SAJ ARCHITECTSCC

8 SAINT SEBASTIAN DRIVE, WENDYWOOD, SANDTON, JOHANNESBURGP O BOX 18570, ACTONVILLE, 1506 TEL : 011 802 0854 FAX : 086 600 4896 CELL: 083 560 4986 E-MAIL : SUNDEEPJ@SAJARC.COM

ELECTRICAL DRAWINGS

BY LEVIT8 ECO ENGINEERS

DJP POWER SERVICES T/A LEVIT8 ECO ENGINEERS

MR. DEEPTESH NARANDAS (PR. ENG, RPEM)

SITE: 7 TREBYAM AVENUE, EDENBURG, SANDTON, JOHANNESBURG,2128. U.S. CONSULATE GENERAL JOHANNESBURG, SOUTH AFRICA

Levit8 Eco Engineers

DRAWING/DOCUMENT REGISTER

CLIENT: SUNDEEP JIVAN
SAJ ARCHITECTS

REFERENCE: 202501 DR 02

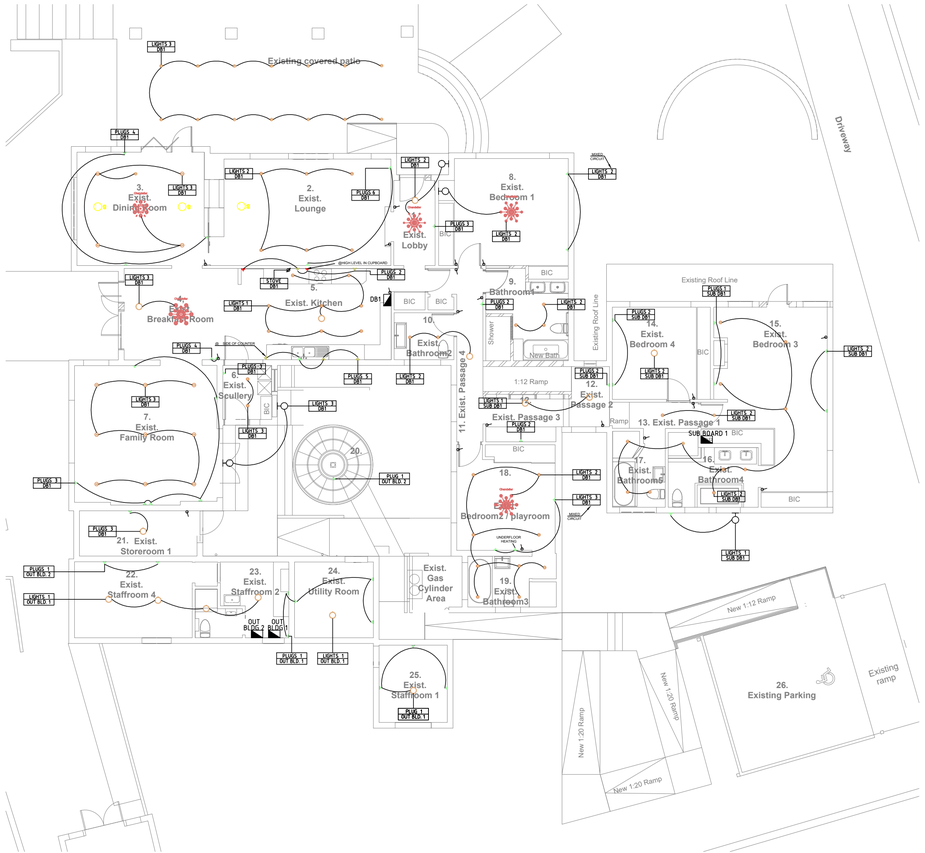
DISCIPLINE: ELECTRICAL ENGINEERING

DATE: 10/12/2025

LEVIT8 EE PROJECT NO: 202501

PROJECT NAME: US EMBASSY RENOVATIONS

DOC NO	REV	ISSUE	SIZE	SCALE	DOC TYPE	TITLE
202501 EX01	A	FOR INFORMATION	A1	1:125	DRAWING	EXISTING SMALL POWER LAYOUT
202501 L01	1	FOR CONSTRUCTION	A1	1:125	DRAWING	LIGHTING LAYOUT
202501 P01	1	FOR CONSTRUCTION	A1	1:125	DRAWING	POWER LAYOUT
202501 S01	0	FOR INFORMATION	A1	NTS	DRAWING	SINGLE LINE DIAGRAM DB 1 (EXISTING)
202501 S02	0	FOR INFORMATION	A1	NTS	DRAWING	SINGLE LINE DIAGRAMS SUB BOARD 1, OUT BLDG 1, OUT BLDG 2 (EXISTING)
202501 S03	0	FOR CONSTRUCTION	A1	NTS	DRAWING	SINGLE LINE DIAGRAM DB 1 (WITH ADDITIONS)
202501 S04	0	FOR CONSTRUCTION	A1	NTS	DRAWING	SINGLE LINE DIAGRAMS SUB BOARD 1, OUT BLDG 1, OUT BLDG 2 (WITH ADDITIONS)
-	0	FOR INFORMATION	A1	NTS	DOCUMENT	DIALUX LIGHTING REPORT
-	0	FOR INFORMATION	A4	NTS	DOCUMENT	LIGHTING SCHEDULE
	0	FOR INFORMATION	A4	NTS	DOCUMENT	LIGHTING DATA SHEETS
-	0	FOR INFORMATION	A4	NTS	DOCUMENT	CBI CATALOGUE
-	0	FOR INFORMATION	A4	NTS	DOCUMENT	CRABTREE DIAMOND CATALOGUE
-	0	FOR INFORMATION	A4	NTS	DOCUMENT	WIRING SPECIFICATIONS
-	0.1	FOR INFORMATION	A4	NTS	DOCUMENT	FAULT LEVEL CALCULATIONS



	LEGEND
SYMBOL	DESCRIPTION
DB	ELECTRICAL DISTRIBUTION BOARD
D1	TYPE D1 - DOWNLIGHT
	TYPE E - CEILING LIGHT
Chandelier	TYPE CH - CHANDELIER LIGHT
	TYPE B - WALL LIGHT
	TYPE E - OPEN CHANNEL LIGHT
S	TYPE S - CEILING SPEAKER
	LIGHT SWITCH POINT
	60A DOUBLE POLE ISOLATOR
	SWITCHED SOCKET OUTLET AT 1200mm AFFL
	SWITCHED SOCKET OUTLET AT 400mm AFFL
	SWITCHED SOCKET OUTLET AT 1000mm AFFL
	CONDUIT LINK / CIRCUIT LINK

UNCLASSIFIED (U)

WARNING

This document is the property of the U.S. Government. Further reproduction and distribution are prohibited without the express written approval of U.S. Department of State, Consulate General Johannesburg,1 Sandton Drive, Sandhurst, Johannesburg, 2146, South Africa.

REV	DATE	DRAWN	CHECK	DESCRIPTION
A	09/12/2025	AV	DN	FOR INFORMATION

CLIENT

US CONSULATE GENERAL JOHANNESBURG

PROJECT

7 TREBYAM AVENUE EDENBURG, SANDTON

TITLE

EXISTING SMALL POWER LAYOUT

Levit8 Eco Engineers

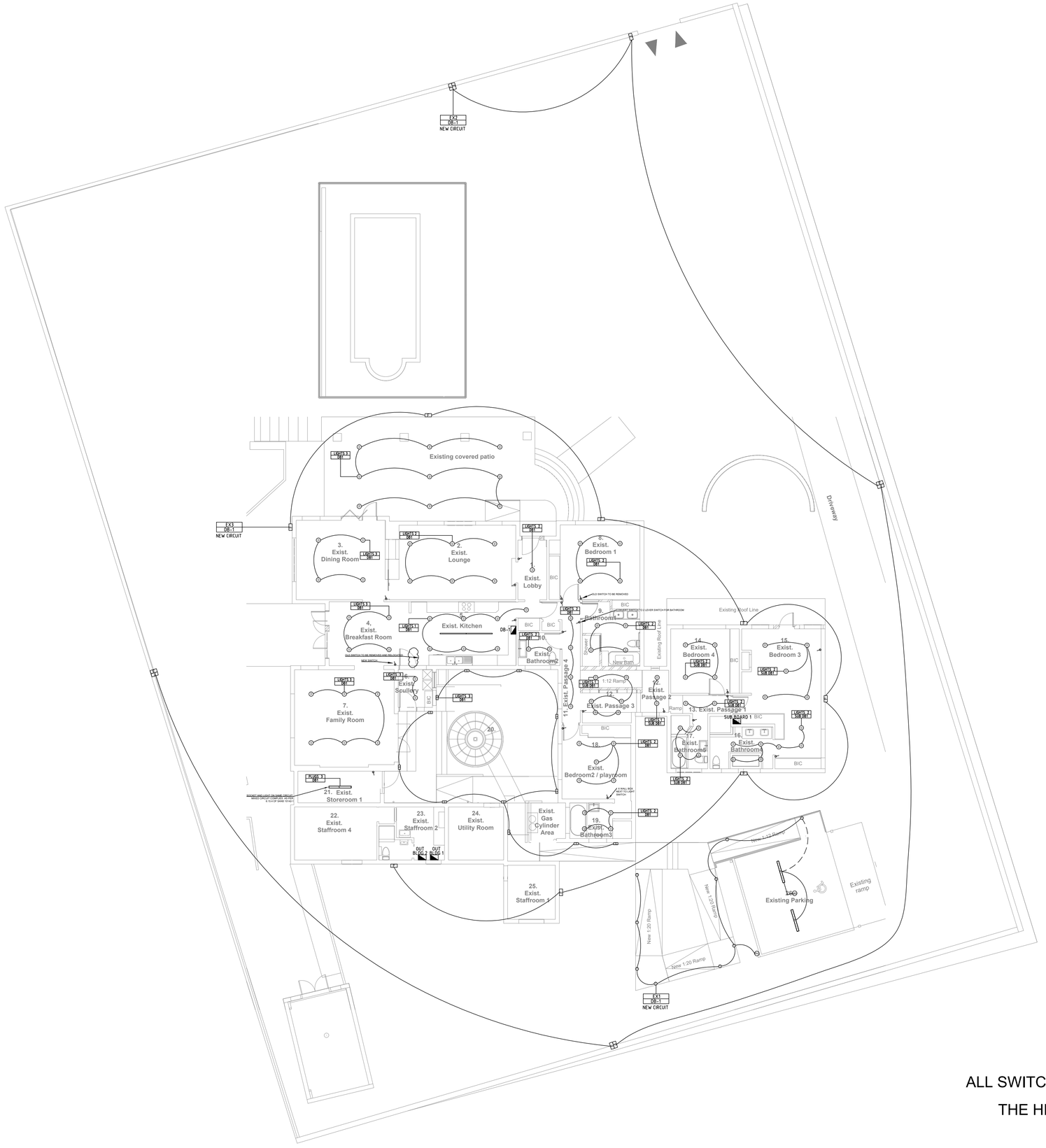
47 DERBY DRIVE, 54 LANZEROTE ESTATE
NORTHRIDING EXT 16, 2169

TEL: 073 732 9829
info@levit8ee.co.za

DISCIPLINE	DESIGNED	DRAWN
ELECTRICAL	DN	AV
	08/12/2025	08/12/2025
SCALE	**CHECKED**	DN
1:125	09/12/2025	20070322

FOR INFORMATION

PROJECT No.	DRG. NUMBER	SHEET SIZE	REVISION
202501	EX01	A1	A



ALL SWITCHES TO BE RAISED TO THE HEIGHTS AS SHOWN ON THE LEGEND

	LEGEND
SYMBOL	DESCRIPTION
DB	ELECTRICAL DISTRIBUTION BOARD
D	TYPE D - REGENT LIGHTING ELUX 70 - 9W LED 4000K ROUND DOWN LIGHT FITTING WHITE
F	TYPE F -FUTURE FLOOD LIGHTING
	TYPE L -REGENT LIGHTING LINEAR MINI 50 1500mm 21W 3000K CEILING LIGHT WHITE
T	TYPE T - REGENT LIGHTING TUBO HALO 13W LED BOLLARD LIGHT BLACK
	TYPE N - REGENT LIGHTING NIMBUS 1278mm 33W LED CEILING LIGHT BLACK
S	TYPE S - REGENT LIGHTING SERENGETI SINGLE 4000K 12W LED WALL LIGHT BLACK
	LIGHTING SWITCH POINT @ 1200mm AFFL
MS	MOTION SENSOR
PH	PHOTOCELL
	CONDUIT LINK / CIRCUIT LINK

NOTES:

1. ALL LIGHT SWITCHES TO BE INSTALLED AT 1200mm AFFL CENTERLINE FROM THE SWITCH.
2. ALL LIGHTS TO BE CONNECTED TO EXISTING LIGHTING CIRCUITS AND SWITCHES. UNLESS STATED OTHERWISE.
3. HEIGHT OF EXTERNAL LIGHT FITTINGS IN COURTYARD TO BE AT 1300mm.
4. BOLLARD LIGHTING AT THE RAMPS TO BE INSTALLED ON GROUND.
5. ONLY CONDUITS AND WIRE WAYS TO BE INSTALLED FOR FUTURE FLOOD LIGHTING.
5. CIRCUITS EX2 AND EX3 FOR FUTURE USE, SWITCHING FOR THESE LIGHTS TO BE CONFIRMED DURING CONSULTATION.

UNCLASSIFIED (U)

WARNING

This document is the property of the U.S. Government. Further reproduction and distribution are prohibited without the express written approval of U.S. Department of State, Consulate General Johannesburg,1 Sandton Drive, Sandhurst, Johannesburg, 2146, South Africa.

REV	DATE	DRAWN	CHECK	DESCRIPTION
1	09/12/2025	AV	DN	UPDATED CIRCUITS
0	17/10/2025	AV	DN	FOR CONSTRUCTION
B	05/06/2025	AV	DN	REVISED BATHROOM 1
A	16/04/2025	AV	DN	FOR INFORMATION

CLIENT

US CONSULATE GENERAL JOHANNESBURG

PROJECT

7 TREBYAM AVENUE EDENBURG, SANDTON

TITLE

LIGHTING LAYOUT

Levit8 Eco Engineers

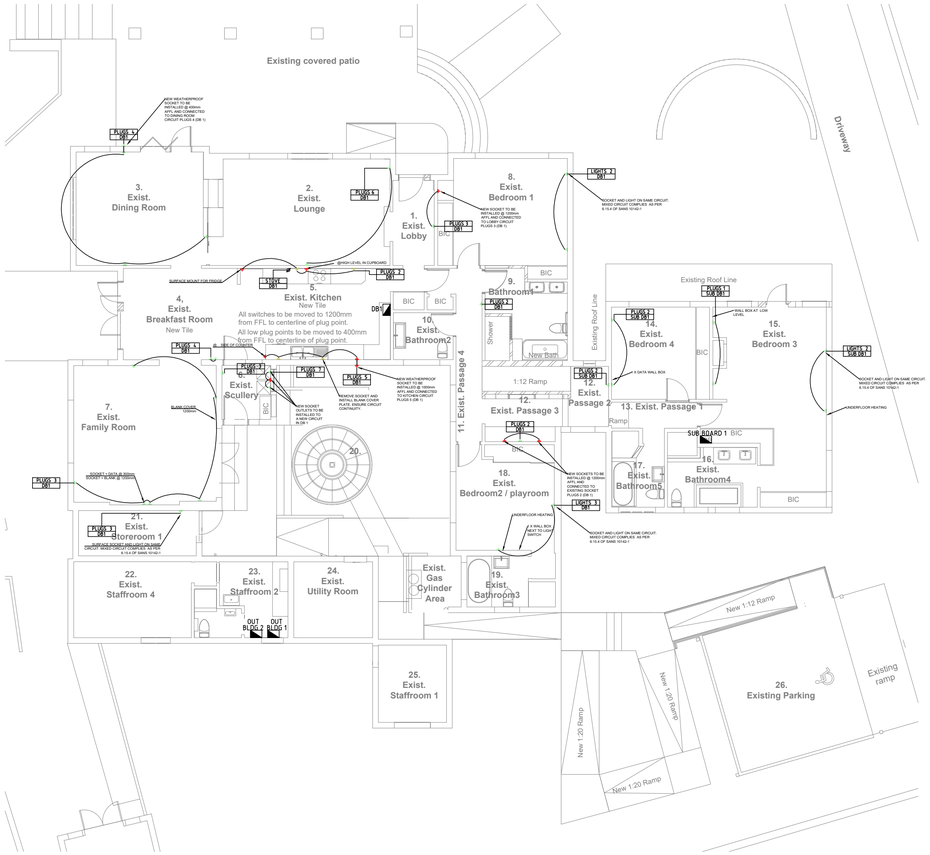
47 DERBY DRIVE, 54 LANZEROTE ESTATE
NORTHRIDING EXT 16, 2169

TEL: 073 732 9829
info@levit8ee.co.za

DISCIPLINE	DESIGNED	DRAWN
ELECTRICAL	DN	AV
	11/04/2025	11/04/2025
SCALE	**CHECKED**	
1:125	15/04/2025	20070322

FOR CONSTRUCTION

PROJECT No.	DRG. NUMBER	SHEET SIZE	REVISION
202501	L01	A1	1



ALL SOCKET OUTLETS TO BE RAISED TO THE HEIGHTS AS SHOWN ON THE LEGEND

LEGEND	
SYMBOL	DESCRIPTION
	ELECTRICAL DISTRIBUTION BOARD
	SWITCHED SOCKET OUTLET TO BE INSTALLED AT 1200mm AFFL TO CENTERLINE OF SOCKET OUTLET
	SWITCHED SOCKET OUTLET TO BE INSTALLED AT 400mm AFFL TO CENTERLINE OF SOCKET OUTLET
	SWITCHED SOCKET OUTLET TO BE INSTALLED AT 1000mm AFFL TO CENTERLINE OF SOCKET OUTLET

NOTES:

1. ALL SOCKET OUTLETS TO BE CONNECTED TO EXISTING CIRCUITS ACCEPT FOR PLUGS 7 WHICH IS NEW.
2. ALL UNDERFLOOR SOCKET OUTLETS TO REMAIN.

UNCLASSIFIED (U)

WARNING

This document is the property of the U.S. Government. Further reproduction and distribution are prohibited without the express written approval of U.S. Department of State, Consulate General Johannesburg,1 Sandton Drive, Sandhurst, Johannesburg, 2146, South Africa.

REV	DATE	DRAWN	CHECK	DESCRIPTION
1	09/12/2025	AV	DN	UPDATED CIRCUITS
0	17/10/2025	AV	DN	FOR CONSTRUCTION
B	12/05/2025	AV	DN	FOR INFORMATION
A	16/04/2025	AV	DN	FOR INFORMATION

CLIENT

US CONSULATE GENERAL JOHANNESBURG

PROJECT

7 TREBYAM AVENUE
EDENBURG, SANDTON

TITLE

SMALL POWER LAYOUT

Levit8 Eco Engineers

47 DERBY DRIVE, 54 LANZEROTE ESTATE
NORTHRIDING EXT 16, 2169

TEL: 073 732 9829
info@levit8ee.co.za

DISCIPLINE	DESIGNED	DRAWN
ELECTRICAL	DN	AV
	11/04/2025	11/04/2025
SCALE	**CHECKED**	
1:125	15/04/2025	20070322

FOR CONSTRUCTION

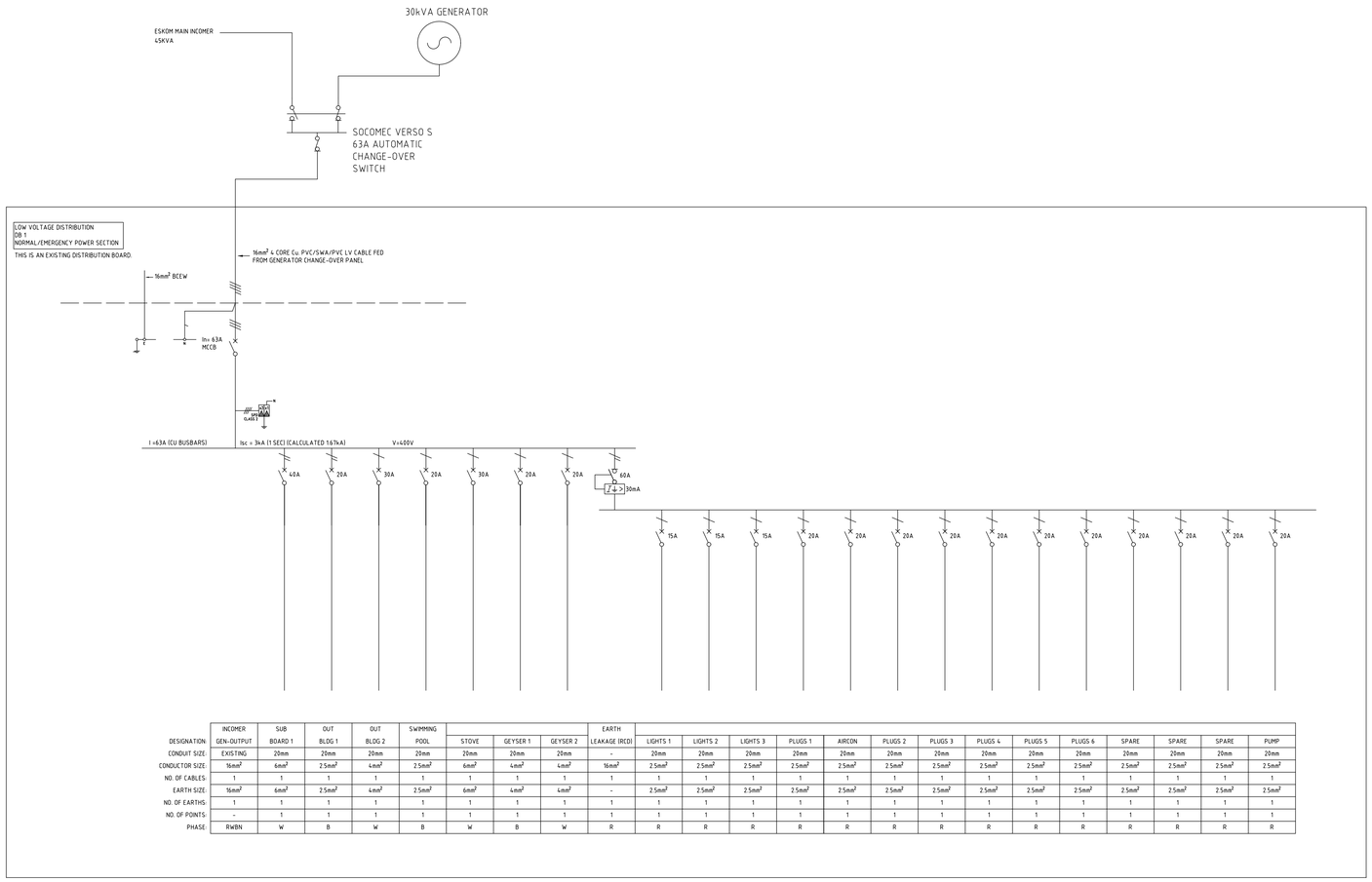
PROJECT No.	DRG. NUMBER	SHEET SIZE	REVISION
202501	P01	A1	1

UNCLASSIFIED (U)

WARNING

This document is the property of the U.S. Government. Further reproduction and distribution are prohibited without the express written approval of U.S. Department of State, Consulate General Johannesburg,1 Sandton Drive, Sandhurst, Johannesburg, 2146, South Africa.

LEGEND	
SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	ISOLATOR
	CHANGE-OVER SWITCH (4-POLE) UTILITY - OFF - GENERATOR 63A
	PHOTO CELL
C	CONTACTOR
	SINGLE PHASE CIRCUIT
	SINGLE PHASE & NEUTRAL CIRCUIT
	THREE PHASE CIRCUIT
	THREE PHASE & NEUTRAL CIRCUIT
	EARTH LEAKAGE - WITHOUT OVERLOAD
x3	SURGE PROTECTION DEVICE (SPD)



	INCOMER	SUB	OUT	OUT	SWIMMING				EARTH														
DESIGNATION:	GEN-OUTPUT	BOARD 1	BLDG 1	BLDG 2	POOL	STOVE	GEYSER 1	GEYSER 2	LEAKAGE (RCD)	LIGHTS 1	LIGHTS 2	LIGHTS 3	PLUGS 1	AIRCON	PLUGS 2	PLUGS 3	PLUGS 4	PLUGS 5	PLUGS 6	SPARE	SPARE	SPARE	PUMP
CONDUIT SIZE:	EXISTING	20mm	20mm	20mm	20mm	20mm	20mm	20mm	-	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm
CONDUCTOR SIZE:	16mm²	6mm²	2.5mm²	4mm²	2.5mm²	6mm²	4mm²	4mm²	16mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²
NO. OF CABLES:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EARTH SIZE:	16mm²	6mm²	2.5mm²	4mm²	2.5mm²	6mm²	4mm²	4mm²	-	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²
NO. OF EARTHS:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NO. OF POINTS:	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PHASE:	RWBN	W	B	W	B	W	B	W	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R

REV	DATE	DRAWN	CHECK	DESCRIPTION
A	03/12/2025	AV	DN	FOR INFORMATION

CLIENT

US CONSULATE GENERAL
JOHANNESBURG

PROJECT

7 TREBYAM AVENUE
EDENBURG, SANDTON

TITLE

SINGLE LINE
DIAGRAM
DB 1 (EXISTING)

Levit8 Eco Engineers

47 DERBY DRIVE, 54 LANZEROTE ESTATE
NORTHRIDING EXT 16, 2169

TEL: 073 732 9829
info@levit8ee.co.za

DISCIPLINE	DESIGNED	DRAWN
ELECTRICAL	DN	AV
	03/12/2025	04/12/2025
SCALE	**CHECKED**	DN
NTS	08/12/2025	20070322

FOR INFORMATION

PROJECT No.	DRG. NUMBER	SHEET SIZE	REVISION
202501	S01	A1	A

UNCLASSIFIED (U)

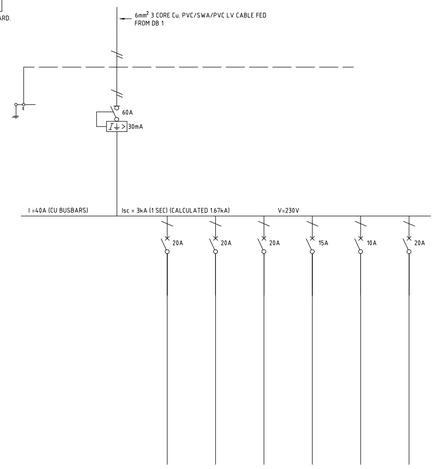
WARNING

This document is the property of the U.S. Government. Further reproduction and distribution are prohibited without the express written approval of U.S. Department of State, Consulate General Johannesburg,1 Sandton Drive, Sandhurst, Johannesburg, 2146, South Africa.

LEGEND	
SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	ISOLATOR
	CHANGE-OVER SWITCH (4-POLE) UTILITY - OFF - GENERATOR 63A
	PHOTO CELL
C	CONTACTOR
	SINGLE PHASE CIRCUIT
	SINGLE PHASE & NEUTRAL CIRCUIT
	THREE PHASE CIRCUIT
	THREE PHASE & NEUTRAL CIRCUIT
	EARTH LEAKAGE - WITHOUT OVERLOAD
x3	SURGE PROTECTION DEVICE (SPD)

LOW VOLTAGE DISTRIBUTION
SUB BOARD 1
NORMAL/EMERGENCY POWER SECTION

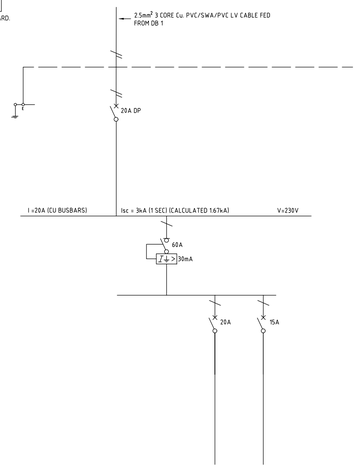
THIS IS AN EXISTING DISTRIBUTION BOARD.



	INCOMER						
DESIGNATION:	DB 1	PLUGS 1	PUMP	SPARE	LIGHTS 1	LIGHTS 2	AIRCON
CONDUIT SIZE:	EXISTING	20mm	20mm	20mm	20mm	20mm	20mm
CONDUCTOR SIZE:	6mm²	6mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²
NO. OF CABLES:	1	1	1	1	1	1	1
EARTH SIZE:	6mm²	6mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²
NO. OF EARTHS:	1	1	1	1	1	1	1
NO. OF POINTS:	-	1	1	1	1	1	1
PHASE:	W	W	W	W	W	W	W

LOW VOLTAGE DISTRIBUTION
OUT BLDG 1
NORMAL/EMERGENCY POWER SECTION

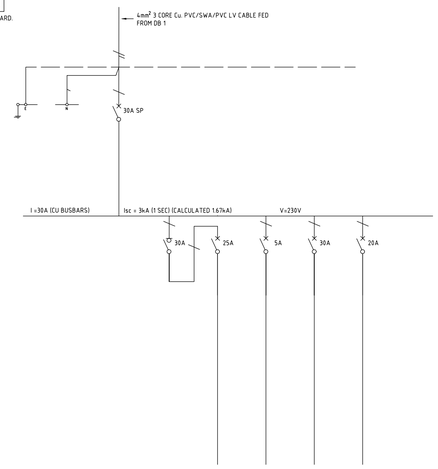
THIS IS AN EXISTING DISTRIBUTION BOARD.



	INCOMER	EARTH		
DESIGNATION:	DB 1	LEAKAGE (RCD)	PLUGS 1	LIGHTS 1
CONDUIT SIZE:	EXISTING	20mm	20mm	20mm
CONDUCTOR SIZE:	2.5mm²	6mm²	2.5mm²	2.5mm²
NO. OF CABLES:	1	1	1	1
EARTH SIZE:	2.5mm²	6mm²	2.5mm²	2.5mm²
NO. OF EARTHS:	1	1	1	1
NO. OF POINTS:	-	1	1	1
PHASE:	B	B	B	B

LOW VOLTAGE DISTRIBUTION
OUT BLDG 2
NORMAL/EMERGENCY POWER SECTION

THIS IS AN EXISTING DISTRIBUTION BOARD.



	INCOMER	GEYSER				
DESIGNATION:	DB 1	ISOLATOR	GEYSER	SPARE	SPARE	PLUGS
CONDUIT SIZE:	EXISTING	20mm	20mm	20mm	20mm	20mm
CONDUCTOR SIZE:	4mm²	4mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²
NO. OF CABLES:	1	1	1	1	1	1
EARTH SIZE:	4mm²	4mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²
NO. OF EARTHS:	1	1	1	1	1	1
NO. OF POINTS:	-	1	1	1	1	1
PHASE:	W	W	W	W	W	W

REV	DATE	DRAWN	CHECK	DESCRIPTION
A	03/12/2025	AV	DN	FOR INFORMATION

CLIENT

US CONSULATE GENERAL JOHANNESBURG

PROJECT

7 TREBYAM AVENUE
EDENBURG, SANDTON

TITLE

SINGLE LINE DIAGRAMS SUB BOARD1, OUT BLDG 1, OUT BLDG 2 (EXISTING)

Levit8 Eco Engineers

47 DERBY DRIVE, 54 LANZEROTE ESTATE
NORTHRIDING EXT 16, 2169

TEL: 073 732 9829
info@levit8ee.co.za

DISCIPLINE	DESIGNED	DRAWN
ELECTRICAL	DN	AV
	03/12/2025	04/12/2025
SCALE	**CHECKED**	DN
NTS	08/12/2025	20070322

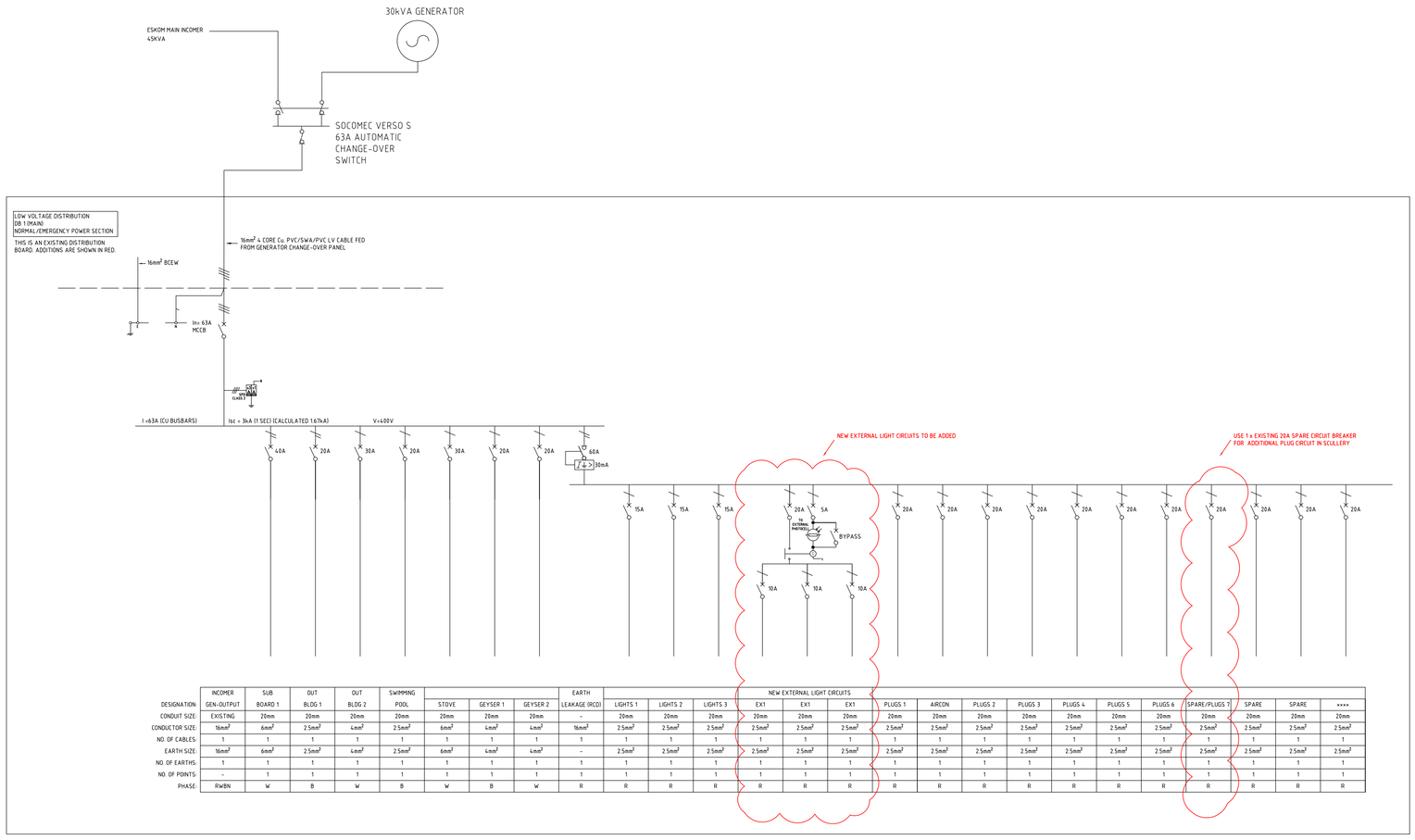
FOR INFORMATION

PROJECT No.	DRG. NUMBER	SHEET SIZE	REVISION
202501	S02	A1	A

UNCLASSIFIED (U)

WARNING

This document is the property of the U.S. Government. Further reproduction and distribution are prohibited without the express written approval of U.S. Department of State, Consulate General Johannesburg,1 Sandton Drive, Sandhurst, Johannesburg, 2146, South Africa.



	INCOMER	SUB	OUT	OUT	SWIMMING				EARTH	NEW EXTERNAL LIGHT CIRCUITS																
DESIGNATION:	GEN-OUTPUT	BOARD 1	BLDG 1	BLDG 2	POOL	STOVE	GEYSER 1	GEYSER 2	LEAKAGE (RCD)	LIGHTS 1	LIGHTS 2	LIGHTS 3	EX1	EX1	EX1	PLUGS 1	AIRCON	PLUGS 2	PLUGS 3	PLUGS 4	PLUGS 5	PLUGS 6	SPARE/PLUGS 7	SPARE	SPARE	****
CONDUIT SIZE:	EXISTING	20mm	20mm	20mm	20mm	20mm	20mm	20mm	-	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm
CONDUCTOR SIZE:	16mm²	6mm²	2.5mm²	4mm²	2.5mm²	6mm²	4mm²	4mm²	16mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²
NO. OF CABLES:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EARTH SIZE:	16mm²	6mm²	2.5mm²	4mm²	2.5mm²	6mm²	4mm²	4mm²	-	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²
NO. OF EARTHS:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NO. OF POINTS:	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PHASE:	RWBN	W	B	W	B	W	B	W	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R

LEGEND	
SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	ISOLATOR
	CHANGE-OVER SWITCH (4-POLE) UTILITY - OFF - GENERATOR 63A
	PHOTO CELL
C	CONTACTOR
	SINGLE PHASE CIRCUIT
	SINGLE PHASE & NEUTRAL CIRCUIT
	THREE PHASE CIRCUIT
	THREE PHASE & NEUTRAL CIRCUIT
I Δ >	EARTH LEAKAGE - WITHOUT OVERLOAD
x3	SURGE PROTECTION DEVICE (SPD)

GENERAL NOTES:

1. SINGLE PHASE CIRCUITS MUST BE WELL BALANCED BETWEEN THE THREE-PHASES.
2. DB COLOURS: WHITE
3. THE DISTRIBUTION BOARD MUST COMPLY WITH THE LATEST REVISION OF THE FOLLOWING STANDARDS:
   SANS IEC 61439-1
   SANS IEC 61641
   SANS 10142-1

REV	DATE	DRAWN	CHECK	DESCRIPTION
0	09/12/2025	AV	DN	FOR CONSTRUCTION

CLIENT: US CONSULATE GENERAL JOHANNESBURG

PROJECT: 7 TREBYAM AVENUE EDENBURG, SANDTON

TITLE: SINGLE LINE DIAGRAM DB 1 (WITH ADDITIONS)

Levit8 Eco Engineers

47 DERBY DRIVE, 54 LANZEROTE ESTATE
NORTHRIDING EXT 16, 2169

TEL: 073 732 9829
info@levit8ee.co.za

DISCIPLINE	DESIGNED	DRAWN
ELECTRICAL	DN	AV
	08/12/2025	08/12/2025
SCALE	**CHECKED**	
NTS	09/12/2025	20070322

FOR CONSTRUCTION

PROJECT No.	DRG. NUMBER	SHEET SIZE	REVISION
202501	S03	A1	0

UNCLASSIFIED (U)

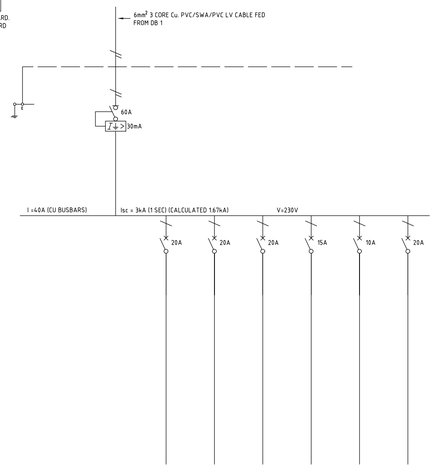
WARNING

This document is the property of the U.S. Government. Further reproduction and distribution are prohibited without the express written approval of U.S. Department of State, Consulate General Johannesburg,1 Sandton Drive, Sandhurst, Johannesburg, 2146, South Africa.

LEGEND	
SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	ISOLATOR
	CHANGE-OVER SWITCH (4-POLE) UTILITY - OFF - GENERATOR 63A
	PHOTO CELL
C	CONTACTOR
	SINGLE PHASE CIRCUIT
	SINGLE PHASE & NEUTRAL CIRCUIT
	THREE PHASE CIRCUIT
	THREE PHASE & NEUTRAL CIRCUIT
	EARTH LEAKAGE - WITHOUT OVERLOAD
x3	SURGE PROTECTION DEVICE (SPD)

LOW VOLTAGE DISTRIBUTION
SUB BOARD 1
NORMAL/EMERGENCY POWER SECTION

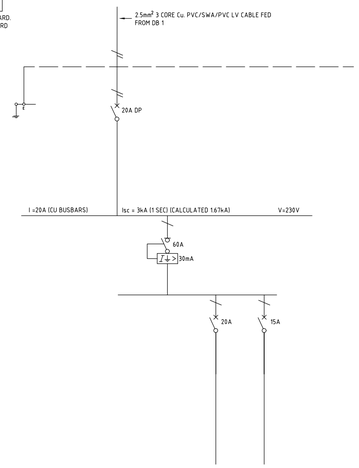
THIS IS AN EXISTING DISTRIBUTION BOARD.
NO CHANGES TO BE MADE TO THIS BOARD



	INCOMER						
DESIGNATION:	DB 1	PLUGS 1	PUMP	SPARE	LIGHTS 1	LIGHTS 2	AIRCON
CONDUIT SIZE:	EXISTING	20mm	20mm	20mm	20mm	20mm	20mm
CONDUCTOR SIZE:	6mm²	6mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²
NO. OF CABLES:	1	1	1	1	1	1	1
EARTH SIZE:	6mm²	6mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²	2.5mm²
NO. OF EARTHS:	1	1	1	1	1	1	1
NO. OF POINTS:	-	1	1	1	1	1	1
PHASE:	W	W	W	W	W	W	W

LOW VOLTAGE DISTRIBUTION
OUT BLDG 1
NORMAL/EMERGENCY POWER SECTION

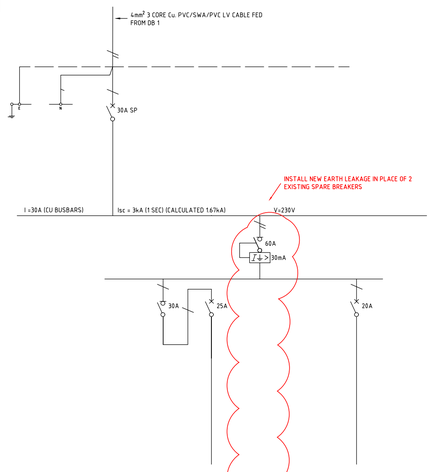
THIS IS AN EXISTING DISTRIBUTION BOARD.
NO CHANGES TO BE MADE TO THIS BOARD



	INCOMER	EARTH		
DESIGNATION:	DB 1	LEAKAGE (RCD)	PLUGS 1	LIGHTS 1
CONDUIT SIZE:	EXISTING	-	20mm	20mm
CONDUCTOR SIZE:	2.5mm²	6mm²	2.5mm²	2.5mm²
NO. OF CABLES:	1	1	1	1
EARTH SIZE:	2.5mm²	-	2.5mm²	2.5mm²
NO. OF EARTHS:	1	1	1	1
NO. OF POINTS:	-	1	1	1
PHASE:	B	B	B	B

LOW VOLTAGE DISTRIBUTION
OUT BLDG 2
NORMAL/EMERGENCY POWER SECTION

THIS IS AN EXISTING DISTRIBUTION
BOARD. ADDITIONS ARE SHOWN IN RED.



	INCOMER	GEYSER		EARTH		
DESIGNATION:	DB 1	ISOLATOR	GEYSER	LEAKAGE (RCD)	SPARE	PLUGS
CONDUIT SIZE:	EXISTING	20mm	20mm	-	20mm	20mm
CONDUCTOR SIZE:	4mm²	4mm²	2.5mm²	4mm²	2.5mm²	2.5mm²
NO. OF CABLES:	1	1	1	1	1	1
EARTH SIZE:	4mm²	4mm²	2.5mm²	-	2.5mm²	2.5mm²
NO. OF EARTHS:	1	1	1	1	1	1
NO. OF POINTS:	-	1	1	1	1	1
PHASE:	W	W	W	W	W	W

GENERAL NOTES:

1. ENSURE PHASES ARE CONNECTED AS PER DB 1 DRAWING S03.
2. DB COLOURS: WHITE
3. THE DISTRIBUTION BOARD MUST COMPLY WITH THE LATEST REVISION OF THE FOLLOWING STANDARDS:
   SANS IEC 61439-1
   SANS IEC 61641
   SANS 10142-1

REV	DATE	DRAWN	CHECK	DESCRIPTION
0	09/12/2025	AV	DN	FOR CONSTRUCTION

CLIENT: US CONSULATE GENERAL JOHANNESBURG

PROJECT: 7 TREBYAM AVENUE EDENBURG, SANDTON

TITLE: SINGLE LINE DIAGRAMS SUB BOARD 1, OUT BLDG 1, OUT BLDG 2 (WITH ADDITIONS)

Levit8 Eco Engineers

47 DERBY DRIVE, 54 LANZEROTE ESTATE
NORTHRIDING EXT 16, 2169

TEL: 073 732 9829
info@levit8ee.co.za

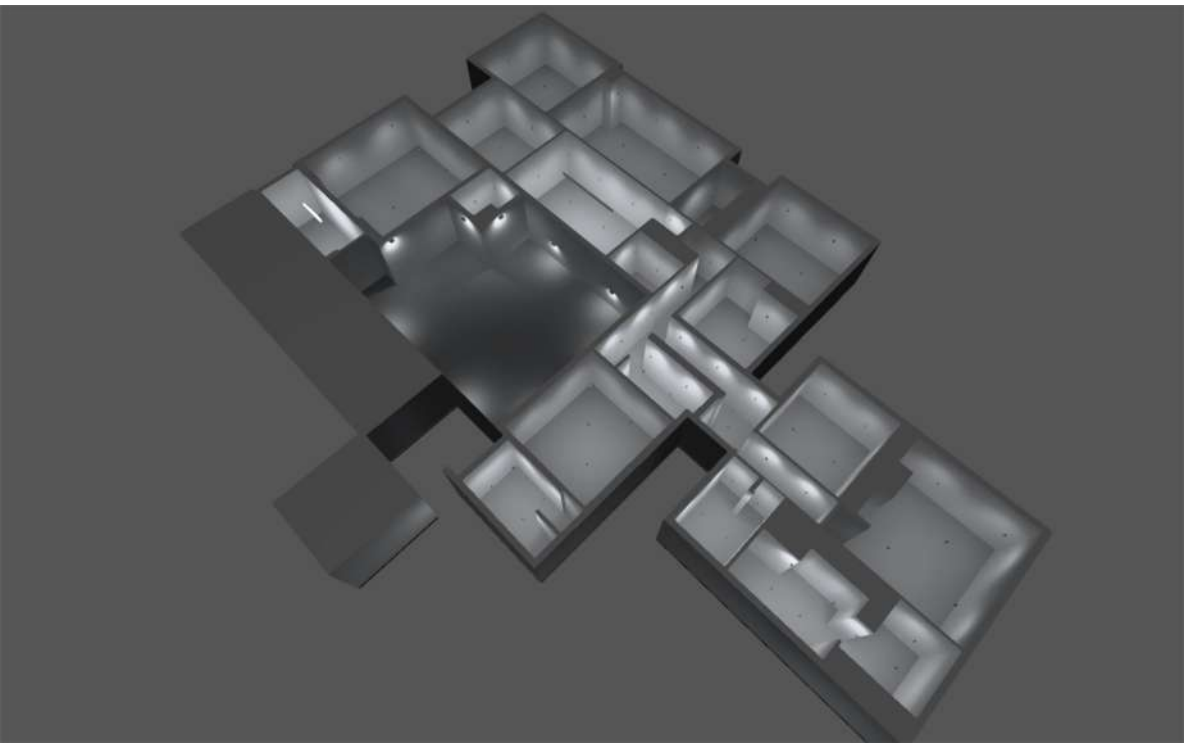
DISCIPLINE	DESIGNED	DRAWN
ELECTRICAL	DN	AV
	08/12/2025	08/12/2025
SCALE	**CHECKED**	
NTS	09/12/2025	20070322

FOR CONSTRUCTION

PROJECT No.	DRG. NUMBER	SHEET SIZE	REVISION
202501	S04	A1	0

Date 2025/04/16

DIALux

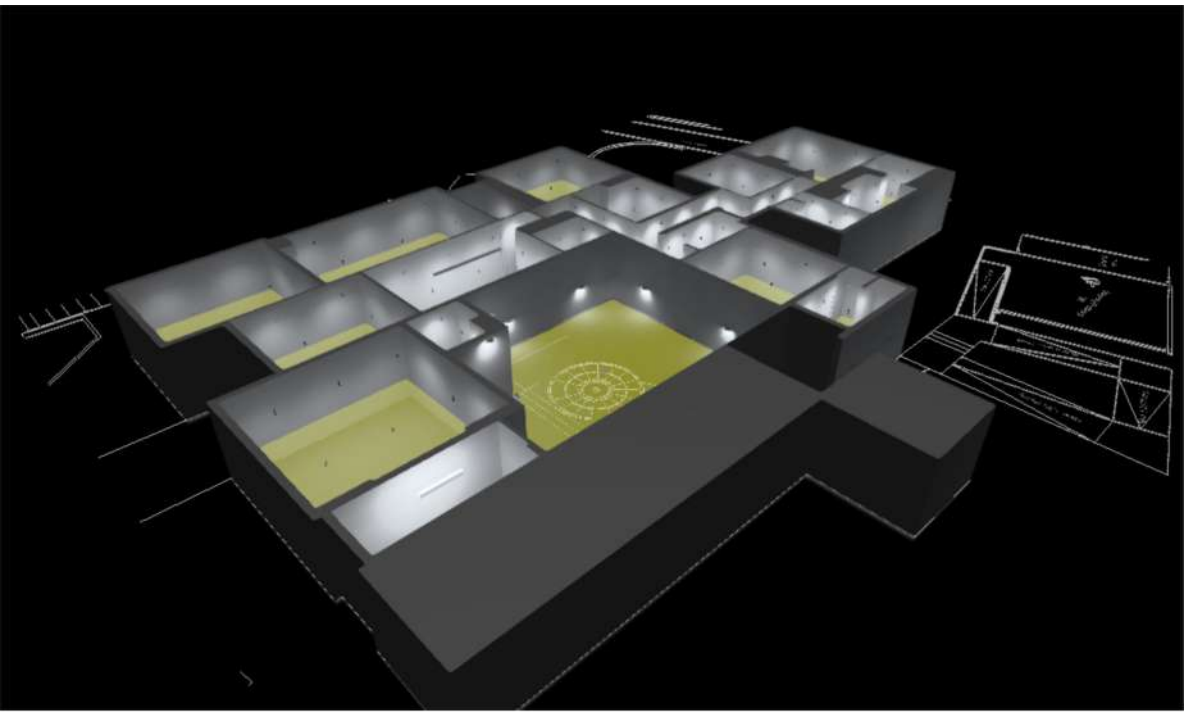


The US Consulate General

Johannesburg

D. Narandas
Pr. Eng: 20070322

Created with DIALux

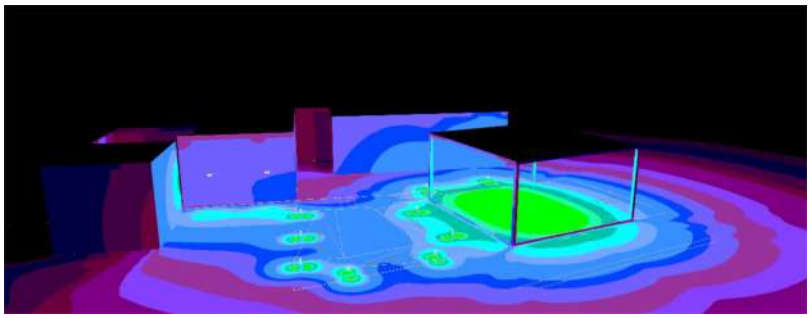


Description

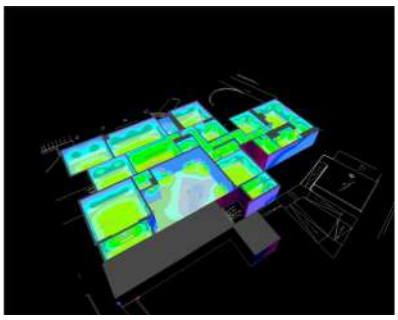
7 Trebyam Avenue
Edenburg
Sandton

Images

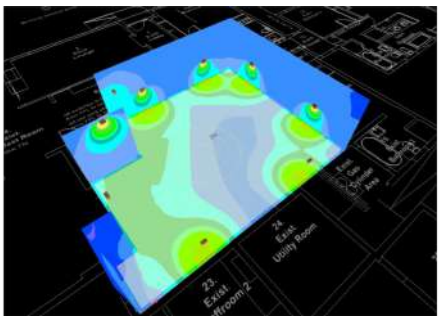
Exterior

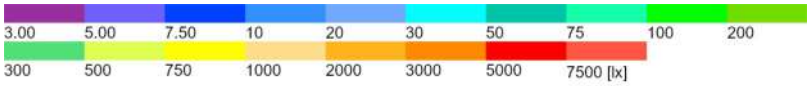


Interior



Courtyard

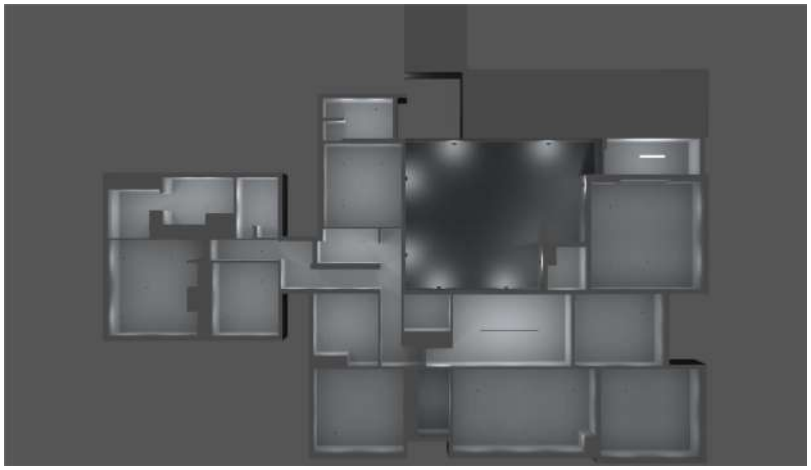




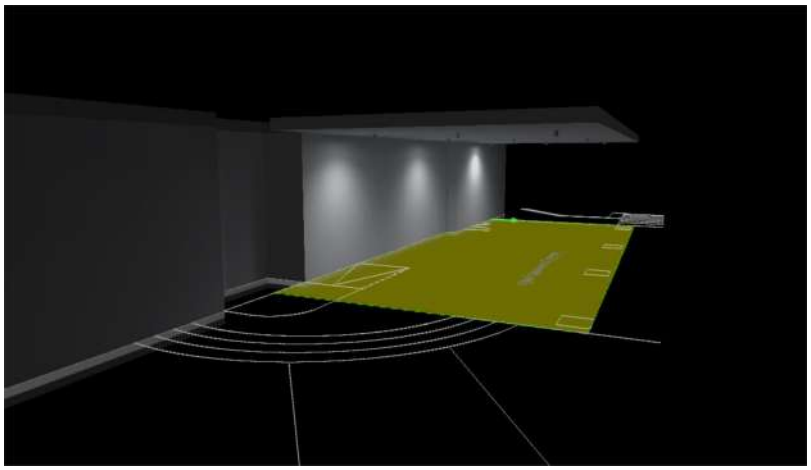
Images

The US Consulnsulate General

Johannesburg



Patio



Building 1 · Storey 1

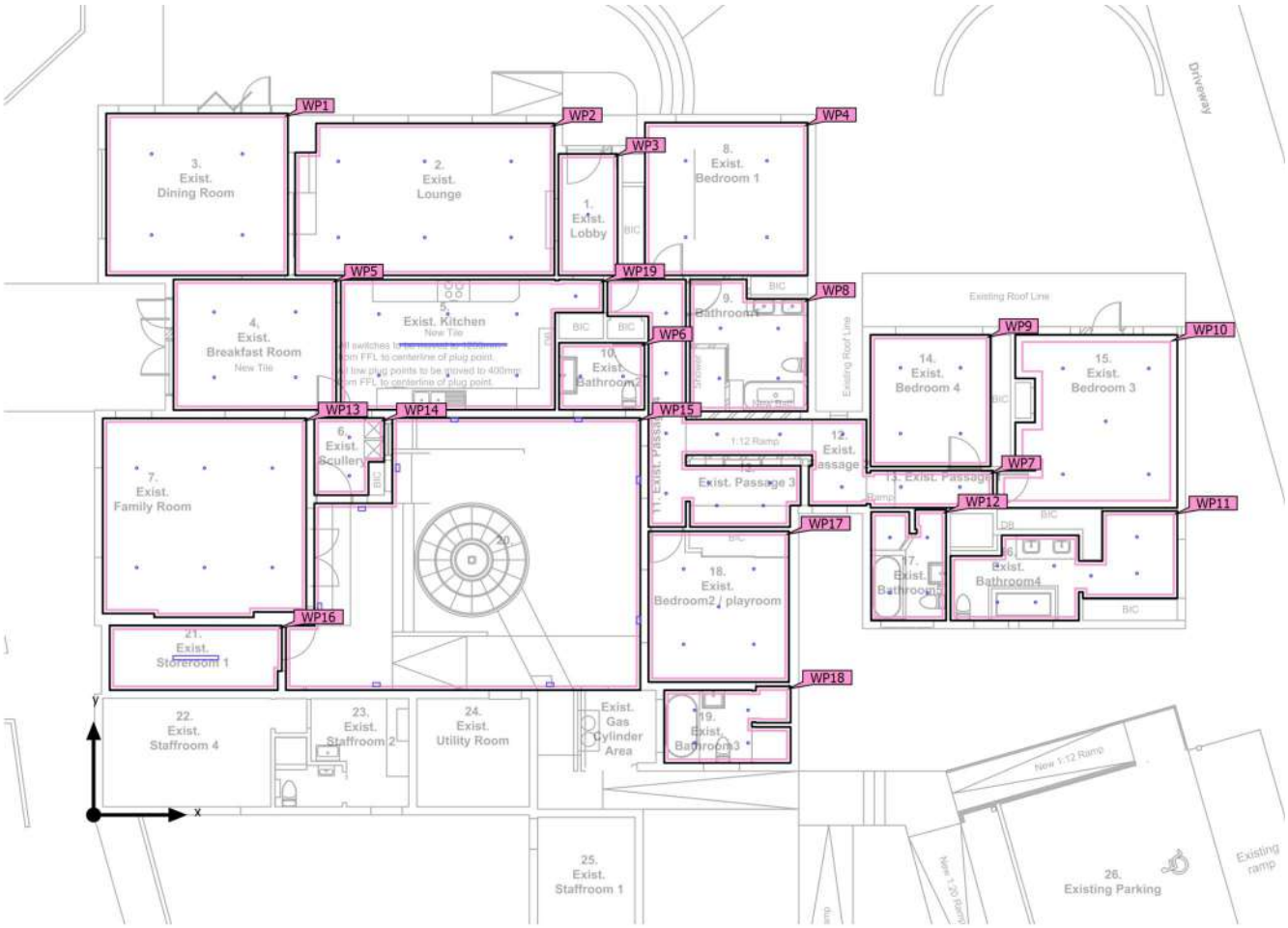
Luminaire list

Φ_{total}	P_{total}	Luminous efficacy
86550 lm	926.8 W	93.4 lm/W

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
83	Regent		ELUX 70 9W 4000k SATINE 82°	8.9 W	858 lm	95.9 lm/W
2	Regent		LINEAR MINI 50 1500mm 21W 3000K LT87 @350mA	21.0 W	1870 lm	89.1 lm/W
9	Regent		SERENGETI SINGLE 12W 3000k	12.6 W	746 lm	59.3 lm/W
1	Regent	F211	NIMBUS 1278 33W 4000k	32.7 W	4882 lm	149.3 lm/W

Building 1 · Storey 1 (Light scene 1)

Calculation objects



Building 1 · Storey 1 (Light scene 1)

Calculation objects

Working planes

Properties	Ē (Target)	E_{min}	E_{max}	Ē/E_{min} (Target)	E_{max}/E_{min}	Index
Working plane (3. Dining Room) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.100 m	107 lx (≥ 50.0 lx) ✓	51.9 lx	149 lx	2.06 (≤ 4.00) ✓	2.87	WP1
Working plane (2. Ex Lounge) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.100 m	122 lx (≥ 100 lx) ✓	62.2 lx	161 lx	1.96 (≤ 5.00) ✓	2.59	WP2
Working plane (1. Ex Lobby) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.100 m	56.0 lx (≥ 30.0 lx) ✓	39.2 lx	71.3 lx	1.43 (≤ 5.00) ✓	1.82	WP3
Working plane (8. Ex Bedroom) Perpendicular illuminance (adaptive) Height: 1.220 m, Wall zone: 0.100 m	136 lx (≥ 30.0 lx) ✓	53.5 lx	225 lx	2.54 (≤ 5.00) ✓	4.21	WP4
Working plane (4. Ex Breakfast) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.100 m	137 lx (≥ 50.0 lx) ✓	75.9 lx	172 lx	1.81 (≤ 4.00) ✓	2.27	WP5
Working plane (10. Bathrm 2) Perpendicular illuminance (adaptive) Height: 0.920 m, Wall zone: 0.100 m	190 lx (≥ 100 lx) ✓	129 lx	237 lx	1.47 (≤ 3.00) ✓	1.84	WP6
Working plane (11.12.13 Passage) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.100 m	223 lx (≥ 30.0 lx) ✓	44.8 lx	383 lx	4.98 (≤ 5.00) ✓	8.55	WP7
Working plane (9. Bathrm 1) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.100 m	190 lx (≥ 100 lx) ✓	75.0 lx	247 lx	2.53 (≤ 3.00) ✓	3.29	WP8
Working plane (14. Bedrm 4) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.100 m	172 lx (≥ 30.0 lx) ✓	103 lx	205 lx	1.67 (≤ 5.00) ✓	1.99	WP9
Working plane (15. Bedrom 3) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.200 m	141 lx (≥ 30.0 lx) ✓	41.7 lx	197 lx	3.38 (≤ 6.00) ✓	4.72	WP10
Working plane (16. Bathrom 4) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.100 m	248 lx (≥ 100 lx) ✓	114 lx	348 lx	2.18 (≤ 3.00) ✓	3.05	WP11

Building 1 · Storey 1 (Light scene 1)

Calculation objects

Working plane (17. Bathrm 5) Perpendicular illuminance (adaptive) Height: 0.920 m, Wall zone: 0.100 m	269 lx (≥ 100 lx) ✓	159 lx	324 lx	1.69 (≤ 3.00) ✓	2.04	WP12
Working plane (7. Family Room) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.100 m	121 lx (≥ 100 lx) ✓	55.8 lx	171 lx	2.17 (≤ 5.00) ✓	3.06	WP13
Working plane (6. Scullery) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.100 m	192 lx (≥ 150 lx) ✓	134 lx	233 lx	1.43 (≤ 2.00) ✓	1.74	WP14
Working plane (20. Courtyard) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.100 m	54.7 lx (≥ 10.0 lx) ✓	9.42 lx	262 lx	5.81 (≤ 6.00) ✓	27.8	WP15
Working plane (21. Storeroom 1) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.100 m	227 lx (≥ 50.0 lx) ✓	93.7 lx	382 lx	2.42 (≤ 3.00) ✓	4.08	WP16
Working plane (18. Bedrom 2) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.100 m	179 lx (≥ 30.0 lx) ✓	84.0 lx	269 lx	2.13 (≤ 5.00) ✓	3.20	WP17
Working plane (19. Bathrm 3) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.100 m	240 lx (≥ 100 lx) ✓	100 lx	323 lx	2.40 (≤ 3.00) ✓	3.23	WP18
Working plane (5. Ex Kitchen) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.100 m	237 lx (≥ 50.0 lx) ✓	102 lx	352 lx	2.32 (≤ 5.00) ✓	3.45	WP19

Levit8 Eco Engineers

THE US CONSULATE GENERAL
JOHANNESBURG
7 TREBYAM AVENUE
LIGHTING SCHEDULE
REV 0
16/04/2025

TYPE	NAME	IMAGE	LOCATION
D	REGENT LIGHTING ELUX 70 9W LED 4000K ROUND DOWN LIGHT WHITE	Image only for illustration proposes	INTERIOR
F	FUTURE FLOOD LIGHT (BY OTHERS)	Image only for illustration proposes	EXTERIOR
L	REGENT LIGHTING LINEAR MINI 50 1500mm 21W LED 3000K LINEAR CEILING LIGHT WHITE	Image only for illustration proposes	INTERIOR KITCHEN

T	REGENT LIGHTING TUBO HALO 13W LED BOLLARD LIGHT BLACK	Image only for illustration proposes	EXTERIOR RAMP
N	REGENT LIGHTING NIMBUS 1278mm 33W LED CEILING LIGHT	Image only for illustration proposes	STOREROOM
S	REGENT LIGHTING SERENGETI SINGLE 12W LED 4000K WALL LIGHT BLACK	Image only for illustration proposes	COURTYARD

ELUX 70

MODEL NUMBER

ELUX 70

SPECIFICATIONS

HOUSING : Die cast and extruded aluminium.
HEAT SINK : Aluminium extrusion, anodised black.
DIFFUSER : Clear or Satine.
LIGHT SOURCE : The fitting is designed to operate a LED up to 16W.
REFLECTOR : High quality aluminium reflector. Beam 38°.
FINISH : Powder coated.
MOUNTING : Ceiling mounted recessed.
COLOUR CONSISTENCY : Mac Adams 3 SDCM
LUMEN MAINTENANCE : 60000h (L80B10) @ 65° C.
CCT : 4000K or 3000K.
CRI : >90.
DIMENSIONS : 85mm Ø x 68mm.
CUT OUT : 70mm Ø.
APPLICATION : Suitable for indoor use only.
OPERATING TEMPERATURE : (Ta) - 20° C to +30 ° C.
WEIGHT : 0.45 Kg.
Fitting supplied with external power supply.
DALI compatible on request.

bluTECH daliTECH elcTECH corTECH

APPLICATION AREAS

Indoor application.
Symmetrical distribution.
Commercial developments.
Retail developments.
Shopping malls.
Public buildings.

COLOURS

White (WH)

BEAM DEGREE

38° 82°

IP 20

LIGHT SOURCE

LED

LED CURRENT (mA)	NOMINAL WATTAGE (W)	SYSTEM WATTAGE (W)	CRI 90 3000K NOMINAL FLUX (lm)	CRI 90 4000K NOMINAL FLUX (lm)
200mA	7W	9W	829 lm	1014 lm
250mA	9W	11W	1051 lm	1223 lm
350mA	12W	16W	1213 lm	1608 lm

EMERGENCY LIGHTING (OPTIONAL)

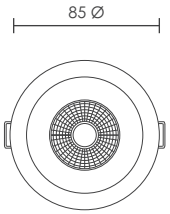
PACK 2 - REMOTE EMERGENCY 7W-20W

DURATION	BACK-UP LIGHT OUTPUT	BATTERY TYPE	INTEGRATION	SELF-TESTING	DIMENSIONS
3 HOURS	20%	Lithium-ion	Remote	Yes	200x42x30mm

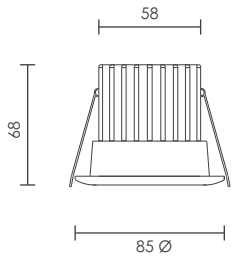
DIMENSIONS IN MM

HOLE CUT OUT

70mm Ø.



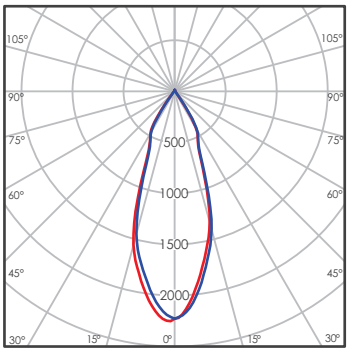
Bottom View



Side View

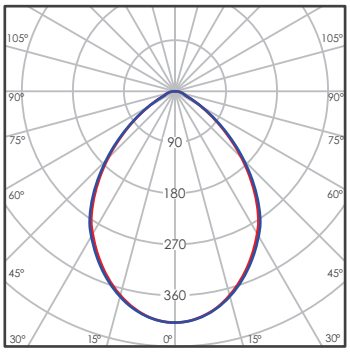
LIGHT DISTRIBUTION

LED 15W 38° Beam



cd/klm
C0 - C180 C90 - C270

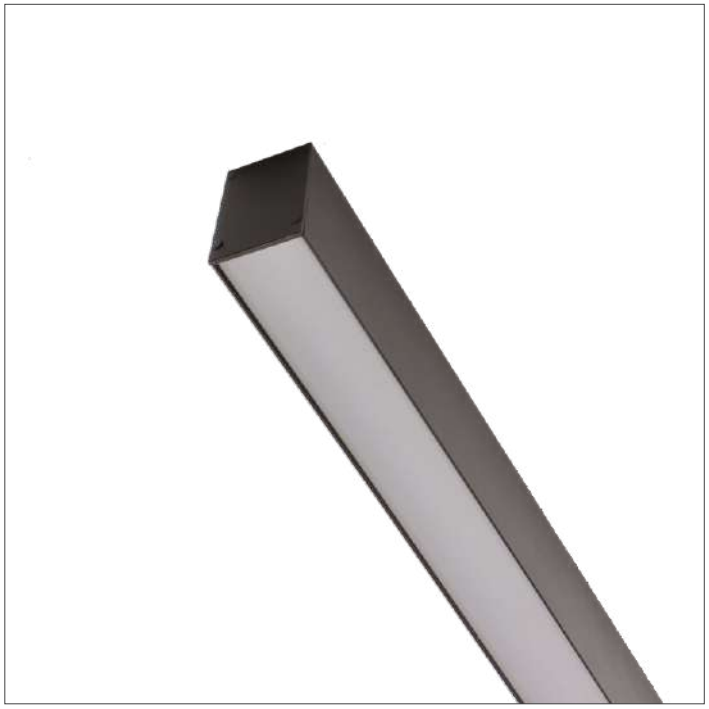
LED 15W Satine 82° Beam



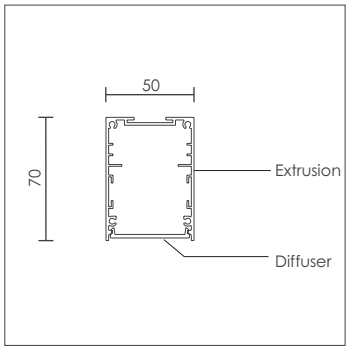
cd/klm
C0 - C180 C90 - C270

LINEAR MINI 50

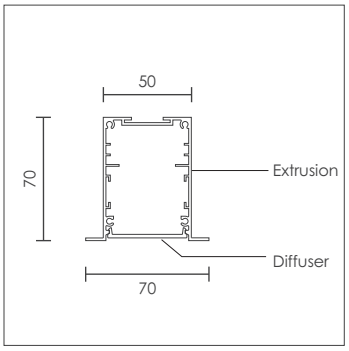
REGENT LIGHTING SOLUTIONS



bluTECH sensTECH tuneTECH daliTECH elcTECH corTECH plcTECH



Section View Linear Mini



Section View Linear Mini with Frame

APPLICATION AREAS

Indoor application.
Architectural lighting.
Commercial lighting.
Office lighting.
Shopping mall lighting.
Corridor lighting.

COLOURS

- Black (B)
- Matt Silver (M)
- White (W)
- Charcoal Grey (C)
- Gold (G)

CLADDING

- Veneer Wood (V)
- Other finishes available on request (O)

IP 20

MODEL NUMBER

LINEAR MINI 50 300mm
LINEAR MINI 50 600mm
LINEAR MINI 50 900mm
LINEAR MINI 50 1200mm
LINEAR MINI 50 1500mm
LINEAR MINI 50 CONTINUOUS

SPECIFICATIONS

HOUSING : Extruded aluminium .
LIGHT SOURCE : The fitting is designed to operate a LED up to 38.39W/m.
DIFFUSER : PMMA Matt LT87 standard diffuser. LT67 for vertical light application.
FINISH : Powder coated.
MOUNTING : Wall mounted or ceiling mounted.
Recessed, surface mounted, semi recessed, suspended, clips onto ceiling "T" or track mounted. Options available for soffit or concrete mounting.
LUMEN MAINTENANCE : 50000h (L90B10).
CCT : 4000K or 3000K .
CRI : 80.
SUSPENSION ACCESSORIES : Stainless steel wire or 12mm Rod complete with decorative ceiling cups. The adjustable wire suspension allows for horizontal and vertical adjustment.
CONTROL GEAR : The electronic power supply is suitable for operation with a 220 - 240 volts. 50 hertz single phase. Dimmable options available.
APPLICATION : Suitable for indoor use only.
OPERATING TEMPERATURE : (Ta) - 20° C to +25 ° C.
FEATURES : Removable gear tray assembly for easy installation and maintenance.
Slender lines of light set in an architectural environment are the essence of the Linear Mini 50, with its simple elegance and adaptability it accommodates most design applications. The extruded aluminum housing offers a precise in-line appearance that complements open space design plans. Fittings can be mounted in continuous lines with 90 degree angles vertical or horizontal flexibility. Continuous fittings are designed according to site application.
Installation instructions available on request or on the website.
NOTE : Ceiling details need to be supplied to design for the layout.

DIMMING INTERFACE OPTION AVAILABLE

- DALI
- 1-10V
- Push dimming
- Corridor Function
- DSI

LIGHT SOURCE

HIGH VOLTAGE LED - HV ZHAGA BOARD | CRI80 | 4000 Kelvin

Length	600mm		900mm		1200mm		1500mm		1700mm	
LED CURRENT (mA) HV	SYSTEM WATTAGE (W)	NOMINAL FLUX (lm)	SYSTEM WATTAGE (W)	NOMINAL FLUX (lm)	SYSTEM WATTAGE (W)	NOMINAL FLUX (lm)	SYSTEM WATTAGE (W)	NOMINAL FLUX (lm)	SYSTEM WATTAGE (W)	NOMINAL FLUX (lm)
175mA	10W	1967 lm	14W	2753 lm	18W	3540lm	21W	4130 lm	24W	4720 lm
250mA	14W	2556 lm	19W	3469 lm	25W	4577 lm	31W	5661 lm	34W	6687 lm
350mA	20W	3216 lm	27W	4823 lm	35W	6376 lm	41W	8316 lm	48W	9440 lm
450mA	24W	3976 lm	34W	5963 lm	43W	7883 lm	55W	8530 lm	64W	11757 lm

LOW VOLTAGE LED - ZHAGA BOARD | CRI80 | 4000 Kelvin

Length	300mm		Per M - Nearest 140mm	
LED CURRENT (mA) LV	SYSTEM WATTAGE (W)	NOMINAL FLUX (lm)	SYSTEM WATTAGE (W/m)	NOMINAL FLUX (lm/m)
350mA	4W	690 lm	16.07W/m	2299 lm/m
500mA	6W	1141 lm	22.32W/m	3804 lm/m
700mA	9W	1520 lm	31.25W/m	5038 lm/m
900mA	12W	1910 lm	38.39W/m	6362 lm/m

* The product is offered with either Low Voltage (LV) or High Voltage (HV) Zhaga boards depending on length and driver availability.
3000 Kelvin available on request, 7% less lumen output.
Due to the continual advancement in LED technology the type of LED is subject to change.

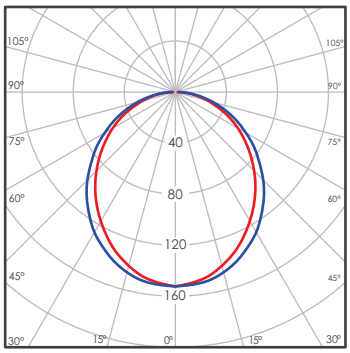
EMERGENCY LIGHTING (OPTIONAL)

PACK 3 - LINEAR EMERGENCY UNIVERSE SLIM

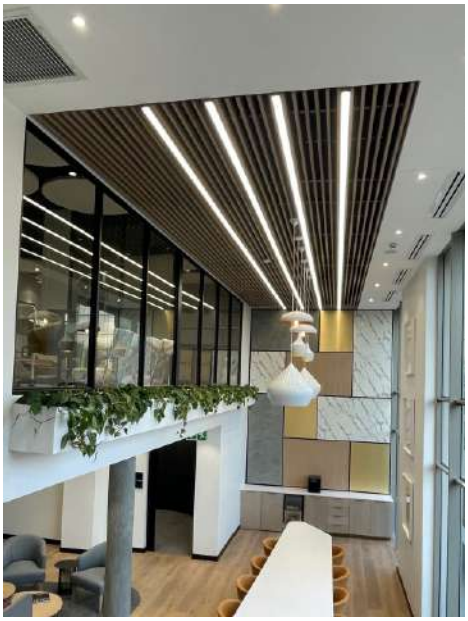
SIZE	DURATION	BACK-UP LIGHT OUTPUT	BATTERY TYPE	INTEGRATION	SELF-TESTING	DIMENSIONS
580mm - 2990mm	1 HOUR	20%	Lithium-ion	Internal	No	Integrated

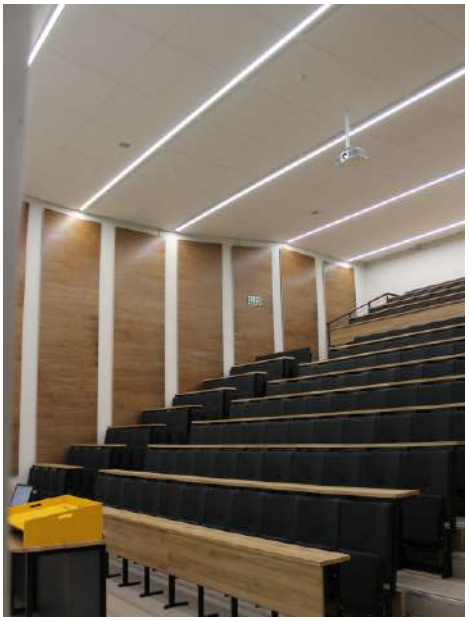
LIGHT DISTRIBUTION

1200mm 25W LED

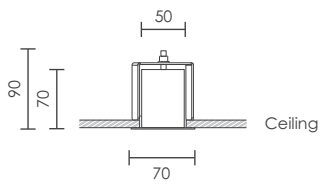


cd/klm
C0 - C180 C90 - C270



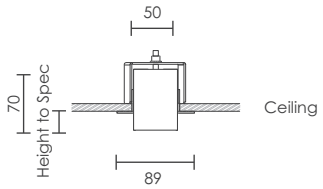


DIMENSIONS IN MM



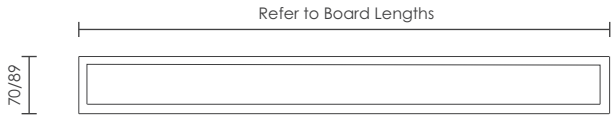
Side View

RECESSED WITH FRAME

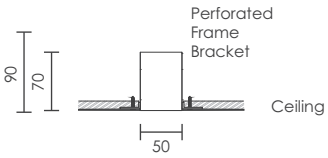


Side View

SEMI RECESSED WITH FRAME

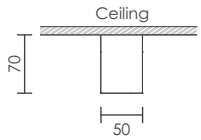


Diffuser View



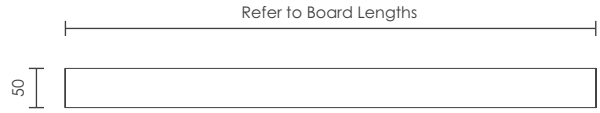
Side View

RECESSED

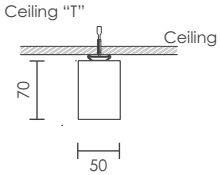


Side View

SURFACE

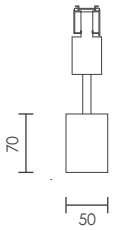


Diffuser View



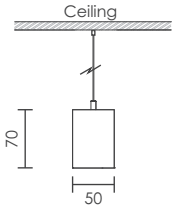
Side View

CEILING "T" CLIP



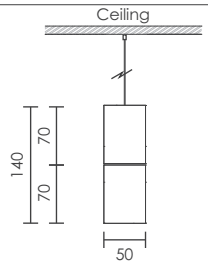
Side View

TRACK MOUNTING



Side View

SUSPENDED



Side View

SUSPENDED DOUBLE

ZHAGA BOARD LENGTHS

Length Required	300mm	600mm	900mm	1200mm	1500mm	Continuous
Length no Frame	291mm	571mm	852mm	1132mm	1413mm	To nearest **140mm**
Length with Frame	306mm	586mm	867mm	1147mm	1428mm	
Cut Out Size	55mm x 296mm	55mm x 576mm	55mm x 857mm	55mm x 1137mm	55mm x 1418mm	

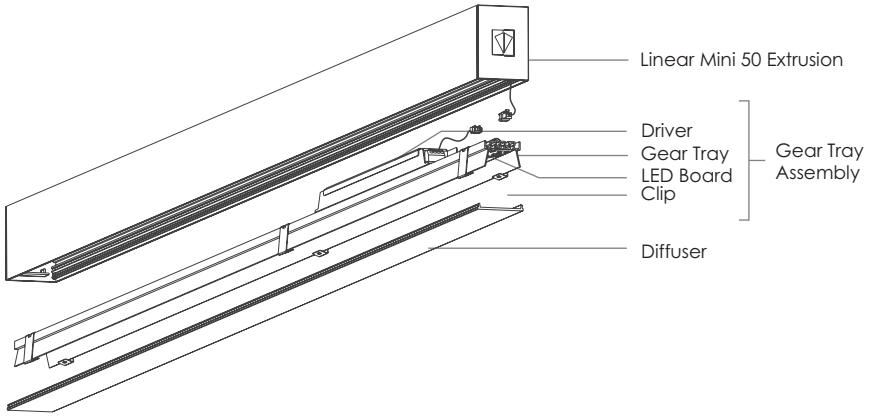
NOTE : Continuous fittings are designed according to site application.

WEIGHTS

Linear Mini 50 300mm : 0.5 Kg
Linear Mini 50 600mm : 1 Kg
Linear Mini 50 900mm : 1.5 Kg
Linear Mini 50 1200mm : 2 Kg
Linear Mini 50 1500mm : 3 Kg

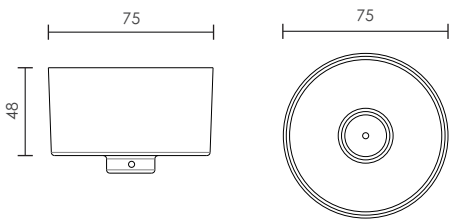
DETAILED VIEW

Removable Gear Tray Assembly for easy installation and maintenance.



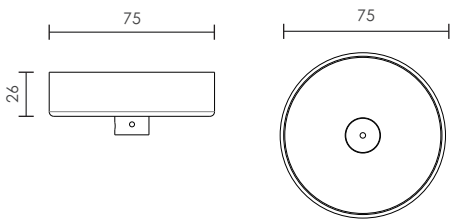
SUSPENSION ACCESSORIES

ELECTRICAL CONNECTION IN THE CEILING CUP			
CODE	**CEILING TYPE**	**SUSPENSION TYPE**	**DESCRIPTION**
CCUP48T12PBC	SOFFIT	12mm ROD	CEILING CUP 75x48 - 12mm Suspended Rod
CCUP48T12PFP	CONCRETE	12mm ROD	CEILING CUP 75x48 - 12mm Suspended Rod
CCUP48SPBC	SOFFIT	CABLE	CEILING CUP 75x48 - Power Cable Clamp - Suspension cable & Power
CCUP48SPCBC	SOFFIT	3 CORE CLEAR	CEILING CUP 75x48 - Power Cable Clamp - 3 Core clear cable
CCUP48SPFP	CONCRETE	CABLE	CEILING CUP 75x48 - Power Cable Clamp - Suspension cable & Power
CCUP48SPCFP	CONCRETE	3 CORE CLEAR	CEILING CUP 75x48 - Power Cable Clamp - 3 Core clear cable
ELECTRICAL CONNECTION IN THE CEILING			
CODE	**CEILING TYPE**	**SUSPENSION TYPE**	**DESCRIPTION**
CCUP26PCBC	SOFFIT	CABLE	CEILING CUP 75x26 - Suspension & Power Cable
CCUPSSSPBC	SOFFIT	CABLE	CEILING CUP STAINLESS STEEL - Suspension & Power Cable
SUSPENSION ONLY			
CODE	**CEILING TYPE**	**SUSPENSION TYPE**	**DESCRIPTION**
CCUP48SBC	SOFFIT	CABLE	CEILING CUP 75x48 - Suspension Cable Only
CCUP48SFP	CONCRETE	CABLE	CEILING CUP 75x48 - Suspension Cable Only
CCUP26SBC	SOFFIT	CABLE	CEILING CUP 75x26 - Suspension Cable Only
CCUP26SFP	CONCRETE	CABLE	CEILING CUP 75x26 - Suspension Cable Only
CCUPSSSBC	SOFFIT	CABLE	CEILING CUP STAINLESS STEEL - Suspension
CCUPSSSFP	CONCRETE	CABLE	CEILING CUP STAINLESS STEEL - Suspension



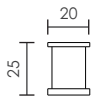
Side View **Bottom View**

CEILING CUP 75x48



Side View **Bottom View**

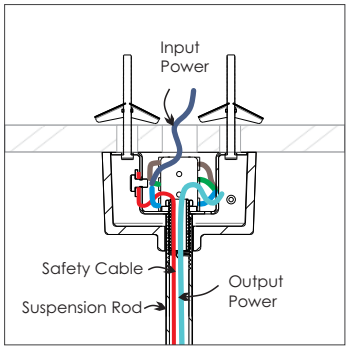
CEILING CUP 75x26



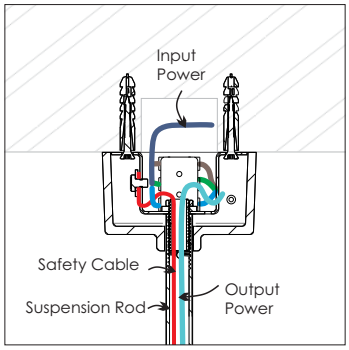
Side View

CEILING CUP STAINLESS STEEL

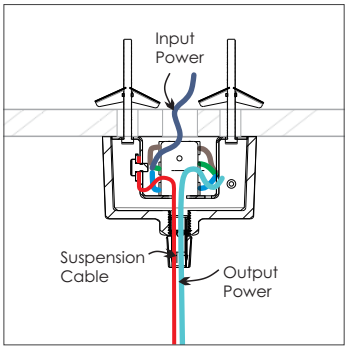
CEILING CUP 75x48 (not to scale)



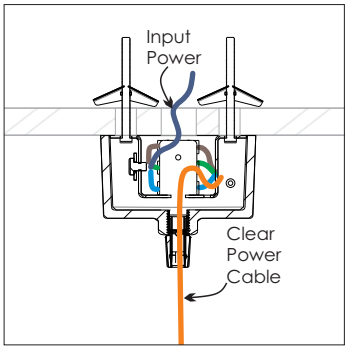
CCUP48T12BC
CEILING CUP 75x48
12mm Suspended Rod
Soffit



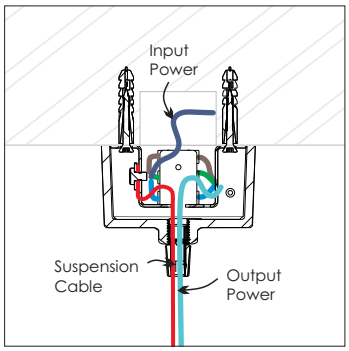
CCUP48T12FP
CEILING CUP 75x48
12mm Suspended Rod
Concrete



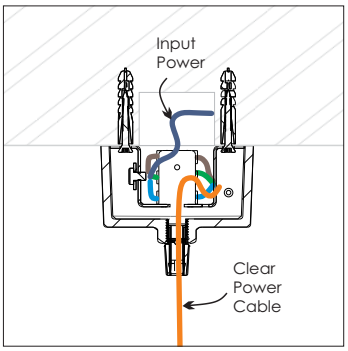
CCUP48SPBC
CEILING CUP 75x48
Power Cable Clamp
Soffit



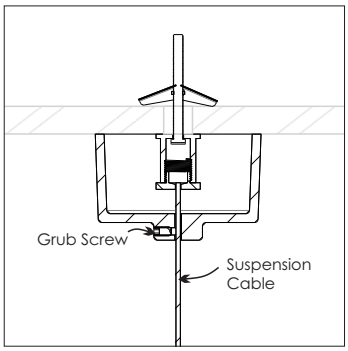
CCUP48SPCBC
CEILING CUP 75x48
3 Core Clear Cable with internal suspension cable.
Soffit



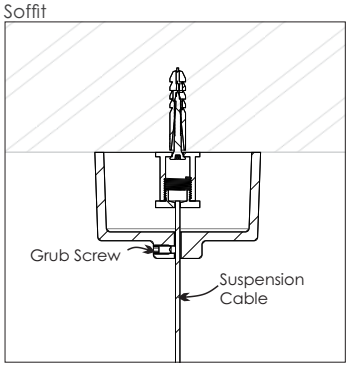
CCUP48SPFP
CEILING CUP 75x48
Power Cable Clamp
Concrete



CCUP48SPCFP
CEILING CUP 75x48
3 Core Clear Cable with internal suspension cable.
Soffit

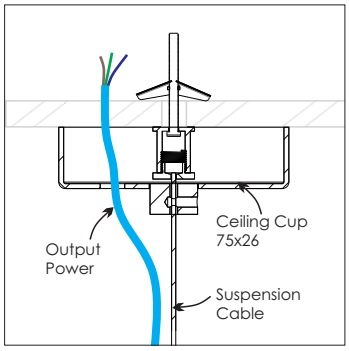


CCUP48SBC
CEILING CUP 75x26
Suspension Cable Only
Soffit

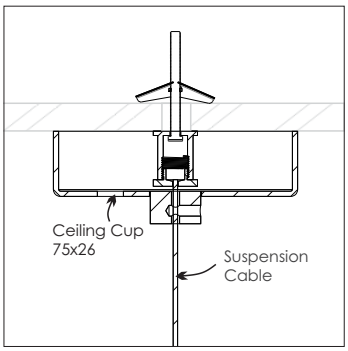


CCUP48SFP
CEILING CUP 75x26
Suspension Cable Only
Concrete

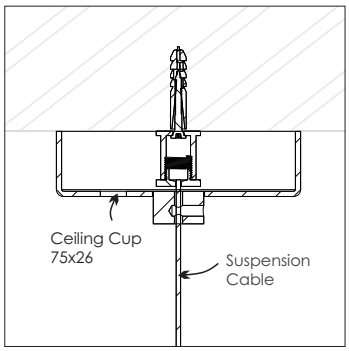
CEILING CUP 75x26 (not to scale)



CCUP26SPBC
CEILING CUP 75x26
Suspension & Power Cable
Soffit

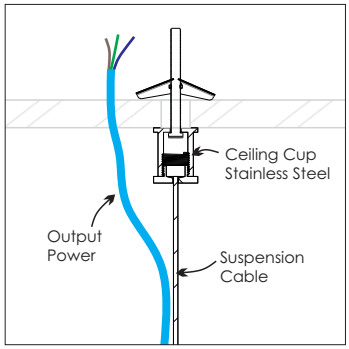


CCUP26SBC
CEILING CUP 75x26
Suspension Cable Only
Soffit

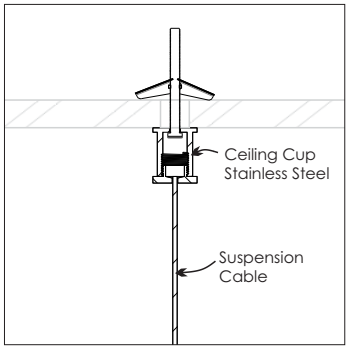


CCUP26SFP
CEILING CUP 75x26
Suspension Cable Only
Concrete

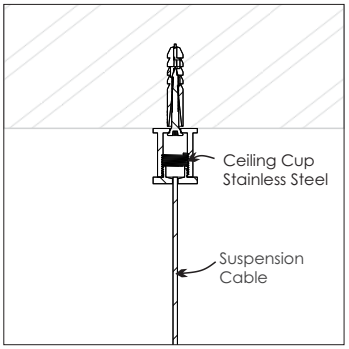
STAINLESS STEEL CEILING CUP (not to scale)



CCUPSSSPBC
CEILING CUP STAINLESS STEEL
Suspension
Soffit



CCUPSSSBC
CEILING CUP STAINLESS STEEL
Suspension
Soffit

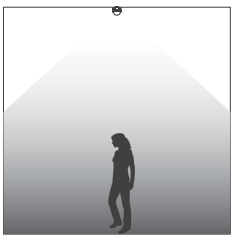


CCUPSSSFP
CEILING CUP STAINLESS STEEL
Suspension
Concrete

NIMBUS PRO

bluTECH sensTECH funeTECH daliTECH elcTECH corTECH

APPLICATION AREAS



Indoor or outdoor application.
Workshops.
Warehouses.
Tunnels.
Garages.
Kitchens and Industrial canteens.
Laboratories.
Humid or dusty areas.

MODEL NUMBER

NIMBUS PRO

SPECIFICATIONS

HOUSING : Polycarbonate and ABS.
DIFFUSER : UV stabilised polycarbonate diffuser. IK10.
LIGHT SOURCE : The fitting is designed to operate a range of LED's up to 55W.
MOUNTING : Wall, ceiling or suspended mounted. Suitable for continuous row mounting. Multi purpose bracket allows for surface or suspended mounting.
LUMINAIRE EFFICACY : Up to 181 lm/W.
LUMEN MAINTENANCE : L95 50 000 hours, L90, 100 000 hrs.
CCT : 4000K or 5000K.
CRI : >80.
DIMENSIONS : 90mm x 90mm x 1263mm
90mm x 90mm x 1563mm
CONTROL GEAR : The electronic power supply is suitable for operation with a 220 - 240 volts. 50 hertz single phase.
FASTENERS : SS316 Stainless steel latches to keep diffuser in place.
WIRING : Rigid wire, cross section 0.5 mm2 , PVC-HT insulation, resistant up to 90°C and terminal block of 2p+E with maximum allowed cross section of 2.5 mm².
INGRESS PROTECTION : IP66 gear compartment. This luminaire has a high degree of hermeticity, IP66 (protection against dust and 0,3 bar to 3m pressure water jets penetration).
OPERATING TEMPERATURE : (Ta) – 20 degrees to +45 degree
WEIGHT : 4 Kg total including control gear.
ACCESSORIES : Wire Guard.

IP 66 CONSTRUCTION GUARANTEE LED

LIGHT SOURCE

ZHAGA BOARD | CRI80 | 4000 Kelvin

Length	1263mm		
LED CURRENT (mA)	SYSTEM WATTAGE (W)	NOMINAL FLUX (lm)	LUMINOUS FLUX (lm)
250mA	27W	4606 lm	4134 lm
350mA	35W	6376 lm	5722 lm
450mA	45W	7883 lm	6745 lm

ZHAGA BOARD | CRI80 | 4000 Kelvin

Length	1563mm		
LED CURRENT (mA)	SYSTEM WATTAGE (W)	NOMINAL FLUX (lm)	LUMINOUS FLUX (lm)
250mA	33W	5616 lm	5062 lm
350mA	44W	8316 lm	7464 lm
450mA	55W	10282 lm	9228 lm

- 3000 Kelvin available on request, 7% less lumen output.
- Due to the continual advancement in LED technology the type of LED is subject to change.

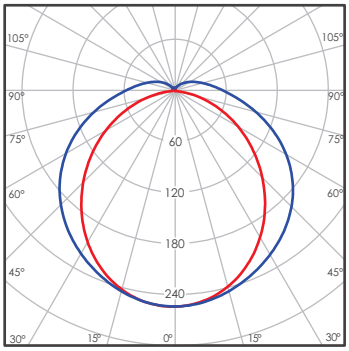
EMERGENCY LIGHTING (OPTIONAL)

PACK 3 - LINEAR EMERGENCY UNIVERSE SLIM

DURATION	BACK-UP LIGHT OUTPUT	BATTERY TYPE	INTEGRATION	SELF-TESTING	DIMENSIONS
1 HOUR	20%	Lithium-ion	Internal	No	Integrated

LIGHT DISTIBUTION

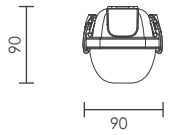
LED 45W



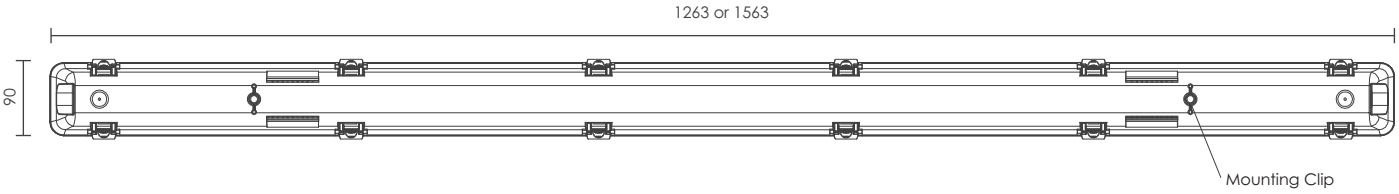
cd/klm

C0 - 180 C90 - 270

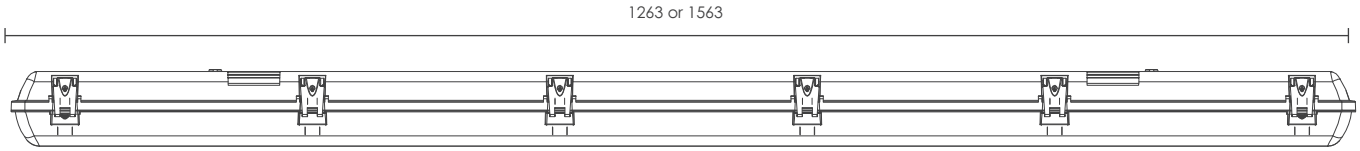
DIMENSIONS IN MM



Side View

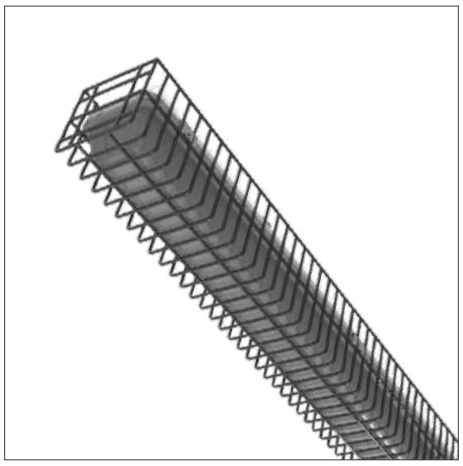


Top View



Side View

ACCESSORIES



Wire Guard Available on Request

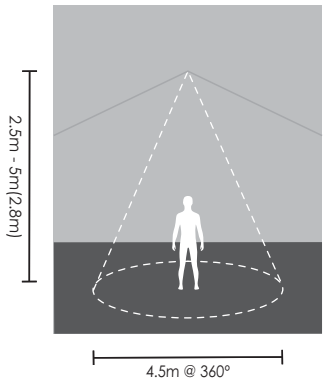
ACCESSORIES (Available on request)

Integrated microwave sensor:
Integrated non-visible motion detection
Automatic on/off switching of electronic control gear
Built in photocell for bright-out function
Delay time, detection range and bright-out function can be set via dip switches
Selectable time delays – 5s – 30m
Max. installation height 5 m
Variable detection area (100 – 10 %)
Zero cross switching
5-year guarantee

Control protocols:
switchDIM
corridorFUNCTION
ready2mains
DSI/DALI

SENSOR DETECTION AREA

Height	Detection Area
2.5m	4.5m
2.8m	4.5m
3.5m	5m
4m	5.5m
5m	5.5m



SERENGETI

MODEL NUMBER

SERENGETI SINGLE
SERENGETI DOUBLE

SPECIFICATIONS

HOUSING : LM 6 die cast aluminium.
LIGHT SOURCE : The fitting is designed to operate a 220V LED up to 25W or E27 lamp.
DIFFUSER : Toughened sandblasted glass.
FINISH : Powder coated.
MOUNTING : Wall mounted. Single - up or down light. Double - up and down light.
CONTROL GEAR : 220V - Direct to mains.
FASTENERS : All external screws are stainless steel.
GASKET : Neoprene gasket.
INGRESS PROTECTION : IP 55.
OPERATING TEMPERATURE : (Ta) ≤ 35° C.
WEIGHT : 2.5Kg including control gear.

bluTECH daliTECH remote

LIGHT SOURCE

LED SAMSUNG 2835 - SINGLE

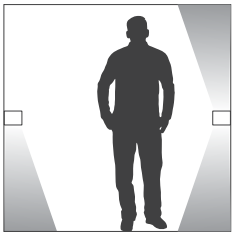
VOLTAGE (V)	NOMINAL WATTAGE (W)	COLOUR TEMP (K)	NOMINAL FLUX (lm)
220V	12W	4000K	1556 lm
		3000K	1463 lm

LED SAMSUNG 2835 - DOUBLE

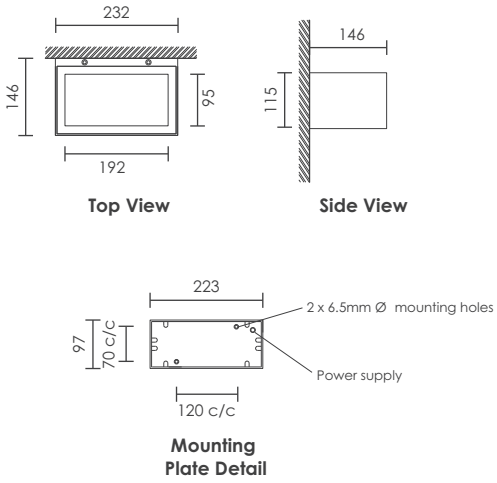
VOLTAGE (V)	NOMINAL WATTAGE (W)	COLOUR TEMP (K)	NOMINAL FLUX (lm)
220V	25W	4000K	3112 lm
		3000K	2925 lm

APPLICATION AREAS

Indoor or outdoor application.
Single or double light element.
Commercial Developments.
Retail Developments.
Shopping malls.
Public buildings.



DIMENSIONS IN MM

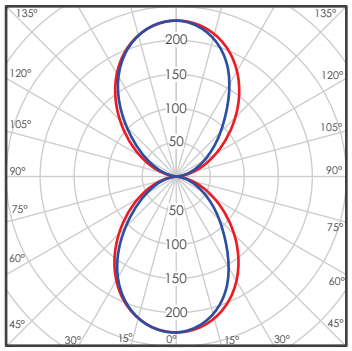


COLOURS

- Black (B)
- Matt Silver (M)
- White (W)
- Charcoal Grey (C)

LIGHT DISTRIBUTION

LED 25W Double



cd/klm
C0 - C180 C90 - C270

TUBO HALO

MODEL NUMBER

TUBO HALO

SPECIFICATIONS

HOUSING : LM 6 die cast aluminium and extruded aluminium.
LIGHT SOURCE : The fitting is designed to operate a range of Compact Fluorescent lamps up to 26W or ES LED lamp.
DIFFUSER : UV stabilised satine acrylic.
FINISH : Powder coated.
MOUNTING : Plinth mounted or buried.
ACCESSORIES : Must be specified when ordering.
Available accessories - Bolt cage.
CONTROL GEAR : Magnetic control gear. The electronic supply is suitable for operation with 220 – 240 volts - 50 hertz single phase.
FASTENERS : All external screws are stainless steel.
GASKET : EPDM gasket.
INGRESS PROTECTION : IP54.
OPERATING TEMPERATURE : (Ta) ≤ 35° C.
WEIGHT : 2 Kg.
WINDAGE : Max. projected areas for mounting 0.0654m^2.

LIGHT SOURCE

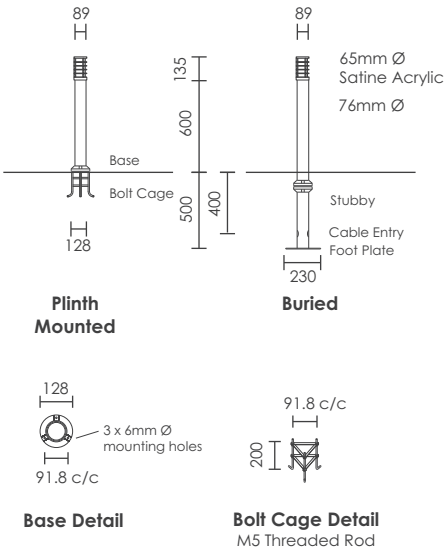
Conventional Light Source

LAMP	WATTAGE	BASE
LED	Lamp specification	ES
CFL	13W, 18W or 26W	G24

APPLICATION AREAS

Indoor or outdoor application.
Symmetrical distribution.
Parks and gardens.
Pedestrian walkways.
Building entrances.

DIMENSIONS IN MM

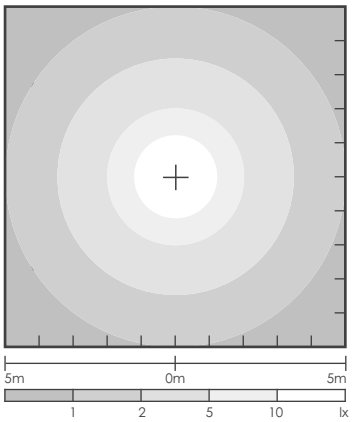


COLOURS

- Black (B)
- Matt Silver (M)
- White (W)
- Charcoal Grey (C)

LIGHT DISTRIBUTION

26W CFL @ 790mm



IP 54

CBi electric
low voltage

a Reunert company

Proud Local Manufacturer since 1949

PRICE LIST 2024/2025

QA Range Mini Rail 13 mm Hydraulic-Magnetic

QA-1(13)

QA-2(13)

QA-3(13)

QA-N-4(13)

Circuit Breakers 3 kA Curve 3 (Standard) Mini Rail Mounting, 57 mm Escutcheon								L1
Type	**Poles**	**Voltage**	**kA**	**MCB Width (mm)**	**Std. Pack**	**Ratings (A)**	**Price Ea. excl. VAT**	**Order No.**
QA-1(13) (White Handle)	1	240 Vac	3	13 (1 Module)	12	1, 2, 5	R 171.00	QAL183...
						10, 15, 20	R 174.00	
						25, 30, 35, 40	R 195.00	
						45, 50, 60	R 201.00	
QA-2(13) (White Handle)	2	415 Vac	3	26 (2 Modules)	6	1, 2, 5	R 654.00	QAL283...
						10, 15, 20	R 671.00	
						25, 30, 35, 40	R 690.00	
						45, 50	R 742.00	
QA-3(13) (White Handle)	3	415 Vac	3	39 (3 Modules)	4	5	R 966.00	QAL383...
						10, 15, 20	R 1 050.00	
						25, 30, 35	R 1 065.00	
						40, 45, 50	R 1 086.00	
QA-N-2(13) (White/Green Handle)	1 + N	240 Vac	3	26 (2 Modules)	6	1, 2, 5, 10, 15, 20	R 462.00	QAL213...
						25, 30, 35, 40, 45, 50	R 489.00	
						60	R 499.00	
QA-N-4(13) (White/Green Handle)	3 + N	415 Vac	3	52 (4 Modules)	3	5, 10, 20, 25	R 1 255.00	QAL413...
						30, 35, 40, 45, 50	R 1 284.00	

Switch Disconnectors 3 kA, Mini Rail Mounting 57 mm Escutcheon								L1
Type	**Poles**	**Voltage**	**Withstand kA [1]**	**MCB Width (mm)**	**Std. Pack**	**Ratings (A)**	**Price Ea. excl. VAT**	**Order No.**
QA-S-1(13) (Green Handle)	1	240 Vac	3	13 (1 Module)	12	63	R 169.00	QAL10063
QA-S-2(13) (Green Handle)	2	415 Vac	3	26 (2 Modules)	6	63	R 339.00	QAL20063
QA-S-3(13) (Green Handle)	3	415 Vac	3	39 (3 Modules)	4	63	R 522.00	QAL30063
QA-S-4(13) (Green Handle)	4	415 Vac	3	52 (4 Modules)	3	63	R 657.00	QAL40063

Notes:

Max cable size 25 mm²
The above Voltages and kA ratings are in accordance with SANS specifications (see side of product)
The front printing on the product refers to Voltages and kA ratings in accordance with IEC specifications

1. Required to be backed up by a suitable Short Circuit Protection Device (SCPD)

Please contact CBI for Amp Ratings not listed

QF Range Dual Mount 13 mm Hydraulic-Magnetic

QF-1(13) C1

QF-2(13) C1

QF-1(13)

QF-2(13)

QF-3(13)

QF-N-4(13)

Circuit Breakers 6 kA Curve 1 (Special) Mini and DIN Rail Mounting, 57 mm Escutcheon								L2
Type	**Poles**	**Voltage**	**kA**	**MCB Width (mm)**	**Std. Pack**	**Ratings (A)**	**Price Ea. excl. VAT**	**Order No.**
QF-1(13) (Orange Handle)	1	240 Vac	6	13 (1 Module)	12	5, 10, 15, 20, 25	R 264.00	QFA181...
QF-2(13) (Orange Handle)	2	415 Vac	6	26 (2 Modules)	6	15, 20	R 974.00	QFA281...
QF-3(13) (Orange Handle)	3	415 Vac	6	39 (3 Modules)	4	5, 10, 15, 20	R 1 461.00	QFA381...
						25	R 1 471.00	
QF-N-2(13) (Orange/Green Handle)	1 + N	240 Vac	6	26 (2 Modules)	6	5, 10, 15, 20	R 559.00	QFA211...
						25	R 565.00	

Circuit Breakers 6 kA Curve 2 (Standard) Mini and DIN Rail Mounting, 57 mm Escutcheon								L2
Type	**Poles**	**Voltage**	**kA**	**MCB Width (mm)**	**Std. Pack**	**Ratings (A)**	**Price Ea. excl. VAT**	**Order No.**
QF-1(13) (White Handle)	1	240 Vac	6	13 (1 Module)	12	1, 2	R 275.00	QFA182...
						5	R 188.00	
						10, 15, 20	R 192.00	
						25	R 214.00	
QF-2(13) (White Handle)	2	415 Vac	6	26 (2 Modules)	6	5	R 711.00	QFA282...
						10, 15, 20	R 731.00	
						25	R 796.00	
QF-3(13) (White Handle)	3	415 Vac	6	39 (3 Modules)	4	5	R 1 140.00	QFA382...
						10, 15, 20	R 1 140.00	
						25	R 1 159.00	
QF-N-2(13) (White/Green Handle)	1 + N	240 Vac	6	26 (2 Modules)	6	5, 10, 15, 20	R 502.00	QFA212...
						25	R 534.00	
QF-N-4(13) (White/Green Handle)	3 + N	415 Vac	6	52 (4 Modules)	3	5, 10, 15, 20, 25	R 1 366.00	QFA412...

Notes:

Max cable Size 25 mm²
The above Voltages and kA ratings are in accordance with SANS specifications (see side of product).
The front printing on the product refers to Voltages and kA ratings in accordance with IEC specifications.
1. Required to be backed up by a suitable Short Circuit Protection Device (SCPD)
Please contact CBI for Amp ratings not listed

QF Range Dual Mount 13 mm Hydraulic-Magnetic

Switch Disconnectors 6 kA, Mini and DIN Rail Mounting, 57 mm Escutcheon								L2
Type	Poles	Voltage	Withstand kA[1]	MCB Width (mm)	Std. Pack	Ratings (A)	Price Ea. excl. VAT	Order No.
QF-S-1(13) (Green Handle)	1	240 Vac	6	13 (1 Module)	12	63	R 196.00	QFA10063
QF-S-2(13) (Green Handle)	2	415 Vac	6	26 (2 Modules)	6	63	R 369.00	QFA20063
QF-S-3(13) (Green Handle)	3	415 Vac	6	39 (3 Modules)	4	63	R 576.00	QFA30063
QF-S-4(13) (Green Handle)	4	415 Vac	6	52 (4 Modules)	3	63	R 739.00	QFA40063

Notes:

Max cable size 25 mm² - QF(13)
The above Voltages and kA ratings are in accordance with SANS specifications (see side of product).
The front printing on the product refers to Voltages and kA ratings in accordance with IEC specifications.

1. Required to be backed up by a suitable Short Circuit Protection Device (SCPD).

SM Range Earth Leakages

SM15

SM36

110 Vac Mining/Industrial Earth Leakage Protection Device, Single Phase with Overload Protection (Mini Rail & Front Mount)									L2
Type	**Poles**	**Voltage**	**kA**	**mA**	**Width (mm)**	**Std. Pack**	**Rating (A)**	**Price Ea. excl. VAT**	**Order No.**
SM15A	1 + N	110 Vac	6	30 mA	65	10	10, 15, 20, 30, 40, 50, 60, 80, 100	R 3 006.00	SN15K...
SM15A	1 + N	110 Vac	6	50 mA	65	10	10, 15, 20, 30, 40, 50, 60, 80, 100	R 3 006.00	SN15L...
SM15A	1 + N	110 Vac	6	100 mA	65	10	10, 15, 20, 30, 40, 50, 60, 80, 100	R 3 006.00	SN15M...
SM15A	1 + N	110 Vac	6	250 mA	65	10	10, 15, 20, 30, 40, 50, 60, 80, 100	R 3 006.00	SN15N...
SM15A	1 + N	110 Vac	6	375 mA	65	10	10, 15, 20, 30, 40, 50, 60, 80, 100	R 3 006.00	SN15P...
SM15A	1 + N	110 Vac	6	500 mA	65	10	10, 15, 20, 30, 40, 50, 60, 80, 100	R 3 006.00	SN15Q...
SM15A	1 + N	110 Vac	6	1000 mA	65	10	10, 15, 20, 30, 40, 50, 60, 80, 100	R 3 006.00	SN15R...

240 Vac Mining / Industrial Earth Leakage Protection Device, Single Phase with Overload Protection (Mini Rail & Front Mount)									L2
Type	**Poles**	**Voltage**	**kA**	**mA**	**Width (mm)**	**Std. Pack**	**Rating (A)**	**Price Ea. excl. VAT**	**Order No.**
SM15A	1 + N	240 Vac	6	50 mA	65	10	10, 15, 20, 30, 40, 50, 60, 80, 100	R 3 006.00	SM15L...
SM15A	1 + N	240 Vac	6	100 mA	65	10	10, 15, 20, 30, 40, 50, 60, 80, 100	R 3 006.00	SM15M...
SM15A	1 + N	240 Vac	6	250 mA	65	10	10, 15, 20, 30, 40, 50, 60, 80, 100	R 3 006.00	SM15N...
SM15A	1 + N	240 Vac	6	375 mA	65	10	10, 15, 20, 30, 40, 50, 60, 80, 100	R 3 006.00	SM15P...
SM15A	1 + N	240 Vac	6	500 mA	65	10	10, 15, 20, 30, 40, 50, 60, 80, 100	R 3 006.00	SM15Q...
SM15A	1 + N	240 Vac	6	1000 mA	65	10	10, 15, 20, 30, 40, 50, 60, 80, 100	R 3 006.00	SM15R...

110 Vac Mining / Industrial Earth Leakage Protection Device, Three Phase with Overload Protection (Mini Rail & Front Mount)									L2
Type	**Poles**	**Voltage**	**kA**	**mA**	**Width (mm)**	**Std. Pack**	**Rating (A)**	**Price Ea. excl. VAT**	**Order No.**
SM36A	3 + N	110 Vac	6	30 mA	117	5	10, 15, 20, 30, 40, 50, 60, 80	R 3 956.00	SN35K...
SM36A	3 + N	110 Vac	6	50 mA	117	5	10, 15, 20, 30, 40, 50, 60, 80	R 3 956.00	SN35L...
SM36A	3 + N	110 Vac	6	100 mA	117	5	10, 15, 20, 30, 40, 50, 60, 80	R 3 956.00	SN35M...
SM36A	3 + N	110 Vac	6	250 mA	117	5	10, 15, 20, 30, 40, 50, 60, 80	R 3 956.00	SN35N...
SM36A	3 + N	110 Vac	6	375 mA	117	5	10, 15, 20, 30, 40, 50, 60, 80	R 3 956.00	SN35P...
SM36A	3 + N	110 Vac	6	500 mA	117	5	10, 15, 20, 30, 40, 50, 60, 80	R 3 956.00	SN35Q...
SM36A	3 + N	110 Vac	6	1000 mA	117	5	10, 15, 20, 30, 40, 50, 60, 80	R 3 956.00	SN35R...

415 Vac Mining / Industrial Earth Leakage Protection Device, Three Phase with Overload Protection (Mini Rail & Front Mount)									L2
Type	**Poles**	**Voltage**	**kA**	**mA**	**Width (mm)**	**Std. Pack**	**Rating (A)**	**Price Ea. excl. VAT**	**Order No.**
SM36A	3 + N	415 Vac	6	50 mA	117	5	15, 20, 30, 40, 50, 60, 80	R 3 956.00	SM35L...
SM36A	3 + N	415 Vac	6	100 mA	117	5	15, 20, 30, 40, 50, 60, 80	R 3 956.00	SM35M...
SM36A	3 + N	415 Vac	6	250 mA	117	5	15, 20, 30, 40, 50, 60, 80	R 3 956.00	SM35N...
SM36A	3 + N	415 Vac	6	375 mA	117	5	15, 20, 30, 40, 50, 60, 80	R 3 956.00	SM35P...
SM36A	3 + N	415 Vac	6	500 mA	117	5	15, 20, 30, 40, 50, 60, 80	R 3 956.00	SM35Q...
SM36A	3 + N	415 Vac	6	1000 mA	117	5	15, 20, 30, 40, 50, 60, 80	R 3 956.00	SM35R...

Notes:
*** Please contact CBI to determine the earth leakage configuration and availability.**
Max cable size 50 mm² - SM.

DIAMOND RANGE

Explanation

STANDARD COLOUR WHITE

PRODUCT

	X	X	X	X	X
Diamond Range	1				
50 x 100mm		0			
Ducting Product		1			
100 x 100mm		2			
Rolling Numbers			x	x	x

/

MATERIAL / COLOUR

X	X	X	
1			Product complete with coverplate
2			
3			
4			
5			
6			
7			
8			
9			
0	0		Product has no coverplate
	0	1	White
	0	2	Orange
	0	3	Red
	0	4	
	0	5	
	0	6	
	0	7	Blue
	0	8	Black
	0	9	
	1	2	Silver Grey
	5	1	Champagne
	6	2	Charcoal

1 2 1 5 3 / 6 0 1

Diamond
4 x 4" (100 x 100mm)

Monoblock
Double Socket

with Coverplate

White
Coverplate

DIAMOND RANGE
SWITCHES ON YOKE COMPLETE WITH COVERPLATE

Switches on Yoke Complete 50 x 100mm		
Description	Colour	Part Number
1 Lever 1 Way Switch + Cover	White	10011/601
1 Lever 2 Way Switch + Cover	White	10012/601

Switches on Yoke Complete 50 x 100mm		
Description	Colour	Part Number
2 Lever 1 Way Switch + Cover	White	10021/601
2 Lever 1x1 & 1x2 Way Switch + Cover	White	10022/601
2 Lever 2 Way Switch + Cover	White	10023/601
1 Lever Intermediate Switch + Cover	White	10020/601

Switches on Yoke Complete 50 x 100mm		
Description	Colour	Part Number
3 Lever 1 Way Switch + Cover	White	10031/601
3 Lever 2x1 & 1x2 Way Switch + Cover	White	10032/601
3 Lever 1x1 & 2x2 Way Switch + Cover	White	10033/601

Switches on Yoke Complete 50 x 100mm		
Description	Colour	Part Number
4 Lever 4x1 1 Way Switch + Cover	White	10041/601

Switches on Yoke Complete 100 x 100mm		
Description	Colour	Part Number
1 Lever Double Pole + Cord Grip + Cover	White	12071/601

Switches on Yoke Complete 50 x 100mm		
Description	Colour	Part Number
1 Lever Double Pole Switch + Cord Grip + Cover Vertical	White	10071/6

Switches on Yoke Complete 100 x 50mm		
Description	Colour	Part Number
1 Lever Double Pole Switch + Cord Grip + Cover Horizontal	White	10076/6

Double Pole Switch on Yoke + Cover		
Description	Colour	Part Number
1 Lever Double Pole + Cover 50 x 100mm	White	10016/601
1 Lever Double Pole + Cover 100 x 100mm	White	12016/601

Shaver Socket on Yoke 100 x 100mm

Description	Part Number
White	12400/601

Diamond Coverplate 100 x 100mm

Description	Part Number
White	12090/601

Sockets on Yoke Complete 100 x 100mm

Description	Colour	Part Number
Single Socket + Cover	White	12151/601

Sockets on Yoke Complete 100 x 100mm

Description	Colour	Part Number
Single Horizontal Socket + Cover	White	12161/601

Sockets on Yoke Complete 100 x 100mm

Description	Colour	Part Number
Double Socket + Cover	White	12155/601

Sockets on Yoke Complete 100 x 100mm		
Description	Colour	Part Number
Combo Socket + Cover	White	12167/601

Sockets on Yoke Complete 100 x 100mm - Polycarb		
Description	Colour	Part Number
USB "A+C" 16A Combo Socket + Yoke 5.25V 3.1A Polycarb	White	12159/601

Sockets on Yoke Complete 100 x 100mm - Polycarb		
Description	Colour	Part Number
Combo Socket + Cover Polycarb	White	12157/601

Single-Phase circuits supplying Socket outlets rated at NOT more than 16Ampere

Single-Phase Circuits that only supply socket-outlets rated at not more than 16A shall, if the circuit protection is rated at more than 20A,useonlyprotectedsocket-outlets,with,asfarasispracticable,discriminationbetweentheprotectivedevicesforthecircuitandtheprotective devices associated with the socket-outlets. The protective device of a protected socket-outlet shall...

1. have a fixed rated current that does not exceed the rating of the socket-outlet,
2. be mounted next to the socket-outlet that protects it
3. provide protection against overload currents,
4. unless short-circuit protection is provided by a separate device,for example on the distribution board, provide protection against short-circuit currents,
5. if it needs the protection of a back-up short-circuit device, be marked with the required or maximum rating of the back-up device,
6. if it protects more than one socket-outlet, be so installed that all the socket-outlets are connected in parallel, have the same rated current and are mounted next to the device, and may, if a ring circuit is used instead of a radial circuit, use conductors least 16A.

Installing Switches and Sockets

- Isolate mains before starting work.
- For flush mounting use a 50mm deep steel box as per SABS-1085.
- Recommended stripping length for cable installationis8mm.

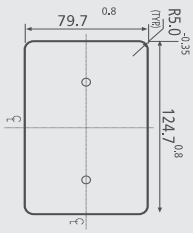
Cables should be connected as follows:

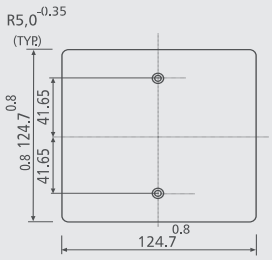
- Terminal L–Live (Red)
- Terminal N–Neutral (Black)
- Terminal E–Earth (Green/Yellow)

Conditions of Use

The productsreferredtointhisinstructionleafletshouldbeinstalledbysuitablequalifiedpersonnelinaccordancewiththerequirements of all relevant legislation, regulations and the accepted practice in the industry. Any further information whichmay be required about the use for which any specific product has been designed and tested, or about the conditions of use, is available on request.

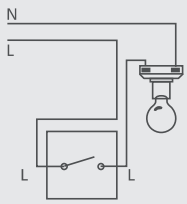
Cover Plate Dimensions



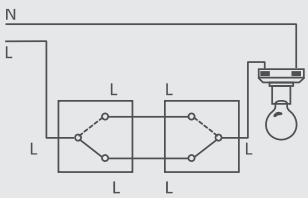


Standard Wiring Diagrams

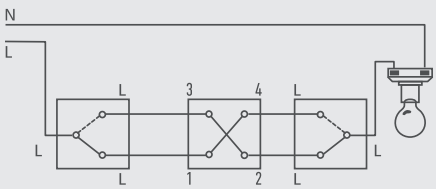
One Way Switching



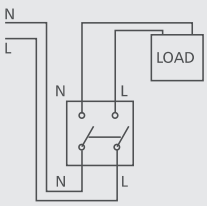
Two Way Switching



Intermediate Switching



One Way Double Pole Switching



Low Voltage Cable Range

ABERDARE
A MEMBER OF HENGTONG GROUP
ENLIGHTENING THE FUTURE

Revised 022023

Flat Twin and Earth Cable

ABERDARE
A MEMBER OF HENGTONG GROUP

Cable Description
Copper conductors to SANS 1411 Part 1, PVC insulated to SANS 1411 Part 2, laid up with a bare copper earth-continuity-conductor between them, PVC sheathed to SANS 1411 Part 2.

Installation Information
Complies with SANS 10142/2001 "Code of Practice for the wiring of Premises" Section 6, Clause 6.3.6:

- Surface wiring
- Under-plaster wiring
- Roof access wiring
- Wiring in hollow walls

Note: The cable shall not be buried direct in concrete or in screed. Joints in the wiring shall be in boxes only.

Properties

Specification	:	SANS 1507-2
Temperature Range	:	-10°C to 70°C
Voltage Rating	:	300 / 500 V
Sheath Identification	:	White & Black
Core Identification	:	**2 Core** - Red & Black, **3 Core** - Red, Yellow, Blue
Packaging	:	100m shrink-wrapped coils

Technical Data

Cable Size *		Electrical Properties					Physical Properties	
		Conductor Resistance (dc @ 20°C)		Current Rating **	Volt Drop ***	1 Sec Short Circuit Rating	Approx. Overall Diameter	Approx. Cable Mass
Phase	Earth	Phase	Earth					
(mm²)		(Ω/km)		(A)	(mV/A/m)	(kA)	(mm)	(kg/100m)
2 Core								
1,5	1	12,1	18,1	17	29	0,14	8,7 x 4,7	8,7
2,5	1,5	7,4	12,1	23	18	0,24	10,3 x 5,5	12,8
4	1,5	4,61	12,1	30	11	0,38	11,9 x 6,4	17,5
6	2,5	3,08	7,41	38	7,3	0,58	13,4 x 7,0	23,3
10	4	1,83	4,61	52	4,4	0,96	16,5 x 8,3	36,1
3 Core (Trip)								
1	1	18,2	18,2	12	38	0,11	4,4 x 10,4	8,9
1,5	1	12,1	18,2	15	25	0,14	4,8 x 10,5	9,9
2,5	1,5	7,4	12,2	20	15	0,24	5,5 x 12,3	14,1

Note:
* Conductors larger than 2,5mm² are usually stranded.
** Maximum conductor temperature 70° C, and installed as per installation Method 3 of SANS 10142-1.
*** 2 Core - Volt drop is phase to Neutral (ie. Single-phase).
3 and 4 Core - Volt drop is phase-to-phase. (ie. Three phase AC).

US CONSULATE GENERAL
7 TREBYAM AVENUE
Fault Level Calculation
Revision: 0.1
Calc by: D Narandas Pr Eng 20070322
08/12/2025

Calculated for MSS 500KVA to 7 TREBYAM AVENUE MSS Impedance = 4.5% (EST) 500KVA

Assume	MSS	70mm Cu	METER	16mm Cu	DB-1
250MVA FL	11kV/400V		400V		400V
	F_1 / F_2	165	F_3	50	F_4
Z_1	Z_2	Z_3		Z_4	

500 kVA Miniature substation located at the entrance to Trebyam Avenue. Distance to 7 Trebyam is approximatey 165m. Assume 70mmsq cable to meter box (for worst case fault level). Typical impedance for 500kVA transformer is 4.5%. Distance from meter box to DB-1 is approximately 50m.

Impedances:

$$Z_2 = \frac{V^2 \times \%_{imp}}{P} = \frac{400^2 \times 0.045}{500000} \quad 0.01440 \text{ ohm}$$

$$Z_3 = 0.3325 * 165m/1000 \quad 0.0549 \text{ ohm}$$

$$Z_4 = 1.38 * 50m/1000 \quad 0.0690 \text{ ohm}$$

Fault currents:

$$F_2 = \frac{V}{Z_2} = \frac{400}{\text{sqrt}(3) * Z_2} \quad 16.038 \text{ kA}$$

$$F_3 = \frac{V}{Z_2 + Z_3} = \frac{400}{\text{sqrt}(3) * Z_2 + Z_3} \quad 3.334 \text{ kA}$$

$$F_4 = \frac{V}{Z_2 + Z_3 + Z_4} = \frac{400}{\text{sqrt}(3) * Z_2 + Z_3 + Z_3} \quad \boxed{\mathbf{1.670\ kA}}$$