Sample Electrical Ltd (sample)
Licence EW 000000 (sample)
00 000 0000
office@example.com

Cable Size

Sample · Workshop sub-main · R1

Prepared by A. Sample (sample name)

CONDUCTOR SIZE

6 mm²

RESULT

Derated capacity	38 A
Voltage drop	3.8 %
Earth conductor	2.5 mm²
Total derating factor	1.00

CHECKS

✓	Current capacity Iz at design current Ib Sets the size	Checked	6 A margin
✓	Voltage drop Sets the size	Checked	1.2 % margin
–	Cable capacity Iz at device rating In	Not assessed	
–	Earth fault loop impedance Zs at 230 V Add a protective device to check this.	Not assessed	
–	Cable fault withstand Add a prospective fault current to check this.	Not assessed	

INPUTS

Phases	Single phase
Voltage	230 V
Design current	32 A
Power factor	0.9
Standard	NZ · AS/NZS 3008.1.2
Run length	40 m
Installation method	Enclosed in air
Ambient temperature	30 °C
Grouped circuits	1
Material	Copper
Insulation	PVC 75 °C
Cores	Multicore
Cables in parallel	1
Voltage drop limit	5 %

Check protective device	No
Prospective fault current	0 kA

STEPS

Ambient derating factor	×1.00
Grouping derating factor	×1.00
Soil derating factor	×1.00
Burial depth derating factor	×1.00
Total derating factor	×1.00
Required tabulated current	32 A
Selected conductor size	6 mm²
Derated current capacity	38 A
Voltage drop	3.8 %

REFERENCES

AS/NZS 3000:2018 Cl 3.4
AS/NZS 3008.1.2:2017 Table 13 p.62–64
AS/NZS 3008.1.2:2017 Table 29 p.90
AS/NZS 3008.1.2:2017 Tables 27(1), 27(2) p.88
AS/NZS 3008.1.2:2017 Tables 28(1), 28(2) p.89
One circuit, no grouping factor

This result is a design aid. Verify it against the current standard.

CHECKED BY _____ SIGNATURE _____ DATE _____