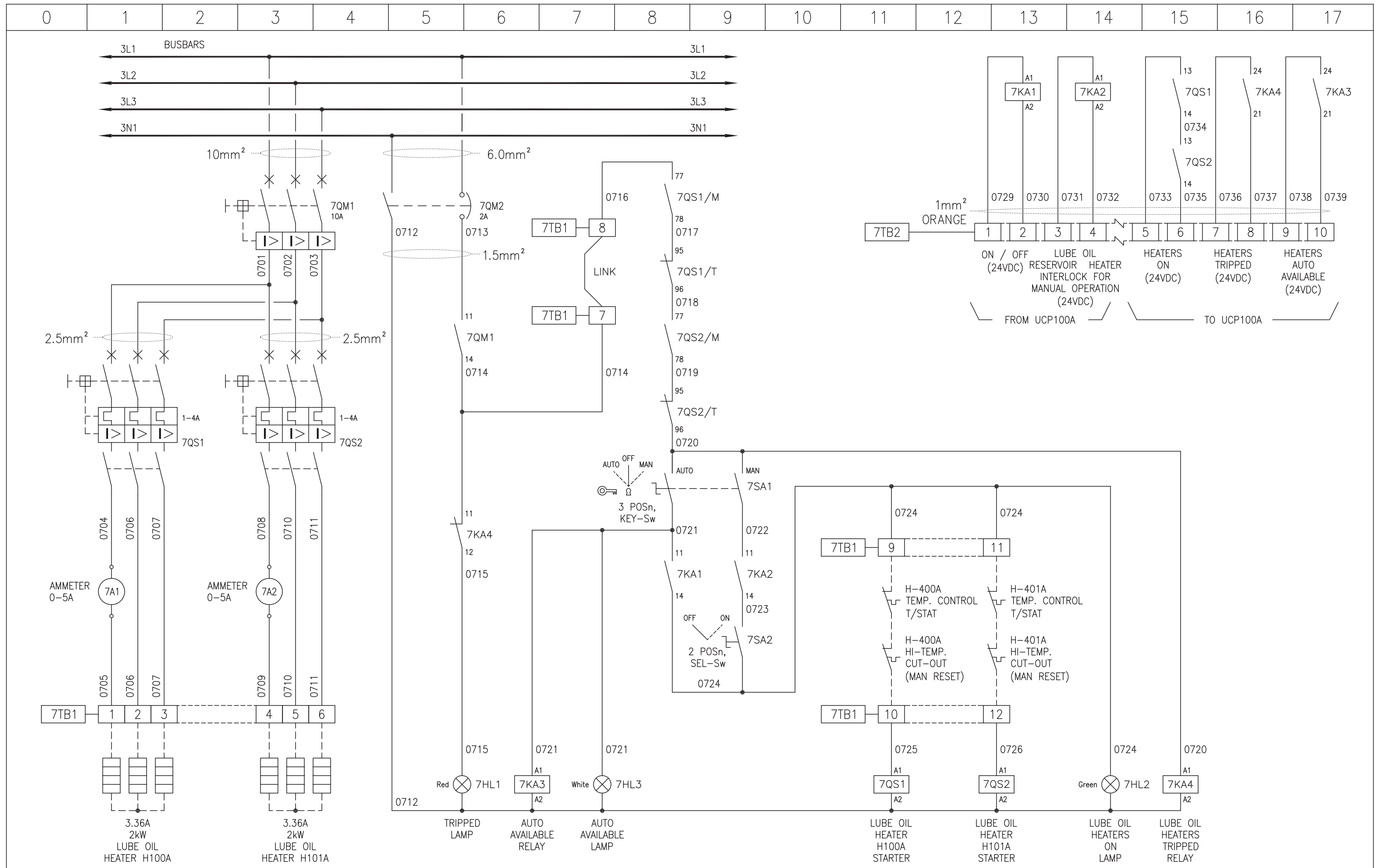
MAIN DRIVE MOTOR ANTI-CONDENSATION HEATER (P100A)



CUBICLE SECTION 'E'

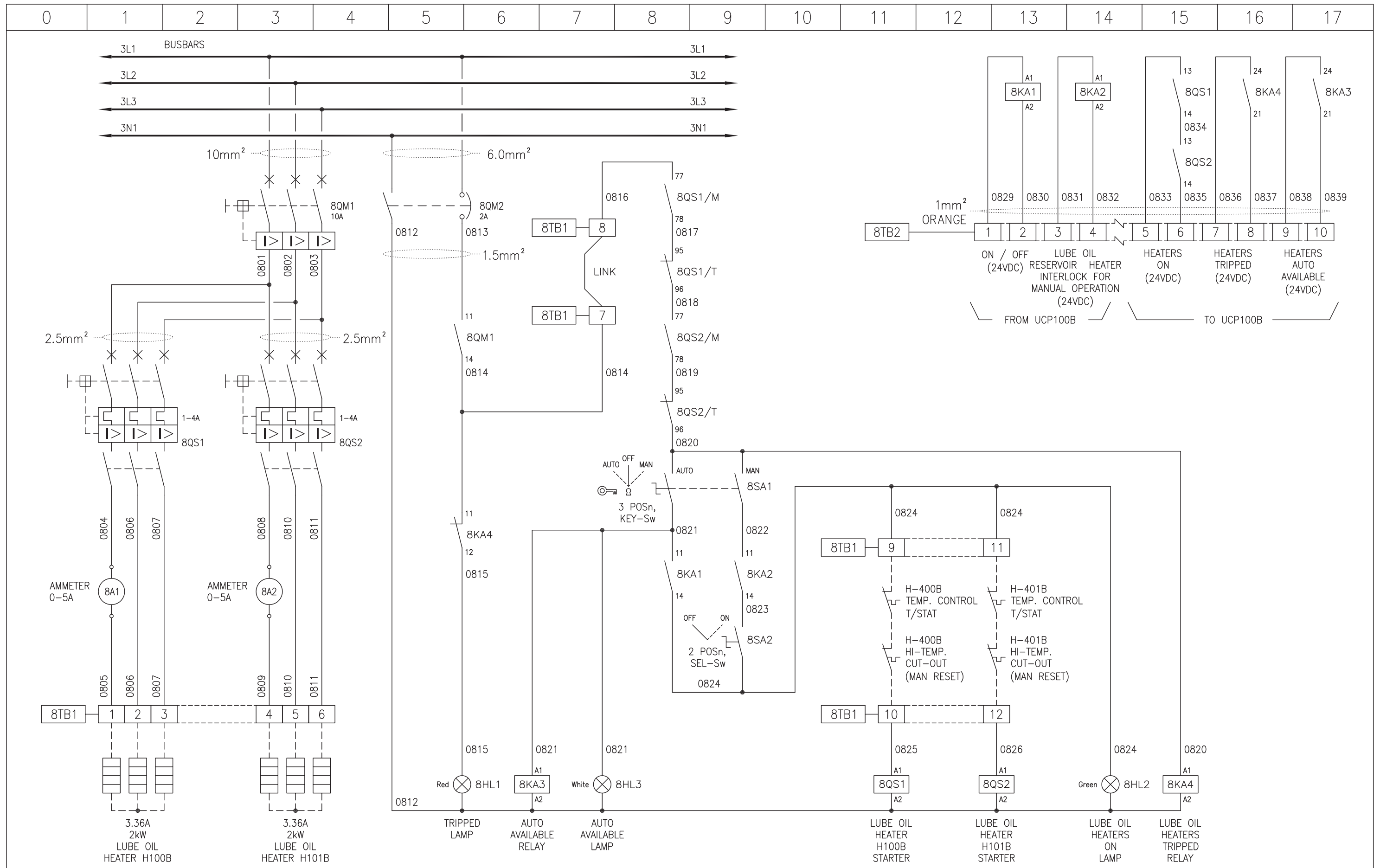
SERVICE

MAIN DRIVE MOTOR ANTI-CONDENSATION HEATER (P100B)



CUBICLE SECTION 'F'

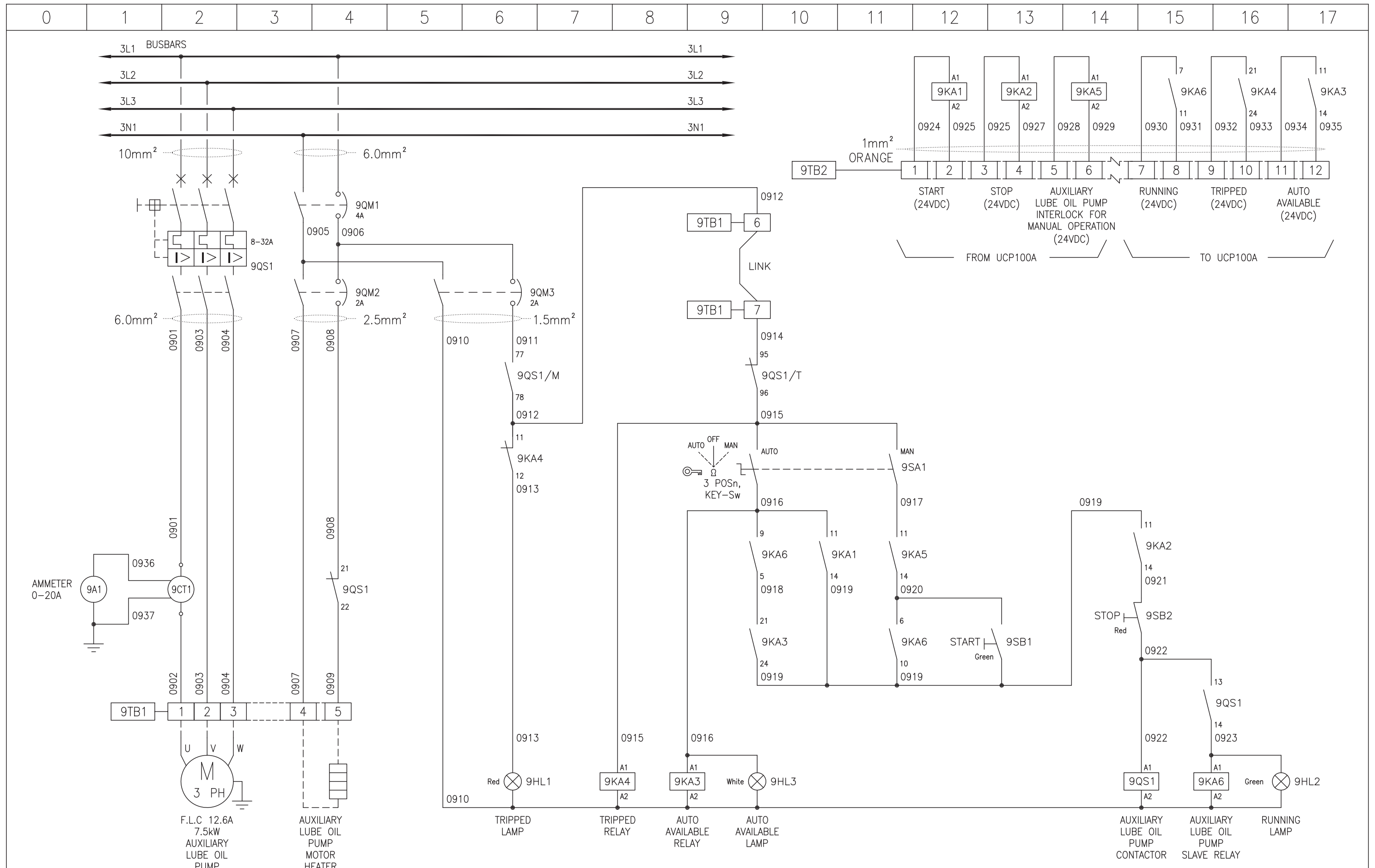
|         |  |
|---------|--|
| SERVICE | LUBE OIL HEATERS H100A & H101A (P100A) |
|---------|--|



CUBICLE SECTION 'G'

SERVICE LUBE OIL HEATERS H100B & H101B (P100B)

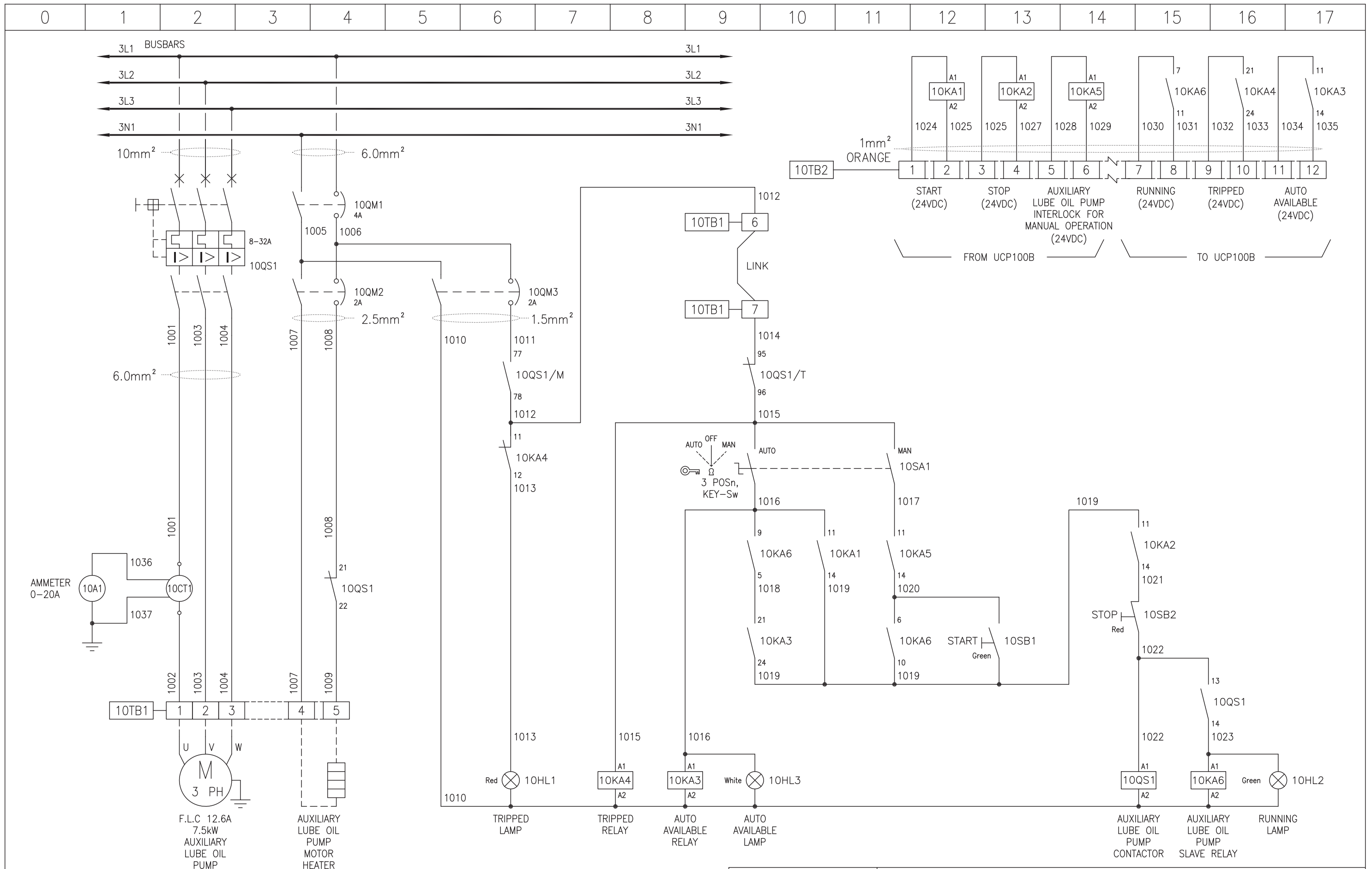




CUBICLE SECTION 'H'

SERVICE

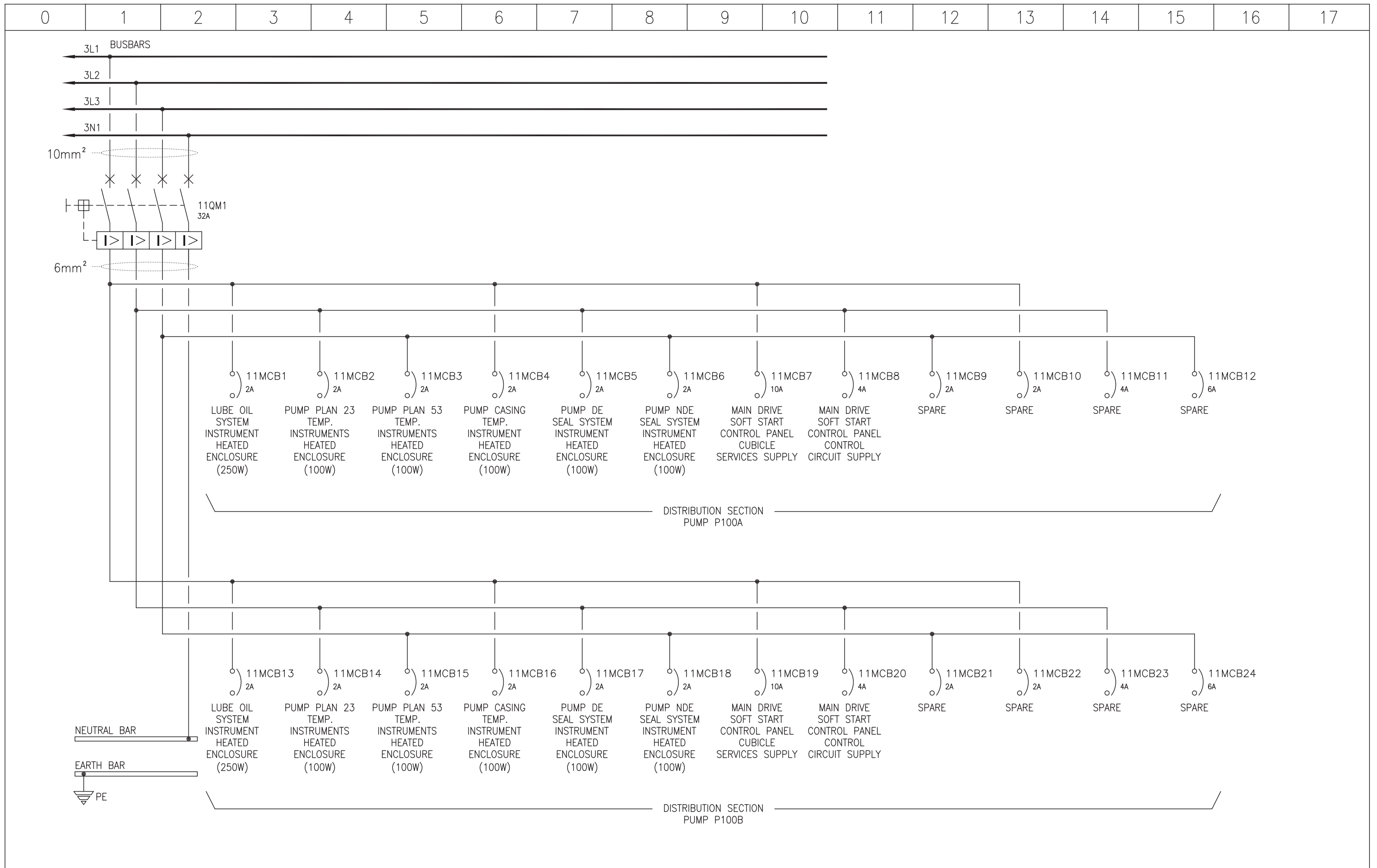
AUXILIARY LUBE OIL PUMP P101A (P100A)



CUBICLE SECTION 'I'

SERVICE

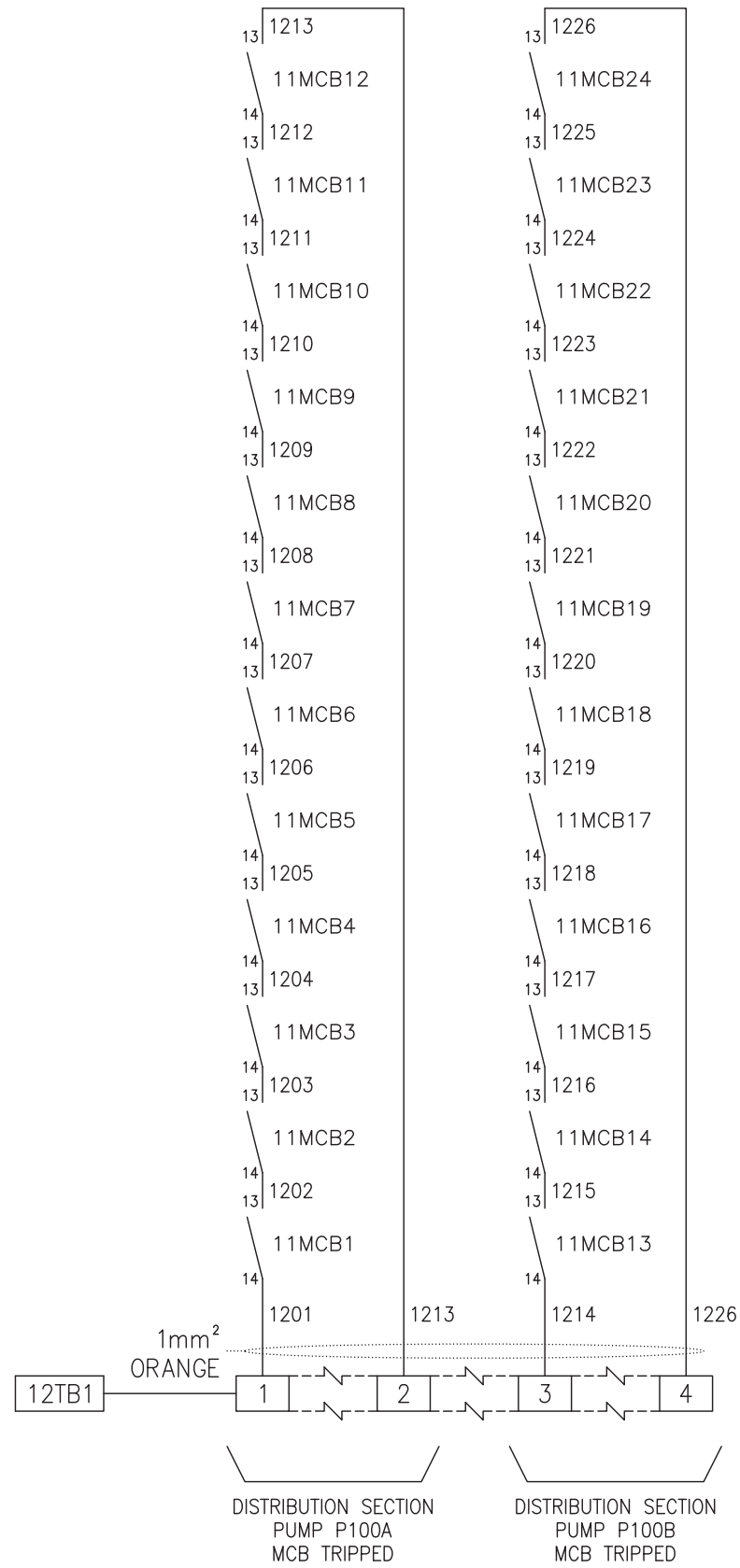
AUXILIARY LUBE OIL PUMP P101B (P100B)



CUBICLE SECTION 'J'

SERVICE

DISTRIBUTION SECTION



|         |                      |
|---------|----------------------|
| SERVICE | DISTRIBUTION SECTION |
|---------|----------------------|

| SHEET | TAG No. | SERVICE DESCRIPTION                               |
|-------|---------|---|
| 01    |         | COVER SHEET                                       |
| 02    |         | NOTES SHEET                                       |
| 03    |         | INCOMER No.1, INCOMER No.2 & MAINS CHANGEOVER     |
| 04    |         | MAINS CHANGEOVER & METERING                       |
| 05    |         | MAIN DRIVE MOTOR ANTI-CONDENSATION HEATER (P100A) |
| 06    |         | MAIN DRIVE MOTOR ANTI-CONDENSATION HEATER (P100B) |
| 07    |         | LUBE OIL HEATERS H100A & H101A (P100A)            |
| 08    |         | LUBE OIL HEATERS H100B & H101B (P100B)            |
| 09    |         | AUXILIARY LUBE OIL PUMP P101A (P100A)             |
| 10    |         | AUXILIARY LUBE OIL PUMP P101B (P100B)             |
| 11    |         | DISTRIBUTION SECTION                              |
| 12    |         | DISTRIBUTION SECTION                              |
| 13    |         | INDEX SHEET (THIS SHEET)                          |

| SHEET | TAG No. | SERVICE DESCRIPTION |
|-------|---------|---------------------|
|       |         |                     |

|         |             |
|---------|-------------|
| SERVICE | INDEX SHEET |
|---------|-------------|