TED v22.0.38 Release Notes

Release Date: October 1, 2025

TRIMBLE ELECTRICAL DESIGNER v22.0.38

This document summarises the latest improvements, bug fixes and new features that are included in the latest version of the Trimble Electrical Designer Suite of products incorporating ProDesign, ProDesign 3D, Protect, SingleCable and PowerNet.

Do you have an idea how to make Trimble Electrical Designer better? Join us in shaping the future of our products by visiting the TED Idea portal to vote and submit your innovative ideas! https://ted.ideas.aha.io/

ProDesign

This release incorporates a number of behind-the-scenes performance, reliability and security
Improvements in addition to the following.

For more information on ProDesign, please go to:

https://mep.trimble.com/en-GB/products/prodesign.

Improvements:

- [MEPEL-11415] In Project Settings > Calculations Tab, a new checkbox "Check Zs against 80% Max Zs" has been added to enhance how Zs (Earth Fault Loop Impedance) values are calculated. This improvement also includes:
    - An error message to inform the user that the Zs value is above the 80% of Max Zs limit and;
    - The 80% Max Zs value in both Cable Calculation and Cable Analysis reports for improved documentation and compliance checks.

Reference	Name	Calculated Values	Description	Status
▼ Earth Fault: Earth Loop Impedance				
1L1L2L3		Zs = 4.0006 Ohm 80% Max.Zs = 3.7343 Ohm	The earth loop impedance Zs at the load end of the cable is 4.0006 Ohm > 80% Max. Zs 3.7343 Ohm for the overcurrent protection.	Error

Cable Calculation Report

Calculated in accordance with BS 7671:2018+A3:2024

Project Reference:		Job Number:		Reg Auth:	BS 7671:2018+A3:
Document No:		Created On:	10/09/2025	Rev Date:	
Created By:	HKaraku	Revised By:		Revision:	

Active Source: Source-1

Circuit

Id No.:	Cbl_FC-1-FCL-1	Name:	
Connected From:	DB-1/1/L1,L2,L3	To:	Load-1-FCL-1
Load Type:	Fixed equipment three phase and neutral	Design Current Ib (A):	10.0

Comments:

Protective Device [a] = Auto, [f] = Fixed, [m] = Max.

Overcurrent Protection: Generic, BS 88-2, Fuse, System E
Rating In (A): 10 [a] | Overload Setting Ir (A): N/A
AFDD: N/A

Conductors [a] = Auto, [f] = Fixed, [d] = Double

Single-core 70°C thermoplastic non-arm Cu Table (4D1)
Euro Class: Undefined | Length (m): 200 | 1 x 4 x 1c | Max Length for Volt Drop(m): 263.45 | Size (mm²): 4.0 [a]
Neutral: 4.0 mm² [a]
30 - On horizontal/vertical unperforated tray | Configuration: Flat Touching

Rating Factors [u] = User Defined

Air Temperature (°C)	= 30.0	Ca = 1.00	[BS 7671:2018+A3:2024, Table 4B1]
Circuits In Group	= 1	Cg = 1.00	[BS 7671:2018+A3:2024, Table 4C1]
3rd Harmonics (%)	= 0.00	Ch = 1.00	

Cable sizing (A) Sized For: Phase Current Carrying Capacity | Auto-sized for current-carrying capacity and voltage drop limits.

Design Current Ib = 10.0
Device Rating In = 10 | Overload Setting Ir N/A | Voltage drop limit = 12.7 V (BS 7671:2018+A3:2024 App. 4)
Min. Cable Capacity Iz = 10.0 | [Ir > Ib]
Actual Cable Rating It = 33.0 | [BS 7671, Appendix 4, Equation (1)]
| [It > Iz]

Load Current and Voltage Drop	L1	L2	L3	Neutral
Design Current Ib (A/PF)	10.0 / 1.00	10.0 / 1.00	10.0 / 1.00	0.0
3rd Harmonic Current (A)	0.0	0.0	0.0	0.0
Voltage Drop - This circuit (V/%)	9.64 / 4.17	9.64 / 4.17	9.64 / 4.17	
Voltage Drop - From Source (V/%)	9.64 / 4.17	9.64 / 4.17	9.64 / 4.17	

Earth Fault Circuit Protective Conductor (mm²) Separate 1.5 [f] [a] = Auto, [f] = Fixed

Earth Fault Loop Impedance (Ω)	Ze 0.01443	Z1 1.09697	Z2 2.90000	Zs 4.00060	Max.Zs 4.66790	80% Max.Zs 3.73432 *	Earth Fault
Disconnection time (s)	From characteristic : 0.18 *	Maximum for circuit [a]: 0.40			Current (kA)
Circuit Protective Conductor (mm²)		Separate 1.5 [f]			0.05
CPC Adiabatic check (mm²)	CPC Section = Separate 1.5	Total = 1.5	Min. Section = 0.2		

Note: Earth Fault Current and Max Zs have been factored by Cmin | *From OCPD characteristic

CIRCUIT DETAILS

| Cable Reference | Id No.: Cbl_FC-1-FCL-1 | Name: |

PROTECTIVE DEVICES

Overcurrent	Type:	Generic, BS 88-2, Fuse, System E	Rating In (A): 10
	Settings:	Phase fault selectivity check required	
Earth Fault	Type:	Generic, BS 88-2, Fuse, System E	Rating (A): 10
	Settings:	N/A	
AFDD	Type:	N/A	Rating (A): N/A

OVERCURRENT PROTECTION Calculations based on BS 7671:2018+A3:2024 433.1, 434.5.1, 536.1 Para. 3

Protective Device:	Type:	Generic, BS 88-2, Fuse, System E	
	Overload:	Rating In (A): 10	Overload Setting Ir (A): N/A
		Motor Rating (A): N/A	Design Current Ib (A): 10.0 A
	Breaking Capacity (kA):	Icu = 80	Back-up Protection = No	Ics = 80
	Max. Fault Current (kA):	Source End = 16.000	Load End = 0.252	Source End Earth Fault Current (kA): 16.00

| Line Conductor Adiabatic Check | CPD Energy Let-through (A²s): 280.00 | Minimum Load End Fault Current Ifmin (kA) = 0.105 |
| | Adiabatic Limit k²S² (A²s): 211.60 x 10⁶ | Phase Conductor Section S (mm²) = 4 |

EARTH FAULT PROTECTION Calculations based on BS 7671:2018+A3:2024 411.3.2, 411.3.3, 411.4, 411.5, 533.1.1, 543.1

| Protection: | Generic, BS 88-2, Fuse, System E | | | Rating (A): 10 |

		Earth Fault Loop Impedance (Ω)				Circuit Protective Conductor (CPC) Details		
Ze	Z1	Z2	Zs	Max Zs inc. Cmin (exc. Cmin)	80% Max Zs inc. Cmin (exc. Cmin)	Conductor k Value	Section (mm²)	
External	Phase	CPC	Total			Phase 115	Actual	Equivalent
0.01443	1.09697	2.90000	4.00060	4.66790 (4.91358)	3.73432 3.93086	Separate 115	1.5	Actual x (k2/k1) = 1.50
								Total = 1.50

Earth fault Disconnection Time (s)		Earth Fault Current (kA)			
Actual from characteristic = 0.18	(Uo x Cmin)/(Zs x 1000) = 0.05		Adiabatic Check: Minimum Section CPC S = √(I²t)/k	
Maximum for circuit type = 0.40	Uo/(Zs x 1000) = 0.06		I²t = 531.93 A²s[1]	Min. S (mm²) = 0.2

[1] Overcurrent Protective Device is used for the Earth Fault Adiabatic calculation as per Regulation 533.1.1.

ERRORS

COMMENTS

Why is this information important?

Resolved Bugs:

- [MEPEL-11802] Resolved a licensing issue that caused ProDesign 3D to shut down when running alongside ProDesign 2D.
- [MEPEL-11912] Resolved a bug where opening a .prd file did not automatically launch the software, instead redirecting to Chromium browser and downloading the file before opening it.
- [MEPEL-11976] Resolved a bug where a saved .PRD project file could become corrupted and unopenable.

ProDesign 3D

This release incorporates a number of behind-the-scenes performance, reliability and security improvements.
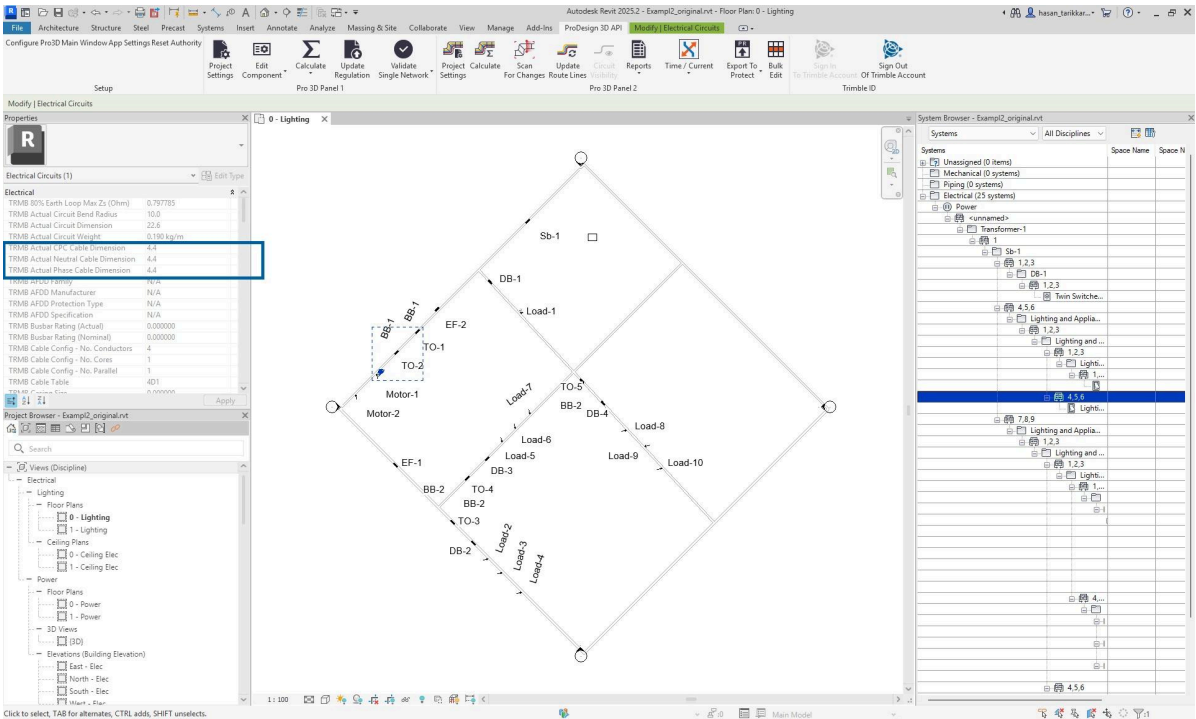
To download ProDesign 3D, ensure you have a **TED 2D UK Pro+ license** and visit the [Trimble community portal](#).

Improvements:

- **[MEPEL-11198]** Three new parameters—"TRMB Actual Phase Cable Dimension", "TRMB Actual Neutral Cable Dimension", and "TRMB Actual CPC Cable Dimension"— have been added to allow for accurate scheduling of single-core circuits and multicore cables.

- **[MEPEL-11415]** In Project Settings > Calculations Tab, a new checkbox "Check Zs against 80% Max Zs" has been added to enhance how Zs (Earth Fault Loop Impedance) values are calculated. This improvement also includes:
    - An error message to inform the user that the Zs value is above the 80% of Max Zs limit and;
    - The 80% Max Zs value in both Cable Calculation and Cable Analysis reports for improved documentation and compliance checks and;
    - A new shared parameter in ProDesign 3D, "TRMB 80% Earth Loop Max Zs (Ohm)".

Reference	Name	Calculated Values	Description	Status
▼ **Earth Fault: Earth Loop Impedance**				
1L1L2L3		Zs = 4.0006 Ohm 80% Max.Zs = 3.7343 Ohm	The earth loop impedance Zs at the load end of the cable is 4.0006 Ohm > 80% Max. Zs 3.7343 Ohm for the overcurrent protection.	Error

Cable Calculation Report — Trimble

Project Reference:		Job Number:		Reg Auth:	BS 7671:2018+A3:
Document No:		Created On:	10/09/2025	Rev Date:	
Created By:	HKaraku	Revised By:		Revision:	

Calculated in accordance with BS 7671:2018+A3:2024

Active Source: Source-1

Circuit

Id No.:	Cbl_FC-1-FCL-1	Name:	
Connected From:	DB-1/1/1,L1,L2,L3	To:	Load-1-FCL-1
Load Type:	Fixed equipment three phase and neutral	Design Current Ib (A):	10.0
Comments:			

Protective Device
[a] = Auto, [f] = Fixed, [m] = Max.

Overcurrent Protection: Generic, BS 88-2, Fuse, System E
Rating In (A): 10 [a] Overload Setting Ir (A): N/A
AFDD: N/A

Conductors
[a] = Auto, [f] = Fixed, [d] = Double

Single-core 70°C thermoplastic non-arm Cu Table (4D1)   1 x 4 x 1c   Size (mm²): 4.0 [a]
Euro Class: Undefined   Length (m): 200   Max Length for Volt Drop(m): 263.45
Neutral: 4.0 mm² [a]
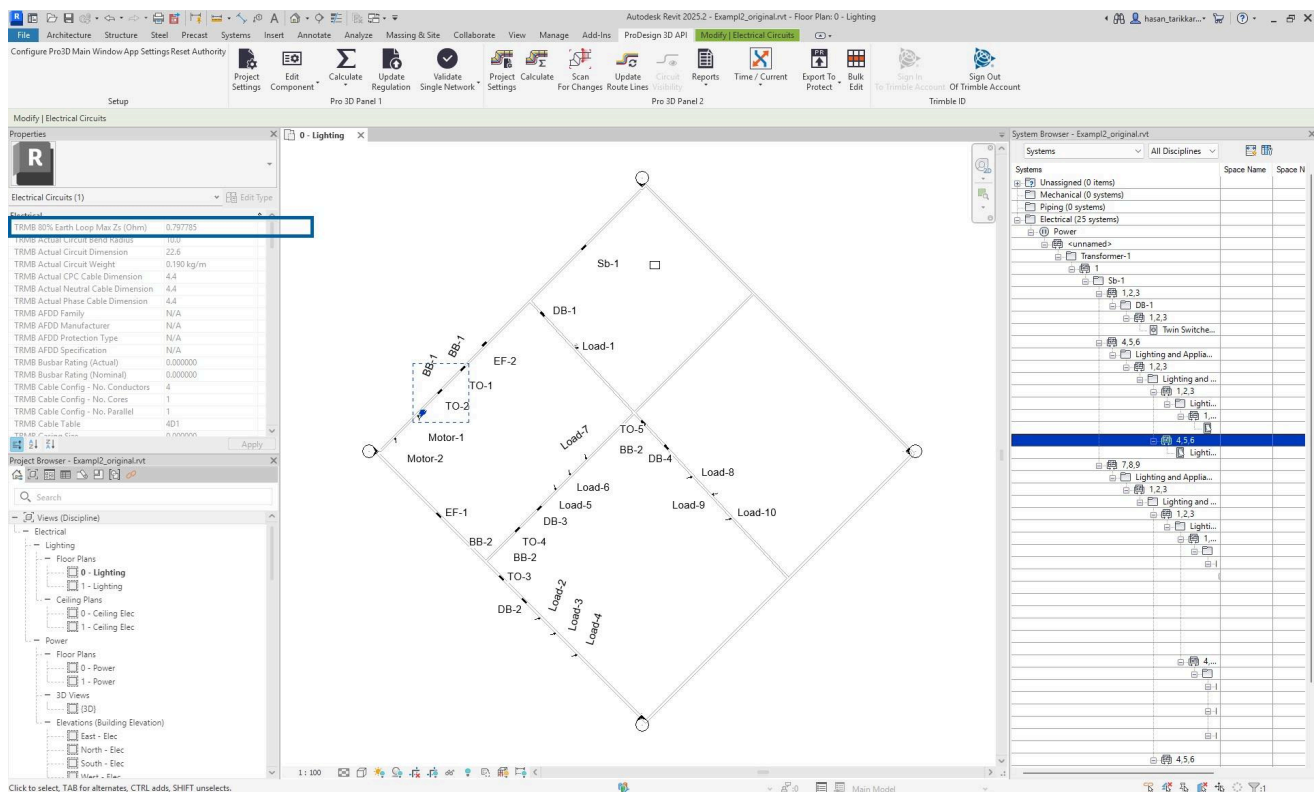30 - On horizontal/vertical unperforated tray   Configuration: Flat Touching

Rating Factors
[u] = User Defined

Air Temperature (°C)	= 30.0	Ca	= 1.00	[BS 7671:2018+A3:2024, Table 4B1]
Circuits In Group	= 1	Cg	= 1.00	[BS 7671:2018+A3:2024, Table 4C1]
3rd Harmonics (%)	= 0.00	Ch	= 1.00	

Cable sizing (A)
Sized For: Phase Current Carrying Capacity   Auto-sized for current-carrying capacity and voltage drop limits.

Design Current Ib	= 10.0	Voltage drop limit = 12.7 V (BS 7671:2018+A3:2024 App. 4)
Device Rating In	= 10	
Min. Cable Capacity Iz	= 10.0	[Ir > Ib]
Actual Cable Rating It	= 33.0	[BS 7671, Appendix 4, Equation (1)]
		[It > Iz]

Load Current and Voltage Drop	L1	L2	L3	Neutral
Design Current Ib (A/PF)	10.0 / 1.00	10.0 / 1.00	10.0 / 1.00	0.0
3rd Harmonic Current (A)	0.0	0.0	0.0	0.0
Voltage Drop - This circuit (V/%)	9.64 / 4.17	9.64 / 4.17	9.64 / 4.17	
Voltage Drop - From Source (V/%)	9.64 / 4.17	9.64 / 4.17	9.64 / 4.17	

Earth Fault
Circuit Protective Conductor (mm²)   Separate 1.5 [f]   [a] = Auto, [f] = Fixed

Earth Fault Loop Impedance (Ω)	Ze 0.01443 Z1 1.09697 Z2 2.90000 Zs 4.00060 Max.Zs 4.66790 80% Max.Zs 3.73432 *	Earth Fault Current (kA)
Disconnection time (s)	From characteristic : 0.18 * Maximum for circuit [a]: 0.40	
Circuit Protective Conductor (mm²)	Separate 1.5 [f]	0.05
CPC Adiabatic check (mm²)	CPC Section = Separate 1.5 Total = 1.5 Min. Section = 0.2	

Note: Earth Fault Current and Max Zs have been factored by Cmin   *From OCPD characteristic

CIRCUIT DETAILS

Cable Reference	Id No.: Cbl_FC-1-FCL-1	Name:

PROTECTIVE DEVICES

Overcurrent	Type:	Generic, BS 88-2, Fuse, System E	Rating In (A): 10
	Settings:	Phase fault selectivity check required	
Earth Fault	Type:	Generic, BS 88-2, Fuse, System E	Rating (A): 10
	Settings:	N/A	
AFDD	Type:	N/A	Rating (A): N/A

OVERCURRENT PROTECTION
Calculations based on BS 7671:2018+A3:2024 433.1, 434.5.1, 536.1 Para. 3

Protective Device:	Type:	Generic, BS 88-2, Fuse, System E	
	Overload:	Rating In (A): 10	Overload Setting Ir (A): N/A
		Motor Rating (A): N/A	Design Current Ib: 10.0 A
	Breaking Capacity (kA):	Icu = 80 Back-up Protection = No Ics = 80	
	Max. Fault Current (kA):	Source End = 16.000 Load End = 0.252	Source End Earth Fault Current (kA): 16.00

Line Conductor Adiabatic Check	CPD Energy Let-through (A²s): 280.00	Minimum Load End Fault Current Ifmin (kA) = 0.105
	Adiabatic Limit k²S² (A²s): 211.60 x 10⁶	Phase Conductor Section S (mm²) = 4

EARTH FAULT PROTECTION
Calculations based on BS 7671:2018+A3:2024 411.3.2, 411.3.3, 411.4, 411.5, 533.1.1, 543.1

Protection:	Generic, BS 88-2, Fuse, System E		Rating (A): 10

Earth Fault Loop Impedance (Ω) / Circuit Protective Conductor (CPC) Details

	Ze	Z1	Z2	Zs	Max Zs inc. Cmin (exc. Cmin)	80% Max Zs inc. Cmin (exc. Cmin)	Conductor	k Value	Section (mm²) Actual	Equivalent
External	0.01443	1.09697	2.90000	4.00060	4.66790 (4.91358)	3.73432 3.93086	Phase 115			
Separate	115						1.5	Actual x (k2/k1) =	1.50	
								Total =	1.50	

Earth fault Disconnection Time (s)	Earth Fault Current (kA)	
Actual from characteristic = 0.18	(Uo x Cmin)/(Zs x 1000) = 0.05	Adiabatic Check: Minimum Section CPC S = √(I²t)/k
Maximum for circuit type = 0.40	Uo/(Zs x 1000) = 0.06	I²t = 531.93 A²s⁽¹⁾ Min. Section = 0.2

⁽¹⁾ Overcurrent Protective Device is used for the Earth Fault Adiabatic calculation as per Regulation 533.1.1.

ERRORS

Why is this information important?

COMMENTS

Resolved Bugs:

- [MEPEL-11802] Resolved a licensing issue that caused ProDesign 3D to shut down when running alongside ProDesign 2D.
- [MEPEL-11982] Reports of missing cable data have now been resolved. For more information, please refer to the Data Release Notes page: https://go.mep.trimble.com/uk/design-suite-data-release

SingleCable

This release incorporates a number of behind-the-scenes performance, reliability and security improvements.

For more information on SingleCable, please go to:

https://mep.trimble.com/en-GB/products/singlecable

Resolved Bugs:

- [MEPEL-11912] Resolved a bug where opening a .prd file did not automatically launch the software, instead redirecting to Chromium browser and downloading the file before opening it.

Protect

This release incorporates a number of behind-the-scenes performance, reliability and security improvements.

For more information on Protect, please go to:

https://mep.trimble.com/en-GB/products/protect.

Resolved Bugs:

- [MEPEL-11912] Resolved a bug where opening a .prd file did not automatically launch the software, instead redirecting to Chromium browser and downloading the file before opening it.

Powernet

This release incorporates a number of behind-the-scenes performance, reliability and security

improvements.

For more information on PowerNet, please go to:

https://mep.trimble.com/en-GB/products/powernet

Upgrade procedure

In order to upgrade your software to this new version, you need a Trimble ID as well as the Named User Licence. For further support, please see the following Technical Assistance section.

Software Update Notifications

The Trimble Electrical Designer suite of applications will notify you when an application update is available for download. You will be able to download the updates from the notification centre itself or from Trimble Downloads.

In case your software has received any calculation updates, you will be notified with a "Calculation Service Version Update" during the first instance of calculation.

Named User Licensing

All our products within the Trimble Electrical Designer Suite namely ProDesign, ProDesign 3D, SingleCable, Protect and PowerNet are now powered through named user licensing. This means that a user of our products must have a named user licence assigned to their own Trimble ID and each licence is meant to be used by a single user.

Please contact our support team if you have any questions regarding the licence management and accessing the product. For further support, please see the following Technical Assistance section.

Technical Assistance

Our Technical Support team uses a support tool which allows them to view and control users' machines remotely. This is only ever undertaken with the user's permission – and while being supervised by the user.

Our applications have a menu option link to the support web page containing details of this assistance should it be required. For more information, please contact our support team via Amtech-Support@Trimble.com or call +44 (0)1908 608833 and then choose Option 1.

UK Customer Portal

If you are a registered customer, please login to the [Trimble Downloads](#) for downloading the software and to access other related information. If you are not registered yet, please contact our support team as mentioned in the Technical Assistance section.