

Western Power's Asset Management System

Distribution Design Catalogue Distribution Automation Section 09 (DA)



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Content Owner/Custodian: Distribution Design and Standards

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Document control

Endorsement approvals

	Name	Title	Signature and Date
Compiled by	Nory Cerrado	Distribution Draftsperson	Signature on file
Checked by	Chris Omodei	Principal Engineer	Signature on file
Endorsed by	Ken Tiong	Team Leader	Signature on file
Approved by	Pep Ngwenya	Distribution Design & Standards Manager	Signature on file

Record of revisions

Revision No.	Date	Version	Compiled by	Description
1	07/04/2025	EDM 16	Nory Cerrado	First Revision with new Format and 3 yearly review
2	22/12/2025	Volt 18	Nory Cerrado	Refer to Amendment List

This document gives direction to and influences the following documents.

Doc	Title of document
ALL CHAPTERS	DDC - DISTRIBUTION DESIGN CATALOGUE
ALL CHAPTERS	DCSH - DISTRIBUTION CONSTRUCTION STANDARD HANDBOOK
ALL CHAPTERS	DSPM - DISTRIBUTION SUBSTATION PLANT MANUAL

Stakeholders (people that were consulted when document was updated)

Business Unit / Function

Asset Management - Asset Performance

Asset Management – Safety Environment Quality and Training

Asset Management - Grid Transformation

Asset Operations – Network Operations

Asset Operations – Operational Services

Asset Operations – Customer Connection Services

Business and Customer Service – Customer Service

Notification list (people to be notified when document is updated)

Business Unit / Function

Asset Management - Asset Performance

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Asset Operations – Customer Connection Services

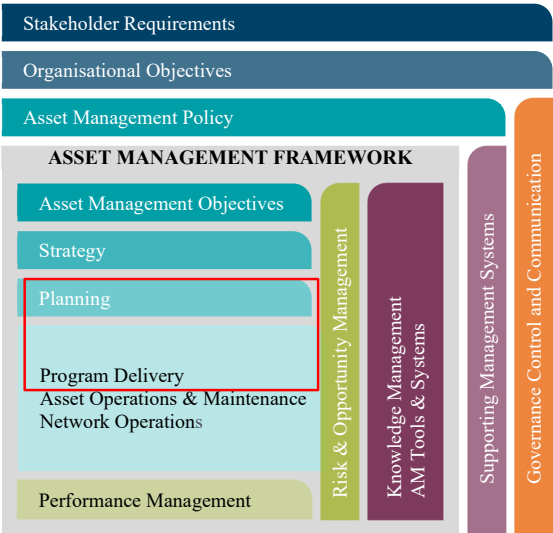
Business and Customer Service – Customer Service

This document must not be made available to personnel outside Western Power without the prior written approval of Western Power.

Document classification and hierarchy

A key requirement of the Western Power Asset Management Policy (AMP) is to develop and maintain an Asset Management System (AMS). This Distribution Substation Plant Manual is defined as a technical document within the AMS document classification and structure and sits within the planning and Program Delivery components of the AMS.

The AMS and the interrelationships between the collection of documents, tools and systems that are used for asset management are described in the AMS document Volt ID ID-005-dc7f342fed83eb7f008777ff0463b876.

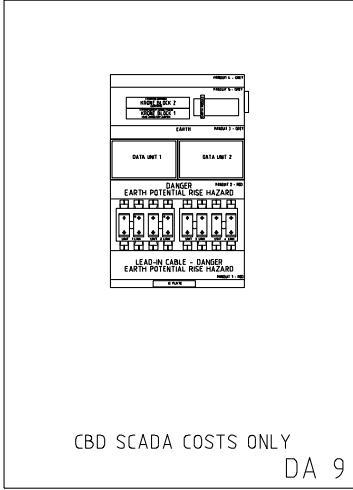
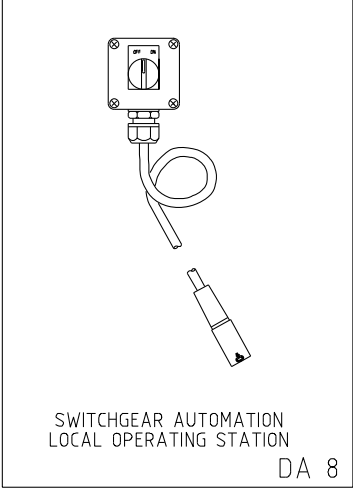
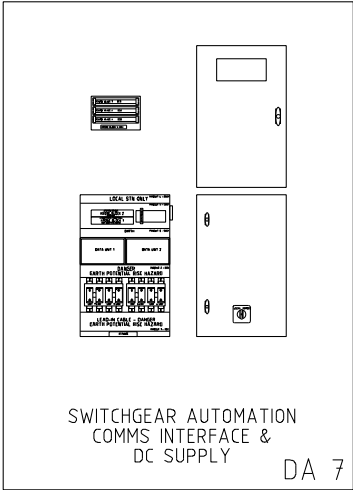
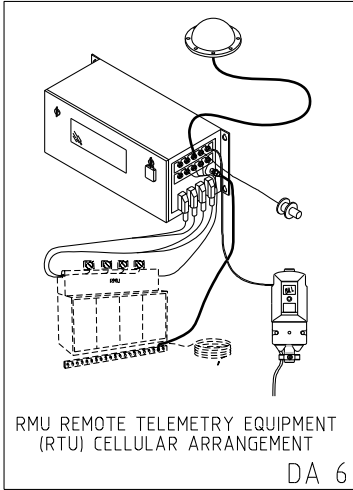
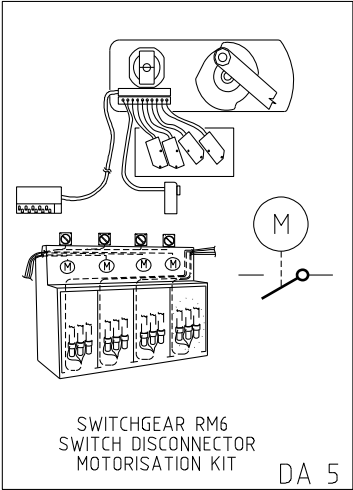
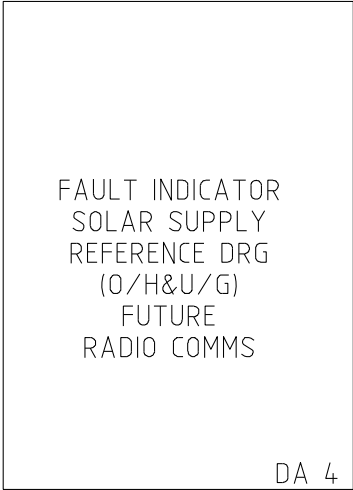
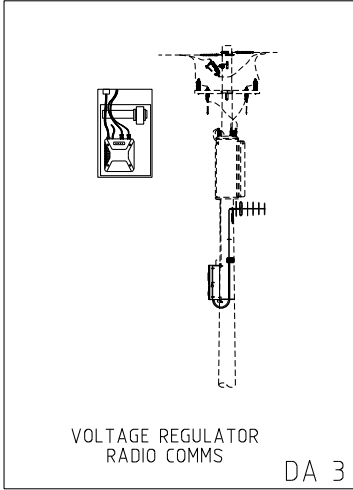
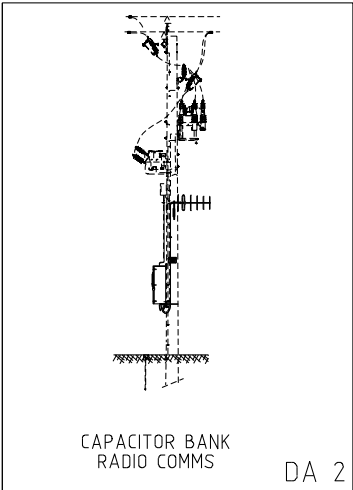
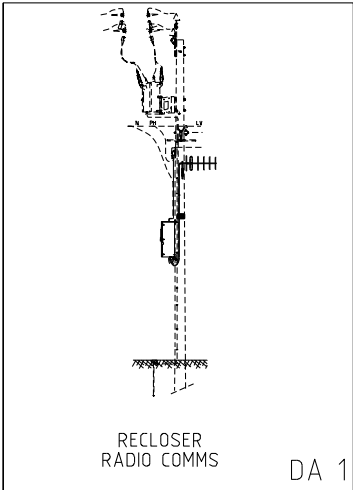


Revision List

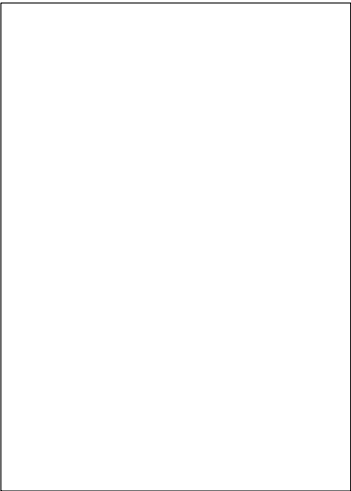
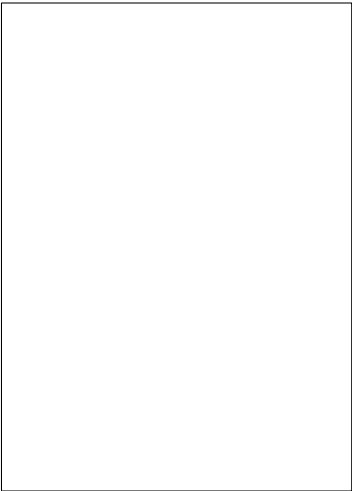
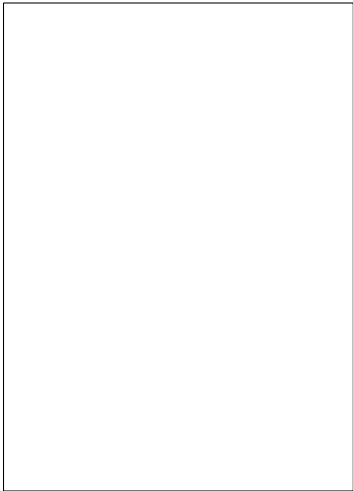
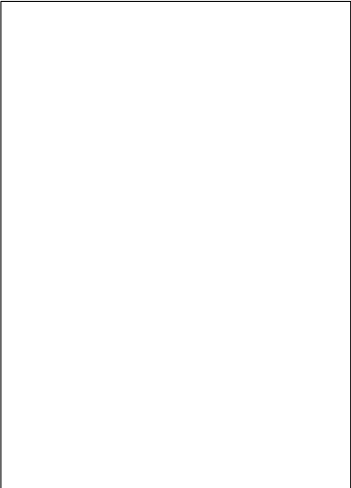
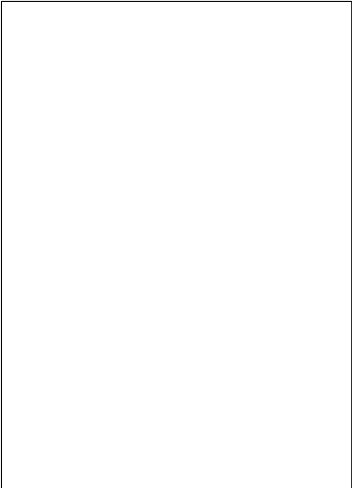
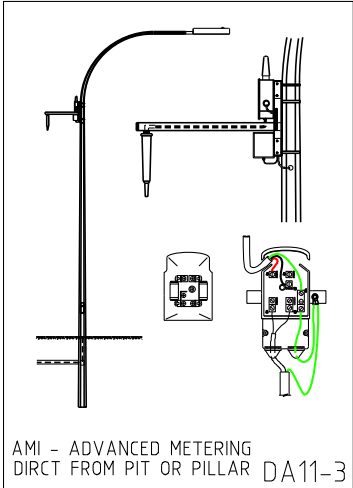
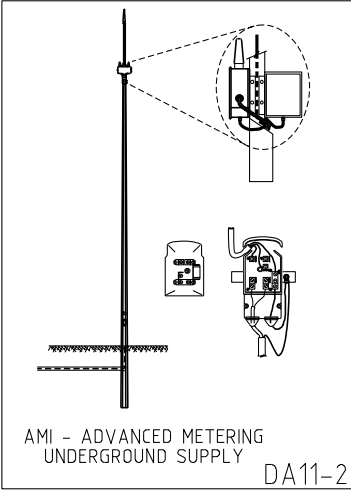
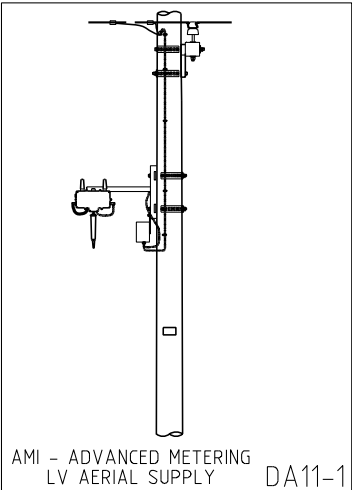
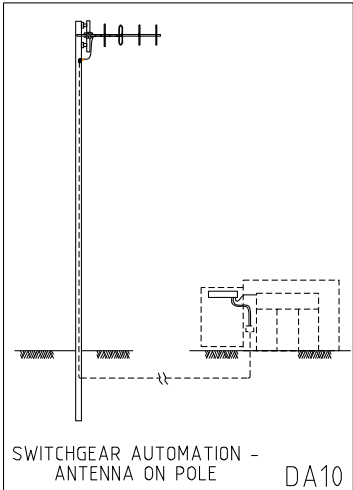
For drawing revisions please refer to the DDC Amendment list Volt ID
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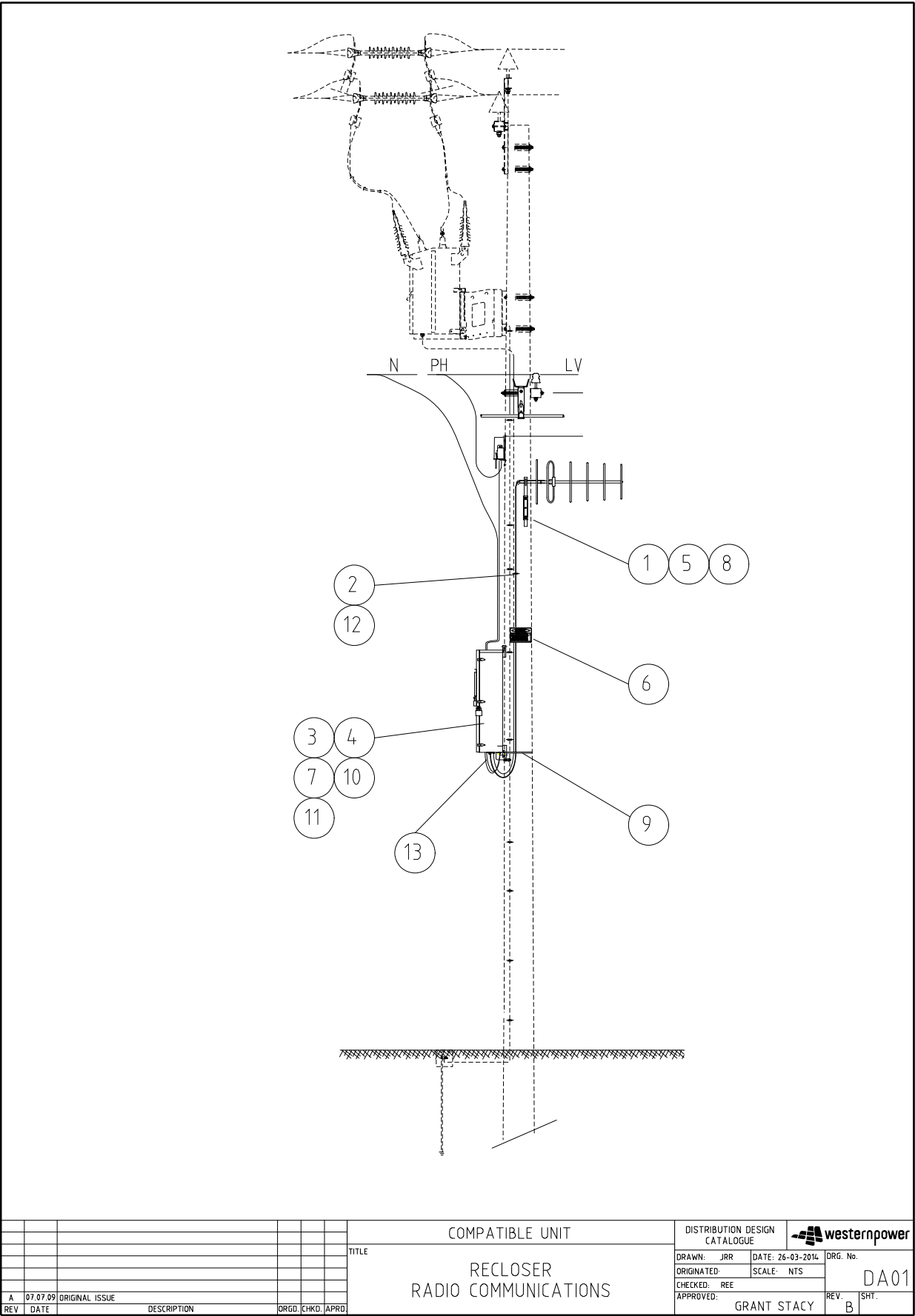
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A 17 09 12 ORIGINAL ISSUE								REV: B		SHY: 2/2	
REV		DATE		DESCRIPTION		ORGO. CHKO. APRO					

Distribution Automation CU List

CU	CU DESCRIPTION
DA1_150MHZ	Recloser Radio 150 MHz Communications – Country Analogue
DA1_150NULEC	Recloser Radio 150 MHz Communications – NULEC Country GE
DA1_150NOJA	Recloser Radio 150 MHz Communications – NOJA/ADVC Country GE
DA1_450 NULEC	Recloser Radio 450 MHz Communications – NULEC Metro GE
DA1_450NOJA	Recloser Radio 450 MHz Communications - NOJA Metro GE
DA1_450MHZ_D	Recloser Radio 450 MHz Communications – NULEC Metro GE
DA1_450NOJA	Recloser Radio 450 MHz Communications – Metro Digital
DA1_NextG	Recloser Radio Communications - NextG
DA2_150MHZ	Capacitor Bank Radio Communications – Country Analogue
DA2_450MHZ_D	Capacitor Bank Radio Communications – Digital
DA2_NextG	Capacitor Bank Radio Communications - NextG
DA3_150MHZ	Voltage Regulator Radio Communications – Country Analogue
DA3_450MHZ	Voltage Regulator Radio Communications – Digital
DA4	Fault Indicator (overhead and underground) Radio Communications - future
DA5_EXT_ALSTO	Switchgear automation motor actuator, Alstom Fluokit M24
DA5_RMU_ALSTO	Switchgear automation motor actuator, Alstom FBA RMU
DA5_RMU_F & G	Switchgear automation motor actuator, F& G RMU
DA5_RM6	Switchgear automation - Schneider RM6 Switch Disconnecter Motorisation Kit
DA6_LVS	T300 RTU LV supply
DA6_NG_SE_2I	T300 RTU Next G (RM6 & FLUSARC), 2x SWDC for SE SWGR
DA6_NG_SE_3I	T300 RTU Next G (RM6 & FLUSARC), 3x SWDC for SE SWGR
DA6_NG_SE_4I	T300 RTU Next G (RM6 & FLUSARC), 4x SWDC for SE SWGR
DA6_NG_SE_5I	T300 RTU Next G (RM6 & FLUSARC), 5x SWDC for SE SWGR
DA7	Switchgear Automation Comms Interface & DC Supply (not for RM6 / Flusarc36)
DA8	Switchgear Automation Local Operating Station (not for RM6 / Flusarc36)
DA9	CBD SCADA only costs for automation
DA10_NEXTG	Switchgear automation - Schneider RM6/Flusarc36 - NextG 800MHz Whip Antenna on pole arrangement
DA10_150MHZ	Switchgear automation - Schneider RM6/Flusarc36 - 150MHz VHF Yagi Antenna on pole arrangement
DA10_450MHZ	Switchgear automation - Schneider RM6/Flusarc36 - 450MHz UHF Yagi Antenna on pole arrangement
DA11_AMI OWA	AMI Equipment on overhead Network – Wood Pole Access Point
DA11_AMI OWR	AMI Equipment on overhead Network – Wood Pole Relay
DA11_AMI UGA	AMI Equipment Underground Supplied – Access Point – 10m
DA11_AMI UGR	AMI Equipment Underground Supplied – Relay – 10m
DA11_AMI SLA	AMI Equipment Streetlight Columns – Access Point – 10m
DA11_AMI SLR	AMI Equipment Streetlight Columns – Relay – 10m



CU	CU Description
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DA1_150MHZ Recloser Radio 150 MHz Communications – Country Analogue					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	AS1423	Coach bolt	2	ea	
2	CB7550	600mm LG; RG58 Cable	1	ea	
3	CB7551	6 Core;350mm LG; RS232 N03-557	1	ea	
5	GS6024	Base, Antenna mounting bracket (VHF)	1	ea	
6	CZ5006	Warning sign	1	ea	
7	GA3011	Surge Arrester – Co-axial	1	ea	
8	GS6023	Antennae - VHF	1	ea	
9	GC7191	Strap – Conduit 20mm Gal	6	ea	
10	GS6025	VHF Radio Tait TM8105;	1	ea	

DA1_150NULEC Recloser Radio 150 MHz Communications – NULEC Country GE					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	AS1423	Coach bolt	2	ea	
2	ED1001	RJ45-P8 Cable	1	ea	
3	ED1000	RG58 RF Patch	1	ea	
4	ED1002	RJ45-P9 Cable	1	ea	
5	GS6024	Base, Antenna mounting bracket (VHF)	1	ea	
6	CZ5006	Warning sign	1	ea	
7	GA3011	Surge Arrester – Co-axial	1	ea	
8	GS6023	Antennae - VHF	1	ea	
9	GC7191	Strap – Conduit 20mm Gal	6	ea	
10	RA0002	GE MCR LN1, 4Eth/2 serial 150 MHZ Radio	1	ea	

DA1_150NOJA Recloser Radio 150 MHz Communications – NOJA/ADVC Country GE					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	AS1423	Coach bolt	2	ea	
3	JW0159	Cat5 Patch Cable 0.5m	1	ea	
4	ED1000	RG58 RF Patch	1	ea	
5	GS6024	Base, Antenna mounting bracket (VHF)	1	ea	
6	CZ5006	Warning sign	1	ea	
7	GA3011	Surge Arrester – Co-axial	1	ea	
8	GS6023	Antennae - VHF	1	ea	
9	GC7191	Strap – Conduit 20mm Gal	6	ea	
10	RA0002	GE MCR LN1, 4Eth/2 serial 150 MHZ Radio	1	ea	

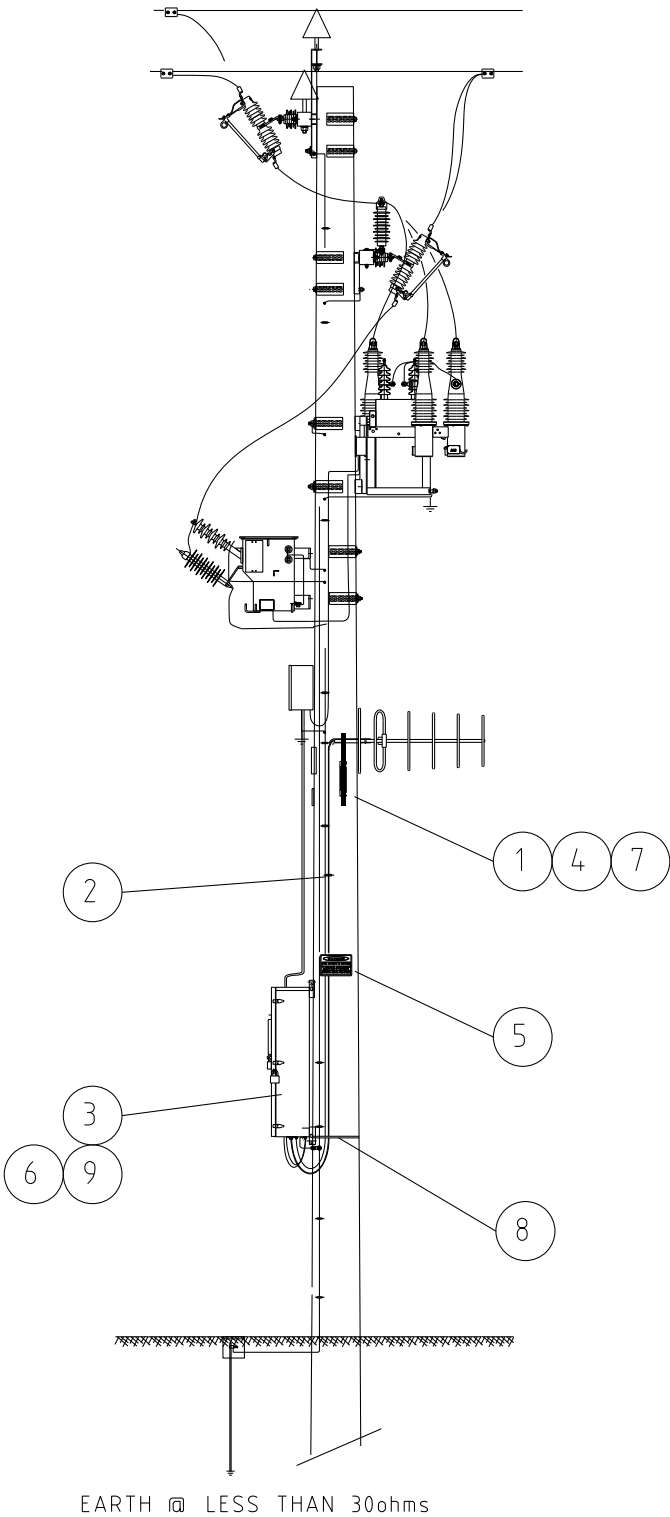
CU	CU Description
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DA1_450NULEC Recloser Radio 450 MHz Communications – NULEC Metro GE					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	AS1423	Coach bolt	2	ea	
2	ED1001	RJ45-P8 Cable	1	ea	
3	ED1000	RG58 RF Patch	1	ea	
4	ED1002	RJ45-P9 Cable	1	ea	
5	CB3080	Bracket Antenna Support	1	ea	
6	CZ5006	Warning Sign	1	ea	
8	GS0003	Antenna – 6El Yagi w/ arrestor & Patch lead	1	ea	
9	GC7191	Strap – Conduit 20mm Gal	6	ea	
10	RA0001	GE MCR LN4, 4Eth/2 Serial Radio	1	ea	

DA1_450NOJA Recloser Radio 450 MHz Communications – NOJA Metro GE					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	AS1423	Coach bolt	2	ea	
3	ED1000	RG58 RF Patch	1	ea	
4	JW0159	Cat5 Patch Cable 0.5m	1	ea	
5	CB3080	Bracket Antenna Support	1	ea	
6	CZ5006	Warning Sign	1	ea	
8	GS0003	Antenna – 6El Yagi w/ arrestor & Patch lead	1	ea	
9	GC7191	Strap – Conduit 20mm Gal	6	ea	
10	RA0001	GE MCR LN4, 4Eth/2 Serial Radio	1	ea	

DA1_450MHZ_D Recloser Radio 450 MHz Communications – Metro Digital					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	AS1423	Coach bolt	2	ea	
3	CB7551	6 Core;350mm LG; RS232 N03-557	1	ea	
3	GS6030	Patch cable	1	ea	
4	HC3034	Cable connector - Modem	1	ea	
6	CZ5006	Warning sign	1	ea	
5	CB3080	Bracket – Antennae Support	1	ea	
8	GS0003	Antenna, 6El Yagi w/ arrestor & patch lead	1	ea	
9	GC7191	Strap – Conduit 20mm Gal	6	ea	
10	GZ4011	Radio, Digital 450Mhz	1	ea	
11	VG7023	Data Cable, P9 Maintenance Port	1	ea	

CU		CU Description			
DA1_NextG Recloser Radio Communications – NextG					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	AS1423	Coach bolt	2	ea	
3	HC3034	Cable Connector 100cm	1	ea	
4	HC3035	Cable Connector 60cm	1	ea	
5	CB7552	Antennae Bracket – 90deg Aluminium	1	ea	
8	GS6027	Antennae – CDMA 6.5db & 5m RG58	1	ea	
9	GC7191	Strap – Conduit 20mm Gal	6	ea	
10	HC3039	GE Orbit - Modem	1	ea	
11	GS6028	Adapter – FME-SMA (Modem to Antennae)	1	ea	
12	GC7872	Conduit 20mm corrugated PVC	1	ea	
13	GC7846	Ferrule, Conduit 20mm, Gland	1	ea	

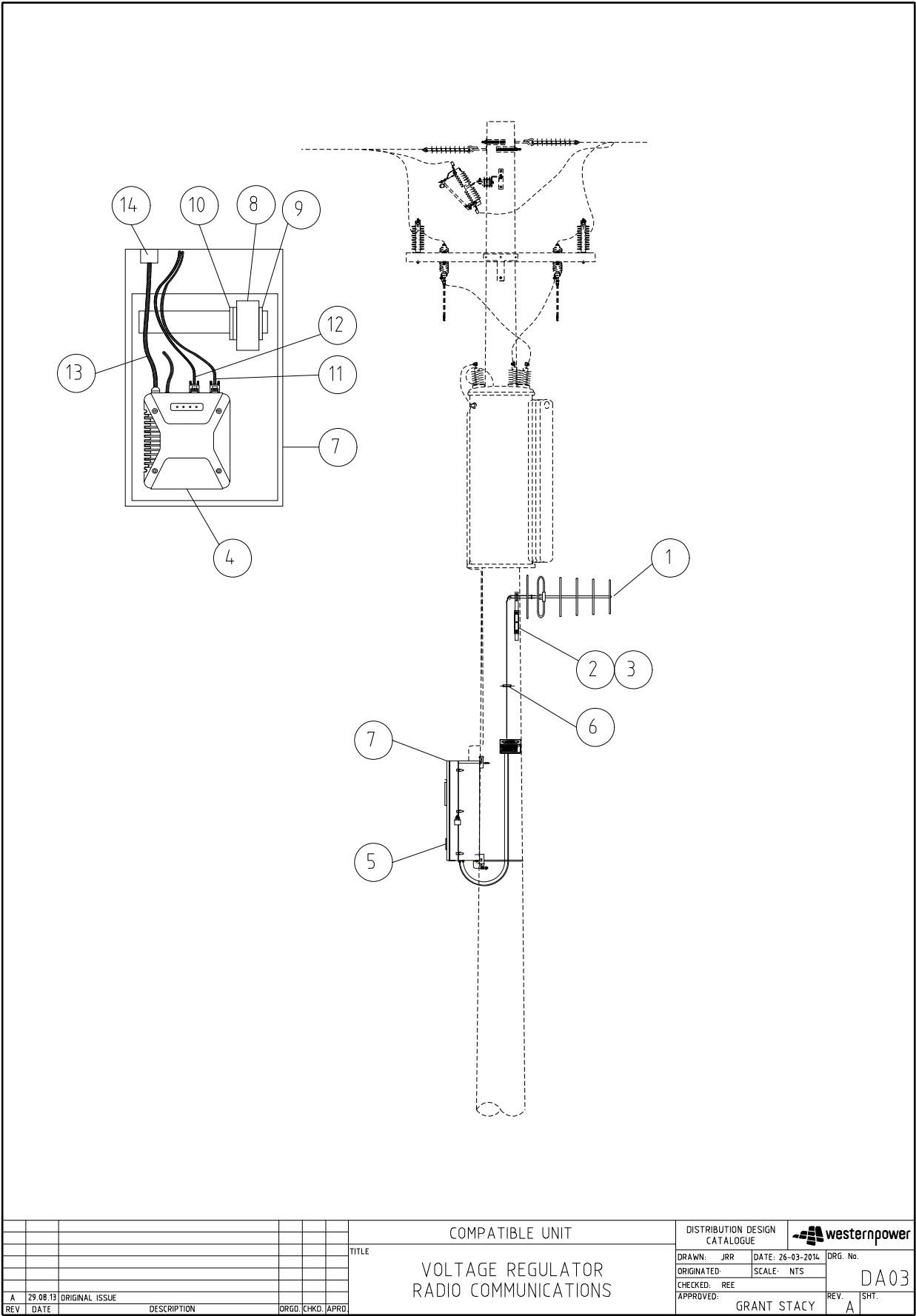


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A	23.03.09	ORIGINAL ISSUE														
REV.	DATE	DESCRIPTION				ORGO.	CHKD.	APRD.								

CU		CU Description			
DA2_150MHZ Capacitor Bank Radio Communications – Country Analogue					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	AS1423	Coach bolt	2	ea	
2	CB7550	600mm LG; RG58 Cable	1	ea	
3	CB7562	Data and Power cable assembly	1	ea	
4	GS6024	Base, Antenna mounting bracket (VHF)	1	ea	
5	CZ5006	Warning sign	1	ea	
6	GA3011	Surge Arrester – Co-axial	1	ea	
7	GS6023	Antennae - VHF	1	ea	
8	GC7191	Strap – Conduit 20mm Gal	6	ea	
9	GS6025	VHF Radio Tait TM8105;	1	ea	

DA2_450MHZ_D Capacitor Bank Radio Communications – Digital					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	AS1423	Coach bolt	2	ea	
3	GS6030	Patch cable	1	ea	
4	CB3080	Antennae support bracket	1	ea	
5	CZ5006	Warning sign	1	ea	
6	GS0003	Antenna, 6El Yagi w/ arrester & patch lead	1	ea	
8	GC7191	Strap – Conduit 20mm Gal	6	ea	
9	GZ4011	Radio, Digital 450Mhz	1	ea	

DA2_NextG Capacitor Bank Radio Communications – NextG					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	AS1423	Coach bolt	2	ea	
2	GC7872	Conduit 20mm corrugated PVC	1	ea	
3	GS6028	Adapter – FME-SMA (Modem to Antennae)	1	ea	
4	CB7552	Antennae Bracket – 90deg Aluminium	1	ea	
6	GC7846	Ferrule, Conduit 20mm, Gland	1	ea	
7	GS6027	Antennae – CDMA 6.5db & 5m RG58	1	ea	
8	GC7191	Strap – Conduit 20mm Gal	6	ea	
9	HC3039	GE Orbit - Modem	1	ea	



				COMPATIBLE UNIT				DISTRIBUTION DESIGN CATALOGUE							
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								CHECKED: REE							
								APPROVED:		GRANT STACY		REV. A		SHT.	

CU	CU Description
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DA3_150MHZ Voltage Regulator Communication – Country Analogue					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	GS6023	Analogue antenna 150 MHz, antenna cable and conduit	1	ea	
2	GS6024	Antenna Bracket	1	ea	
3	AS1423	Coach screw for the bracket	2	ea	
4	GS6025	Tait analogue Modem	1	ea	
5	CZ5006	Warning sign	1	ea	
6	GC7191	Strap for conduit	6	ea	
7	HC3044	Modified GE Control Box's Lid	1	ea	DM # 11231766
8	GT0042	Power supply 120VAC/12VDC	1	ea	PBAMR2-12
9	GZ0097	120V AC mcb	1	ea	iC60N-A9F44101
10	GZ0098	12V DC mcb	1	ea	iC60N-A9F44202
11	HC3043	Com1 cable 3 RS232 dm #11234015	1	ea	To VR COM1
12	NA	Not used.	NA	NA	Purposely left blank
13	CB7550	Data cable between radio and surge arrester	1	ea	RG58 cable
14	GA3011	Surge Arrester	1	ea	

DA3_450MHZ Voltage Regulator Communication – Digital					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	GS0003	Digital antenna 450 MHz, antenna cable, conduit, and surge arrester	1	ea	Including RG58 cable (CB7550)
2	CB3080	Antenna Bracket	1	ea	
3	AS1423	Coach screw for the bracket	2	ea	
4	GZ4011	Trio ER450 Modem	1	ea	
5	CZ5006	Warning sign	1	ea	
6	GC7191	Strap for conduit	6	ea	
7	HC3044	Modified GE Control Box's Lid	1	ea	DM # 11231766
8	GT0042	Power supply 120AC/12VDC	1	ea	PBAMR2-12
9	GZ0097	120V AC mcb	1	ea	iC60N-A9F44101
10	GZ0098	12V DC mcb	1	ea	iC60N-A9F44202
11	HC3041	Com1 cable 1 RS232 dm #11234015	1	ea	To VR COM1
12	HC3042	Com2 cable 2 RS232 dm #11234015	1	ea	To VR COM2

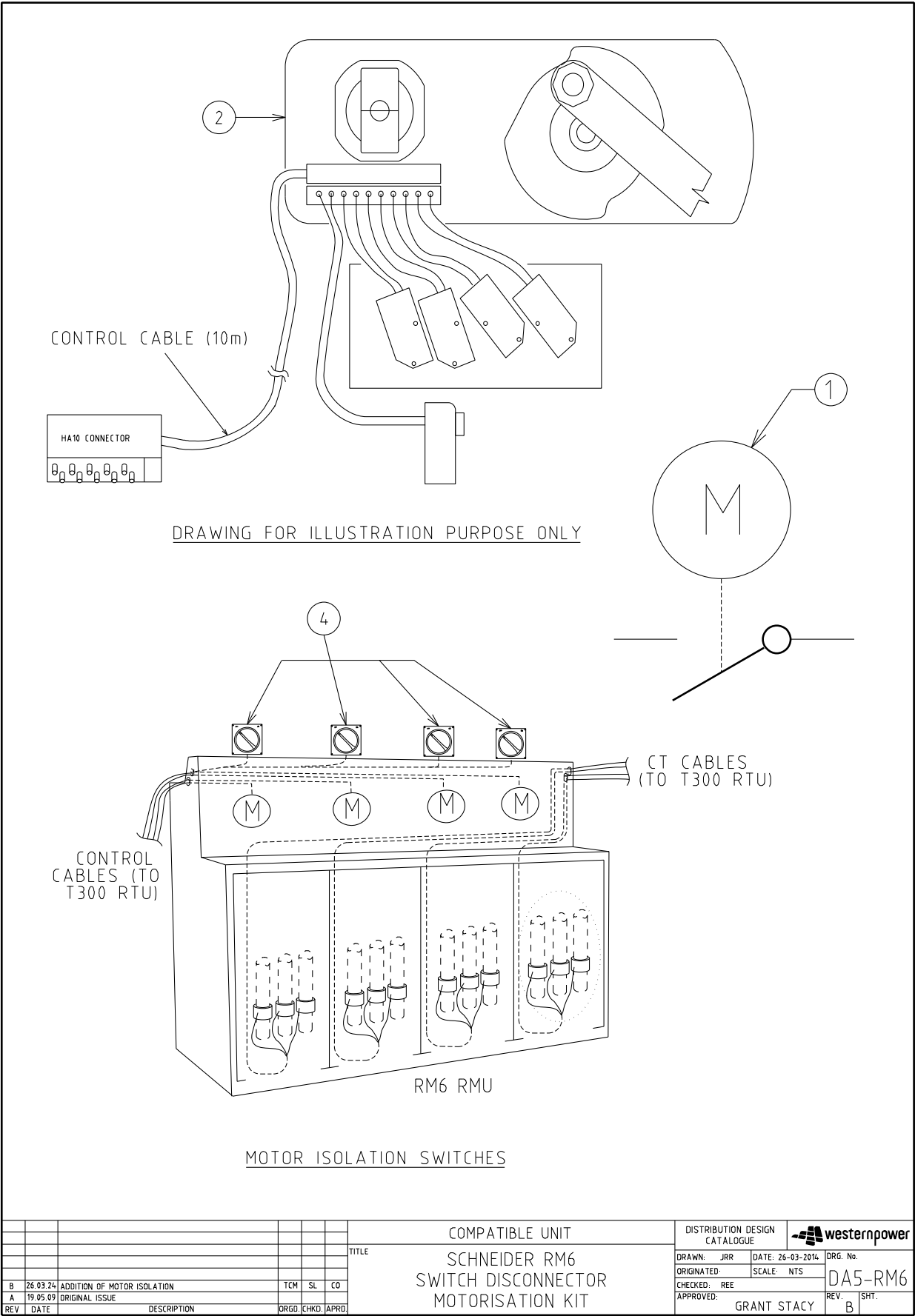
FUTURE

 CUSTOMER SERVICES DIVISION DISTRIBUTION DESIGN CATALOGUE	COMPATIBLE UNIT	DATE	REVISION
	FAULT INDICATOR (O/H&U/G) RADIO COMMUNICATIONS	DRAWING No. DA4	

CU	CU Description
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DA4_UG_FI Underground Fault Indicator					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	GZ9422	Indicator fault locating	1	ea	

DA4_UG_NextG Underground Fault Indicator Telemetry (NextG)					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	HC0404	Indicator fault locating	1	ea	



CU	CU Description
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DA5_EXT_ALSTO Switchgear automation motor actuator, Alstom extensible					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	XA2530	Alstom motor mechanism for M24 Fluokit type incl instrument panel	1	ea	

DA5_RMU_ALSTO Switchgear automation motor actuator, Alstom RMU					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	XA2525	Alstom motor mechanism for FBA type	1	ea	

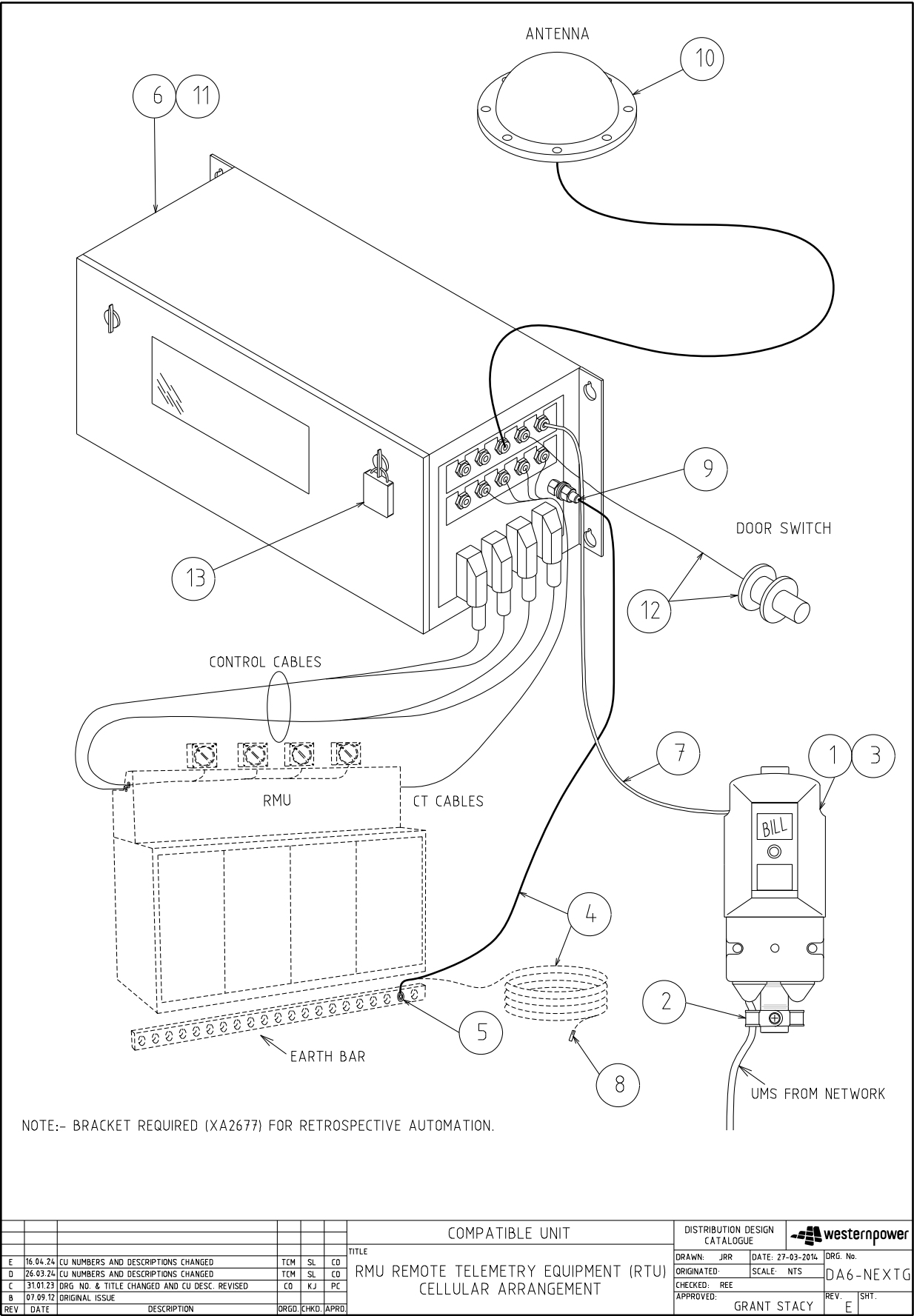
DA5_RMU_F & G Switchgear automation motor actuator, F & G RMU					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	XA2158	F & G motor actuator kit	1	ea	
1	XA2180	F & G manual operating handle	1	ea	

DA5_RM6 Switchgear automation Schneider RM6 Switch Disconnecter Motorisation Kit					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
2	XA2660	Schneider RM6 SWDC Motorisation Kit consisting of 1x24V DC motor kit and 10m control cable complete with HA10 connector and pins	1	kit	For retrofitting extensible RM6 SWDC or extensible RM6 BUS-SWDC
2	XA2667	Split CTs for SchneiderT200H RTU (set of 3) with 1x10m CT cable and shorting plug	1	set	RMU MV cable mounted CTs for load Amps & SC/EF sensing

DA5_2M_KIT		Retrospective motor isolation kit for T300 RTU + RM6 RMU (2 motor)			
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
4	XA2676	4 pole, 20 A, 440 V Clipsal 56 series isolation switch	2	ea	

DA5_3M_KIT		Retrospective motor isolation kit for T300 RTU + RM6 RMU (3 motor)			
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
4	XA2676	4 pole, 20 A, 440 V Clipsal 56 series isolation switch	3	ea	

DA5_4M_KIT		Retrospective motor isolation kit for T300 RTU + RM6 RMU (4 motor)			
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
4	XA2676	4 pole, 20 A, 440 V Clipsal 56 series isolation switch	4	ea	



CU		CU Description			
DA6_LVS		T300 RTU LV supply			
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY Rqd	UNIT OF MEASURE	REMARKS
1	HZ0131	Cutout fuse box	1	ea	
2	HZ0135	Cut-out mounting bracket	1	ea	
3	GF1300	10A fuse	1	ea	
4	EE1435	16mm ² copper earth cable	5	m	
5	FL1430	16mm ² tinned copper termination lug (M12 hole)	1	ea	
8	CJ0054	16mm ² cable cap	1	ea	

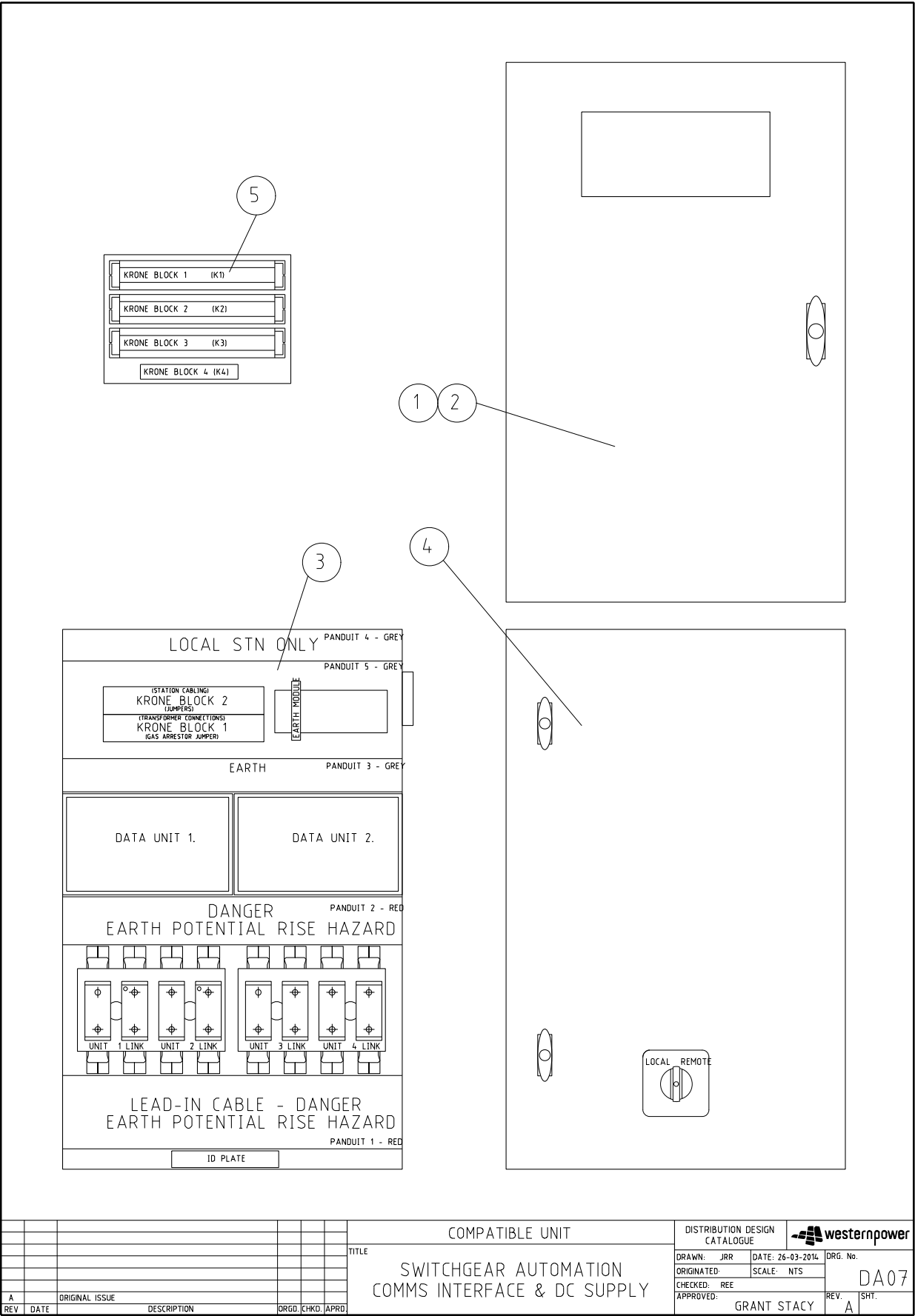
DA6_NG_SE_2I		T300 RTU Next G (RM6 & FLUSARC), 2x SWDC for SE SWGR			
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY Rqd	UNIT OF MEASURE	REMARKS
6	XA2678	T300 RTU and Controller with 3x SC150	1	set	
7	EE1643	2 Core 4mm ² Cable	2	m	
9	FL1428	16mm ² copper termination ug	1	ea	
10	GS6100	Radome Antenna (with coax cable and connectors to kiosk roof B/H and with coax cable from B/H to NextG modem)	1	ea	
11	HC3047	Cybertec NextG Modem Model 2455X	1	ea	
12	XA2665	Kiosk/Switchroom door switch (normally open momentary contact) with 5m 2-core cable	1	set	
13	OH0194	WP NMK2 Padlock (Lockwood 234B45/619/6MK; Keyed to MK RD1/WPC NMK2)	1	ea	

DA6_NG_SE_3I		T300 RTU Next G (RM6 & FLUSARC), 3x SWDC for SE SWGR			
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY Rqd	UNIT OF MEASURE	REMARKS
6	XA2678	T300 RTU and Controller with 3x SC150	1	set	
7	EE1643	2 Core 4mm ² Cable	2	m	
9	FL1428	16mm ² copper termination ug	1	ea	
10	GS6100	Radome Antenna (with coax cable and connectors to kiosk roof B/H and with coax cable from B/H to NextG modem)	1	ea	
11	HC3047	Cybertec NextG Modem Model 2455X	1	ea	
12	XA2665	Kiosk/Switchroom door switch (normally open momentary contact) with 5m 2-core cable	1	set	
13	OH0194	WP NMK2 Padlock (Lockwood 234B45/619/6MK; Keyed to MK RD1/WPC NMK2)	1	ea	

CU		CU Description			
DA6_NG_SE_4I		T300 RTU Next G (RM6 & FLUSARC), 4x SWDC for SE SWGR			
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
6	XA2678	T300 RTU and Controller with 3x SC150	1	set	
	XA2685	T300 SC150 Switch Controller	1	ea	
	XA2684	T300 Ethernet Jumper	1	ea	
7	EE1643	2 Core 4mm ² Cable	2	m	
9	FL1428	16mm ² copper termination ug	1	ea	
10	GS6100	Radome Antenna (with coax cable and connectors to kiosk roof B/H and with coax cable from B/H to NextG modem)	1	ea	
11	HC3047	Cybertec NextG Modem Model 2455X	1	ea	
12	XA2665	Kiosk/Switchroom door switch (normally open momentary contact) with 5m 2-core cable	1	set	
13	OH0194	WP NMK2 Padlock (Lockwood 234B45/619/6MK; Keyed to MK RD1/WPC NMK2)	1	ea	

DA6_NG_SE_5I		T300 RTU Next G (RM6 & FLUSARC), 5x SWDC for SE SWGR			
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
6	XA2678	T300 RTU and Controller with 3x SC150	1	set	
	XA2685	T300 SC150 Switch Controller	2	ea	
	XA2684	T300 Ethernet Jumper	2	ea	
7	EE1643	2 Core 4mm ² Cable	2	m	
9	FL1428	16mm ² copper termination ug	1	ea	
10	GS6100	Radome Antenna (with coax cable and connectors to kiosk roof B/H and with coax cable from B/H to NextG modem)	1	ea	
11	HC3047	Cybertec NextG Modem Model 2455X	1	ea	
12	XA2665	Kiosk/Switchroom door switch (normally open momentary contact) with 5m 2-core cable	1	set	
13	OH0194	WP NMK2 Padlock (Lockwood 234B45/619/6MK; Keyed to MK RD1/WPC NMK2)	1	ea	

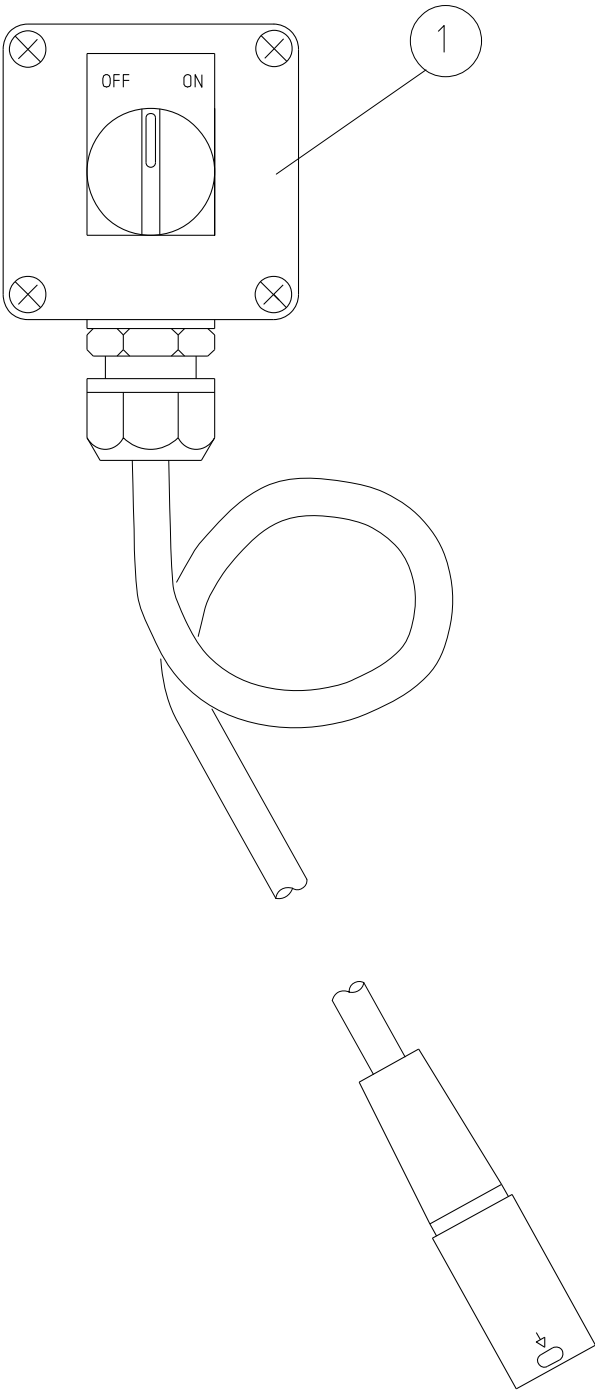
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										RMU REMOTE TELEMETRY EQUIPMENT (RTU) - FIBRE ARRANGEMENT										ORIGINATED:				SCALE: NTS		DA6-FIBRE			
																				CHECKED: REE									
C 31.01.23 TITLE CHANGED, DETAILS DELETED										CO KJ PC										APPROVED:				GRANT STACY		REV. C		SHT.	
B 07.09.12 ORIGINAL ISSUE										ORDG. CHKD. APRD.																			
REV DATE DESCRIPTION																													



				COMPATIBLE UNIT				DISTRIBUTION DESIGN CATALOGUE			
				TITLE				DRAWN: JRR		DATE: 26-03-2014	
				SWITCHGEAR AUTOMATION				ORIGINATED:		SCALE: NTS	
				COMMS INTERFACE & DC SUPPLY				CHECKED: REE		REV. No.	
								APPROVED:		DA07	
								GRANT STACY		REV. A	
										SHT.	
</											

CU	CU Description
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DA7 Switchgear automation comms interface and dc supply (not for RM6/Flusarc36)					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	XA2179	24V DC Battery Charger	1	ea	
2	XA2360	Batteries	2	ea	
3	XA2365	Isolation enclosure	1	ea	
4	XA4089	Remote terminal unit	1	ea	
5	XA2182	Krone block	1	ea	

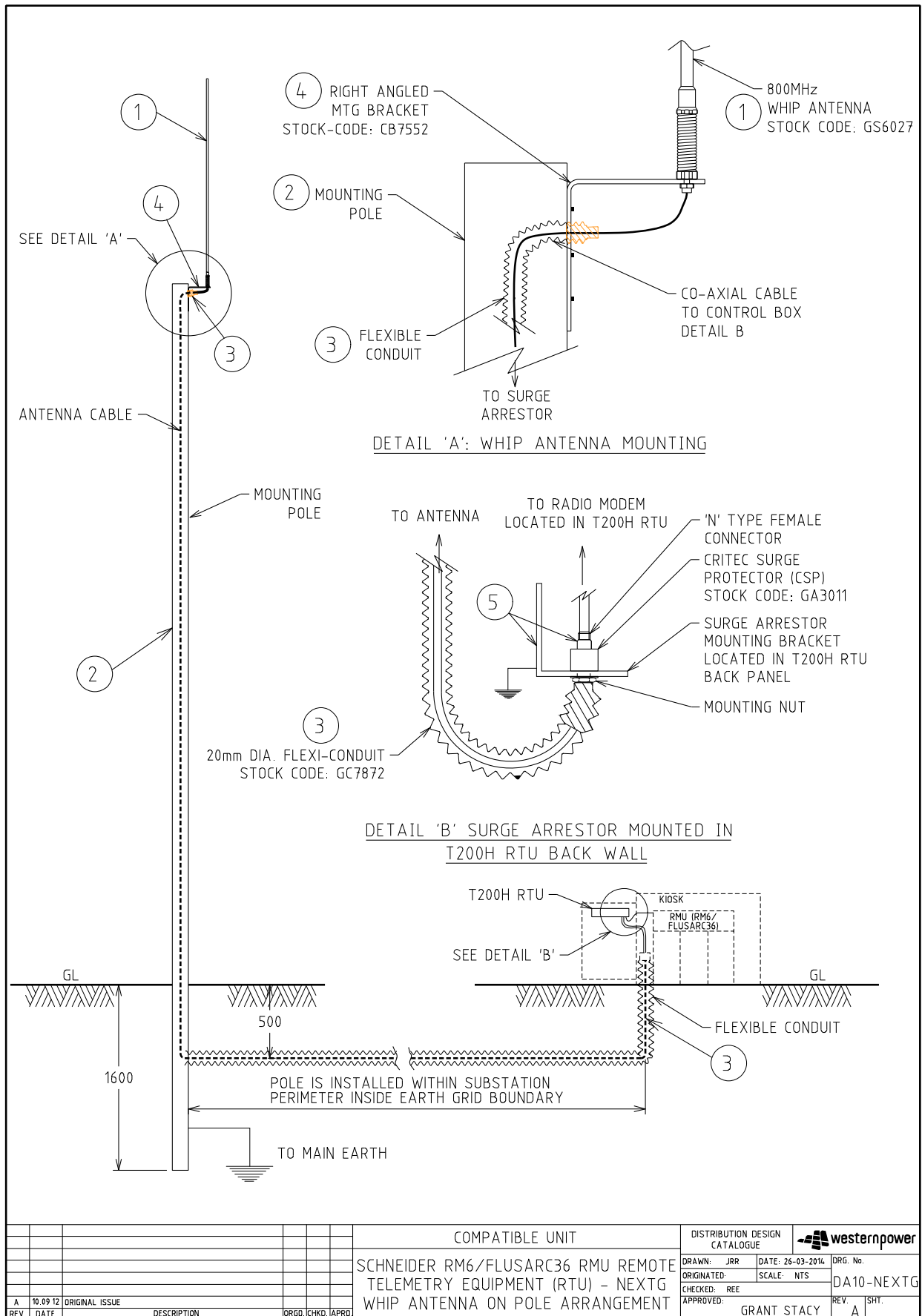


					COMPATIBLE UNIT					DISTRIBUTION DESIGN CATALOGUE					
					TITLE SWITCHGEAR AUTOMATION LOCAL OPERATING STATION					DRAWN: JRR		DATE: 26-03-2014		DRG. No.	
										ORIGINATED:		SCALE: NTS		DA08	
										CHECKED: REE					
										APPROVED:					
										GRANT STACY		REV. A		SHT.	
A		ORIGINAL ISSUE													
REV		DATE		DESCRIPTION			DRGD.		CHKD.		APRD.				

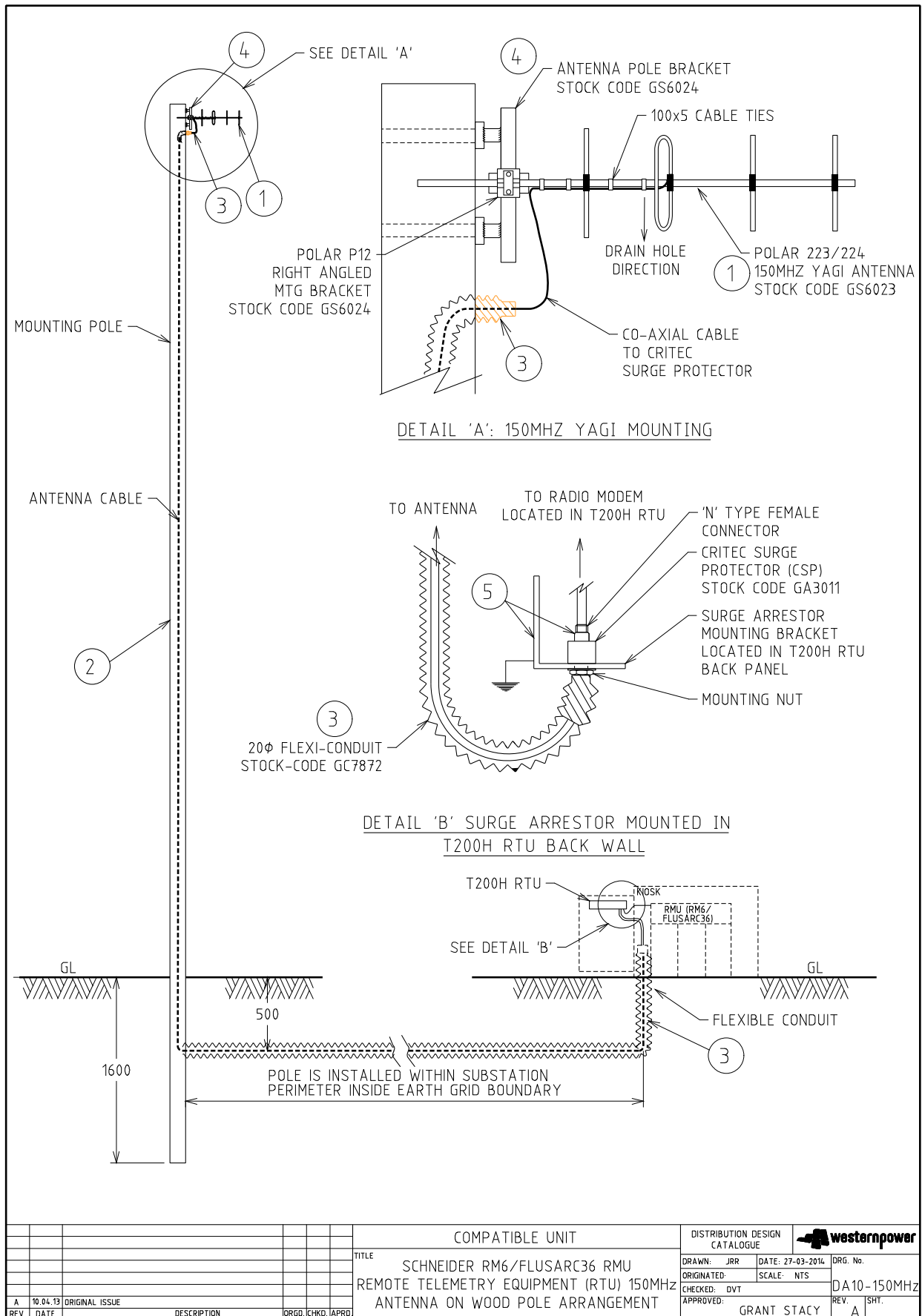
CU	CU Description
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DA8 Switchgear automation local operating station (not for RM6/Flusarc36)					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	XA2370	Local operating station	1	ea	Incl 8m lead

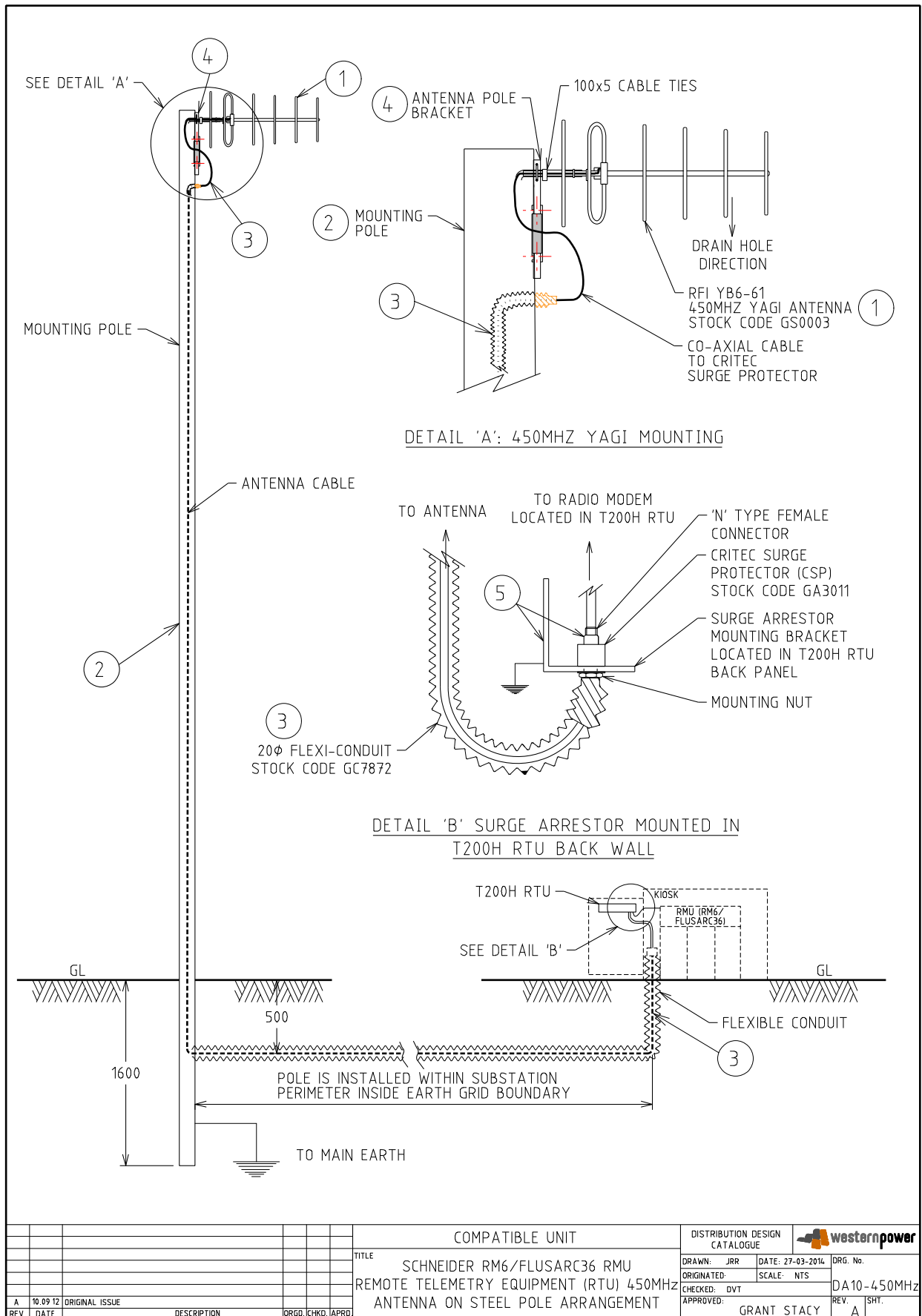
DA9 CBD SCADA only costs for automation					
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	N/A	Automation Commissioning	1	ea	Listed under "Materials" tab



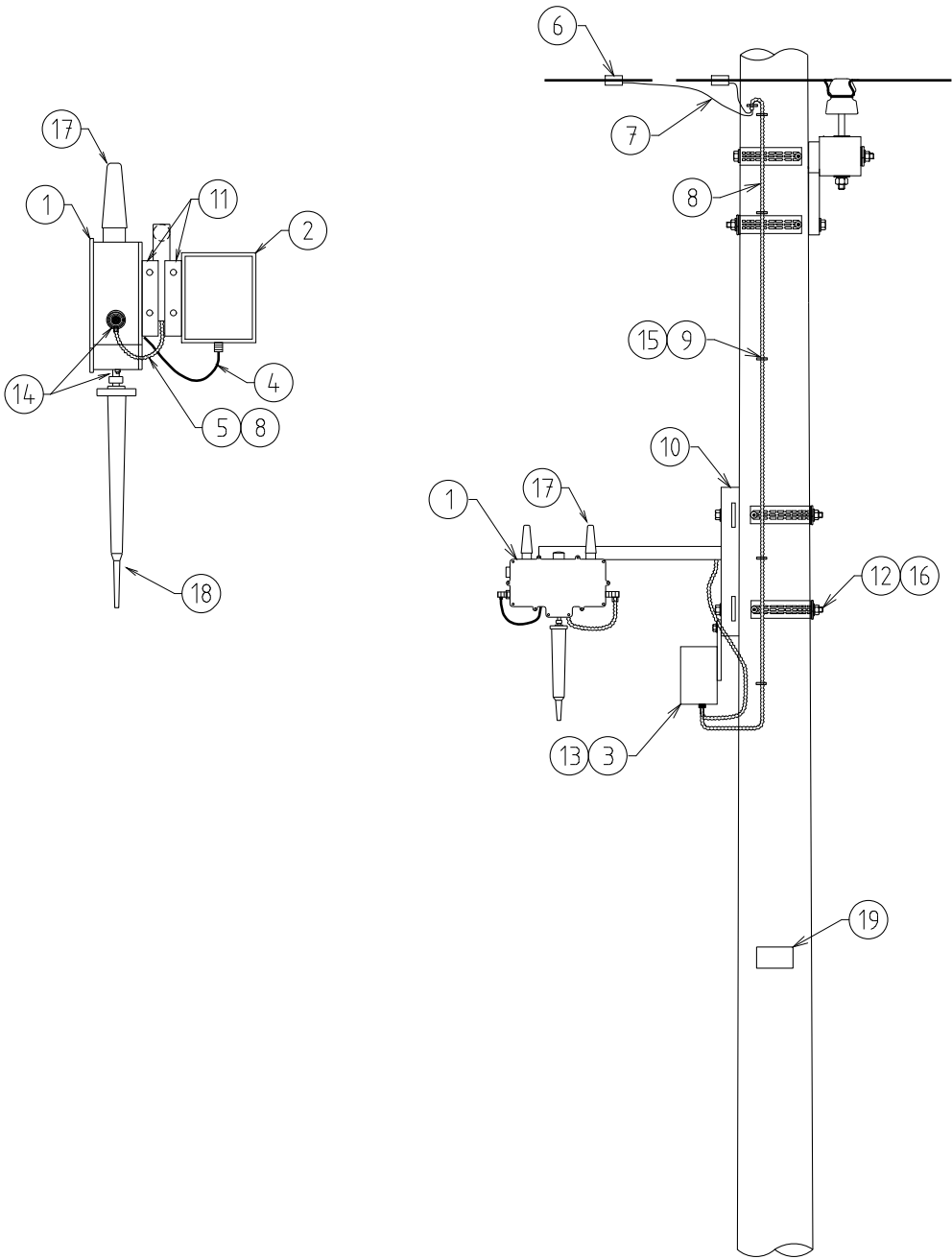
CU		CU Description			
DA10_NEXTG		External Whip Antenna for RMU automation - NextG			
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	GS6027	Whip antenna; 800MHz, CDMA, 6.5dB gain, with 5m RG58 coax cable	1	ea	
2	CW1525	Customer pole 6.5m, 114mm (outer diameter), galvanized. (Drawing No. L10-0001)	1	ea	
3	GC7872	Flexible conduit 20mm NB;corrugated;plastic PVC; UV stable;grey;10m roll	1	roll	
4	CB7552	Angle bracket for antenna mounting; 90deg; aluminium	1	ea	
5	GA3011	Coaxial surge arrester; N-type F-F; bulkhead mounted; with L-mounting bracket	1	ea	
6	-	Non-catalogued miscellaneous materials	1	lot	



CU		CU Description			
DA10_150MHZ		External Yagi Antenna for RMU automation – 150MHz Analogue Radio			
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	GS6023	VHF Antenna; 4 element Yagi (Y34) 150-156 MHz; with 6m tail in flexi loom tube, N-type connector, right angle clamp (P12) and Yagi assembly hardware	1	ea	
2	CW1205	Wood pole 9.5m, 5kN	1	ea	
3	GC7872	Flexible conduit 20mm NB, corrugated;plastic PVC; UV stable;grey;10m roll	1	roll	
4	GS6024	Antenna mounting bracket, right angled, POLAR P12	1	ea	
5	GA3011	Coaxial surge arrester; N-type F-F; bulkhead mounted; with L-mounting bracket	1	ea	
6	-	Non-catalogued miscellaneous materials	1	lot	



CU		CU Description			
DA10_450MHZ		External Yagi Antenna for RMU automation – 450MHz Digital Radio			
ITEM NUMBER	STOCK NUMBER	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	GS0003	UHF Antenna, 6EL Yagi (YB6-61); with 5m tail in flex conduit terminated with N-type connector; and 500mm RF patch cable	1	kit	
2	CW1525	Customer pole 6.5m, 114mm (outer diameter), galvanised (Drawing No. L10-0001)	1	ea	
3	GC7872	Flexible conduit 20mm NB, corrugated;plastic PVC; UV stable;grey;10m roll	1	roll	
4	CB3080	Antenna support bracket; galvanised steel	1	ea	
5	GA3011	Coaxial surge arrester; N-type F-F; bulkhead mounted; with L-mounting bracket	1	ea	
6	-	Non-catalogued miscellaneous materials	1	lot	



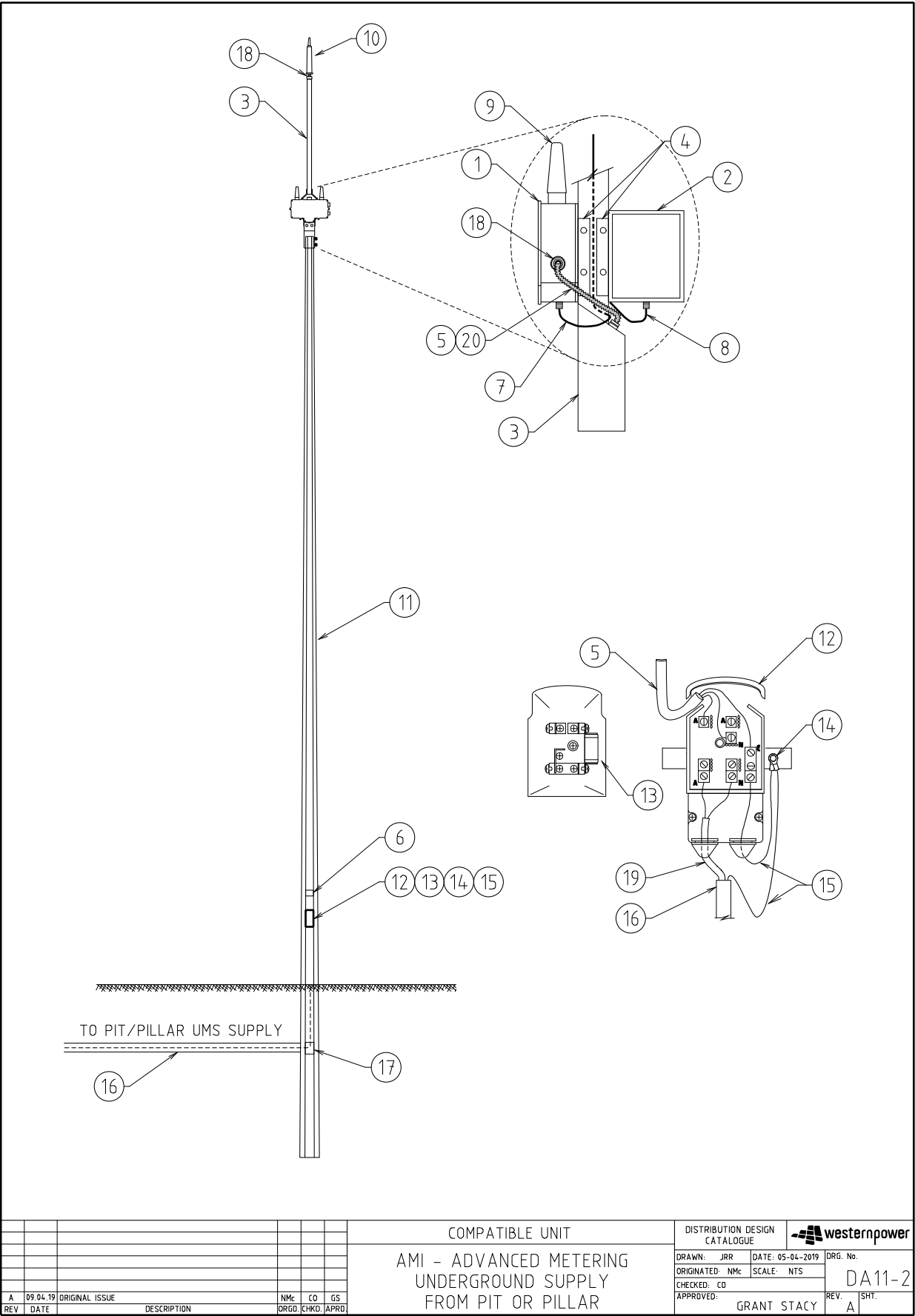
NOTES:-
1. SCREWS FOR ATTACHING AP/RELAY & BATTERY
TO DEVICE BRACKETS SUPPLIED WITH COMMS DEVICES.

						COMPATIBLE UNIT			DISTRIBUTION DESIGN CATALOGUE						
						AMI – ADVANCED METERING LV AERIAL SUPPLY ARRANGEMENT			DRAWN: JRR		DATE: 05-04-2019		DRG. No.		
									ORIGINATED: NMC		SCALE: NTS		DA11-1		
									CHECKED: CD		APPROVED:				
									GRANT STACY		REV. A		SHT.		
A		09.04.19		ORIGINAL ISSUE		NMC		CO		GS					
REV		DATE		DESCRIPTION		DRGD		CHKD		APRD					

CU	CU Description
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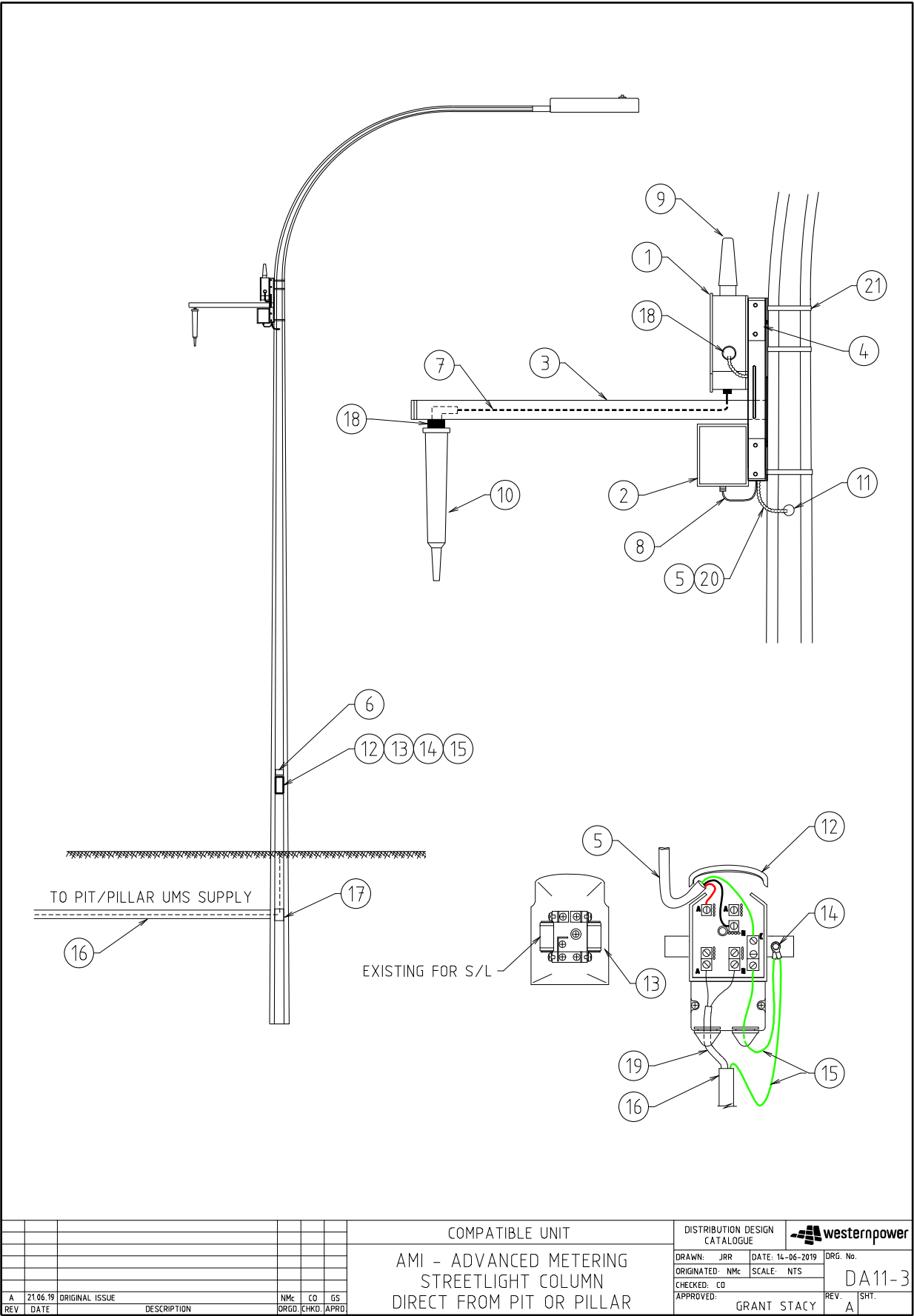
DA11_AMI OWA AMI Equipment on Overhead Network – Wood Pole Access Point					
ITEM NUMBER	STOCK CODE	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	RA0010	Ittron Access Point	1	ea	
2	RA0012	Ittron Battery	1	ea	
3	GF1804	Fuse Box	1	ea	
4	RA0015	Ittron DC Battery Cable	1	ea	
5	RA0016	Ittron AC Supply Cable	1	ea	
6		Select from CN68 / FC0110 / FC0160 - FC0163	1	ea	LV ABC / Cu / Al
7	EE1120	6mm sq service cable 2 core	5	m	
8	GC7872	Flexible Conduit 20mm	1	roll	10m
9	GC7191	Saddles	10	ea	
10	GS6053	Pole Mount Bracket	1	ea	
11	GS6501	Device Plate	2	ea	
12	AB6736	M12 x 400mm Pole Bolt	2	ea	
13	GF0925	10A Fuse	1	ea	
14	HT0175	Self-Amalgamating Tape	1	ea	
14	HT0181	Vinyl Tape (applied over self-amalgamating tape)	1	ea	
15	AS2511	Wood screws	20	ea	
16	CE7541	Dispersion Plate	2	ea	
17	RA0014	Ittron Antenna GSM	2	ea	
18	RA0013	Ittron Antenna UHF	1	ea	
19	CZ5005	Label Base	1	ea	Label Truck Stock

DA11_AMI OWR AMI Equipment on Overhead Network – Wood Pole Relay					
ITEM NUMBER	STOCK CODE	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	RA0011	Ittron Relay	1	ea	
2	RA0012	Ittron Battery	1	ea	
3	GF1804	Fuse Box	1	ea	
4	RA0015	Ittron DC Battery Cable	1	ea	
5	RA0016	Ittron AC Supply Cable	1	ea	
6		Select from CN68 / FC0110 / FC0160 - FC0163	1	ea	LV ABC / Cu / Al
7	EE1120	6mm sq service cable 2 core	5	m	
8	GC7872	Conduit 20mm	1	roll	10m
9	GC7191	Saddles	10	ea	
10	GS6053	Pole Mount Bracket	1	ea	
11	GS6501	Device Plate	2	ea	
12	AB6736	M12 x 400mm Pole Bolt	2	ea	
13	GF0925	10A Fuse	1	ea	
14	HT0175	Self-Amalgamating Tape	1	ea	
14	HT0181	Vinyl Tape (applied over self-amalgamating tape)	1	ea	
15	AS2511	Wood screws	20	ea	
16	CE7541	Dispersion Plate	2	ea	
17	RA0014	Ittron Antenna GSM	1	ea	
18	RA0013	Ittron Antenna UHF	1	ea	
19	CZ5005	Label Base	1	ea	Label Truck Stock



CU		CU Description			
DA11_AMI UGA					
AMI Equipment Underground Supplied – Access Point – 10m*					
ITEM NUMBER	STOCK CODE	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	RA0010	Itron Access Point	1	ea	
2	RA0012	Itron Battery	1	ea	
3	GS6054	Streetlight Bracket	1	ea	
4	GS6501	Device Plate	2	ea	
5	RA0015	Itron DC Battery Cable	1	ea	
6		Label	1	ea	Truck Stock
7	RA0017	Coaxial Cable with connectors	1	ea	
8	RA0016	Itron AC Supply Cable	1	ea	
9	RA0014	Itron Antenna GSM	2	ea	
10	RA0013	Itron Antenna UHF	1	ea	
11	CW0256	Pole	1	ea	
12	HZ0131	Cut-out	1	ea	
13	GF1300	10A Street light Cut-out Fuse	1	ea	
14	FL0163	Lug	2	ea	
15	EE1364	6mm sq earth wire	10	m	*
16	GC0024	Conduit 40mm	3	ea	4m lg *
17	GC0479	Elbow 90 deg for 40mm conduit	2	ea	
18	HT0175	Self-Amalgamating Tape	1	ea	
18	HT0181	Vinyl Tape (applied over self-amalgamating tape)	1	ea	
19		Select from CN41 or CN41_TRMT (Termite Protected)	10	m	*
20	GC7872	Conduit 20mm	1	roll	10m/1m required
21	HZ0135	Cut-out mounting bracket	1	ea	
New UMS supply from Pillar – LU10 or Pit – UM04					
* - adjust quantity to distance required between supply and pole installation (default 10m)					

CU		CU Description			
DA11_AMI UGR					
AMI Equipment Underground Supplied – Relay – 10m*					
ITEM NUMBER	STOCK CODE	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	RA0011	Itron Relay	1	ea	
2	RA0012	Itron Battery	1	ea	
3	GS6054	Streetlight Bracket	1	ea	
4	GS6501	Device Plate	2	ea	
5	RA0015	Itron DC Battery Cable	1	ea	
6		Label	1	ea	Truck Stock
7	RA0017	Coaxial Cable with connectors	1	ea	
8	RA0016	Itron AC Supply Cable	1	ea	
9	RA0014	Itron Antenna GSM	1	ea	
10	RA0013	Itron Antenna UHF	1	ea	
11	CW0256	Pole	1	ea	
12	HZ0131	Cut-out	1	ea	
13	GF1300	10A Street light Cut-out Fuse	1	ea	
14	FL0163	Lug	2	ea	
15	EE1364	6mm sq earth wire	10	m	*
16	GC0024	Conduit 40mm	3	ea	4m lg *
17	GC0479	Elbow 90 deg for 40mm conduit	2	ea	
18	HT0175	Self-Amalgamating Tape	1	ea	
18	HT0181	Vinyl Tape (applied over self-amalgamating tape)	1	ea	
19		Select from CN41 or CN41_TRMT(Termite Protected)	10	m	*
20	GC7872	Conduit 20mm	1	roll	10m/1m required
21	HZ0135	Cut-out mounting bracket	1	ea	
New UMS supply from Pillar – LU10 or Pit – UM04					
* - adjust quantity to distance required between supply and pole installation (default 10m)					



CU		CU Description			
DA11_AMI SLA AMI Equipment Streetlight Column – Access Point – 10m*					
ITEM NUMBER	STOCK CODE	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	RA0010	Itron Access Point	1	ea	
2	RA0012	Itron Battery	1	ea	
3	GS6055	Streetlight column Bracket	1	ea	
4	GS6501	Device Plate	2	ea	
5	RA0015	Itron DC Battery Cable	1	ea	
6		Label	1	ea	Truck Stock
7	RA0022	Coaxial Cable with connectors	1	ea	
8	RA0016	Itron AC Supply Cable	1	ea	
9	RA0014	Itron Antenna GSM	2	ea	
10	RA0013	Itron Antenna UHF	1	ea	
11	HG0001	Gland	1	ea	
12	HZ0131	Electrical Cut-out	1	ea	
13	GF1300	10A Street light Cut-out Fuse	1	ea	
14	FL0163	Lug	2	ea	
15	EE1364	6mm sq earth wire	10	m	*
16	GC0023	Conduit 32mm	3	ea	4m lg *
17	GC0478	Elbow 90 deg for 32mm conduit	2	ea	
18	HT0175	Self-Amalgamating Tape	1	ea	
18	HT0181	Vinyl Tape (applied over self-amalgamating tape)	1	ea	
19		Select from CN41 or CN41_TRMT (Termite Protected)	10	m	*
20	GC7872	Conduit 20mm	1	roll	Only 1m required
21	OZ0017	16mm band-it strap & buckles	3	ea	Strap - Truck stock
22	HZ0135	Cut-out mounting bracket	1	ea	
New UMS supply from Pillar – LU10 or Pit – UM04					
* - adjust quantity to distance required between supply and pole installation (default 10m)					

CU		CU Description			
DA11_AMI SLR AMI Equipment Streetlight Column – Relay – 10m*					
ITEM NUMBER	STOCK CODE	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	RA0011	Itron Relay	1	ea	
2	RA0012	Itron Battery	1	ea	
3	GS6055	Streetlight column Bracket	1	ea	
4	GS6501	Device Plate	2	ea	
5	RA0015	Itron DC Battery Cable	1	ea	
6		Label	1	ea	Truck Stock
7	RA0022	Coaxial Cable with connectors	1	ea	
8	RA0016	Itron AC Supply Cable	1	ea	
9	RA0014	Itron Antenna GSM	2	ea	
10	RA0013	Itron Antenna UHF	1	ea	
11	HG0001	Gland	1	ea	
12	HZ0131	Electrical Cut-out	1	ea	
13	GF1300	10A Street light Cut-out Fuse	1	ea	
14	FL0163	Lug	2	ea	
15	EE1364	6mm sq earth wire	10	m	*
16	GC0023	Conduit 32mm	3	ea	4m lg *
17	GC0478	Elbow 90 deg for 32mm conduit	2	ea	
18	HT0175	Self-Amalgamating Tape	1	ea	
18	HT0181	Vinyl Tape (applied over self-amalgamating tape)	1	ea	
19		Select from CN41 or CN41_TRMT (Termite Protected)	10	m	*
20	GC7872	Conduit 20mm	1	roll	Only 1m required
21	OZ0017	16mm band-it strap & buckles	3	ea	Strap - Truck stock
22	HZ0135	Cut-out mounting bracket	1	ea	
New UMS supply from Pillar – LU10 or Pit – UM04					
* - adjust quantity to distance required between supply and pole installation (default 10m)					