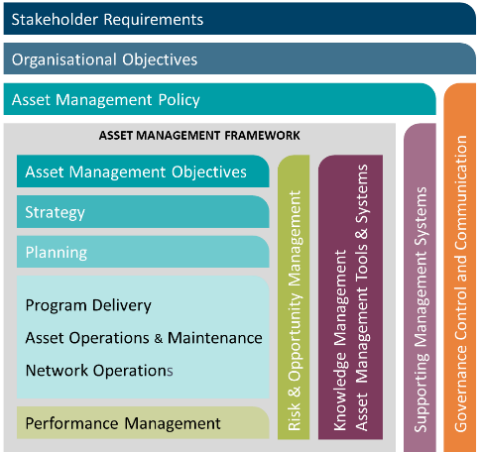


Western Power’s Asset Management System

Distribution Design Catalogue Unmetered Supply Section 16 (UM)



Original Issue: June 2004
Content Owner/Custodian: Distribution Design and Standards
This Revision: 4 – April 2025
Date for Next Review: April 2028

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ABN 18540492861



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	EDM Version	Compiled by	Description
1	04/04/2025	12	Nory Cerrado	First Revision with new Format and 3 yearly review

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

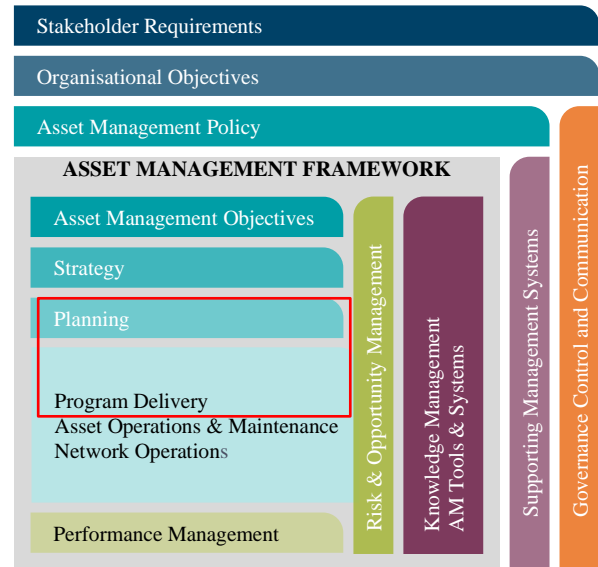
Business and Customer Service – Customer Service

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

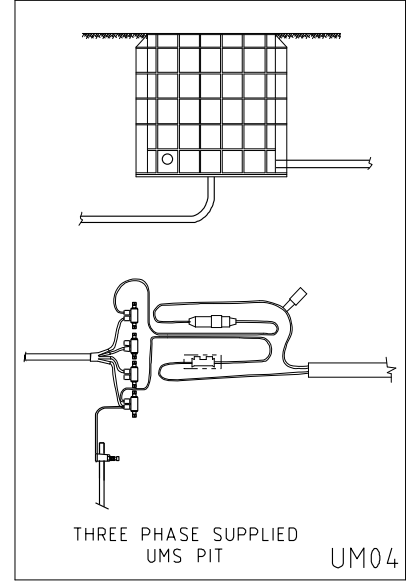
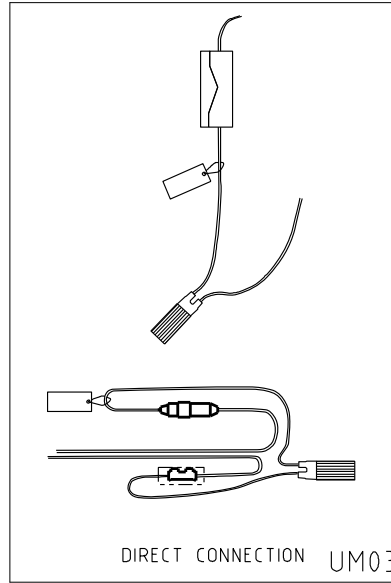
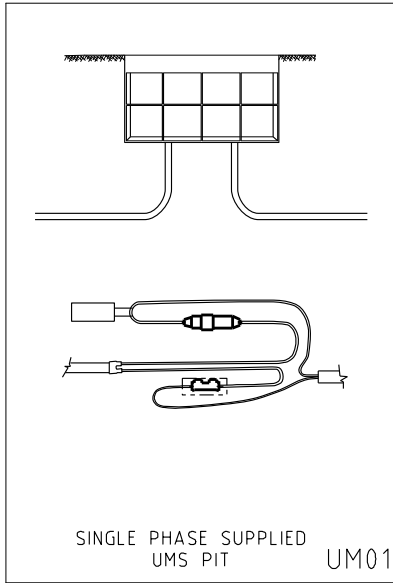
For drawing revisions please refer to the DDC Amendment list EDM# 24803827


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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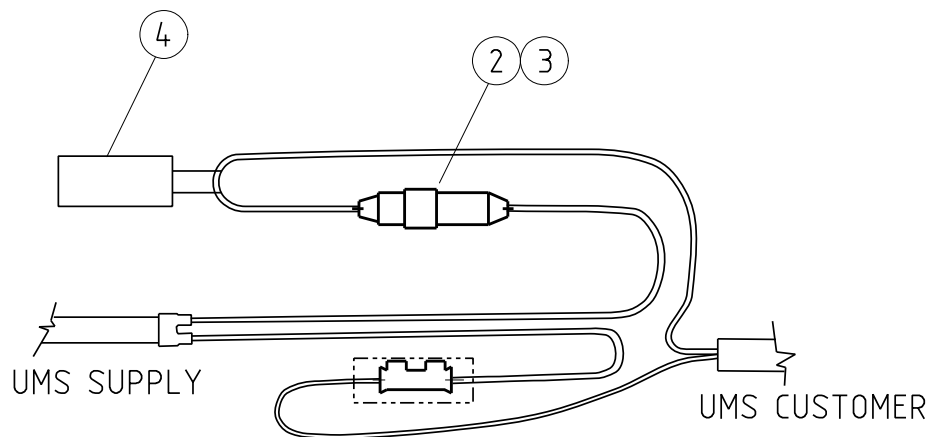
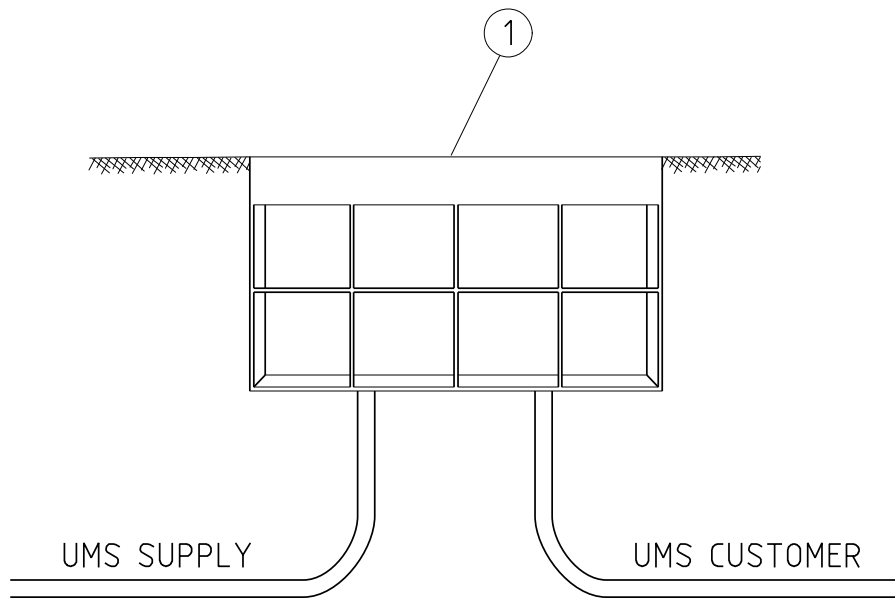
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								TITLE				DRAWN: JRR		DATE: 22-04-2014		DRG. No.	
F 18.02.21 DRAWING UM02 DELETED				CO NN GS				UM COMPATIBLE UNITS				ORIGINATED:		SCALE: NTS		UM INDEX	
E 21.08.19 DRAWING UM02 DELETED				CO NMc GS								CHECKED: REE		APPROVED: GRANT STACY			
D 17.09.09 ORIGINAL ISSUE																	
REV.		DATE		DESCRIPTION		ORGO		CHKO		APRD							

UM COMPATIBLE UNITS

UM INDEX

Unmetered Supply CU List

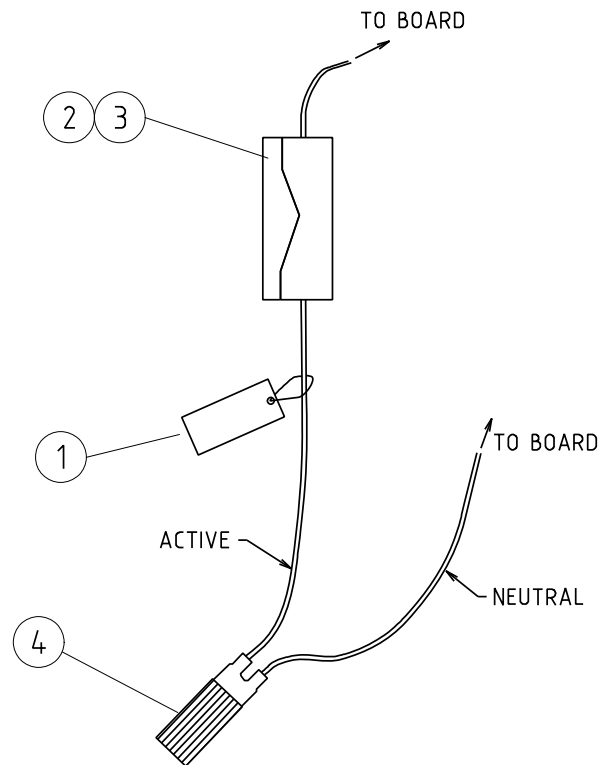
CU	CU DESCRIPTION
UM1	Single phase supplied ums pit
UM3_NR	Direct connection - fit fuse only
UM3_R	Direct connection - install red spot and fit fuse
UM3_FS	Direct connection to below ground service pit - install flood seal below great to service pit
UM_4	T-Off with 25 mm ² from LV feeder cable



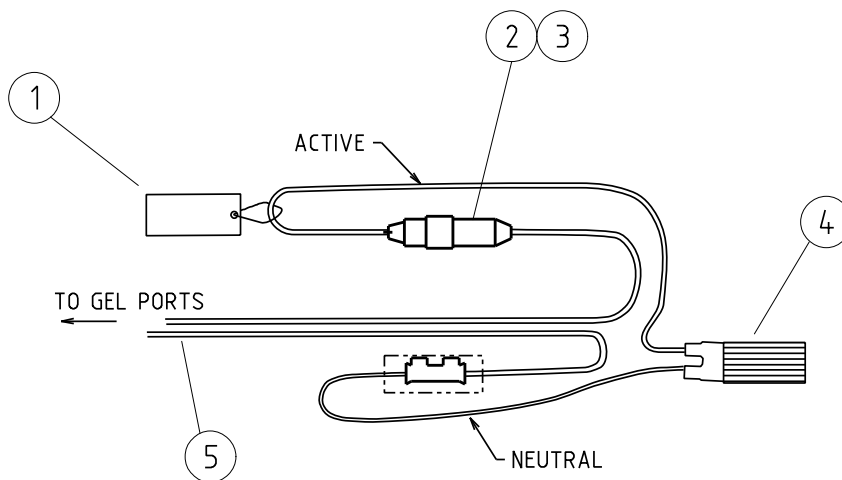
				COMPATIBLE UNIT			DISTRIBUTION DESIGN CATALOGUE		westernpower	
				TITLE			DRAWN: JRR		DATE: 22-04-2014	
				SINGLE PHASE SUPPLIED UMS PIT			ORIGINATED:		SCALE: NTS	
							CHECKED: REE		APPROVED: GRANT STACY	
							REV. C		SHT.	

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

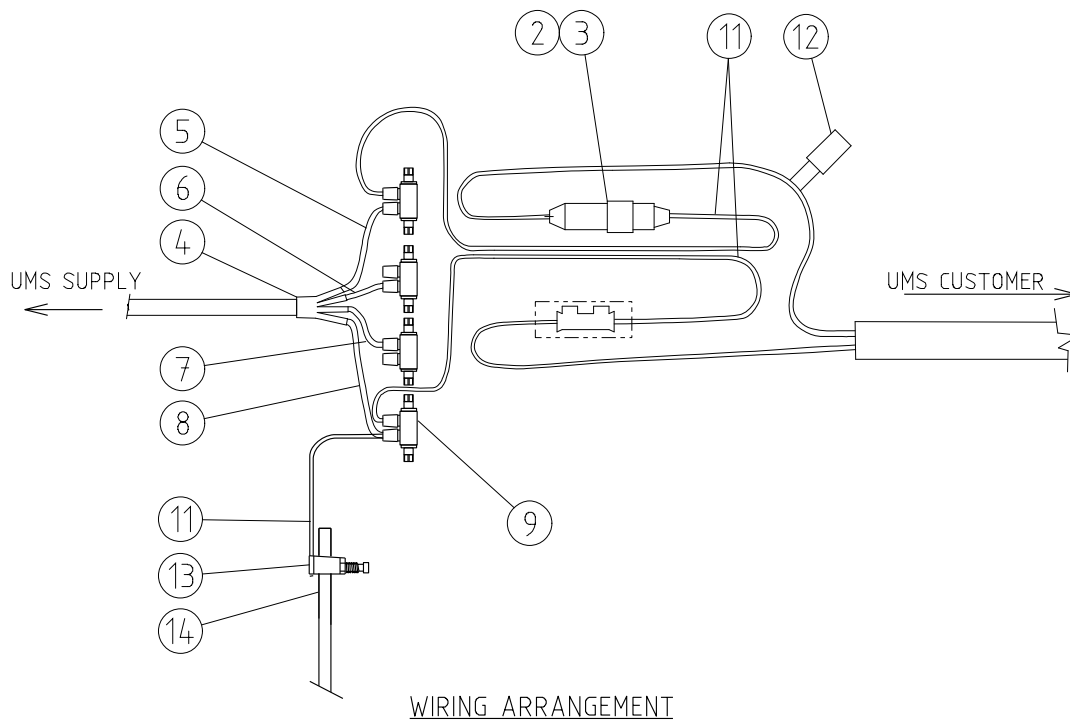
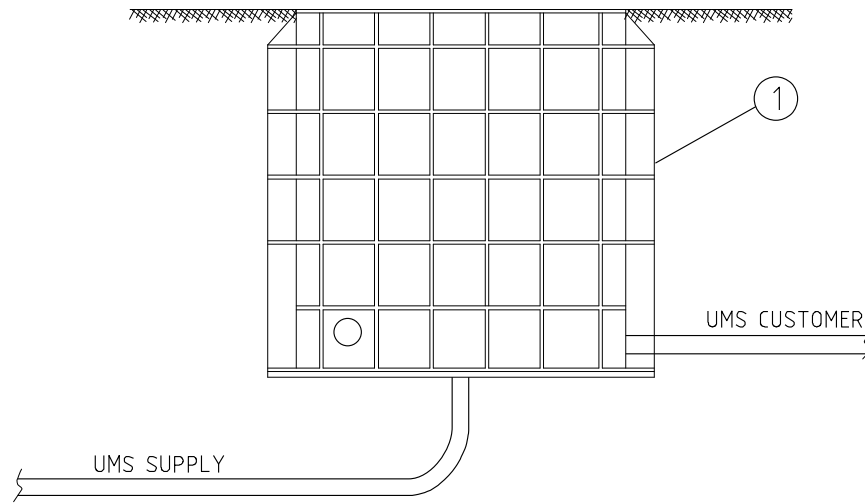
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CU	CU Description
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UM3_NR Direct Connection to pillar - fit fuse only (no red spot required)					
ITEM NUMBER	STOCK CODE	DESCRIPTION	QTY RQD	UNIT OF MEASURE	REMARKS
1	CZ0307	instruction tag	1	ea	
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	



WIRING ARRANGEMENT

						COMPATIBLE UNIT				DISTRIBUTION DESIGN CATALOGUE			
E	23.05.22	4 PORT CONNECTOR CHANGED			CO	SH	GS	TITLE	DRAWN: JRR		DATE: 22-04-2014	DRG. No.	
D	18.02.21	DETAILS REVISED			CO	REE	GS		THREE PHASE SUPPLIED		ORIGINATED:	SCALE: NTS	UM04
C	30.06.16	TITLE CHANGED			REE	JC	GS		UMS PIT		CHECKED: REE		
B	05.02.16	DRG. FORMAT CHANGED AND ITEM 13 ADDED			JC	ME	GS				APPROVED:		
A	16.09.09	ORIGINAL ISSUE									GRANT STACY	REV. F	SHT.
REV.	DATE	DESCRIPTION			ORGD.	CHKD.	APRD.						

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	FB0051	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	CC0852	4-port connector	4	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.