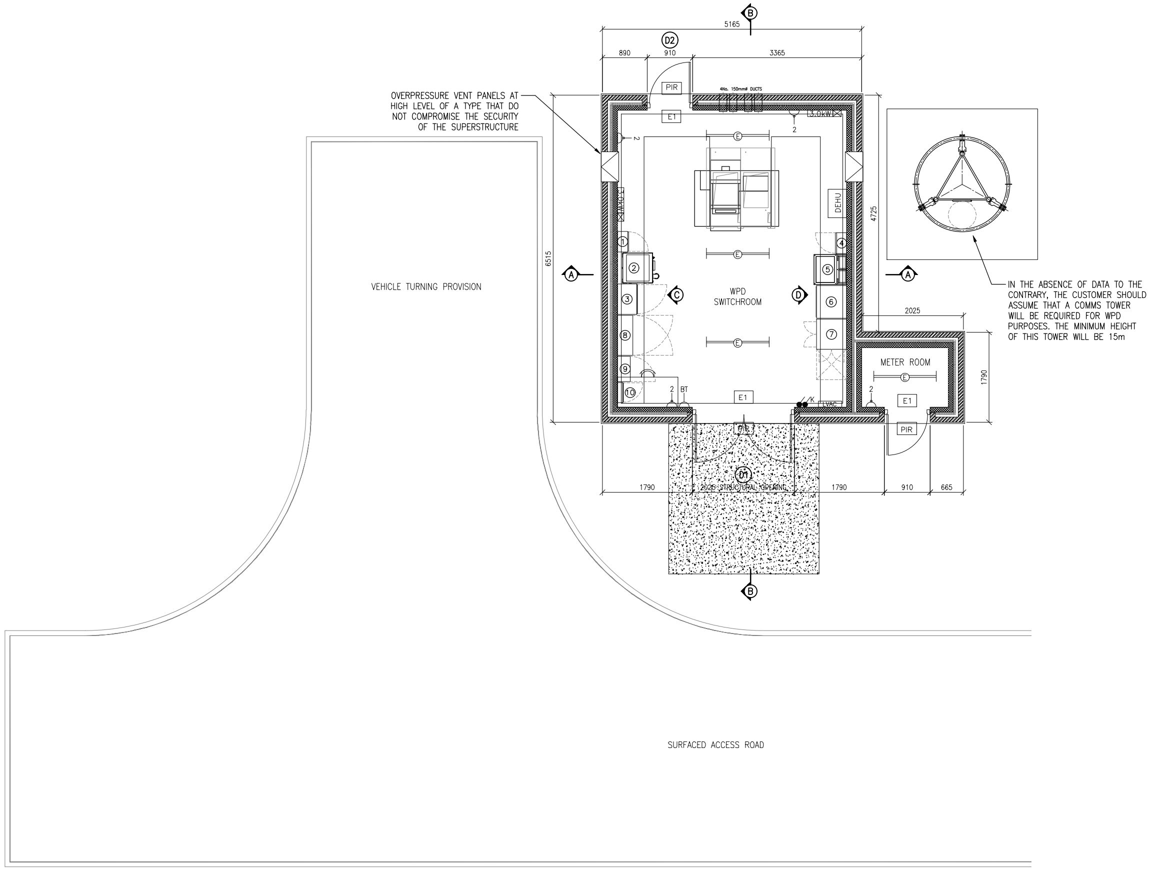


EQUIPMENT SCHEDULE				
REF	DESCRIPTION	DIMENSIONS (mm)	WEIGHT*	CONTESTIBLE / NON CONTESTIBLE
1	24/48V 6 WAY DISTRIBUTION BOARD	410(W)x220(D)x650(H) WALL MOUNTED	25kg	C
2	24/48V BATTERY CHARGER & BATTERY	600(W)x650(D)x2000(H) FLOOR MOUNTED	334kg	C
3	TELECONTROL OUTSTATION (IBOX)	600(W)x400(D)x800(H) WALL MOUNTED	50kg	NC
4	110V 6 WAY DISTRIBUTION BOARD	410(W)x220(D)x650(H) WALL MOUNTED	25kg	C
5	110V BATTERY CHARGER & BATTERY	600(W)x650(D)x1960(H) FLOOR MOUNTED	488kg	C
6	INTERTRIPPING DIP 5000 PANEL	650(W)x610(D)x2275(H) FLOOR MOUNTED	220kg	NC
7	TELECOMS MULTIPLEXER PANEL	600(W)x600(D)x2275(H) FLOOR MOUNTED	20kg	NC
8	GENERATION CONSTRAINT PANEL	800(W)x1000(H)x300(D) WALL MOUNTED	70kg	NC
9	GCP INTERFACE PANEL	500(W)x600(H)x250(D) WALL MOUNTED	20kg	C
10	ANM PANEL	400(W)x120(D)x800(H) WALL MOUNTED	20kg	NC

* WHERE WEIGHTS ARE INDICATED FOR CONTESTABLE APPARATUS, THEY RELATE TO THOSE OF WPD VARIANTS & MAY BE DISCOUNTED IF NOT APPLICABLE

NOTES:

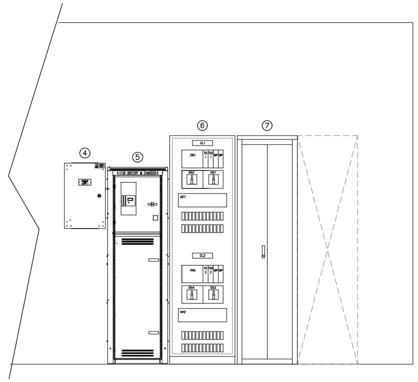
THIS DRAWING IS TO BE READ IN CONJUNCTION WITH WPD DOCUMENT – '33kV INDOOR METERED CONNECTION – GUIDANCE FOR SUBSTATION DESIGNERS.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH SHEET 2.

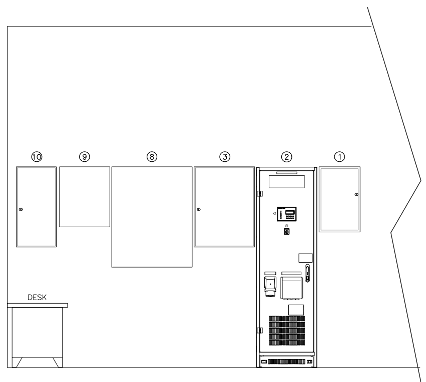
THIS DRAWING SETS OUT THE SPATIAL REQUIREMENTS FOR A SINGLE CIRCUIT INDOOR METERED CONNECTION SUBSTATION. IT SHOULD NOT BE CONSIDERED TO BE A CONSTRUCTION DOCUMENT BUT MAY BE USED BY DESIGNERS WORKING ON BEHALF OF A CUSTOMER SEEKING TO EVOLVE SUCH DESIGNS FOR THE DESIGN SUBMISSION PROCESS ASSOCIATED WITH SUCH A CONNECTION.

KEY TO LVAC SYMBOLS

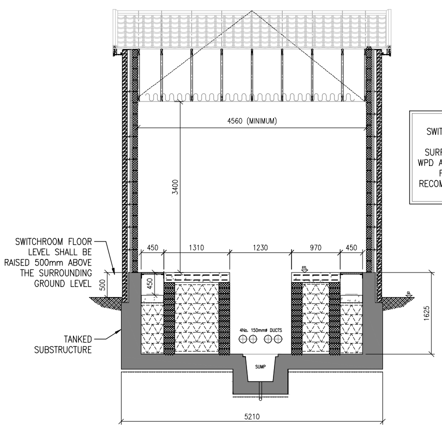
- 13A TWIN SWITCHED SOCKET OUTLET
- BT MASTER SOCKET (DEDICATED EXT LINE)
- TWIN 58w BATTEN FLUORESCENT LUMINAIRE WITH INTEGRAL EMERGENCY
- 3.0kW CONVECTOR HEATER – NORMAL OPERATING TEMP 10°C WITH PUSH BUTTON BOOST TO 18°C (TIMED FOR 2 HOURS) DIMPLEX PLX RANGE
- LVAC — LV METALCLAD 1Ø DISTRIBUTION BOARD WITH 4No SPARE 20A MCB WAYS RESRVED FOR WPD USE
- SINGLE GANG LIGHT SWITCH (ONE FOR ALL EXT LIGHTING AND 1 FOR ALL INTERNAL WITH TEST SOCKET)
- KEY SWITCH (TO SWITCH ALL EMERGENCY LIGHTS)
- DEHU — EBAC CD30E DEHUMIDIFIER WITH TRACE HEATED CONDENSATE DRAIN TO SUITABLE POINT OF DISPOSAL
- E1 — ILLUMINATED EMERGENCY EXIT SIGN
- PIR — PIR ACTIVATED 150w FLOOD LIGHT
- 600X600 TOP-HINGED OVERPRESSURE VENT PANELS AT HIGH LEVEL FITTED WITH SECURITY GRILLE.



ELEVATION 'C'
SCALE 1:50

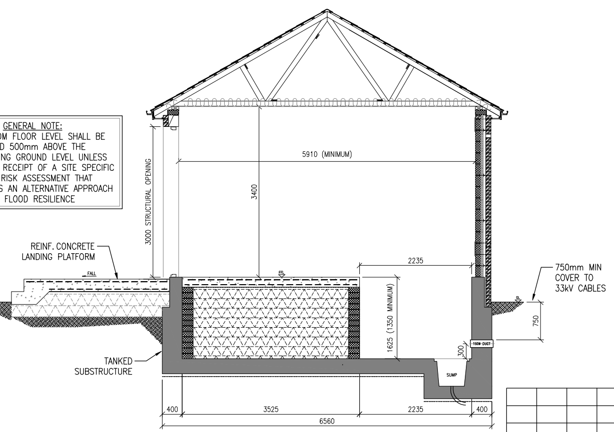


ELEVATION 'D'
SCALE 1:50



SECTION A–A
SCALE 1:50

GENERAL NOTE:
SWITCHROOM FLOOR LEVEL SHALL BE RAISED 500mm ABOVE THE SURROUNDING GROUND LEVEL UNLESS WPD ARE IN RECEIPT OF A SITE SPECIFIC FLOOD RISK ASSESSMENT THAT RECOMMENDS AN ALTERNATIVE APPROACH TO FLOOD RESILIENCE



SECTION B–B
SCALE 1:50

Rev No	Drawn	Chk'd	App'd	Date	Revision
7	L.F.			SEPT'17	SECTION ARROWS C & D CORRECTED.
6	L.F.			APR'17	DRAWING UPDATED & RE-ISSUED.

ORIGINAL ISSUE		Date
Drawn	LF	AUG 16
Checked		
Approved		
SCALE:	1:50	

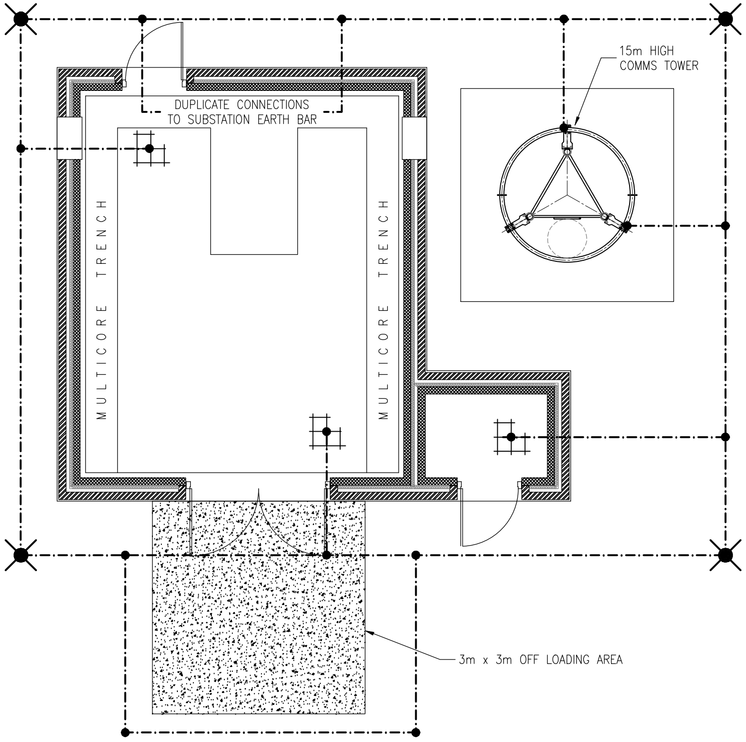
ORIGINAL SHEET SIZE: A1

WESTERN POWER DISTRIBUTION
Design Department.
Lamby Way, Rumney, Cardiff CF3 2EQ

WESTERN POWER DISTRIBUTION

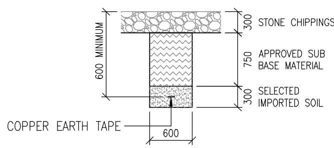
Title: TYPICAL 33kV INDOOR METERED TEE'D SWITCHGEAR BUILDING
BUILDING DETAILS
SHEET 1 OF 2

Drg. No. GCS0015–1
Rev No. 7



LEGEND

- BURIED EARTH ELECTRODE (600mm DEEP)
- VERTICAL EARTH ROD (MIN 3m LONG)
- CONNECTION TO FOUNDATION REBAR – INDICATIVE

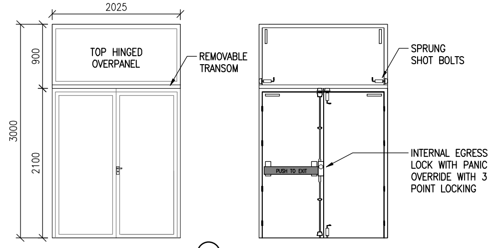


TYPICAL CROSS SECTION
THROUGH EARTH TAPE TRENCH

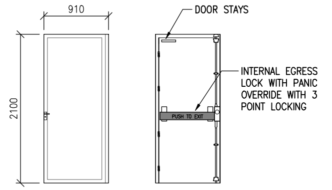
TYPICAL EARTHING LAYOUT

SCALE 1:50

THE ABOVE DESIGN IS INDICATIVE AND IS BASED UPON AN IDEALISED SITE. IT IS INTENDED MORE TO BROADLY IDENTIFY THE FEATURES COMPRISING THE EARTHING SYSTEM THAN TO BE A COVERALL DESIGN FOR ALL SITES. SITE SPECIFIC EARTHING DESIGN FOR A PARTICULAR SITE WILL BE THE RESPONSIBILITY OF THE ICP.



EXTERNAL DOOR ELEVATION (D1)   INTERNAL DOOR ELEVATION

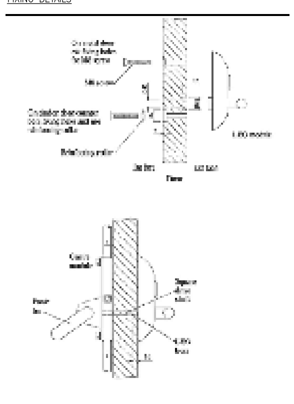


EXTERNAL DOOR ELEVATION   INTERNAL DOOR ELEVATION
(D2)

(D1) DOUBLE SECURITY STEEL DOORSET TO SUIT 3000mm HIGH STRUCTURAL OPENING. DOUBLE LEAF DOOR, ACTIVE LEAF SURELOCK McGILL SLIMLINE 3 POINT INTERNAL PANIC SYSTEM COMPLETE WITH LOCK WITH EMERGENCY OVERRIDE, EXTERNAL ACCESS DEVICE TO ACTIVE LEAF. PASSIVE LEAF TO HAVE HEAVY DUTY SPRUNG SHOOT BOLTS TO TOP AND BOTTOM.
HEAVY DUTY DOOR RESTRAINTS SHALL BE FITTED AT THE HEAD OF EACH DOOR LEAF AND THE TOP OF HINGED OVERPANEL, THEY SHALL BE CAPABLE OF HOLDING THE DOORS AND PANEL OPEN AT 90 DEGREES FITTED WITH EXTENDED HANDLES FOR RELEASE. REMOVAL TRANSOM AS PER DOOR MANUFACTURES RECOMMENDATION. ALL DOOR HINGES SHALL BE VANDAL RESISTANT / HEAVY DUTY WITH CONCEALED FIXINGS.
DOORS SHALL BE FITTED WITH A EXTERNAL S-11330 SURFACE LEO, EURO-PROFILE CYLINDER SECURE LOCKING ARRANGEMENT CAPABLE OF RECEIVING AN ABLOY CY336PT EURO-PROFILE CYLINDER ASSEMBLY. SEE DETAIL VIEWS WPD-SUITED CYLINDER WILL BE SUPPLIED BY WPD.

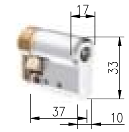
(D2) SINGLE DOOR AS ABOVE TO SUIT 2100mm HIGH STRUCTURAL OPENING.

FIXING DETAILS



DETAIL 1

DETAIL 2



HARDENED STEEL SATIN FINISH EURO PROFILE SINGLE CYLINDER BSEN1303 GRADE 2 RESISTANCE TO ATTACK GRADE 6 KEY RELATED SECURITY. TO FIT INTO EXTERNAL ESCAPE LOCKING DEVICE TO PROVIDE EXTERNAL KEY ACCESS.

DOOR SET & LOCKING DETAILS

NTS

NOTES:

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH WPD DOCUMENT – '33kV INDOOR METERED CONNECTION – GUIDANCE FOR SUBSTATION DESIGNERS.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH SHEET 1.

THIS DRAWING SETS OUT THE SPATIAL REQUIREMENTS FOR A SINGLE CIRCUIT INDOOR METERED CONNECTION SUBSTATION. IT SHOULD NOT BE CONSIDERED TO BE A CONSTRUCTION DOCUMENT BUT MAY BE USED BY DESIGNERS WORKING ON BEHALF OF A CUSTOMER SEEKING TO EVOLVE SUCH DESIGNS FOR THE DESIGN SUBMISSION PROCESS ASSOCIATED WITH SUCH A CONNECTION.

Rev No	Drawn	Chk'd	App'd	Date	Revision
7	L.F.			SEPT'17	SECTION ARROWS C & D CORRECTED.
6	L.F.			APR'17	DRAWING UPDATED & RE-ISSUED.

ORIGINAL ISSUE		Date
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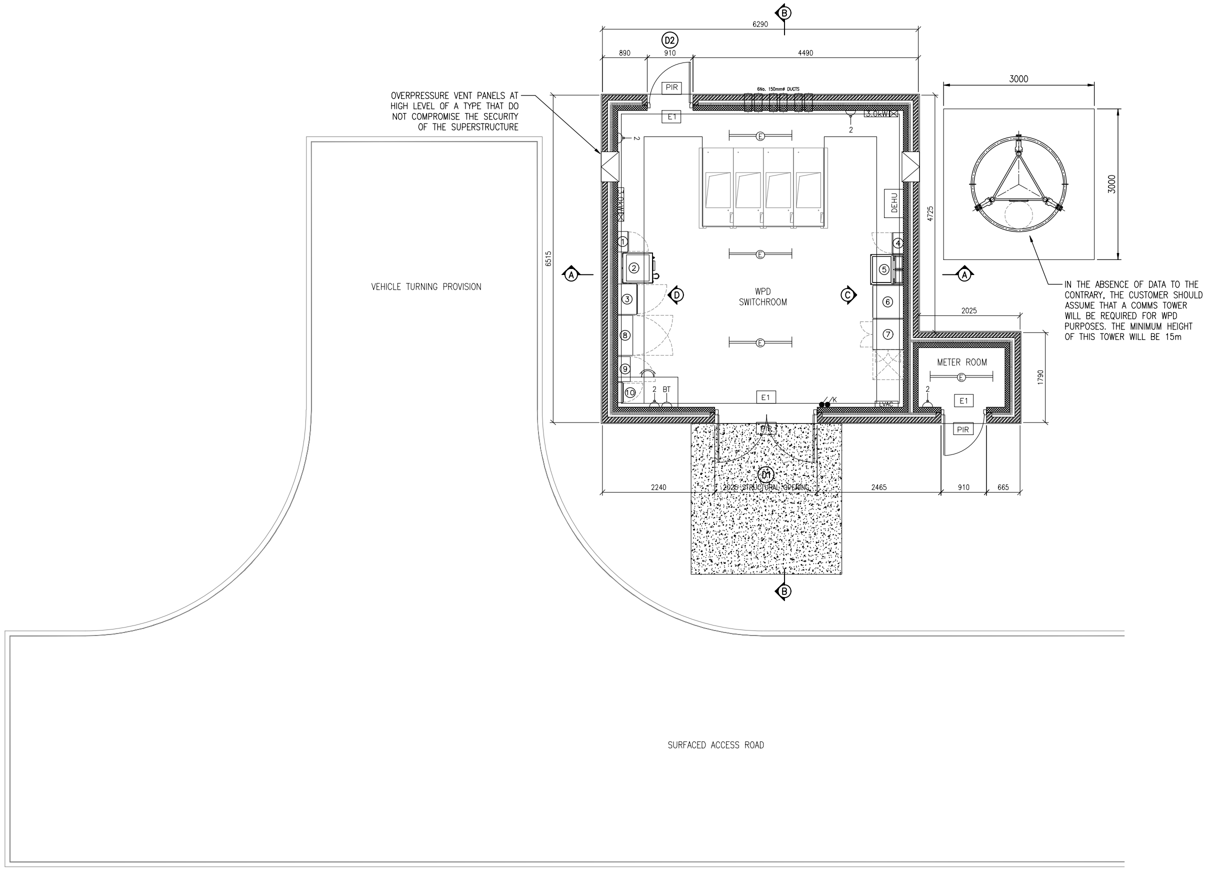
ORIGINAL SHEET SIZE: A2

WESTERN POWER DISTRIBUTION
Design Department.
Lamby Way, Rumney, Cardiff CF3 2EQ

WESTERN POWER DISTRIBUTION

Title: TYPICAL 33kV INDOOR METERED TEE'D SWITCHGEAR BUILDING
BUILDING DETAILS
SHEET 2 OF 2

Drg. No. GCS0015-2   Rev No. 7



EQUIPMENT SCHEDULE

REF	DESCRIPTION	DIMENSIONS (mm)	WEIGHT*	CONTESTIBLE / NON CONTESTIBLE
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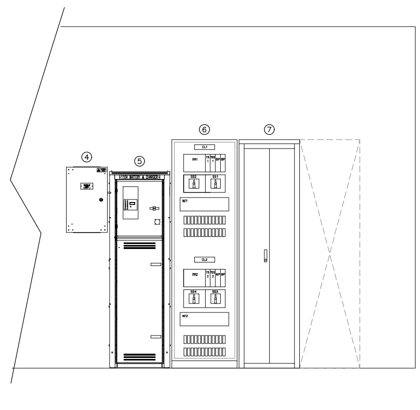

ELEVATION 'C'
SCALE 1:50

KEY TO LVAC SYMBOLS

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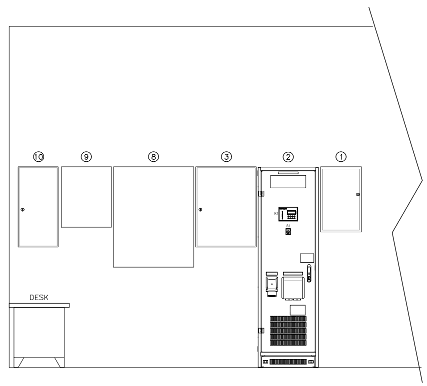
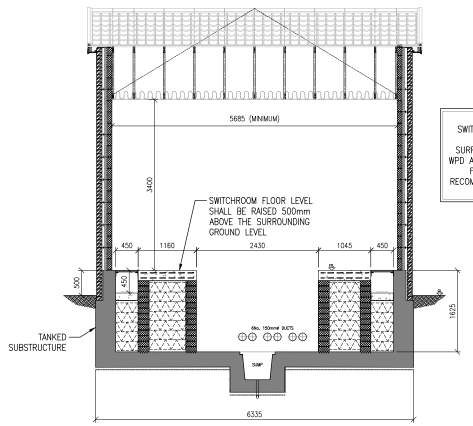
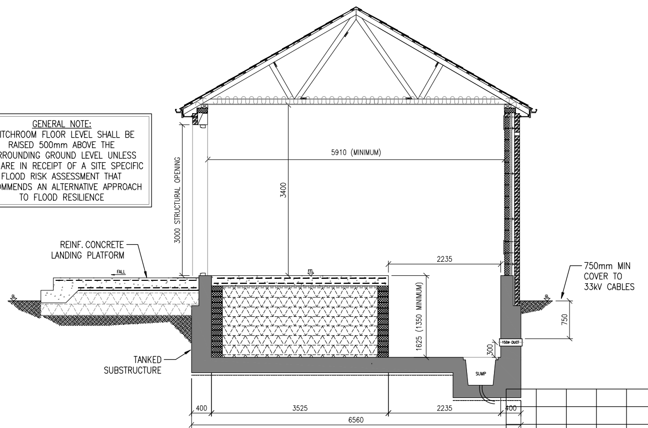


ELEVATION 'D'
SCALE 1:50



SECTION A–A
SCALE 1:50

GENERAL NOTE:
SWITCHROOM FLOOR LEVEL SHALL BE RAISED 500mm ABOVE THE SURROUNDING GROUND LEVEL UNLESS WPD ARE IN RECEIPT OF A SITE SPECIFIC FLOOD RISK ASSESSMENT THAT RECOMMENDS AN ALTERNATIVE APPROACH TO FLOOD RESILIENCE



SECTION B–B
SCALE 1:50

NOTES:

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH WPD DOCUMENT – '33kV INDOOR METERED CONNECTION – GUIDANCE FOR SUBSTATION DESIGNERS.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH SHEET 2.

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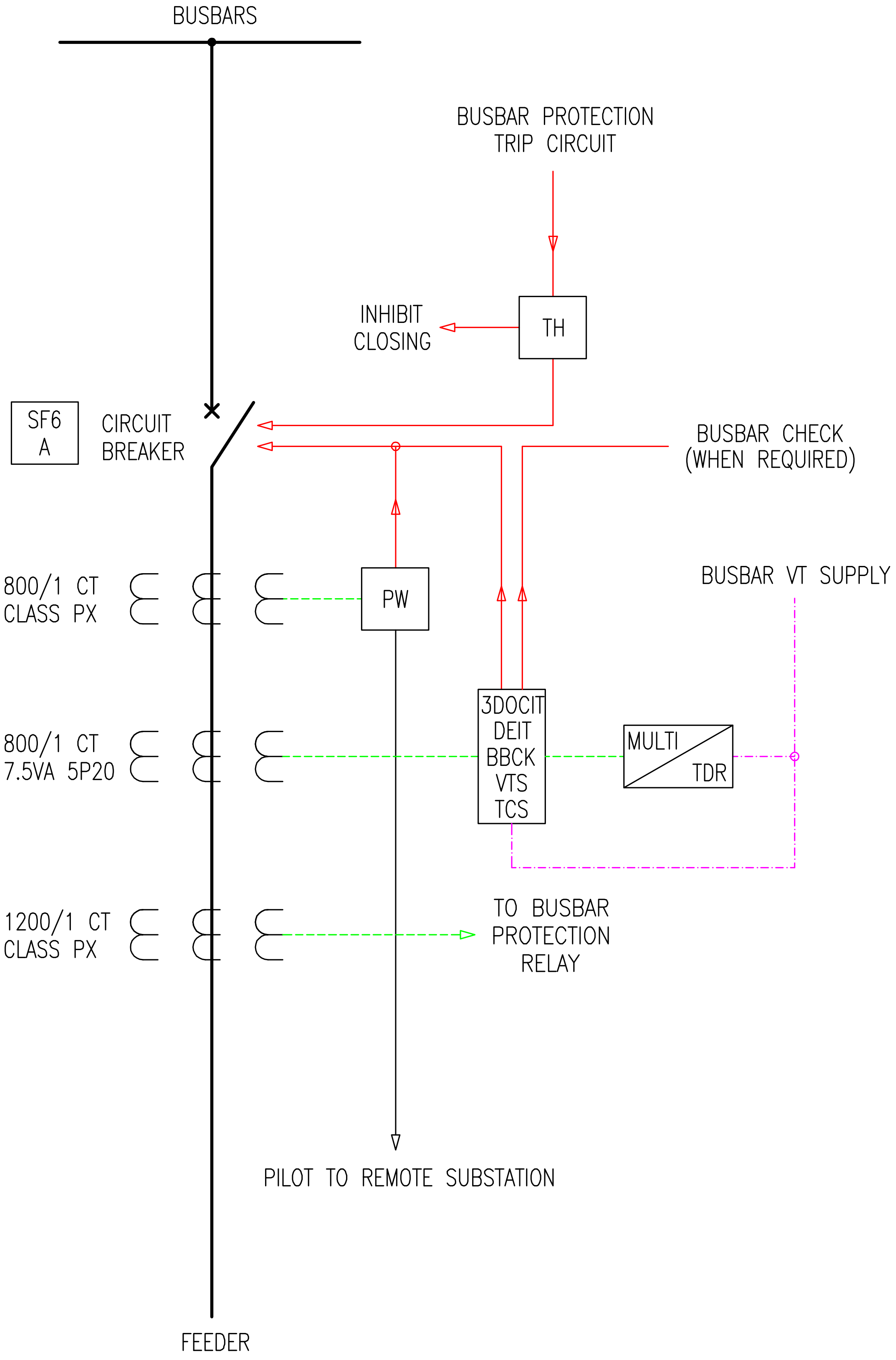
ORIGINAL SHEET SIZE: A1

WESTERN POWER DISTRIBUTION
Design Department.
Lamby Way, Rumney, Cardiff CF3 2EQ

Title: TYPICAL 33kV INDOOR 'LOOPED' SUBSTATION
BUILDING DETAILS
SHEET 1 OF 2

WESTERN POWER DISTRIBUTION

Drg. No. GCS0016-1 Rev No. 7



Rev No	Drawn	Chk'd	App'd	Date	Revision

ORIGINAL ISSUE		DATE
Drawn	CM	13/11/17
Checked		
Approved		
SCALE	NTS	

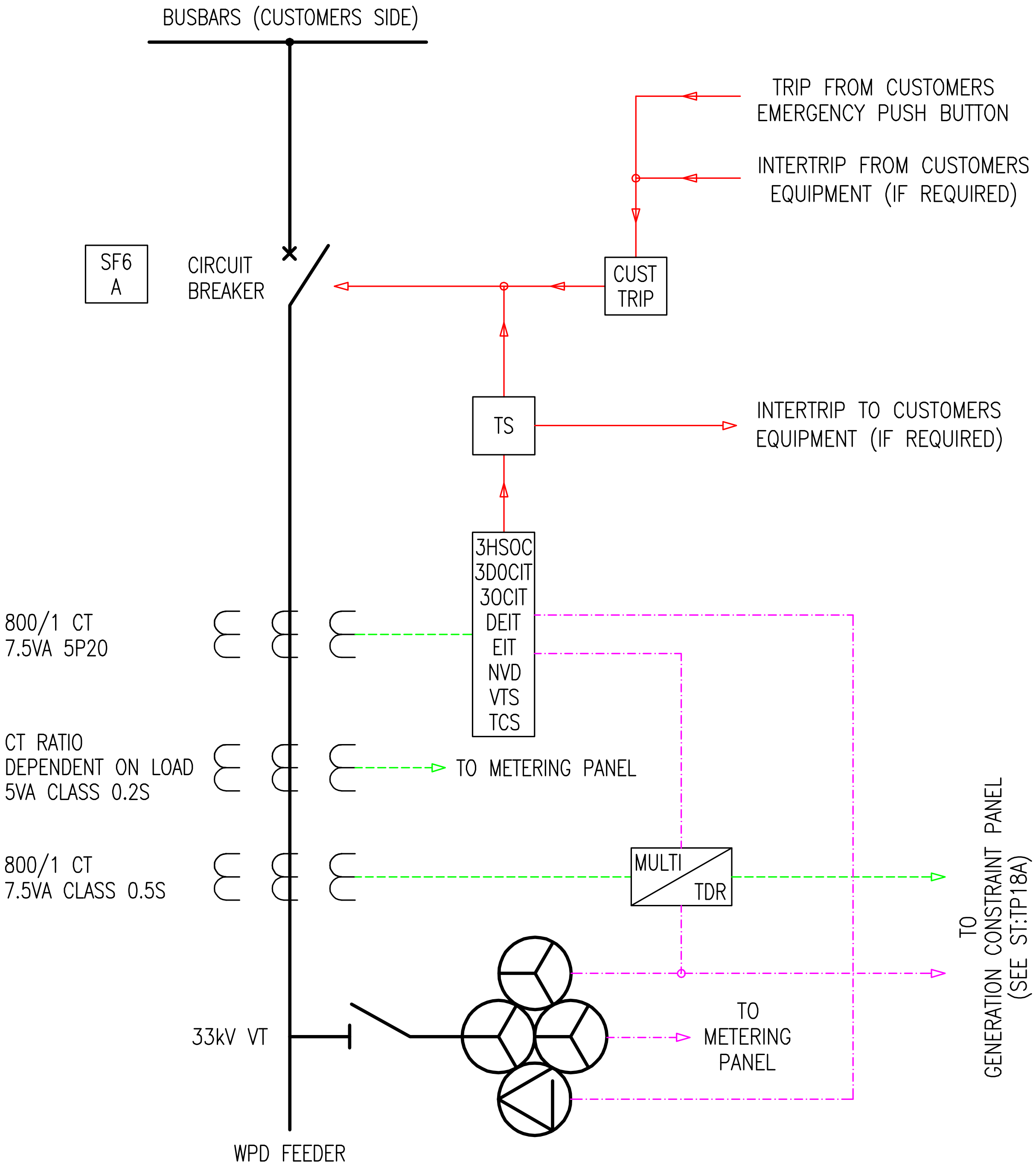
WESTERN POWER DISTRIBUTION
Design Department.
Avonbank, Feeder Road, Bristol BS2 0TB
Tel: 0117 933 2000 Fax: 0117 933 2001.

WESTERN POWER DISTRIBUTION

Title
SINGLE LINE DIAGRAM OF 36kV
FEEDER CIRCUIT WITH PILOT WIRE PROTECTION
(1250A BUSBARS)

Drg. No. SL36C5A

Rev No



Rev No	Drawn	Chk'd	App'd	Date	Revision

ORIGINAL ISSUE		DATE
Drawn	CM	13/11/17
Checked		
Approved		
SCALE	NTS	

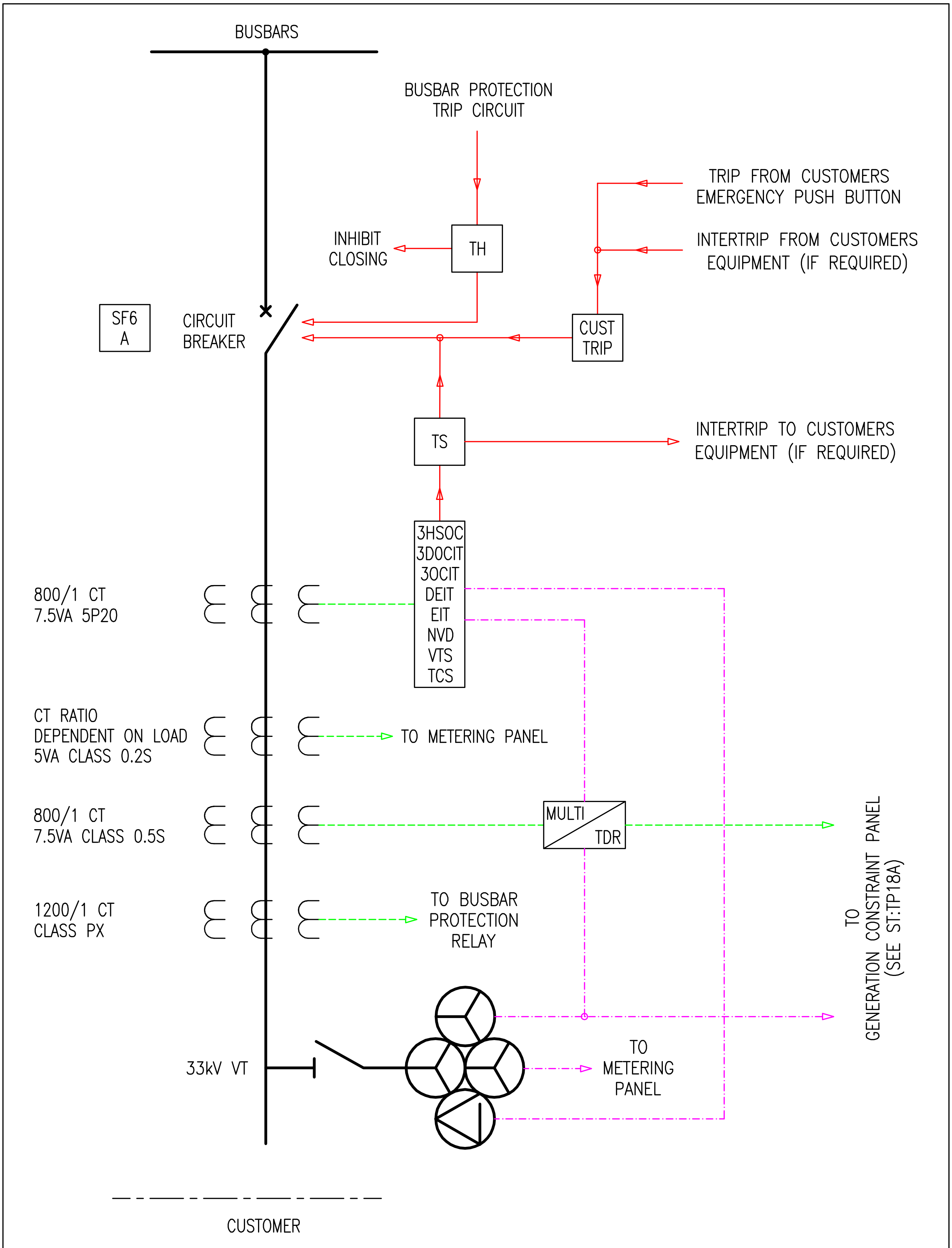
WESTERN POWER DISTRIBUTION
Design Department.
Avonbank, Feeder Road, Bristol BS2 0TB
Tel: 0117 933 2000 Fax: 0117 933 2001.

WESTERN POWER DISTRIBUTION

Title: SINGLE LINE DIAGRAM OF 36kV INCOMING CIRCUIT WITH METERING (1250A BUSBARS)

Drg. No. SL36C11A

Rev No



Rev No	Drawn	Chk'd	App'd	Date	Revision

ORIGINAL ISSUE	DATE
Drawn CM	13/11/17
Checked	
Approved	
SCALE NTS	

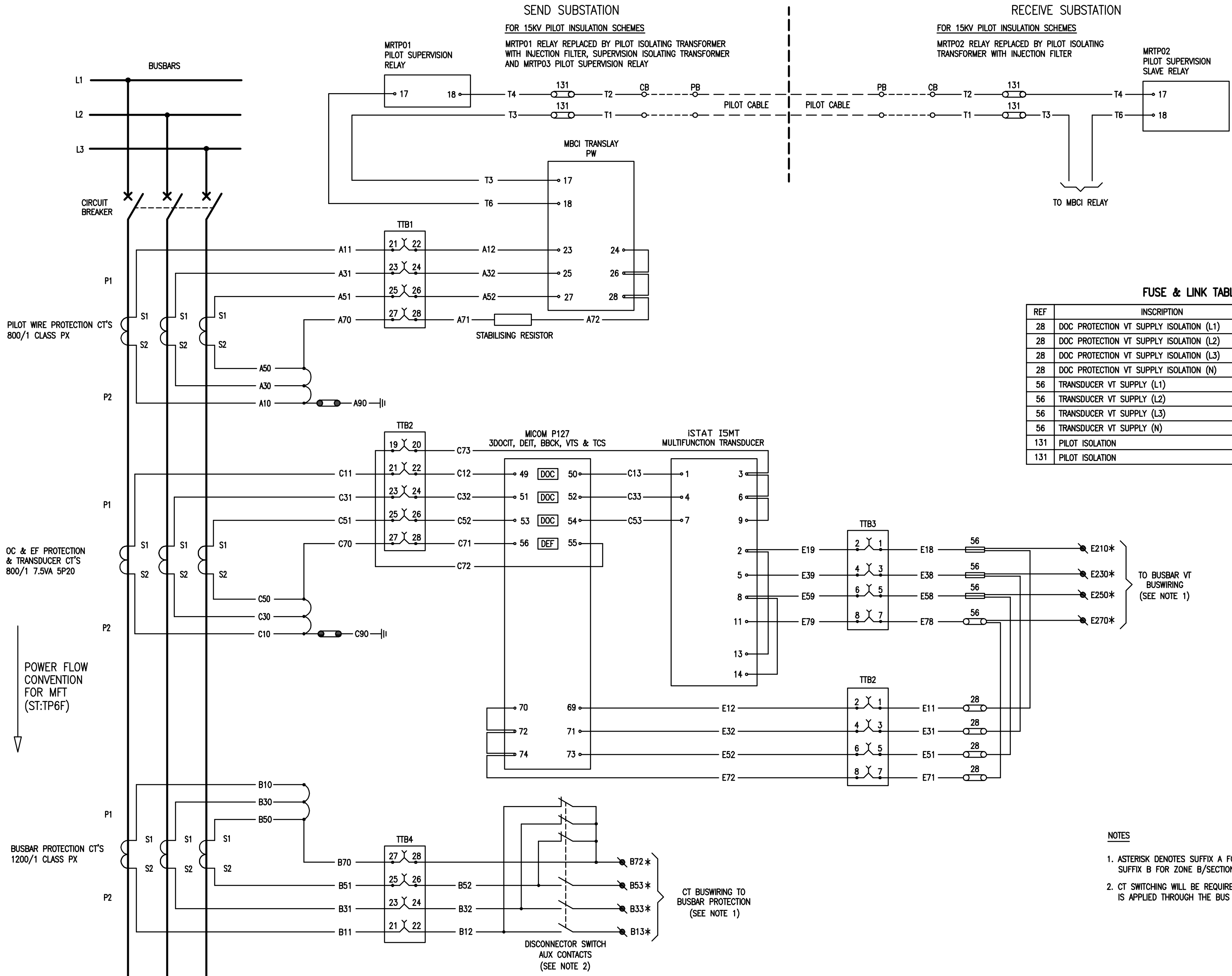
WESTERN POWER DISTRIBUTION
Design Department.
Avonbank, Feeder Road, Bristol BS2 0TB
Tel: 0117 933 2000 Fax: 0117 933 2001.

WESTERN POWER DISTRIBUTION

Title: SINGLE LINE DIAGRAM OF 36kV OUTGOING CIRCUIT WITH METERING (1250A BUSBARS)

Drg. No. SL36C12A

Rev No



FUSE & LINK TABLE

REF	INSCRIPTION		FUSE	LINK
28	DOC PROTECTION VT SUPPLY ISOLATION (L1)	110V AC		LINK
28	DOC PROTECTION VT SUPPLY ISOLATION (L2)	110V AC		LINK
28	DOC PROTECTION VT SUPPLY ISOLATION (L3)	110V AC		LINK
28	DOC PROTECTION VT SUPPLY ISOLATION (N)	110V AC		LINK
56	TRANSDUCER VT SUPPLY (L1)	110V AC	2A	
56	TRANSDUCER VT SUPPLY (L2)	110V AC	2A	
56	TRANSDUCER VT SUPPLY (L3)	110V AC	2A	
56	TRANSDUCER VT SUPPLY (N)	110V AC		LINK
131	PILOT ISOLATION	110V DC		LINK
131	PILOT ISOLATION	110V DC		LINK

NOTES

1. ASTERISK DENOTES SUFFIX A FOR ZONE A/SECTION A, SUFFIX B FOR ZONE B/SECTION B ETC.
2. CT SWITCHING WILL BE REQUIRED IF THE CIRCUIT MAIN EARTH IS APPLIED THROUGH THE BUS ZONE CT'S

Rev No	Drawn	Chk'd	App'd	Date	Revision

ORIGINAL ISSUE		Date
Drawn	CM	13/11/17
Checked		
Approved		
SCALE:	NTS	

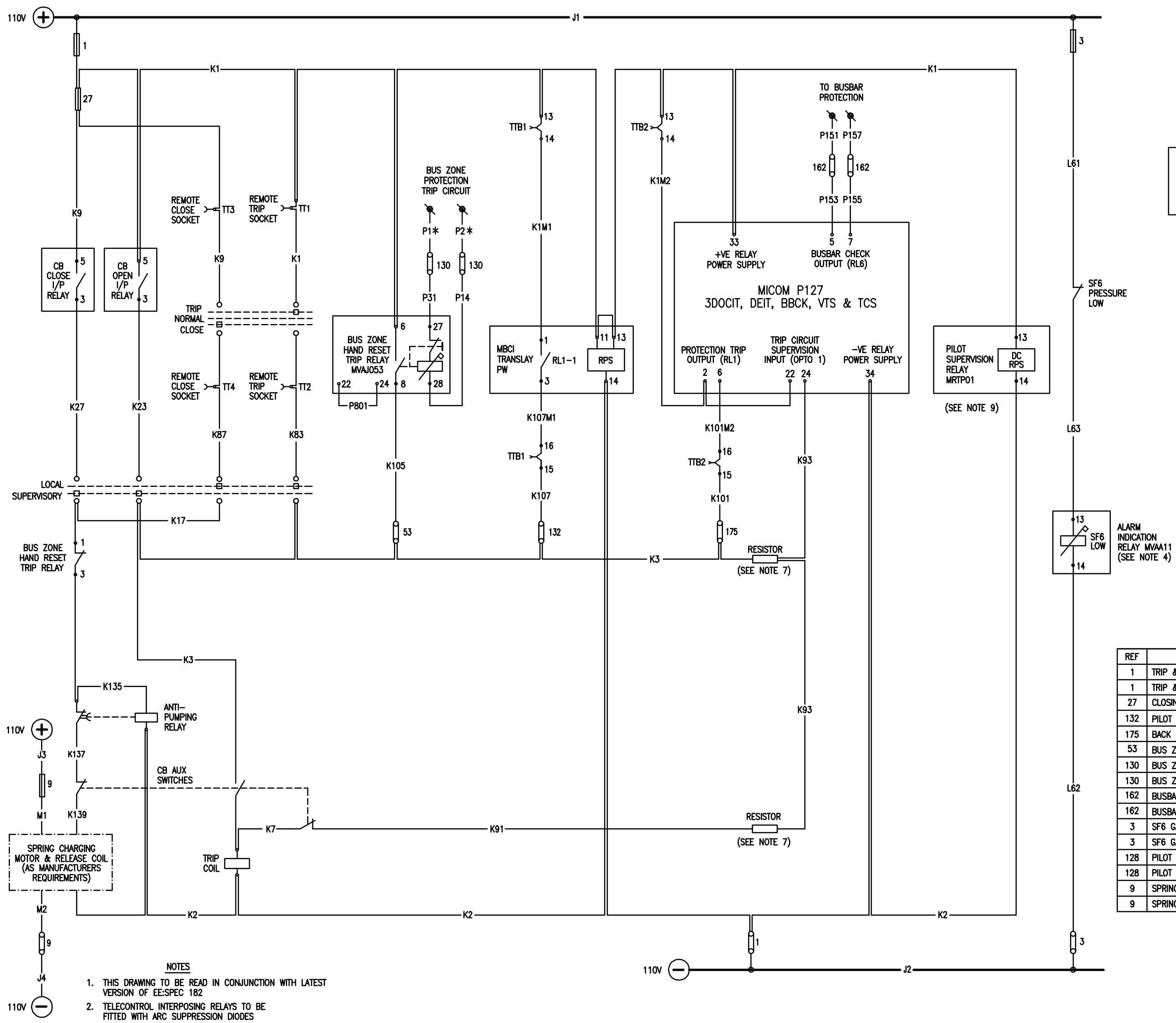
WESTERN POWER DISTRIBUTION
Design Department.
Avonbank, Feeder Road, Bristol BS2 0TB
Tel: 0117 933 2000 Fax: 0117 933 2001.

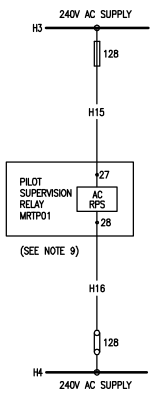
Title AC PROTECTION FOR 36kV FEEDER CIRCUIT WITH PILOT WIRE PROTECTION (1250A BUSBARS)

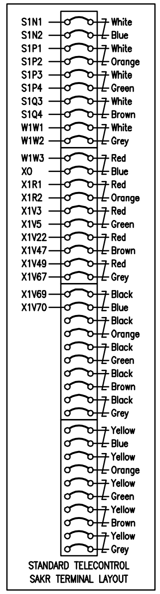
WESTERN POWER DISTRIBUTION

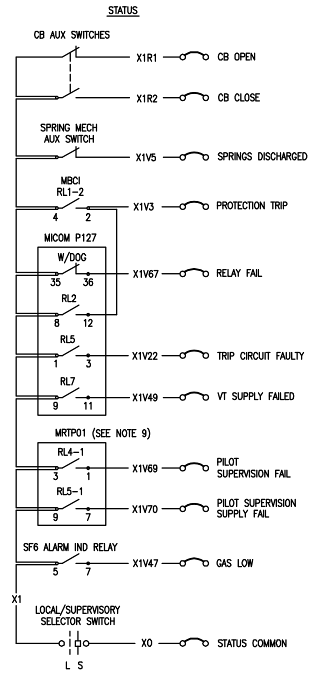
Drg. No. SPC36C5A–AC

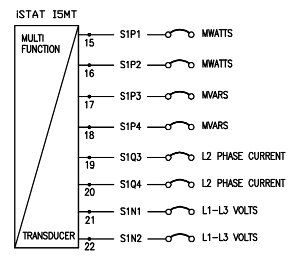
Rev No.

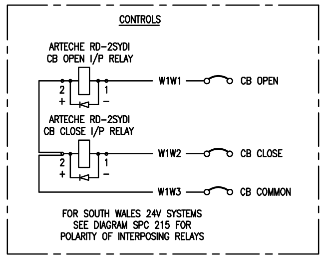












FUSE & LINK TABLE

REF	INSCRIPTION		FUSE	LINK	
1	TRIP & CLOSE SUPPLY +VE	110V DC	16A		
1	TRIP & CLOSE SUPPLY -VE	110V DC		LINK	
27	CLOSING	110V DC	6A		
132	PILOT PROTECTION TRIP ISOLATION	110V DC		LINK	
175	BACK UP OC & EF TRIP ISOLATION	110V DC		LINK	
53	BUS ZONE TRIP ISOLATION	110V DC		LINK	
130	BUS ZONE TRIP RELAY ISOLATION	110V DC		LINK	
130	BUS ZONE TRIP RELAY ISOLATION	110V DC		LINK	
162	BUSBAR CHECK ISOLATION	110V DC		LINK	
162	BUSBAR CHECK ISOLATION	110V DC		LINK	
3	SF6 GAS PRESSURE LOW ALARM SUPPLY +VE	110V DC	2A		
3	SF6 GAS PRESSURE LOW ALARM SUPPLY -VE	110V DC		LINK	
128	PILOT SUPERVISION SUPPLY (PH)	240V AC	2A		(SEE NOTE 9)
128	PILOT SUPERVISION SUPPLY (N)	240V AC		LINK	(SEE NOTE 9)
9	SPRING MOTOR SUPPLY +VE	110V DC	6A		
9	SPRING MOTOR SUPPLY -VE	110V DC		LINK	

NOTES

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH LATEST VERSION OF EE:SPEC 182
2. TELECONTROL INTERPOSING RELAYS TO BE FITTED WITH ARC SUPPRESSION DIODES
3. SPRING CHARGING MOTOR SUPPLY TO BE DERIVED FROM A SEPARATE SOURCE OF SUPPLY
4. SF6 LOW ALARM REQUIRED WHEN CB UTILISES SF6 GAS. A PROGRAMMABLE LED & ALARM ON THE PROTECTION DEVICE MAY ALSO BE USED FOR THIS FUNCTION
5. WHERE SF6 IS THE INTERUPTING MEDIUM, SEEK GUIDANCE FROM WPD POLICY TEAM ON CB LOCKOUT/TRIP FUNCTIONS
6. K1 & K3 WIRED TO ALLOW TRIP CIRCUIT SUPERVISION TO MONITOR ALL LOOPS TO CIRCUIT BREAKER TRIP COIL
7. TCS RESISTOR VALUES DEPENDANT ON TRIP COIL
8. ASTERISK DENOTES A FOR ZONE A & B FOR ZONE B
9. MRTP01 RELAY AT SEND SUBSTATION END ONLY (REPLACED BY MRTP03 FOR 15KV PILOT INSULATION SCHEMES)
10. DRAWING SHOWN WITH SUPPLIES OFF, CB OPEN, SPRINGS DISCHARGED & SF6 LOW

Rev No	Drawn	Chk'd	App'd	Date	Revision

ORIGINAL ISSUE		Date
Drawn	CM	13/11/17
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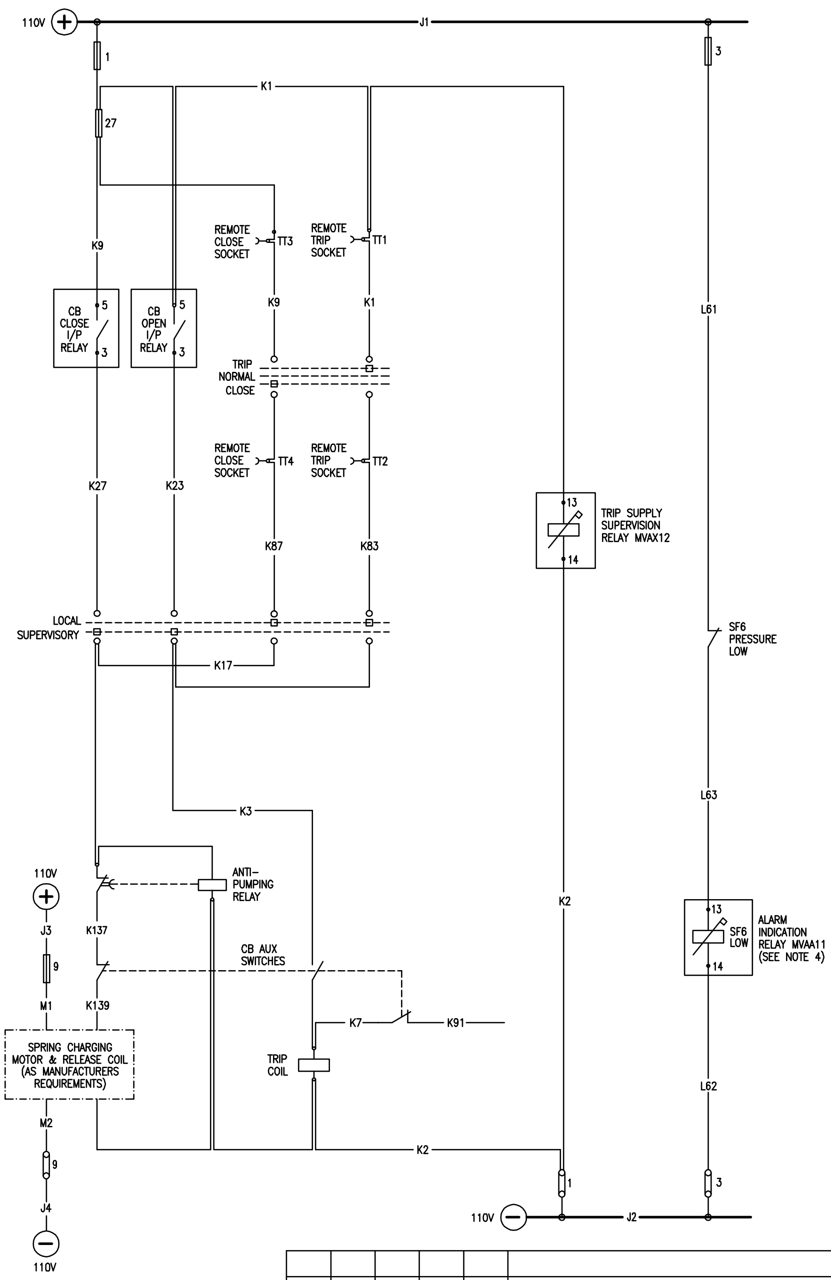
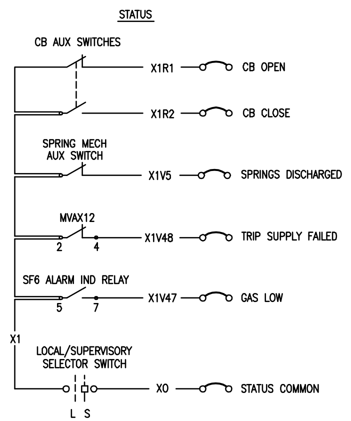
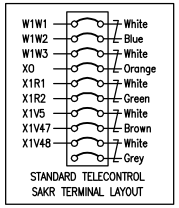
Title: DC PROTECTION FOR 36kV FEEDER CIRCUIT WITH PILOT WIRE PROTECTION (1250A BUSBARS)

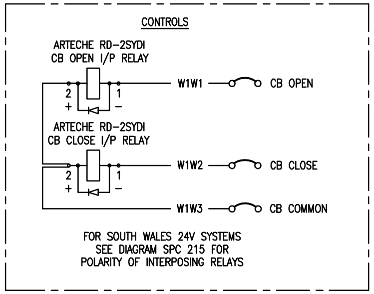
Drg. No. SPC36C5A-DC

Rev No.









NOTES

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH LATEST VERSION OF EE:SPEC 182
2. TELECONTROL INTERPOSING RELAYS TO BE FITTED WITH ARC SUPPRESSION DIODES
3. SPRING CHARGING MOTOR SUPPLY TO BE DERIVED FROM A SEPARATE SOURCE OF SUPPLY
4. SF6 LOW ALARM REQUIRED WHEN CB UTILISES SF6 GAS. A PROGRAMMABLE LED & ALARM ON THE PROTECTION DEVICE MAY ALSO BE USED FOR THIS FUNCTION
5. WHERE SF6 IS THE INTERUPTING MEDIUM, SEEK GUIDANCE FROM WPD POLICY TEAM ON CB LOCKOUT/TRIP FUNCTIONS
6. DRAWING SHOWN WITH SUPPLIES OFF, CB OPEN, SPRINGS DISCHARGED & SF6 LOW

FUSE & LINK TABLE

REF	INSCRIPTION		FUSE	LINK
1	TRIP & CLOSE SUPPLY +VE	110V DC	16A	
1	TRIP & CLOSE SUPPLY -VE	110V DC		LINK
27	CLOSING	110V DC	6A	
3	SF6 GAS PRESSURE LOW ALARM SUPPLY +VE	110V DC	2A	
3	SF6 GAS PRESSURE LOW ALARM SUPPLY -VE	110V DC		LINK
9	SPRING MOTOR SUPPLY +VE	110V DC	6A	
9	SPRING MOTOR SUPPLY -VE	110V DC		LINK

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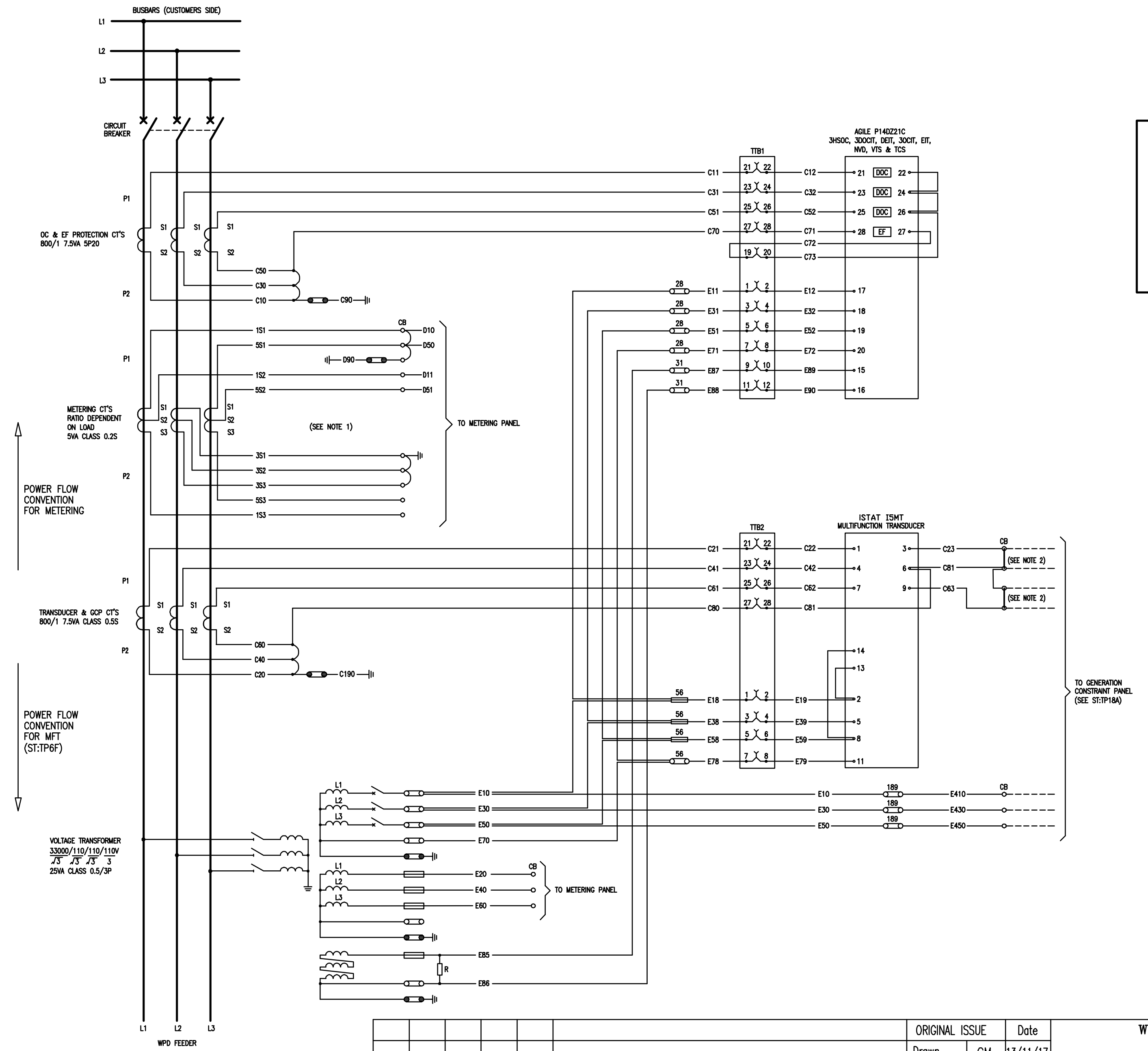
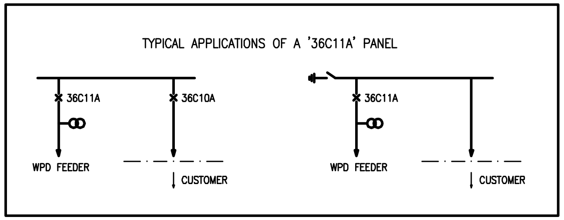
Title: DC PROTECTION FOR 36kV CIRCUIT WITHOUT PROTECTION (1250A BUSBARS)

Drg. No. SPC36C10A-DC

Rev No.





NOTES

1. METERING CT FERRULING SHOWN TO IDENTIFY PHASE & CT TERMINAL I.E.
   1S1 – L1 PHASE & CT TERMINAL S1
   3S1 – L2 PHASE & CT TERMINAL S1
   5S1 – L3 PHASE & CT TERMINAL S1
   MANUFACTURERS CT FERRULING SYSTEM MAY DIFFER TO THAT SHOWN, BUT MUST CLEARLY IDENTIFY THE PHASE & CT TERMINAL S1, S2 & S3 AT THE MULTICORE TERMINAL BLOCK. FOR LOW RATIO USE S1 & S2 (AS SHOWN) AND FOR HIGH RATIO USE S1 & S3
2. SHORTING LINKS TO BE REMOVED ON CONNECTION OF GENERATION CONSTRAINT PANEL.

FUSE & LINK TABLE

REF	INSCRIPTION		FUSE	LINK
28	DOC PROTECTION VT SUPPLY ISOLATION (L1)	110V AC		LINK
28	DOC PROTECTION VT SUPPLY ISOLATION (L2)	110V AC		LINK
28	DOC PROTECTION VT SUPPLY ISOLATION (L3)	110V AC		LINK
28	DOC PROTECTION VT SUPPLY ISOLATION (N)	110V AC		LINK
31	NVD PROTECTION VT SUPPLY ISOLATION (L)	110V AC		LINK
31	NVD PROTECTION VT SUPPLY ISOLATION (N)	110V AC		LINK
56	TRANSDUCER VT SUPPLY (L1)	110V AC	2A	
56	TRANSDUCER VT SUPPLY (L2)	110V AC	2A	
56	TRANSDUCER VT SUPPLY (L3)	110V AC	2A	
56	TRANSDUCER VT SUPPLY (N)	110V AC		LINK
189	VOLTAGE CONSTRAINT VT SUPPLY ISOLATION (L1)	110V AC		LINK
189	VOLTAGE CONSTRAINT VT SUPPLY ISOLATION (L2)	110V AC		LINK
189	VOLTAGE CONSTRAINT VT SUPPLY ISOLATION (L3)	110V AC		LINK

Rev No	Drawn	Chk'd	App'd	Date	Revision

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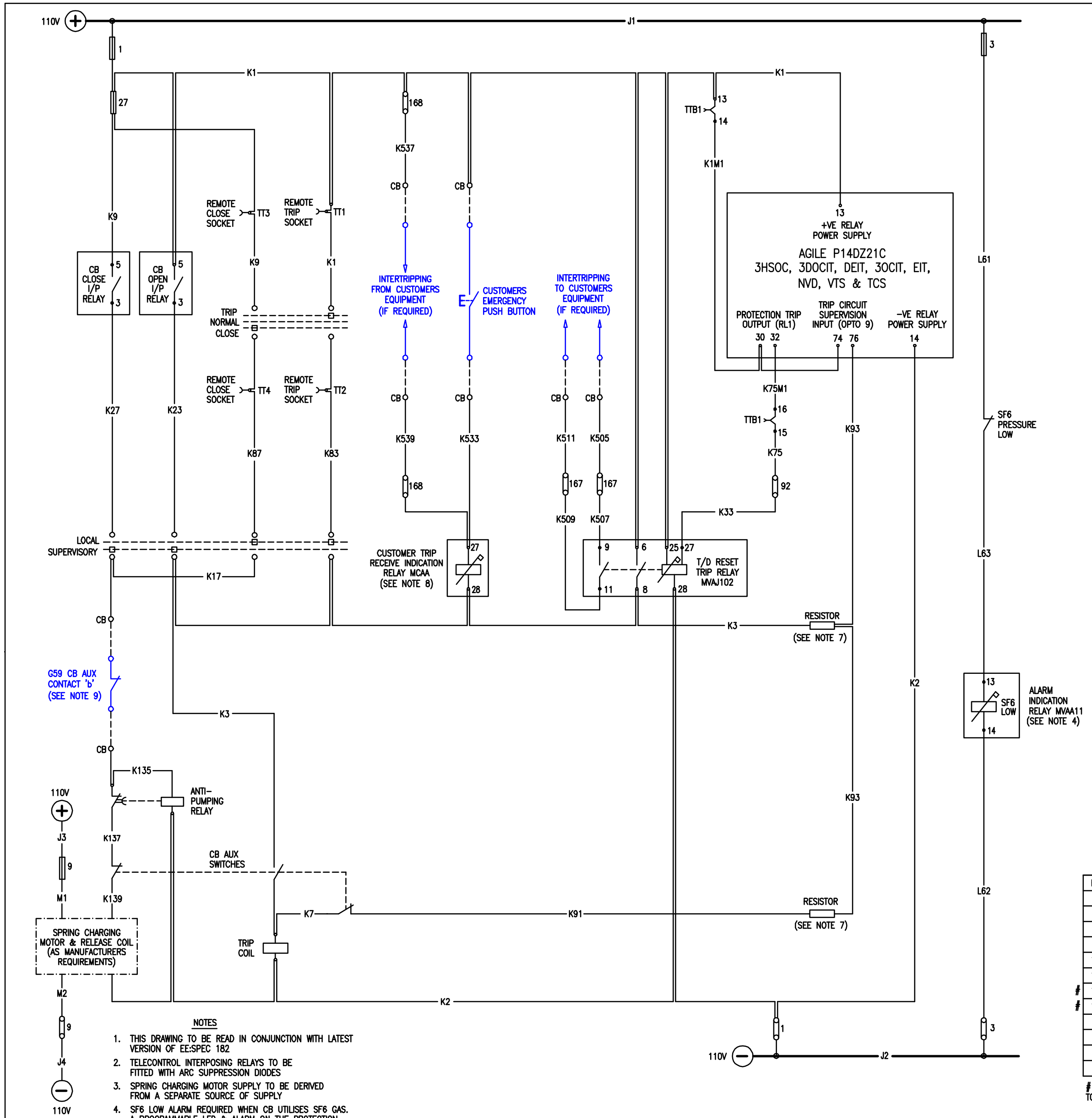
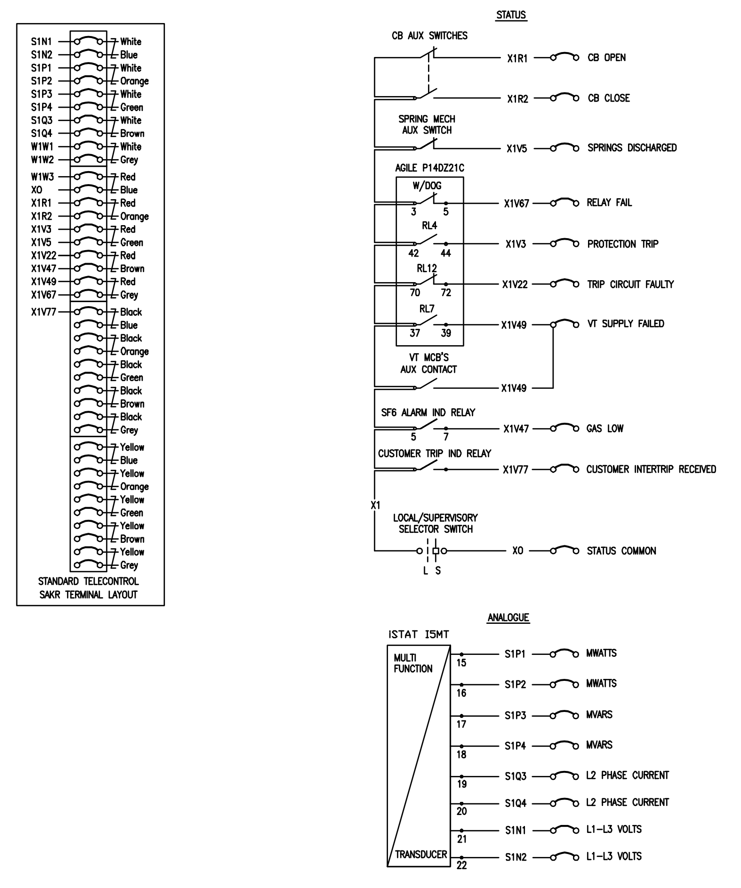
WESTERN POWER DISTRIBUTION

Title: AC PROTECTION FOR 36kV INCOMING CIRCUIT WITH METERING (1250A BUSBARS)

Drg. No. SPC36C11A–AC

Rev No.

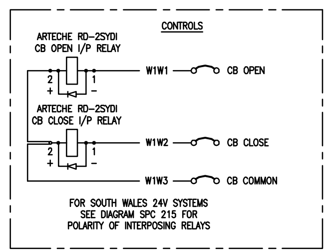




FUSE & LINK TABLE

REF	INSCRIPTION		FUSE	LINK
1	TRIP & CLOSE SUPPLY +VE	110V DC	16A	
1	TRIP & CLOSE SUPPLY -VE	110V DC		LINK
27	CLOSING	110V DC	6A	
92	PROTECTION TRIP ISOLATION	110V DC		LINK
168	CUSTOMER INTERTRIP RECEIVE ISOLATION	110V DC		LINK
168	CUSTOMER INTERTRIP RECEIVE ISOLATION	110V DC		LINK
# 167	CUSTOMER INTERTRIP SEND ISOLATION	110V DC		LINK
# 167	CUSTOMER INTERTRIP SEND ISOLATION	110V DC		LINK
3	SF6 GAS PRESSURE LOW ALARM SUPPLY +VE	110V DC	2A	
3	SF6 GAS PRESSURE LOW ALARM SUPPLY -VE	110V DC		LINK
9	SPRING MOTOR SUPPLY +VE	110V DC	6A	
9	SPRING MOTOR SUPPLY -VE	110V DC		LINK

FUSE & LINK LABELLING TO BE RED LETTERING ON WHITE BACKGROUND TO DENOTE TRIPPING TO OTHER PANELS.



NOTES

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH LATEST VERSION OF EE:SPEC 182
2. TELECONTROL INTERPOSING RELAYS TO BE FITTED WITH ARC SUPPRESSION DIODES
3. SPRING CHARGING MOTOR SUPPLY TO BE DERIVED FROM A SEPARATE SOURCE OF SUPPLY
4. SF6 LOW ALARM REQUIRED WHEN CB UTILISES SF6 GAS. A PROGRAMMABLE LED & ALARM ON THE PROTECTION DEVICE MAY ALSO BE USED FOR THIS FUNCTION
5. WHERE SF6 IS THE INTERUPTING MEDIUM, SEEK GUIDANCE FROM WPD POLICY TEAM ON CB LOCKOUT/TRIP FUNCTIONS
6. K1 & K3 WIRED TO ALLOW TRIP CIRCUIT SUPERVISION TO MONITOR ALL LOOPS TO CIRCUIT BREAKER TRIP COIL
7. TCS RESISTOR VALUES DEPENDANT ON TRIP COIL
8. THE MCAA RELAY SHOULD BE SELECTED TO ENSURE CORRECT OPERATION WITH THE CB TRIP COIL/ACTUATOR. AN APPROPRIATE MCAA11 OR MCAA12 (S/R CONTACTS) MAY BE USED.
9. A CLOSE INHIBIT CONTACT MAY BE REQUIRED FOR GENERATION CONNECTIONS FROM THE CUSTOMERS G59 CB
10. DRAWING SHOWN WITH SUPPLIES OFF, CB OPEN, SPRINGS DISCHARGED & SF6 LOW

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Title
DC PROTECTION FOR 36kV
INCOMING CIRCUIT WITH METERING
(1250A BUSBARS)

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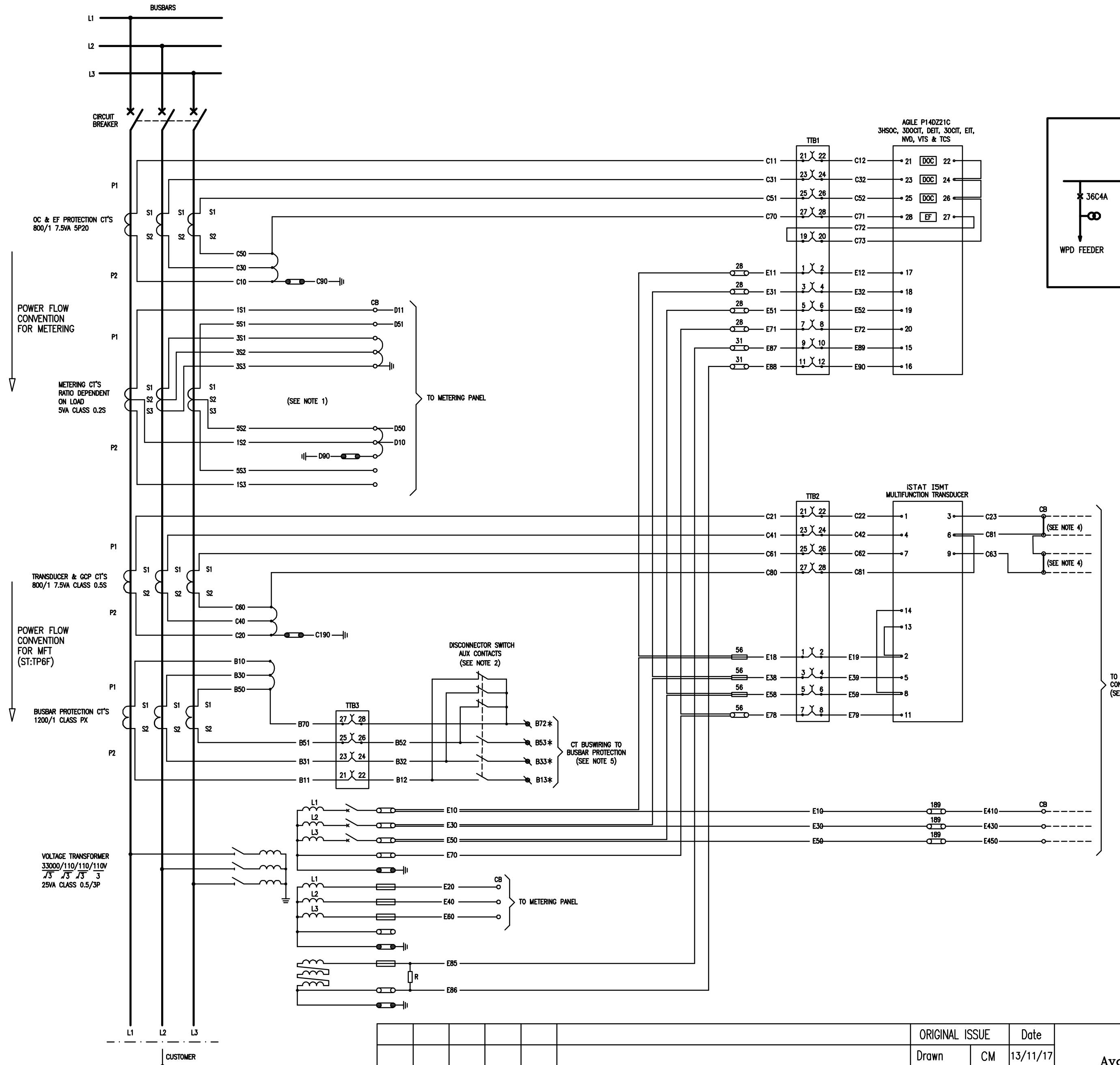
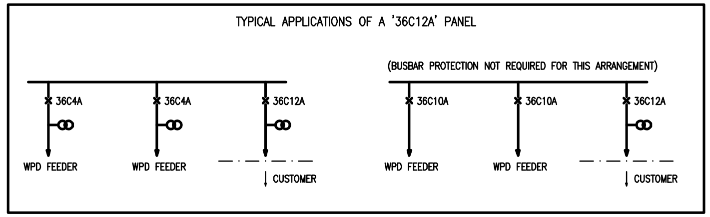
Drg. No. SPC36C11A-DC

Rev No.





NOTES

1. METERING CT FERRULING SHOWN TO IDENTIFY PHASE & CT TERMINAL I.E.
   1S1 – L1 PHASE & CT TERMINAL S1
   3S1 – L2 PHASE & CT TERMINAL S1
   5S1 – L3 PHASE & CT TERMINAL S1
   MANUFACTURERS CT FERRULING SYSTEM MAY DIFFER TO THAT SHOWN, BUT MUST CLEARLY IDENTIFY THE PHASE & CT TERMINAL S1, S2 & S3 AT THE MULTICORE TERMINAL BLOCK. FOR LOW RATIO USE S1 & S2 (AS SHOWN) AND FOR HIGH RATIO USE S1 & S3
2. CT SWITCHING WILL BE REQUIRED IF THE CIRCUIT MAIN EARTH IS APPLIED THROUGH THE BUS ZONE CT'S
3. ASTERISK DENOTES SUFFIX A FOR ZONE A & SUFFIX B FOR ZONE B
4. SHORTING LINKS TO BE REMOVED ON CONNECTION OF GENERATION CONSTRAINT PANEL.
5. FOR SWITCHBOARDS WITHOUT A BUS SECTION, BUSBAR PROTECTION RELAYS SHALL BE FITTED ON A DUMMY PANEL.

FUSE & LINK TABLE

REF	INSCRIPTION		FUSE	LINK
28	DOC PROTECTION VT SUPPLY ISOLATION (L1)	110V AC		LINK
28	DOC PROTECTION VT SUPPLY ISOLATION (L2)	110V AC		LINK
28	DOC PROTECTION VT SUPPLY ISOLATION (L3)	110V AC		LINK
28	DOC PROTECTION VT SUPPLY ISOLATION (N)	110V AC		LINK
31	NVD PROTECTION VT SUPPLY ISOLATION (L)	110V AC		LINK
31	NVD PROTECTION VT SUPPLY ISOLATION (N)	110V AC		LINK
56	TRANSDUCER VT SUPPLY (L1)	110V AC	2A	
56	TRANSDUCER VT SUPPLY (L2)	110V AC	2A	
56	TRANSDUCER VT SUPPLY (L3)	110V AC	2A	
56	TRANSDUCER VT SUPPLY (N)	110V AC		LINK
189	VOLTAGE CONSTRAINT VT SUPPLY ISOLATION (L1)	110V AC		LINK
189	VOLTAGE CONSTRAINT VT SUPPLY ISOLATION (L2)	110V AC		LINK
189	VOLTAGE CONSTRAINT VT SUPPLY ISOLATION (L3)	110V AC		LINK

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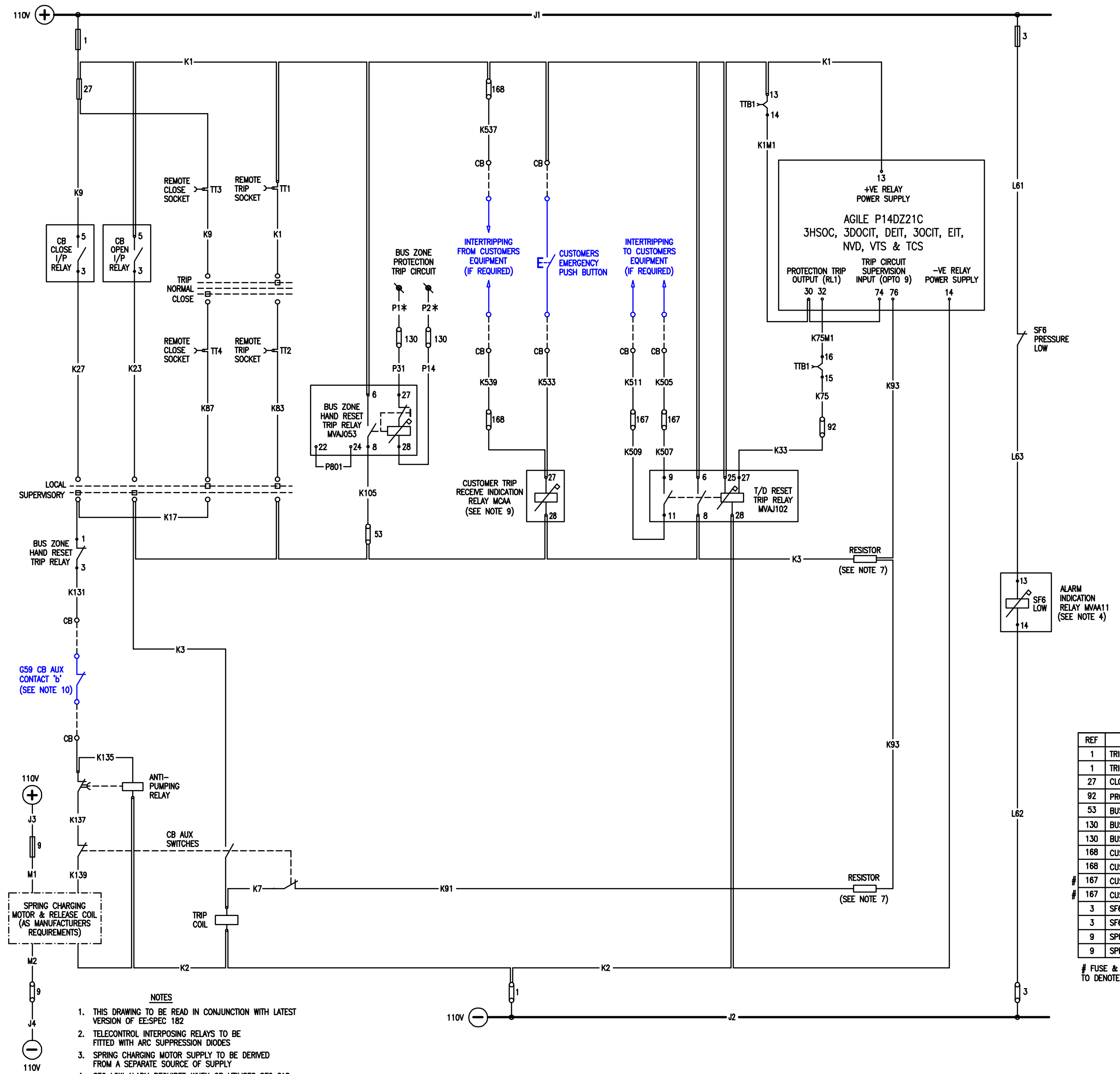
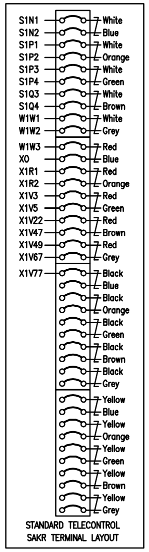
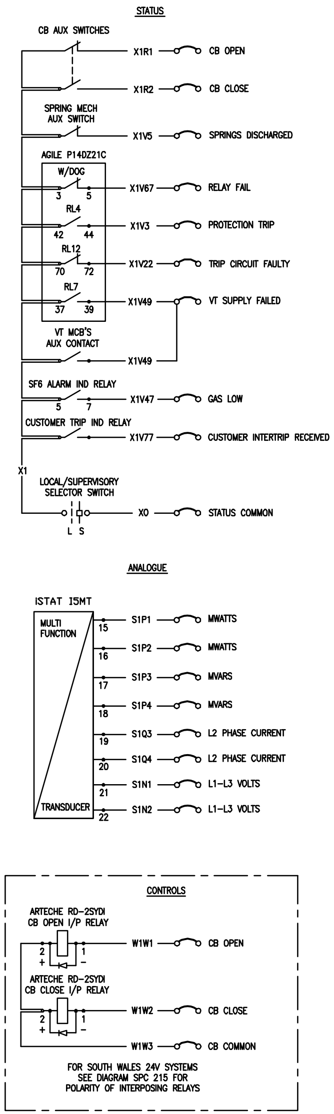
Title: AC PROTECTION FOR 36kV OUTGOING CIRCUIT WITH METERING (1250A BUSBARS)

Drg. No. SPC36C12A–AC

Rev No.







FUSE & LINK TABLE

REF	INSCRIPTION		FUSE	LINK
1	TRIP & CLOSE SUPPLY +VE	110V DC	16A	
1	TRIP & CLOSE SUPPLY -VE	110V DC		LINK
27	CLOSING	110V DC	6A	
92	PROTECTION TRIP ISOLATION	110V DC		LINK
53	BUS ZONE TRIP ISOLATION	110V DC		LINK
130	BUS ZONE TRIP RELAY ISOLATION	110V DC		LINK
130	BUS ZONE TRIP RELAY ISOLATION	110V DC		LINK
168	CUSTOMER INTERTRIP RECEIVE ISOLATION	110V DC		LINK
168	CUSTOMER INTERTRIP RECEIVE ISOLATION	110V DC		LINK
# 167	CUSTOMER INTERTRIP SEND ISOLATION	110V DC		LINK
# 167	CUSTOMER INTERTRIP SEND ISOLATION	110V DC		LINK
3	SF6 GAS PRESSURE LOW ALARM SUPPLY +VE	110V DC	2A	
3	SF6 GAS PRESSURE LOW ALARM SUPPLY -VE	110V DC		LINK
9	SPRING MOTOR SUPPLY +VE	110V DC	6A	
9	SPRING MOTOR SUPPLY -VE	110V DC		LINK

FUSE & LINK LABELLING TO BE RED LETTERING ON WHITE BACKGROUND TO DENOTE TRIPPING TO OTHER PANELS.

NOTES

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH LATEST VERSION OF EE:SPEC 182
2. TELECONTROL INTERPOSING RELAYS TO BE FITTED WITH ARC SUPPRESSION DIODES
3. SPRING CHARGING MOTOR SUPPLY TO BE DERIVED FROM A SEPARATE SOURCE OF SUPPLY
4. SF6 LOW ALARM REQUIRED WHEN CB UTILISES SF6 GAS. A PROGRAMMABLE LED & ALARM ON THE PROTECTION DEVICE MAY ALSO BE USED FOR THIS FUNCTION
5. WHERE SF6 IS THE INTERUPTING MEDIUM, SEEK GUIDANCE FROM WPD POLICY TEAM ON CB LOCKOUT/TRIP FUNCTIONS
6. K1 & K3 WIRED TO ALLOW TRIP CIRCUIT SUPERVISION TO MONITOR ALL LOOPS TO CIRCUIT BREAKER TRIP COIL
7. TCS RESISTOR VALUES DEPENDANT ON TRIP COIL
8. ASTERISK DENOTES A FOR ZONE A & B FOR ZONE B
9. THE MCAA RELAY SHOULD BE SELECTED TO ENSURE CORRECT OPERATION WITH THE CB TRIP COIL/ACTUATOR. AN APPROPRIATE MCAA11 OR MCAA12 (S/R CONTACTS) MAY BE USED.
10. A CLOSE INHIBIT CONTACT MAY BE REQUIRED FOR GENERATION CONNECTIONS FROM THE CUSTOMERS G59 CB
11. DRAWING SHOWN WITH SUPPLIES OFF, CB OPEN, SPRINGS DISCHARGED & SF6 LOW

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(1250A BUSBSARS)

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