

Western Power's Asset Management System

Distribution Design Catalogue Unmetered Supply Section 16 (UM)



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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	04/04/2025	EDM 12	Nory Cerrado	First Revision with new Format and 3 yearly review
2	14/07/2025	Volt 6	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

Asset Management – Safety Environment Quality and Training

Asset Management - Grid Transformation

Asset Operations – Network Operations

Asset Operations – Operational Services

Asset Operations – Customer Connection Services

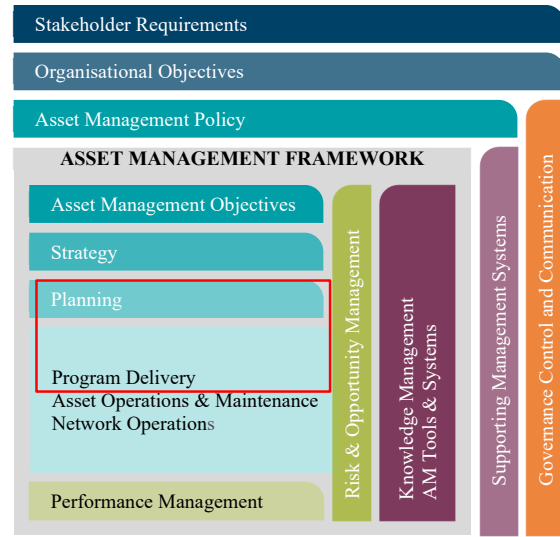
Business and Customer Service – Customer Service

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 EDM# [40304923](#).



Revision List

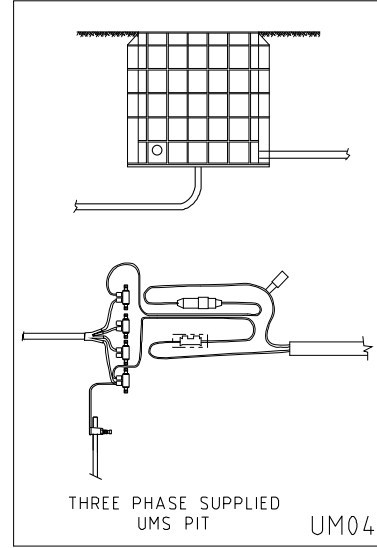
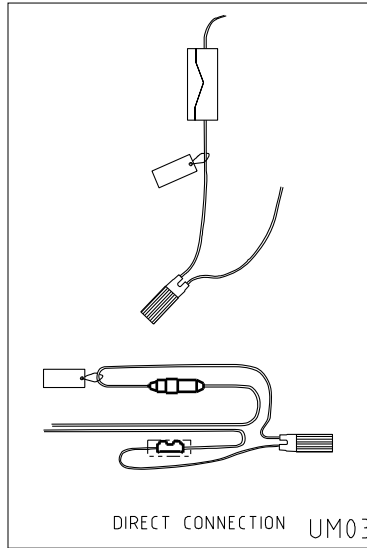
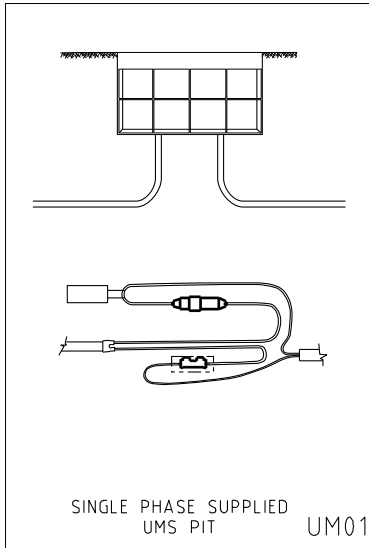
For drawing revisions please refer to the DDC Amendment list EDM# 24803827

General Notes

NOTE #	DESCRIPTION
1	Driving point is not required for normal ground conditions including small coffee rocks and shale. For harder ground condition, a driving point is recommended. (It is unlikely the driving point will be suitable for granite rock)
2	Expulsion Dropout Fuse (EDO) base and links as well as K-Mate fuse current limiters are not included in CUs but listed in HV51. Fault Tamer fuse base and links are listed in HV52. Fault Tamer fuse are not to be used on 33kV networks and have a maximum rating of 20A. EDOs are used on 33kV networks and for current rating greater than 20A.
3	For the physical dimension tables the uppermost king bolt / eye bolt is the reference point with coordinates X=0.0, Y=0.0 (Datum)
4	The conductor location in the Y axis of the physical dimension tables lists the height of the conductor on the top of the post insulator above the datum. This dimension has been rounded down taking equipment differences, manufacturing tolerances and installation variations into account. On angle structures, where the conductor is attached to the side of the insulator head the conductor is located marginally lower than if located on the top of the insulator. No adjustment is considered necessary to the Y dimension in these cases.
5	For conductor clashing calculation, apply the correct Y dimension which may differ from that listed in the dimension table which is used for ground clearance simulation purposes. E.g. HV09 RHS span (centre to outer phase) Ydim to be 230mm and not 310mm.
6	HV isolators to be selected according to HV53.

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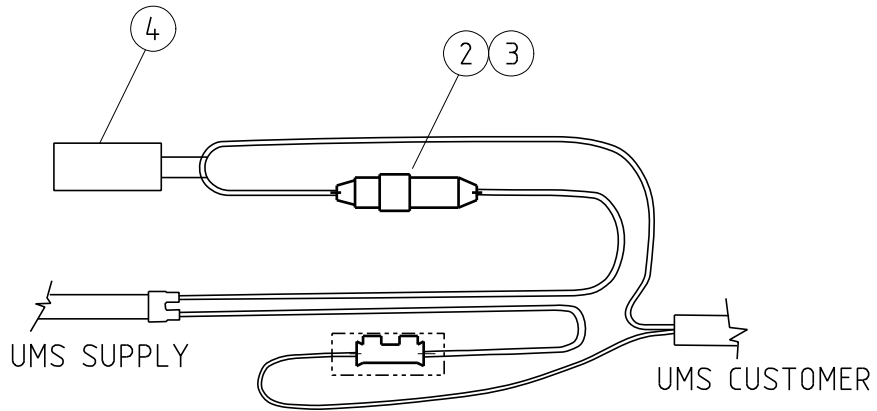
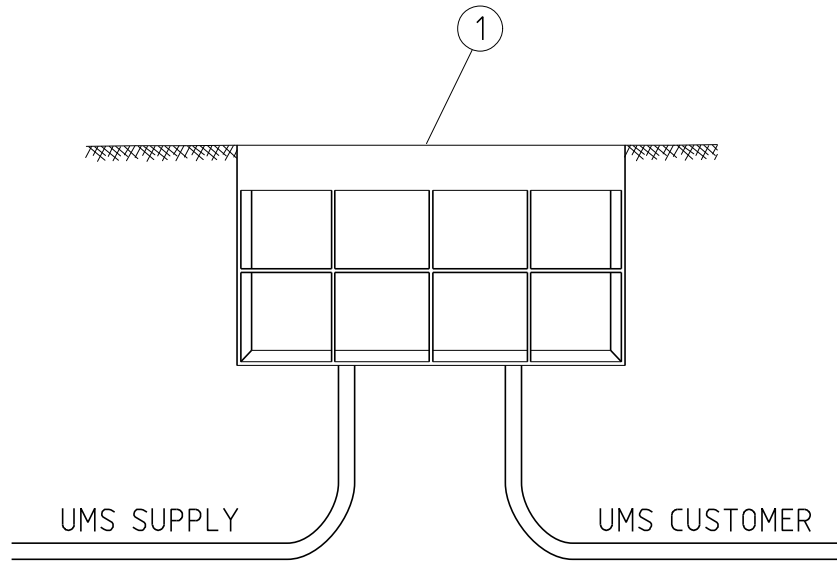
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				COMPATIBLE UNIT			DISTRIBUTION DESIGN CATALOGUE		westernpower	
				TITLE			DRAWN: JRR		DATE: 22-04-2014	
				UM COMPATIBLE UNITS			ORIGINATED:		SCALE: NTS	
							CHECKED: REE		UM INDEX	
							APPROVED: GRANT STACY		REV. F	
REV	DATE	DESCRIPTION	DRG.	CHKD.	APRD.					SHT.

Unmetered Supply CU List

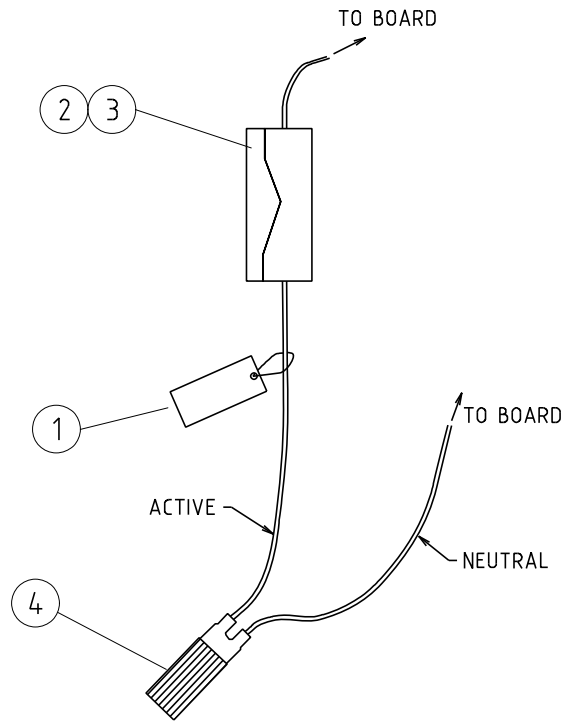
CU	CU DESCRIPTION
UM1	Single phase supplied ums pit
UM3_NR	Direct connection - fit fuse only
UM3_R	Direct connection - install red spot and fit fuse
UM3_FS	Direct connection to below ground service pit - install flood seal below great to service pit
UM_4	T-Off with 25 mm ² from LV feeder cable



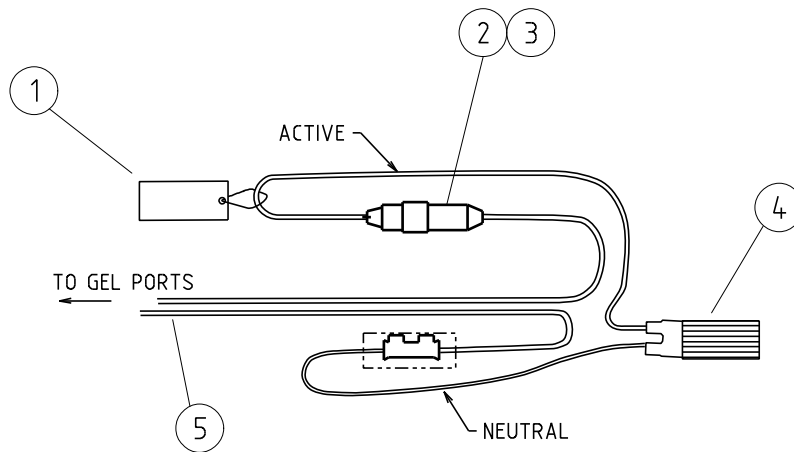
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																			ORIGINATED:		SCALE: NTS		UM01	
																			CHECKED: REE					
C	18.02.21	PIT TYPE CHANGED																	APPROVED:		GRANT STACY		REV. C	SHT.
B	03.06.09	ORIGINAL ISSUE																						
REV.	DATE	DESCRIPTION																						
						CO	REE	GS																

CU	CU Description
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UM1 Single phase supplied ums pit					
ITEM NUMBER	STOCK CODE	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	FB0055	Single phase pit	1	ea	
2	FE0110	fuse holder kit	1	ea	
3	GF2102	fuse, 20 Amp	1	ea	
4	CZ0307	instruction tag	1	ea	



PILLAR CONNECTION



BELOW GROUND SERVICE PIT CONNECTION

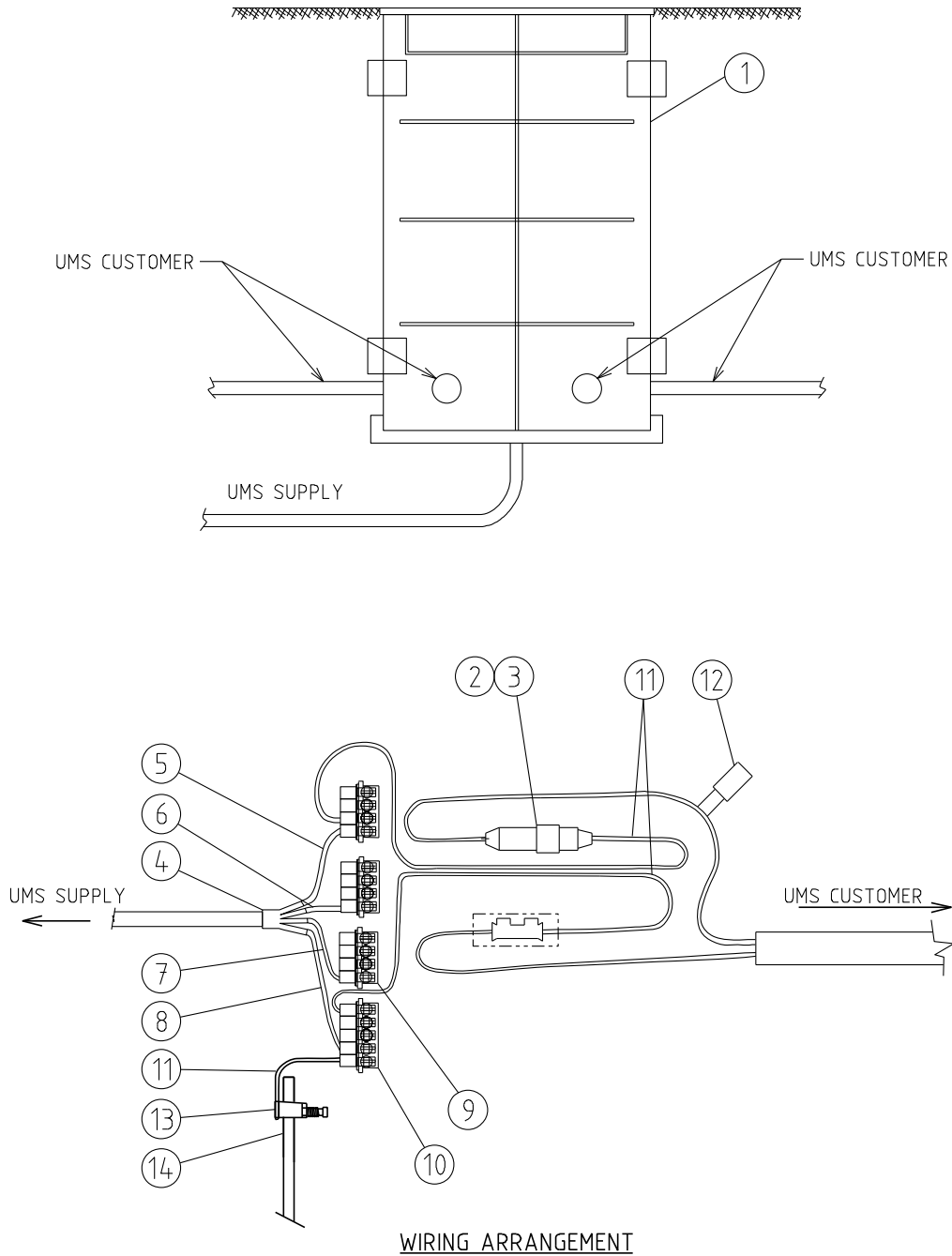
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CU	CU Description
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UM3_NR Direct Connection to pillar - fit fuse only (no red spot required)					
ITEM NUMBER	STOCK CODE	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	CZ0307	instruction tag	1	ea	
2	GF0917	red spot fuse, 20 Amp	1	ea	
4	FE0112	Termination kit	1	ea	If WP Cable

UM3_R Direct Connection to pillar - install red spot and fit fuse					
ITEM NUMBER	STOCK CODE	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	CZ0307	instruction tag	1	ea	
2	GF0917	red spot fuse, 20 Amp	1	ea	
3	GF0121	red spot fuse holder	1	ea	
4	FE0112	Termination kit	1	ea	If WP Cable

UM3_FS Direct Connection to below ground service pit - install flood seal and fit fuse					
ITEM NUMBER	STOCK CODE	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	CZ0307	instruction tag	1	ea	
2	FE0110	Fuse holder kit	1	ea	
3	GF2102	Fuse 20 amp	1	ea	
4	FE0112	Termination kit	1	ea	If WP Cable
5	EE1432	16mm ² cable	2	m	



F	09 06 25	PIT AND CONNECTORS CHANGED	NG	SH	CO
E	23 05 22	4 PORT CONNECTOR CHANGED	CO	SH	GS
D	18 02 21	DETAILS REVISED	CO	REE	GS
C	30 06 16	TITLE CHANGED	REE	JC	GS
B	05 02 16	DRG. FORMAT CHANGED AND ITEM 13 ADDED	JC	ME	GS
A	16 09 09	ORIGINAL ISSUE			
REV.	DATE	DESCRIPTION	DRG.	CHKD.	APRD.

COMPATIBLE UNIT

**THREE PHASE SUPPLIED
UMS PIT**

DISTRIBUTION DESIGN
CATALOGUE


DRAWN: JRR	DATE: 22-04-2014	DRG. No.
ORIGINATED:	SCALE: NTS	UM04
CHECKED: REE		REV F
APPROVED: GRANT STACY		SHT. 1/1

CU	CU Description
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UM_4 T-Off with 25mm² from LV Feeder Cable **					
ITEM NUMBER	STOCK CODE	DESCRIPTION	QTY Rqd	UNIT OF MEASURE	REMARKS
1	FB0052	Three phase pit	1	ea	
2	FE0110	fuse holder kit	1	ea	
3	GF2102	fuse, 20 Amp	1	ea	
4	FE0109	4-finger glove and black heatshrink sleeving	1	ea	
5	FE0102	red heatshrink sleeving	1	ea	
6	FE0103	white heatshrink sleeving	1	ea	
7	FE0104	blue heatshrink sleeving	1	ea	
8	FE0071	black heatshrink sleeving	1	ea	
9	CC0846	4-port gel port	3	ea	
10	CC0851	5-port gel port	1	ea	
11	EE1432	16mm conductor	3	m	
12	CZ0307	instruction tag	1	ea	
13	CE0055	earth clamp	1	ea	
14	CE0135	earth rod	1	ea	

** Use UM3_FS if more than one required.