IN ALL CASES CT BLOCK TO BE IN AN ENCLOSURE ACCESSIBLE DURING NORMAL OPERATION.

CT BLOCK TO BE FITTED AT REAR AS 400979 SHEET 2

INSTRUMENTS:
ANALOGUE VOLTMETER WITH SELECTOR
METER TO BE 7550:1 ON TO READ:
ALL PHASES + NEUTRAL CURRENT

FOR VARIABLE LOADS GREATER THAN 60A, CT ARRANGEMENT AS 400979 SHEET 2

INSTRUMENTS:
ANALOGUE VOLTMETER AND SELECTOR
METER TO BE 7550:1 ON TO READ:
ALL PHASES + EARTH LEAKAGE

CTs TO BE INSTALLED AS 400979 SHEET 3

INSTRUMENTS:
ELECTRONIC DEVICE (22000:1)
METERS — NONE

FOR VARIABLE LOADS GREATER THAN 60A, CT ARRANGEMENT AS 400979 SHEET 3

INSTRUMENTS:
ELECTRONIC DEVICE (22000:1)
METERS — NONE

WHERE TWO INCOMERS ARE USED SUMMATION CT'S TO BE FITTED FOR METER CONNECTION

SUB-DISTRIBUTION BOARDS ETC WITH VARIABLE LOADS > 50A
CT ARRANGEMENT AS 400979 SHEET 1

INSTRUMENTS:
AS MAIN SWITCHBOARD OUTGOING
METERS — NONE
Standard CT arrangement for all Substation and department switchboards (INCOMERS)

Switchboard Enclosure
(Accessible during normal operation)

Separate Enclosure

ION7550

Notes
CTs to be Class 1
CTs to be 10VA or greater
CT secondary to be 5A
CT Ratio dependant on Site

Analogue Voltmeters to be mounted adjacent to switchgear, complete with selector switches.
Standard CT arrangement for all Substation and department switchboards (OUTGOING)

CT's to be Class 1
CT's to be 10VA or greater
CT secondary to be 5A
CT Ratio dependant on Site

Notes:

E/L instrument to be fitted only as follows:
- Departmental Switchboard
- Riser Top Offs
- Sub-Distribution

Terminal Blocks

ION 6200

Switchboard Enclosure
(Accessible during normal operation)
GENERAL NOTES
1) SWITCHBOARD TO P31
2) SWITCHBOARD INCOMING TO FORM 4a TYPE 6 / OUTGOING TO FORM 4a TYPE 2
3) SPECIAL FINISH - COLOUR OXFORD BLUE
4) BUSBAR RATED TO INCOMING DEVICE - Min 500 VA FOR 1 SEC
5) MVCB AT FRONT OF PANEL
6) FUSE SURGE PROTECTION DIMENSIONS REQUIRED
7) ALL OUTGOING MCBS WILL BE 4P PLUG IN MERLIN GERIN NS RANGE
8) • DENOTES TRANSIT SPLITS (TO BE AGREED)
9) INCOMERS AND BUSBARS SHOWN FOR BOTTOM ENTRY

INCOMING CIRCUIT
1) 4 x 4 CTs FOR REMOTE METERING FACILITY ONLY (CONTINUOUS)
2) CURRENT / VOLTAGE BLOCKS FOR REMOTE METERING
   TO BE POSITIONED FOR SAFE ACCESS
   SEE STANDARD WIRING DIAGRAM OXFORD 5
3) 1 x 4 ANALOGUE VOLTMETER - SEL SW READING PH TO PH
   & PH TO NEUTRAL VOLTS (ADDITIONAL SEL SW TO INDICATE
   INCOMING VOLTS / BUSBAR VOLTS IF MORE THAN 1 INCOMER)
4) INCOMING MCB TO BE MERLIN GERIN 4 POLE FIXED TYPE NS RANGE
5) INCOMING MCB TO BE PADLOCKABLE ON / OFF
6) REMOVABLE FRAME ANGLE AT INCOMING CABLE ENTRY

BUS-SECTION
1) MCB TO BE MERLIN GERIN 4 POLE FIXED TYPE NS RANGE

OUTGOING CIRCUITS
1) 4 x 4 CTs - CAUTION METER + E/L AMMETER
   SEE STANDARD WIRING DIAGRAM OXFORD 4
   GT SHARING BLOCKS TO BE POSITIONED FOR SAFE ACCESS
   NO REMOTE METERING BLOCKS ARE REQUIRED
   NO VOLTAGE RTF REQUIRED
2) NO AUXILIARIES ARE FITTED
3) FOR ALL MCBs UP TO 250A - ALL CTs WILL BE 250/5
4) FOR ALL MCBs 400A TO 630A - ALL CTs WILL BE 600/5
5) ALL MCBs ARE PADLOCKABLE ON / OFF
6) ALL FUTURE CIRCUITS EQUIPPED WITH PLUG IN BASE,
   ALL COPPER CABLES, CTs & WIRING BUT WITHOUT METER
GENERAL NOTES
1) SWITCHBOARD TO IP31
2) SWITCHBOARD TO FORM 4 TYPE 6
3) SPECIAL FINISH – COLOUR OXFORD BLUE
4) BUSBARS RATED TO INCOMING DEVICE – 50 KA FOR 1 SEC
5) MIMIC ON FRONT OF PANEL
6) FUSE SURGE PROTECTION DEVICES IF REQUIRED
   TYPE ESP415 M1 – WIRED FOR REMOTE INDICATION
7) ALL OUTGOING MCCB's WILL BE PLUG IN TYPE N
8) * DENOTES TRANSIT SPLITS

INCOMING CIRCUIT
1) 4 No CT's FOR REMOTE METERING FACILITY ONLY
2) CURRENT / VOLTAGE BLOCKS FOR REMOTE METERING
   TO BE POSITIONED FOR SAFE ACCESS
   SEE STANDARD WIRING DIAGRAM OXFORD 3
3) 1 No ANALOGUE VOLTMETER + SEL SW READING PH TO PH
   & PH TO NEUTRAL VOLTS (ADDITIONAL SEL SW TO INDICATE
   INCOMING VOLTS / BUSBAR VOLTS IF MORE THAN 1 INCOMER)
4) INCOMING MCCB TO BE MERLIN GERIN 4 POLE FIXED TYPE N
5) INCOMING MCCB TO BE PADLOCKABLE ON / OFF
6) REMOVABLE FRAME ANGLE AT INCOMING CABLE ENTRY

OUTGOING CIRCUITS
1) 4 No CT's = 1 No POWER MEASUREMENT 620011N = E/L AMMETER +
   SEE STANDARD WIRING DIAGRAM OXFORD 4
   CT SHORTING BLOCKS TO BE POSITIONED FOR SAFE ACCESS
   NO REMOTE METERING BLOCKS ARE REQUIRED
   NO VOLTAGE REF REQUIRED
2) NO AUXILIARIES ARE FITTED
3) FOR ALL MCCB's UP TO 250A – ALL CT's WILL BE 250/5
4) FOR ALL MCCB's 400A TO 630A – ALL CT's WILL BE 600/5
5) ALL MCCB's ARE PADLOCKABLE ON / OFF
6) ALL FUTURE CIRCUITS EQUIPPED WITH PLUG IN BASE
   ALL COPPER CONNS, CT's & WIRING BUT WITHOUT METERS

TYPICAL BUILDING LV SWITCHBOARD (Single Incomer)

University Estates Directorate
Drawing No. E600987J

REV A December 2023

Length: 2200
Width: 1800
Height: 370

Panel 1: 125KG
Panel 2: 300KG
Panel 3: 100KG

Oxford OX1 1RE
Telephone 2199 777 777

Oxford Estates Services Limited

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CT BLOCK TO BE FITTED AT REAR AS E400979 SHEET 2

INSTRUMENTS
ANALOGUE VOLTMETER WITH SELECTOR
METER TO BE 7550:1
TO READ:
ALL PHASES + NEUTRAL CURRENT

FOR VARIABLE LOADS GREATER THAN 60A, CT ARRANGEMENT AS E400979 SHEET 3

INSTRUMENTS:
ELECTRONIC DEVICE (6200:1ON)
METERS = NONE

WHERE TWO INCOMERS ARE USED SUMMATION CT'S TO BE FITTED FOR METER CONNECTION

FOR VARIABLE LOADS GREATER THAN 60A, CT ARRANGEMENT AS E400979 SHEET 3

INSTRUMENTS:
ELECTRONIC DEVICE (6200:1ON)
METER TO BE 7550:1
TO READ:
ALL PHASES + EARTH LEAKAGE
METERS = NONE

SUB-DISTRIBUTION BOARDS ETC WITH VARIABLE LOADS > 50A CT ARRANGEMENT AS E400979 SHEET 2

INSTRUMENTS:
AS MAIN SWITCHBOARD OUTGOING
METERS = NONE

GENERAL ARRANGEMENT OF METERING/INSTRUMENTATION
UNIVERSITY BUILDINGS

University Estates Directorate
Date: 10.01.2004

Scale: 1:50

Drawn by: JPB (CAG) E400978
Standard CT arrangement for all Substation and department switchboards (INCOMERS)

Switchboard Enclosure
(Accessible during normal operation)

Separate Enclosure

ION7550

CT, a to be Class 1
CT, a to be 10VA or greater
CT secondary to be 5A
CT Ratio dependent on Site

Analogue Voltimeters to be mounted adjacent to switchgear, complete with selector switches.
Standard CT arrangement for all Substation and department switchboards (OUTGOING)

CT's to be Class 1
CT's to be 10VA or greater
CT secondary to be 5A
CT Ratio dependant on Site

Terminal Blocks

ION 6200

E/L instrument to be fitted only as follows:
- Departmental Switchboard
- Riser Top Offs
- Sub-Distribution

Switchboard Enclosure
(Accessible during normal operation)
GENERAL NOTES
1) SWITCHBOARD TO REMARK A TYPE 6
2) SWITCHBOARD TO REMARK A TYPE 6
3) SPECIAL FINISH - COLOUR OXFORD BLUE
4) ALLEL DOORS TO BE REMOVABLE & RULOCOMA LASE
5) PCBARDS TO BE MIN 1600A - MIN 600A FOR 1 SEC
6) FUSE SURGE PROTECTION OXIDES ON BOTH INCOMERS (IF REQUIRED)
7) WHITE MMC DIAGRAM ON FRONT OF SWITCHBOARD

INCOMING CIRCUITS
1) 4 x 4 CT's FOR REMOTE METERING FACILITY
   CURRENT / VOLTAGE TERMINAL BLOCKS FOR REMOTE METERING TO BE
   POSITIONED IN THE REAR OF THE SWITCHBOARD
2) 1 x 4 ANALOGUE VOLTMETER = EN ITJ READS PH TO PH & PH TO NCV VOLTS
   SEPARATE SEL 50A TO INDICATE INCOMING VOLS / BUS BY VOLTS
3) INCOMING AC/DC & 1 POLAR CONTROLS FITTED WITH W/PRO 3D / UNRESTRICTED
   EARTH FAULT, 250 VOLT DE-ENERGISED
   FOR REMOTE TRIPPING AND CLOSING
4) 2 NO/2 N/O AUXILIARY WIRED TO TERMINALS FOR REMOTE INDICATION

OUTGOING CIRCUITS
1) 4 x 4 CT's - 1 NO 4 KVA METER & ANALOGUE TACH / LIMIT WATT METER
   SEE OXFORD 2 STANDARD Wiring Diagram - CT SHORTHIT IN FRONT INSTRUMENT COMPARTMENT
2) NO AUXILIARY CONTACTS FITTED UNLESS SPECIFIED
3) ALL FUTURE CIRCUITS EQUIPPED WITH PLUS INBASE & ALL COPPER CABLES OUT WITHOUT CT'S OR INSTRUMENTS
4) FOR ALL WADS UP TO 250A ALL CT'S WILL BE 200/5
   5) ALL OUTGOING CIRCUITS TO REMARK A 4 POLE MINUS OXEN WADS IN CT'S RANGE

TYPICAL SUBSTATION LV SWITCHBOARD

University Estates Directorate
Director: John Smith
Telephone: 01234 567890

Drawing Date: May 2024

File Name: T4008971

Drawn by: John Doe

Software: AutoCAD

REVISION HISTORY

01/05/2024 - Revised by John Doe

10/06/2024 - Approved by John Smith
GENERAL NOTES
1) SWITCHBOARD TO IP31
2) SWITCHBOARD TO FORM 4 TYPE 6
3) SPECIAL FINISH - COLOUR OXFORD BLUE
4) BUSBARS RATED TO INCOMING DEVICE - 50 kA FOR 1 SEC
5) MIMIC ON FRONT OF PANEL
6) FUSE SURGE PROTECTION DEVICE(+ REQUIRED)
   TYPE ESP415 M1 - WIRED FOR REMOTE INDICATION
7) ALL OUTGOING MCCB's WILL BE PLUG IN TYPE N
8) * DENOTES TRANSIT SPLITS

INCOMING CIRCUIT
1) 4 No CT's FOR REMOTE METERING FACILITY ONLY
2) CURRENT / VOLTAGE BLOCKS FOR REMOTE METERING
   TO BE POSITIONED FOR SAFE ACCESS
   SEE STANDARD WIRING DIAGRAM OXFORD 3
3) 1 No ANALOGUE VOLTMETER + SEL SW READING PH TO PH
   & PH TO NEUTRAL VOLTS (ADDITIONAL SEL SW TO INDICATE
   INCOMING VOLTS / BUSBAR VOLTS IF MORE THAN 1 INCOMER)
4) INCOMING MCCB TO BE MERLIN GERIN 4 POLE FIXED TYPE N
5) INCOMING MCCB TO BE PADLOCKABLE ON / OFF
6) REMOVABLE FRAME ANGLE AT INCOMING CABLE ENTRY

OUTGOING CIRCUITS
1) 4 No CT's = 1 No POWER MEASUREMENT 620010N = E/L AMMETER +
   SEE STANDARD WIRING DIAGRAM OXFORD 4
   CT SHORTING BLOCKS TO BE POSITIONED FOR SAFE ACCESS
   NO REMOTE METERING BLOCKS ARE REQUIRED
   NO VOLTAGE REF REQUIRED
2) NO AUXILIARIES ARE FITTED
3) FOR ALL MCCB's UP TO 250A - ALL CT's WILL BE 250/5
4) FOR ALL MCCB's 400A TO 630A - ALL CT's WILL BE 600/5
5) ALL MCCB's ARE PADLOCKABLE ON / OFF
6) ALL FUTURE CIRCUITS EQUIPPED WITH PLUG N BASE,
   ALL COPPER CONNS, CT's & WIRING BUT WITHOUT METERS

TYPICAL BUILDING LV SWITCHBOARD (Single Incomer)