



MCFC North Expansion
North Stand

Metrolink External Lighting Circuit Calculations Schedule

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RIBA Stage 4
Revision:
P01

MCFC North Expansion

External Lighting Circuit Calculations Schedule

Issue and Revision Record

Rev/ Issue	Date	Description	Revision Details	Prepared	Checked
P01	07/08/2023	RIBA Stage 4	S3 – For Review and Comment	AF	JM

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Summary Report

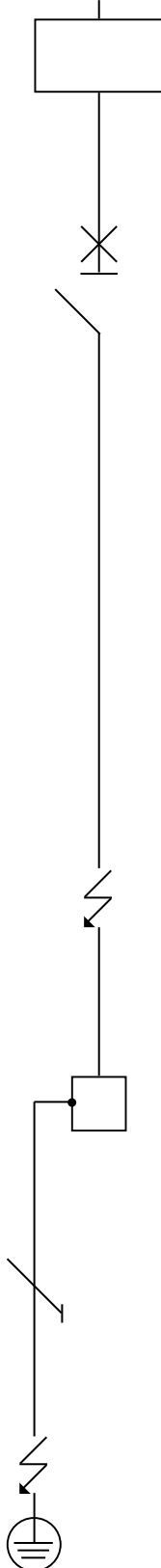


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Source

Phase Connection	L1
Voltage (V)	230
PSCC	10.000 kA / 0.0231 Ω
Earth Fault	10.000 kA / 0.0231 Ω

Supply

Protective Device

Manufacturer	Schneider
Family	Acti9 RCBO
Type	iC60H Type C
Protection	30mA
Rating (A)	10
Overload Setting Ir (A)	N/A
Maximum Zs (Ω)	7315.31822

Cable

Type	Multicore 90°C thermosetting armoured *RUN TO 70°C Cu Table 4D4
Makeup	1 x 1 x 3c
Phase Cable Size (mm ²)	2.5
Installation Method	70 - In conduit or ducting in the ground
Length (m)	90
Voltage Drop	0.23 V 0.10 %
Required Rating Iz (A)	10.6
Actual Rating It (A)	29

Cable

Phase Fault

Max. Fault Current (kA)	10.000
Device Breaking Capacity (kA)	10
Min. Fault Current (kA)	0.142
Disconnection Time (s)	<0.1

Load

Load Type	Lighting, radial circuits
Design Current Ib (A)	0.3
Power Factor	1.00

Load

CPC

Type	Arm 7.6 + Int 2.5
Total Size (mm ²)	10.1
Min. Adiabatic Requirement (mm ²)	0.3

Earth Fault

Fault Current (kA)	0.17
Disconnection Time (s)	0.01