



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan
Client	Sample client
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Project revisions

Revision	Revision by	Revision date	Comment
Revision_001	Nandu gopan	25/11/2024	

Zs - Earth fault loop impedance report : SECTION 1



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	SECTION 1	4x BTS 3200A Busbar Trunking System Length: 15m	ACB 4P 3200A Ir=3200A/65kA Schneider Electric NW40 H1 2.0 65kA	0.08	5	0.0065	0.0052	0.045	0.036	0.0004	0.0003
1.R,Y,B	APFCR PANEL-2	5x3.5Cx300/150N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 40m	ACB 4P 1600A Ir=1600A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0082	0.0066	0.0825	0.066	0.0019	0.0015
2.R,Y,B	DT3/RISING MAIN-1A	8x3.5Cx300/150N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 190m	ACB 4P 3200A Ir=3200A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0239	0.0191	0.0412	0.033	0.018	0.0144
3.R,Y,B	DT3/MDB-13	3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 109m	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0933	0.0746	0.3299	0.2639	0.0886	0.0709
4.R,Y,B	DT3/MDB-14	3.5Cx120/70N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 64m	MCCB 4P 200A Ir=200A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0812	0.065	0.6597	0.5278	0.0777	0.0621
5.R,Y,B	DT3/MDB-15	3.5Cx120/70N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 64m	MCCB 4P 250A Ir=250A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0812	0.065	0.5278	0.4222	0.0777	0.0621
6.R,Y,B	DT3/MDB-17	2x3.5Cx400/185N mm ² 1x500mm ² E(and armour) SWA/XLPE90/Cu Length: 200m	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0279	0.0223	0.3299	0.2639	0.0142	0.0114
7.R,Y,B	SPARE	-	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
8.R,Y,B	SPARE	-	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
9.R,Y,B	SPARE	-	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
10.R,Y,B	SPARE	-	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-

Zs - Earth fault loop impedance report : SECTION 1



Company	T & G Electrotech Pvt Ltd - India
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Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	SECTION 1	4x BTS 3200A Busbar Trunking System Length: 15m	ACB 4P 3200A Ir=3200A/65kA Schneider Electric NW40 H1 2.0 65kA	0.08	5	0.0065	0.0052	0.045	0.036	0.0004	0.0003
11.R,Y,B	SPARE	-	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
12.R,Y,B	SPARE	-	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
13.R,Y,B	SPARE	-	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
14.R,Y,B	SECTION 2	-	ACB 4P 3200A Ir=3200A/65kA Schneider Electric NW40 H1 2.0 65kA	-	-	-	-	-	-	-	-

REFER

Zs - Earth fault loop impedance report : DT3/RISING MAIN-1A



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/RISING MAIN-1A	8x3.5Cx300/150N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Al Length: 190m	ACB 4P 3200A Ir=3200A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0239	0.0191	0.0412	0.033	0.018	0.0144
1.R,Y,B	STILT 4 LEVEL	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0242	0.0194	0.045	0.036	0.0003	0.0003
1.R,Y,B	TOP OF PODIUM	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0245	0.0196	0.045	0.036	0.0003	0.0003
1.R,Y,B	1ST FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0248	0.0198	0.045	0.036	0.0003	0.0003
1.R,Y,B	2ND FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0251	0.0201	0.045	0.036	0.0003	0.0003
1.R,Y,B	3RD FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0254	0.0203	0.045	0.036	0.0003	0.0003
1.R,Y,B	4TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0257	0.0206	0.045	0.036	0.0003	0.0003
1.R,Y,B	5TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.026	0.0208	0.045	0.036	0.0003	0.0003
1.R,Y,B	6TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0263	0.021	0.045	0.036	0.0003	0.0003
1.R,Y,B	7TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0266	0.0213	0.045	0.036	0.0003	0.0003
1.R,Y,B	8TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0269	0.0215	0.045	0.036	0.0003	0.0003
1.R,Y,B	9TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0272	0.0218	0.045	0.036	0.0003	0.0003
1.R,Y,B	10TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0275	0.022	0.045	0.036	0.0003	0.0003

Zs - Earth fault loop impedance report : DT3/RISING MAIN-1A

Company	T & G Electrotech Pvt Ltd - India
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Designer	Nandu Gopan
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Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/RISING MAIN-1A	8x3.5Cx300/150N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Al Length: 190m	ACB 4P 3200A Ir=3200A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0239	0.0191	0.0412	0.033	0.018	0.0144
1.R,Y,B	11TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0279	0.0223	0.045	0.036	0.0003	0.0003
1.R,Y,B	12TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0282	0.0226	0.045	0.036	0.0003	0.0003
1.R,Y,B	13TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0285	0.0228	0.045	0.036	0.0003	0.0003

REFERENCE

Zs - Earth fault loop impedance report : DT3/MDB-13



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-13	3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 109m	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0933	0.0746	0.3299	0.2639	0.0886	0.0709
1.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/16kA Adjustable Generic Adjustable MCCB 16kA	0.05	0.2	0.1489	0.1191	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-TOS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 39m		0.05	0.2	0.2399	0.1919	4.1233	3.2986	0.0913	0.073
2.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/16kA Adjustable Generic Adjustable MCCB 16kA	0.05	0.2	0.1489	0.1191	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-1F	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 34m		0.05	0.2	0.2282	0.1826	4.1233	3.2986	0.0796	0.0637
3.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1489	0.1191	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-2F	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 29m		0.05	0.2	0.2165	0.1732	4.1233	3.2986	0.0679	0.0543
4.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1489	0.1191	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-3F	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 24m		0.05	0.2	0.2049	0.1639	4.1233	3.2986	0.0562	0.0449
5.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1489	0.1191	4.1233	3.2986	0.0563	0.045

Zs - Earth fault loop impedance report : DT3/MDB-13



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-13	3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 109m	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0933	0.0746	0.3299	0.2639	0.0886	0.0709
1.R,Y,B	FMAHU-WB-4F	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 17m		0.05	0.2	0.1885	0.1508	4.1233	3.2986	0.0398	0.0318
6.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 3P 32A Ir=32A/16kA Adjustable Generic Adjustable MCCB 16kA	0.05	0.2	0.1489	0.1191	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-5F	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 24m		0.05	0.2	0.2049	0.1639	4.1233	3.2986	0.0562	0.0449
7.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1489	0.1191	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-6F	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 29m		0.05	0.2	0.2165	0.1732	4.1233	3.2986	0.0679	0.0543
8.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1489	0.1191	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-7F	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 34m		0.05	0.2	0.2282	0.1826	4.1233	3.2986	0.0796	0.0637
9.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1489	0.1191	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-8F	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 39m		0.05	0.2	0.2399	0.1919	4.1233	3.2986	0.0913	0.073

Zs - Earth fault loop impedance report : DT3/MDB-13



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-13	3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Al Length: 109m	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0933	0.0746	0.3299	0.2639	0.0886	0.0709
10.R,Y,B	SPARE	-	MCCB 4P 160A Ir=160A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
11.R,Y,B	DT3/SDB-13.1	3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Al Length: 64m	MCCB 4P 160A Ir=160A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1461	0.1169	0.8247	0.6597	0.052	0.0416
12.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
13.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-

REFLECT

Zs - Earth fault loop impedance report : DT3/SDB-13.1



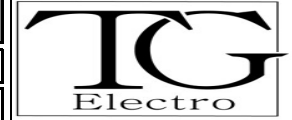
Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time sec	Max Disc. time sec	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
						Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/SDB-13.1	3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 64m	MCCB 4P 160A Ir=160A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1461	0.1169	0.8247	0.6597	0.052	0.0416
1.R,Y,B	MS	3.5Cx50/25N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 63A Ir=63A/16kA Adjustable Generic Adjustable MCCB 16kA	0.05	5	0.1852	0.1482	2.0944	1.6755	0.0395	0.0316
1.R,Y,B	CP-06_1NOS.HRW FOR OFFICE	3.5Cx50/25N mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 155m		0.05	5	0.3934	0.3147	2.0944	1.6755	0.2079	0.1663
2.R,Y,B	MS	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 20A Ir=20A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.3564	0.2851	6.5972	5.2778	0.2122	0.1697
1.R,Y,B	CS AHU-WB-TER-LMR-05-FIRE LIFT MACHINE ROOM	4Cx4mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 160m		0.05	0.2	1.5265	1.2212	6.5972	5.2778	1.1707	0.9366
3.R,Y,B	MS	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCB C 3P/6A/10kA Generic BS EN 60898 10kA MCB Type C	0.01	0.2	0.287	0.2296	3.9583	3.1667	0.1424	0.1139
1.R,Y,B	CS AHU-WB-TER-LMR-06-FIRE LIFT MACHINE ROOM	4Cx4mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 150m		0.01	0.2	1.3836	1.1069	3.9583	3.1667	1.0975	0.878
4.R,Y,B	MS	3.5Cx95/50N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1702	0.1362	1.3194	1.0556	0.0242	0.0193
1.R,Y,B	CP-08_2NOS.HRW FOR-OFFICE (SUPPLY AIR FAN)	3.5Cx95/50N mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 150m		0.05	5	0.2769	0.2215	1.3194	1.0556	0.1056	0.0845
5.R,Y,B	MS	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 3P/6A/10kA Generic BS EN 60898 10kA MCB Type C	0.01	0.2	0.3564	0.2851	3.9583	3.1667	0.2122	0.1697

Zs - Earth fault loop impedance report : DT3/SDB-13.1



Company	T & G Electrotech Pvt Ltd - India
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Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/SDB-13.1	3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Al Length: 64m	MCCB 4P 160A Ir=160A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1461	0.1169	0.8247	0.6597	0.052	0.0416
1.R,Y,B	CP-03_1NOS.TUBE AXIAL FAN- FOR ELECTRICAL ROOM - 1	4Cx4mm ² 1x16mm ² E(and armour) SWA/XLPE90/Al Length: 120m		0.01	0.2	1.6854	1.3483	3.9583	3.1667	1.3298	1.0639
6.R,Y,B	SPARE	-	MCCB 4P 160A Ir=160A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
7.R,Y,B	SPARE	-	MCCB 4P 160A Ir=160A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-

REFER

Zs - Earth fault loop impedance report : DT3/MDB-14



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time sec	Max Disc. time sec	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
						Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-14	3.5Cx120/70N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 64m	MCCB 4P 200A Ir=200A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0812	0.065	0.6597	0.5278	0.0777	0.0621
1.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-TOS-OFFICELHS-02 AHU-OFFICE-LHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 53m		0.05	0.2	0.2611	0.2089	4.1233	3.2986	0.124	0.0992
2.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-1F-OFFICELHS-05 AHU-OFFICE-LHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 58m		0.05	0.2	0.2728	0.2182	4.1233	3.2986	0.1357	0.1086
3.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 3P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-2F-OFFICELHS-08 AHU-OFFICE-LHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 63m		0.05	0.2	0.2845	0.2276	4.1233	3.2986	0.1474	0.1179
4.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-3F-OFFICELHS-11 AHU-OFFICE-LHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 68m		0.05	0.2	0.2962	0.237	4.1233	3.2986	0.1591	0.1273
5.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045

Zs - Earth fault loop impedance report : DT3/MDB-14



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-14	3.5Cx120/70N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 64m	MCCB 4P 200A Ir=200A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0812	0.065	0.6597	0.5278	0.0777	0.0621
1.R,Y,B	FMAHU-WB-4F-OFFICELHS-14 AHU-OFFICE-LHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 73m		0.05	0.2	0.3079	0.2463	4.1233	3.2986	0.1708	0.1367
6.R,Y,B	MS	4Cx25mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1239	0.0991	4.1233	3.2986	0.0429	0.0343
1.R,Y,B	FMAHU-WB-5F-OFFICELHS-17 AHU-OFFICE-LHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 78m		0.05	0.2	0.3063	0.245	4.1233	3.2986	0.1825	0.146
7.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/16kA Adjustable Generic Adjustable MCCB 16kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-6F-OFFICELHS-20 AHU-OFFICE-LHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 83m		0.05	0.2	0.3313	0.265	4.1233	3.2986	0.1942	0.1554
8.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-7F-OFFICELHS-23 AHU-OFFICE-LHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 88m		0.05	0.2	0.343	0.2744	4.1233	3.2986	0.2059	0.1648
9.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/16kA Adjustable Generic Adjustable MCCB 16kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-8F-OFFICELHS-26 AHU-OFFICE-LHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 93m		0.05	0.2	0.3548	0.2838	4.1233	3.2986	0.2176	0.1741

Zs - Earth fault loop impedance report : DT3/MDB-14



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-14	3.5Cx120/70N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Al Length: 64m	MCCB 4P 200A Ir=200A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0812	0.065	0.6597	0.5278	0.0777	0.0621
10.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
11.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
12.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-

REFER

Zs - Earth fault loop impedance report : DT3/MDB-15



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-15	3.5Cx120/70N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 64m	MCCB 4P 250A Ir=250A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0812	0.065	0.5278	0.4222	0.0777	0.0621
1.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-TOS-OFFICERHS-03 AHU-OFFICE-RHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 46m		0.05	0.2	0.2447	0.1958	4.1233	3.2986	0.1077	0.0861
2.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-1F-OFFICERHS-06 AHU-OFFICE-RHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 51m		0.05	0.2	0.2564	0.2051	4.1233	3.2986	0.1194	0.0955
3.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-2F-OFFICERHS-09 AHU-OFFICE-RHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 56m		0.05	0.2	0.2681	0.2145	4.1233	3.2986	0.1311	0.1048
4.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 3P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-3F-OFFICERHS-12 AHU-OFFICE-RHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 61m		0.05	0.2	0.2798	0.2238	4.1233	3.2986	0.1427	0.1142
5.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 3P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045

Zs - Earth fault loop impedance report : DT3/MDB-15



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-15	3.5Cx120/70N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 64m	MCCB 4P 250A Ir=250A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0812	0.065	0.5278	0.4222	0.0777	0.0621
1.R,Y,B	FMAHU-WB-4F-OFFICERHS-15 AHU-OFFICE-RHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 66m		0.05	0.2	0.2915	0.2332	4.1233	3.2986	0.1545	0.1236
6.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 3P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-5F-OFFICERHS-18 AHU-OFFICE-RHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 71m		0.05	0.2	0.3032	0.2426	4.1233	3.2986	0.1662	0.1329
7.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 3P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-6F-OFFICERHS-21 AHU-OFFICE-RHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 76m		0.05	0.2	0.3149	0.2519	4.1233	3.2986	0.1779	0.1423
8.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 3P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-7F-OFFICERHS-24 AHU-OFFICE-RHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 81m		0.05	0.2	0.3266	0.2613	4.1233	3.2986	0.1896	0.1516
9.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCCB 3P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1371	0.1097	4.1233	3.2986	0.0563	0.045
1.R,Y,B	FMAHU-WB-8F-OFFICERHS-27 AHU-OFFICE-RHS	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 86m		0.05	0.2	0.3384	0.2707	4.1233	3.2986	0.2013	0.161

Zs - Earth fault loop impedance report : DT3/MDB-15



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-15	3.5Cx120/70N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Al Length: 64m	MCCB 4P 250A Ir=250A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0812	0.065	0.5278	0.4222	0.0777	0.0621
10.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
11.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
12.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-

REFER

Zs - Earth fault loop impedance report : DT3/MDB-17



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-17	2x3.5Cx400/185N mm ² 1x500mm ² E(and armour) SWA/XLPE90/Cu Length: 200m	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0279	0.0223	0.3299	0.2639	0.0142	0.0114
1.R,Y,B	MS	3Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Al Length: 15m	MCB C 3P/6A/10kA Generic BS EN 60898 10kA MCB Type C	0.01	0.2	0.1749	0.1399	3.9583	3.1667	0.1569	0.1255
1.R,Y,B	FILTER FEED PUMP	3Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/Al Length: 25m		0.01	0.2	0.3897	0.3118	3.9583	3.1667	0.2155	0.1724
2.R,Y,B	MS	3Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Al Length: 15m	MCB C 3P/6A/10kA Generic BS EN 60898 10kA MCB Type C	0.01	0.2	0.1749	0.1399	3.9583	3.1667	0.1569	0.1255
1.R,Y,B	FILTER FEED PUMP	3Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/Al Length: 20m		0.01	0.2	0.3467	0.2774	3.9583	3.1667	0.1724	0.1379
3.R,Y,B	MS	3Cx16mm ² 1x16mm ² E(and armour) SWA/XLPE90/Al Length: 15m	MCB C 3P/6A/10kA Generic BS EN 60898 10kA MCB Type C	0.01	0.2	0.0805	0.0644	3.9583	3.1667	0.0603	0.0483
1.R,Y,B	DOMESTIC WATER-SUPPLY HYDRO - PNEUMATIC PUMPS	3Cx16mm ² 1x10mm ² E(and armour) SWA/XLPE90/Al Length: 25m		0.01	0.2	0.1921	0.1537	3.9583	3.1667	0.1135	0.0908
4.R,Y,B	MS	3Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Al Length: 15m	MCB C 3P/6A/10kA Generic BS EN 60898 10kA MCB Type C	0.01	0.2	0.1016	0.0813	3.9583	3.1667	0.0823	0.0658
1.R,Y,B	DOMESTIC WATER-SUPPLY HYDRO - PNEUMATIC PUMPS	3Cx16mm ² 1x10mm ² E(and armour) SWA/XLPE90/Al Length: 20m		0.01	0.2	0.1913	0.153	3.9583	3.1667	0.0908	0.0726
5.R,Y,B	MS	3x1Cx1.5mm ² 1x1.5mm ² E PVC70/S/Cu Length: 15m	MCB C 3P/6A/10kA Generic BS EN 60898 10kA MCB Type C	0.01	0.2	0.4508	0.3606	3.9583	3.1667	0.434	0.3472

Zs - Earth fault loop impedance report : DT3/MDB-17



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-17	2x3.5Cx400/185N mm ² 1x500mm ² E(and armour) SWA/XLPE90/Cu Length: 200m	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0279	0.0223	0.3299	0.2639	0.0142	0.0114
1.R,Y,B	DOMESTIC WATER-SUPPLY HYDRO - PNEUMATIC PUMPS	3Cx16mm ² 1x16mm ² E(and armour) SWA/XLPE90/Al Length: 35m		0.01	0.2	0.5916	0.4733	3.9583	3.1667	0.1407	0.1126
6.R,Y,B	MS	3Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCB C 3P/6A/10kA Generic BS EN 60898 10kA MCB Type C	0.01	0.2	0.096	0.0768	3.9583	3.1667	0.0765	0.0612
1.R,Y,B	PUMP ROOM-SUMP PUMP	3Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 50m		0.01	0.2	0.3491	0.2793	3.9583	3.1667	0.2549	0.2039
7.R,Y,B	MS	3Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCB C 3P/6A/10kA Generic BS EN 60898 10kA MCB Type C	0.01	0.2	0.096	0.0768	3.9583	3.1667	0.0765	0.0612
1.R,Y,B	PUMP ROOM-SUMP PUMP	3Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 75m		0.01	0.2	0.4765	0.3812	3.9583	3.1667	0.3823	0.3059
8.R	empty	-	-	-	-	-	-	-	-	-	-
8.Y	LDB-17.1-STP & PLUMBING	3Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 10m	MCCB 2P 40A Ir=40A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.0416	0.0333	3.2986	2.6389	0.018	0.0144
8.B	empty	-	-	-	-	-	-	-	-	-	-
9.R	empty	-	-	-	-	-	-	-	-	-	-
9.Y	LDB-17.1-STP & PLUMBING	3Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 10m	MCCB 2P 40A Ir=40A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.0416	0.0333	3.2986	2.6389	0.018	0.0144
9.B	empty	-	-	-	-	-	-	-	-	-	-

Zs - Earth fault loop impedance report : DT3/MDB-17



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time sec	Max Disc. time sec	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
						Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-17	2x3.5Cx400/185N mm ² 1x500mm ² E(and armour) SWA/XLPE90/Cu Length: 200m	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0279	0.0223	0.3299	0.2639	0.0142	0.0114
10.R,Y,B	STP (GREY WATER)-STP & PLUMBING	4Cx16mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 10m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0608	0.0486	1.3194	1.0556	0.0396	0.0317
11.R,Y,B	STP (GREY WATER)-STP & PLUMBING	4Cx16mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 10m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0608	0.0486	1.3194	1.0556	0.0396	0.0317
12.R,Y,B	STP (BLACK WATER)-STP & PLUMBING	4Cx16mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 10m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0608	0.0486	1.3194	1.0556	0.0396	0.0317
13.R,Y,B	STP (BLACK WATER)-STP & PLUMBING	4Cx16mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 10m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0608	0.0486	1.3194	1.0556	0.0396	0.0317
14.R,Y,B	BASEMENT DRAINAGE-SUMP PUMP	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 100m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.8385	0.6708	4.1233	3.2986	0.8214	0.6572
15.R,Y,B	BASEMENT DRAINAGE-SUMP PUMP	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 75m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.6332	0.5066	4.1233	3.2986	0.6161	0.4929
16.R,Y,B	BASEMENT DRAINAGE-SUMP PUMP	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 110m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.9207	0.7366	4.1233	3.2986	0.9036	0.7229
17.R,Y,B	BASEMENT DRAINAGE-SUMP PUMP	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 70m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.5922	0.4738	4.1233	3.2986	0.575	0.46
18.R,Y,B	BASEMENT DRAINAGE-SUMP PUMP	4Cx10mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 165m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	1.0247	0.8198	4.1233	3.2986	1.0074	0.8059

Zs - Earth fault loop impedance report : DT3/MDB-17



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time sec	Max Disc. time sec	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
						Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-17	2x3.5Cx400/185N mm ² 1x500mm ² E(and armour) SWA/XLPE90/Cu Length: 200m	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0279	0.0223	0.3299	0.2639	0.0142	0.0114
19.R,Y,B	BASEMENT DRAINAGE-SUMP PUMP	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 75m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.6332	0.5066	4.1233	3.2986	0.6161	0.4929
20.R,Y,B	BASEMENT DRAINAGE-SUMP PUMP	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 85m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.7154	0.5723	4.1233	3.2986	0.6982	0.5586
21.R,Y,B	BASEMENT DRAINAGE-SUMP PUMP-257	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 110m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.9207	0.7366	4.1233	3.2986	0.9036	0.7229
22.R,Y,B	BASEMENT DRAINAGE-SUMP PUMP-257	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 100m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.8385	0.6708	4.1233	3.2986	0.8214	0.6572
23.R,Y,B	BASEMENT DRAINAGE-SUMP PUMP-257	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 100m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.8385	0.6708	4.1233	3.2986	0.8214	0.6572
24.R,Y,B	GREASE TRAP-SUMP PUMP	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 100m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.8385	0.6708	4.1233	3.2986	0.8214	0.6572
25.R,Y,B	GREASE TRAP-SUMP PUMP	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 95m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.7975	0.638	4.1233	3.2986	0.7804	0.6243
26.R,Y,B	SEWAGE-SUMP PUMP	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 55m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.4691	0.3753	4.1233	3.2986	0.4518	0.3614
27.R,Y,B	SEWAGE-SUMP PUMP	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 80m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.6743	0.5394	4.1233	3.2986	0.6572	0.5257

Zs - Earth fault loop impedance report : DT3/MDB-17



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time sec	Max Disc. time sec	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
						Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-17	2x3.5Cx400/185N mm ² 1x500mm ² E(and armour) SWA/XLPE90/Cu Length: 200m	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0279	0.0223	0.3299	0.2639	0.0142	0.0114
28.R,Y,B	CONDENSATE PUMP	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 100m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.8385	0.6708	4.1233	3.2986	0.8214	0.6572
29.R,Y,B	CONDENSATE PUMP	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 95m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.7975	0.638	4.1233	3.2986	0.7804	0.6243
30.R,Y,B	CONDENSATE PUMP	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 105m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.8796	0.7037	4.1233	3.2986	0.8625	0.69
31.R,Y,B	CONDENSATE PUMP	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 105m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.8796	0.7037	4.1233	3.2986	0.8625	0.69
32.R,Y,B	DOMESTIC WATER SUPPLY TERRACE-BOOSTER PUMPS	4Cx10mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 165m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	1.0247	0.8198	4.1233	3.2986	1.0074	0.8059
33.R,Y,B	DOMESTIC WATER SUPPLY TERRACE-BOOSTER PUMPS	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 75m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.6332	0.5066	4.1233	3.2986	0.6161	0.4929
34.R,Y,B	DOMESTIC WATER SUPPLY TERRACE-BOOSTER PUMPS	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 80m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.6743	0.5394	4.1233	3.2986	0.6572	0.5257
35.R,Y,B	FLUSHING WATER SUPPLY TERRACE-BOOSTER PUMPS	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 110m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.9207	0.7366	4.1233	3.2986	0.9036	0.7229
36.R,Y,B	FLUSHING WATER SUPPLY TERRACE-BOOSTER PUMPS	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/AI Length: 110m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.9207	0.7366	4.1233	3.2986	0.9036	0.7229

Zs - Earth fault loop impedance report : DT3/MDB-17



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-17	2x3.5Cx400/185N mm ² 1x500mm ² E(and armour) SWA/XLPE90/Cu Length: 200m	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0279	0.0223	0.3299	0.2639	0.0142	0.0114
37.R,Y,B	FLUSHING WATER SUPPLY TERRACE-BOOSTER PUMPS	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/Al Length: 110m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.9207	0.7366	4.1233	3.2986	0.9036	0.7229
38.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
39.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
40.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
41.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
42.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
43.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
44.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
45.R,Y,B	SPARE	-	MCCB 4P 25A Ir=25A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
46.R,Y,B	SPARE	-	MCCB 4P 16A Ir=16A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-

Zs - Earth fault loop impedance report : SECTION 2



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	SECTION 2	-	-	-	-	-	-	-	-	-	-
1.R,Y,B	DT3/MDB-11	3x3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 239m	ACB 4P 1000A Ir=1000A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0677	0.0542	0.1319	0.1056	0.0613	0.0491
2.R,Y,B	DT3/ RISING MAIN-1B	8x3.5Cx300/150N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 190m	ACB 4P 3200A Ir=3200A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0239	0.0191	0.0412	0.033	0.018	0.0144
1.R,Y,B	DT3/MDB-4	-	-	-	-	-	-	-	-	-	-
4.R,Y,B	DT3/MDB-12	2x3.5Cx185/95N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 50m	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0262	0.021	0.2094	0.1676	0.0217	0.0174
5.R,Y,B	DT3/RISING MAIN-2B	7x3.5Cx300/150N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 120m	ACB 4P 2500A Ir=2500A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0186	0.0149	0.0528	0.0422	0.013	0.0104
6.R,Y,B	DT3/MDB-3	2x3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 247m	MCCB 4P 800A Ir=800A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1001	0.0801	0.1649	0.1319	0.0935	0.0748
1.R,Y,B	DT3/MDB-16	-	-	-	-	-	-	-	-	-	-
8.R,Y,B	DT3/MDB-5	3.5Cx35/16N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 94m	MCCB 4P 250A Ir=250A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.2351	0.1881	0.5278	0.4222	0.2322	0.1858
1.R,Y,B	DT3/MDB-6	-	-	-	-	-	-	-	-	-	-
10.R,Y,B	DT3/MDB-18	2x3.5Cx185/95N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 205m	MCCB 4P 800A Ir=800A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0947	0.0758	0.1649	0.1319	0.0891	0.0713
11.R,Y,B	SPARE	-	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
12.R,Y,B	SPARE	-	ACB 4P 1250A Ir=1250A/50kA Generic Adjustable ACB 50kA	-	-	-	-	-	-	-	-

Zs - Earth fault loop impedance report : SECTION 2



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	SECTION 2	-	-	-	-	-	-	-	-	-	-
13.R,Y,B	SPARE	-	ACB 4P 2000A Ir=2000A/50kA Generic Adjustable ACB 50kA	-	-	-	-	-	-	-	-
14.R,Y,B	SPARE	-	ACB 4P 2000A Ir=2000A/50kA Generic Adjustable ACB 50kA	-	-	-	-	-	-	-	-
15.R,Y,B	SPARE	-	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
16.R,Y,B	SPARE	-	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
17.R,Y,B	SPARE	-	ACB 4P 3200A Ir=3200A/50kA Generic Adjustable ACB 50kA	-	-	-	-	-	-	-	-
1.R,Y,B	SECTION 2 -DT3/MLTP-1	-	-	-	-	-	-	-	-	-	-
19.R,Y,B	APFCR PANEL - 1	5x3.5Cx300/150N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Al Length: 38m	ACB 4P 1600A Ir=1600A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0081	0.0065	0.0825	0.066	0.0018	0.0014

Zs - Earth fault loop impedance report : DT3/MDB-11



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time sec	Max Disc. time sec	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
						Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-11	3x3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 239m	ACB 4P 1000A Ir=1000A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0677	0.0542	0.1319	0.1056	0.0613	0.0491
1.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 44m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.192	0.1536	1.3194	1.0556	0.1262	0.101
1.R,Y,B	CP-01-TUBE AXIAL FAN	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 44m		0.05	5	0.2568	0.2054	1.3194	1.0556	0.0648	0.0518
2.R,Y,B	MS	4Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 12m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1127	0.0902	1.3194	1.0556	0.0464	0.0371
1.R,Y,B	CP-11-TUBE AXIAL FAN	4Cx16mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 12m		0.05	5	0.1389	0.1111	1.3194	1.0556	0.0265	0.0212
3.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 17m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1152	0.0922	1.3194	1.0556	0.0488	0.039
1.R,Y,B	CP-12-TUBE AXIAL FAN	4Cx25mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 17m		0.05	5	0.14	0.112	1.3194	1.0556	0.025	0.02
4.R,Y,B	MS	4Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 48m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.2509	0.2007	1.3194	1.0556	0.1856	0.1485
1.R,Y,B	CP-14-TUBE AXIAL FAN	4Cx16mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 48m		0.05	5	0.3569	0.2855	1.3194	1.0556	0.106	0.0848
5.R,Y,B	MS	4Cx35mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 58m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.2092	0.1674	1.3194	1.0556	0.1433	0.1146

Zs - Earth fault loop impedance report : DT3/MDB-11



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-11	3x3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 239m	ACB 4P 1000A Ir=1000A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0677	0.0542	0.1319	0.1056	0.0613	0.0491
1.R,Y,B	CP-15-TUBE AXIAL FAN	4Cx35mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 58m		0.05	5	0.2736	0.2189	1.3194	1.0556	0.0641	0.0513
6.R,Y,B	MS	4Cx35mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 60m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.2141	0.1713	1.3194	1.0556	0.1482	0.1186
1.R,Y,B	CP-22-TUBE AXIAL FAN	4Cx35mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 60m		0.05	5	0.2807	0.2246	1.3194	1.0556	0.0663	0.053
7.R,Y,B	SPARE	-	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
8.R,Y,B	SPARE	-	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
9.R,Y,B	SPARE	-	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
10.R,Y,B	SPARE	-	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
11.R,Y,B	SPARE	-	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
12.R,Y,B	MS	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 101m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.5686	0.4549	4.1233	3.2986	0.5039	0.4031
1.R,Y,B	CP_21-TUBE AXIAL FAN	4Cx10mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 101m		0.05	0.2	0.9001	0.7201	4.1233	3.2986	0.3314	0.2651

Zs - Earth fault loop impedance report : DT3/MDB-11



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time sec	Max Disc. time sec	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
						Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-11	3x3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 239m	ACB 4P 1000A Ir=1000A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0677	0.0542	0.1319	0.1056	0.0613	0.0491
13.R,Y,B	MS	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 58m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.4599	0.3679	4.1233	3.2986	0.3953	0.3162
1.R,Y,B	CP_16-TUBE AXIAL FAN	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 58m		0.05	0.2	0.7558	0.6046	4.1233	3.2986	0.296	0.2368
14.R,Y,B	MS	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 41m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.2696	0.2157	4.1233	3.2986	0.2046	0.1636
1.R,Y,B	CP-02-TUBE AXIAL FAN	4Cx10mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 41m		0.05	0.2	0.404	0.3232	4.1233	3.2986	0.1345	0.1076
15.R,Y,B	MS	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 38m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.3237	0.259	4.1233	3.2986	0.259	0.2072
1.R,Y,B	CP-03-TUBE AXIAL FAN	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 38m		0.05	0.2	0.5174	0.4139	4.1233	3.2986	0.1939	0.1552
16.R,Y,B	MS	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 101m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.7528	0.6022	4.1233	3.2986	0.6884	0.5507
1.R,Y,B	CP-20-TUBE AXIAL FAN	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 101m		0.05	0.2	1.2683	1.0146	4.1233	3.2986	0.5155	0.4124
17.R,Y,B	MS	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 56m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.4462	0.357	4.1233	3.2986	0.3817	0.3053

Zs - Earth fault loop impedance report : DT3/MDB-11



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-11	3x3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 239m	ACB 4P 1000A Ir=1000A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0677	0.0542	0.1319	0.1056	0.0613	0.0491
1.R,Y,B	CP-17-TUBE AXIAL FAN	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 56m		0.05	0.2	0.7319	0.5855	4.1233	3.2986	0.2858	0.2286
18.R,Y,B	MS	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 20m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.2015	0.1612	4.1233	3.2986	0.1363	0.1091
1.R,Y,B	CP-23-TUBE AXIAL FAN	4Cx6mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 20m		0.05	0.2	0.3032	0.2426	4.1233	3.2986	0.1021	0.0817
19.R,Y,B	MS	4Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 39m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.2162	0.173	2.0944	1.6755	0.1508	0.1207
1.R,Y,B	CP-05-TUBE AXIAL FAN	4Cx16mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 39m		0.05	5	0.3022	0.2418	2.0944	1.6755	0.0861	0.0689
20.R,Y,B	MS	4Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 30m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1816	0.1453	2.0944	1.6755	0.116	0.0928
1.R,Y,B	CP-9-TUBE AXIAL FAN	4Cx16mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 30m		0.05	5	0.2477	0.1982	2.0944	1.6755	0.0662	0.053
21.R,Y,B	MS	4Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 38m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.2124	0.1699	4.1233	3.2986	0.147	0.1176
1.R,Y,B	CP-6-TUBE AXIAL FAN	4Cx16mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 38m		0.05	5	0.2962	0.237	4.1233	3.2986	0.0839	0.0671

Zs - Earth fault loop impedance report : DT3/MDB-11



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-11	3x3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 239m	ACB 4P 1000A Ir=1000A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0677	0.0542	0.1319	0.1056	0.0613	0.0491
22.R,Y,B	MS	4Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 20m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1432	0.1146	4.1233	3.2986	0.0774	0.0619
1.R,Y,B	CP-10-TUBE AXIAL FAN	4Cx16mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 20m		0.05	5	0.1871	0.1497	4.1233	3.2986	0.0442	0.0353
23.R,Y,B	MS	4Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 101m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.4557	0.3646	4.1233	3.2986	0.3906	0.3125
1.R,Y,B	CP-18-TUBE AXIAL FAN	4Cx16mm ² 1x10mm ² E(and armour) SWA/XLPE90/Cu Length: 101m		0.05	0.2	0.6789	0.5431	4.1233	3.2986	0.223	0.1784

Zs - Earth fault loop impedance report : DT3/ RISING MAIN-1BCompany **T & G Electrotech Pvt Ltd - India**Designer **Nandu Gopan****Uo - Nominal Line Voltage to Earth: 250V**

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/ RISING MAIN-1B	8x3.5Cx300/150N mm ² 1x4mm ² E(and armour) SWA/XLPE90/AI Length: 190m	ACB 4P 3200A Ir=3200A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0239	0.0191	0.0412	0.033	0.018	0.0144
1.R,Y,B	STILT 4 LEVEL	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0242	0.0194	0.045	0.036	0.0003	0.0003
1.R,Y,B	TOP OF PODIUM	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0245	0.0196	0.045	0.036	0.0003	0.0003
1.R,Y,B	1ST FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0248	0.0198	0.045	0.036	0.0003	0.0003
1.R,Y,B	2ND FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0251	0.0201	0.045	0.036	0.0003	0.0003
1.R,Y,B	3RD FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0254	0.0203	0.045	0.036	0.0003	0.0003
1.R,Y,B	4TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0257	0.0206	0.045	0.036	0.0003	0.0003
1.R,Y,B	5TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.026	0.0208	0.045	0.036	0.0003	0.0003
1.R,Y,B	6TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0263	0.021	0.045	0.036	0.0003	0.0003
1.R,Y,B	7TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0266	0.0213	0.045	0.036	0.0003	0.0003
1.R,Y,B	8TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0269	0.0215	0.045	0.036	0.0003	0.0003
1.R,Y,B	9TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0272	0.0218	0.045	0.036	0.0003	0.0003
1.R,Y,B	10TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0275	0.022	0.045	0.036	0.0003	0.0003

Zs - Earth fault loop impedance report : DT3/ RISING MAIN-1B



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/ RISING MAIN-1B	8x3.5Cx300/150N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Al Length: 190m	ACB 4P 3200A Ir=3200A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0239	0.0191	0.0412	0.033	0.018	0.0144
1.R,Y,B	11TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0279	0.0223	0.045	0.036	0.0003	0.0003
1.R,Y,B	12TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0282	0.0226	0.045	0.036	0.0003	0.0003
1.R,Y,B	13TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0285	0.0228	0.045	0.036	0.0003	0.0003

REFERENCE

Zs - Earth fault loop impedance report : DT3/MDB-12



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-12	2x3.5Cx185/95N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 50m	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0262	0.021	0.2094	0.1676	0.0217	0.0174
1.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 187m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.5616	0.4493	1.3194	1.0556	0.5364	0.4291
1.R,Y,B	TUBE AXIAL FAN ZONE 1-ZONE 1-NORMAL MODE EXHAUST	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 187m		0.05	5	0.8541	0.6833	1.3194	1.0556	0.2917	0.2334
2.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 185m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.5558	0.4446	1.3194	1.0556	0.5307	0.4245
1.R,Y,B	TUBE AXIAL FAN-ZONE 2- NORMAL MODE EXHAUST	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 185m		0.05	5	0.8452	0.6762	1.3194	1.0556	0.2886	0.2309
3.R,Y,B	MS	3.5Cx50/25N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 345m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.758	0.6064	1.3194	1.0556	0.7316	0.5853
1.R,Y,B	TUBE AXIAL FAN-ZONE 3- NORMAL MODE EXHAUST	3.5Cx50/25N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 345m		0.12	5	1.0621	0.8497	1.3194	1.0556	0.3017	0.2414
4.R,Y,B	MS	3.5Cx35/16N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 261m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.6705	0.5364	1.3194	1.0556	0.6448	0.5158
1.R,Y,B	TUBE AXIAL FAN-ZONE 4- NORMAL MODE EXHAUST	3.5Cx35/16N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 261m		0.05	5	0.9747	0.7798	1.3194	1.0556	0.3027	0.2422
5.R,Y,B	MS	3.5Cx35/16N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 201m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.522	0.4176	1.3194	1.0556	0.4965	0.3972

Zs - Earth fault loop impedance report : DT3/MDB-12



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-12	2x3.5Cx185/95N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 50m	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0262	0.021	0.2094	0.1676	0.0217	0.0174
1.R,Y,B	TUBE AXIAL FAN-ZONE 5-NORMAL MODE EXHAUST	3.5Cx35/16N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 201m		0.05	5	0.7563	0.605	1.3194	1.0556	0.2331	0.1865
6.R,Y,B	MS	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 223m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	1.1373	0.9098	2.0944	1.6755	1.1126	0.8901
1.R,Y,B	TUBE AXIAL FAN-MULTI HIGH LOBBY SMOKE	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 223m		0.12	0.2	1.9366	1.5493	2.0944	1.6755	0.7989	0.6391
7.R,Y,B	SPARE	-	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
8.R,Y,B	MS	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 20m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1607	0.1286	4.1233	3.2986	0.1363	0.1091
1.R,Y,B	TUBE AXIAL FAN-LT PANEL ROOM FRESH AIR	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 20m		0.05	0.2	0.2726	0.2181	4.1233	3.2986	0.1121	0.0896
9.R,Y,B	MS	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 100m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.7058	0.5646	4.1233	3.2986	0.6816	0.5452
1.R,Y,B	TUBE AXIAL FAN-LT PANEL ROOM FRESH AIR	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 100m		0.05	0.2	1.2662	1.013	4.1233	3.2986	0.5602	0.4482
10.R,Y,B	MS	4Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 100m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.4113	0.329	4.1233	3.2986	0.3868	0.3094

Zs - Earth fault loop impedance report : DT3/MDB-12



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-12	2x3.5Cx185/95N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 50m	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0262	0.021	0.2094	0.1676	0.0217	0.0174
1.R,Y,B	TUBE AXIAL FAN FOR FIRE-PUMP ROOM FRESH AIR BASEMENT-1 LEVEL	4Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 100m		0.05	0.2	0.6498	0.5198	4.1233	3.2986	0.2381	0.1905
11.R,Y,B	MS	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 223m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	1.1373	0.9098	4.1233	3.2986	1.1126	0.8901
1.R,Y,B	TUBE AXIAL FAN -MULTI HT ATRIUM STILT LVL-04	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 223m		0.05	0.2	1.9366	1.5493	4.1233	3.2986	0.7989	0.6391
12.R,Y,B	MS	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 100m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.5233	0.4186	4.1233	3.2986	0.4989	0.3991
1.R,Y,B	TUBE AXIAL FAN -LIFT WELL PRESSURIZATION+1NO.TUBE AXIAL FAN	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 100m		0.05	0.2	0.8818	0.7054	4.1233	3.2986	0.3583	0.2866
13.R,Y,B	MS	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 287m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	1.4567	1.1654	4.1233	3.2986	1.4319	1.1455
1.R,Y,B	TUBE AXIAL FAN-LIFT WELL WTP FRESH AIR BASEMENT-1 LEVEL	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 287m		0.05	0.2	2.4855	1.9884	4.1233	3.2986	1.0282	0.8225
14.R,Y,B	MS	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 285m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	1.4467	1.1574	4.1233	3.2986	1.4219	1.1375
1.R,Y,B	SMOKE SPILL FAN-WTP EXHAUST AIR BASEMENT-1 LEVEL	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 285m		0.05	0.2	2.4683	1.9746	4.1233	3.2986	1.021	0.8168

Zs - Earth fault loop impedance report : DT3/MDB-12



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-12	2x3.5Cx185/95N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 50m	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0262	0.021	0.2094	0.1676	0.0217	0.0174
15.R,Y,B	MS	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 223m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	1.1373	0.9098	4.1233	3.2986	1.1126	0.8901
1.R,Y,B	TUBE AXIAL FAN-MULTI HT ATRIUM STILT LVL-04	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 223m		0.05	0.2	1.9366	1.5493	4.1233	3.2986	0.7989	0.6391
16.R,Y,B	MS	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 100m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.5233	0.4186	4.1233	3.2986	0.4989	0.3991
1.R,Y,B	TUBE AXIAL FAN -LIFT WELL PRESSURIZATION+1NO.TUBE AXIAL FAN	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 100m		0.05	0.2	0.8818	0.7054	4.1233	3.2986	0.3583	0.2866
17.R,Y,B	MS	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 130m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.6731	0.5385	4.1233	3.2986	0.6486	0.5189
1.R,Y,B	TUBE AXIAL FAN-LIFT LOBBY PRESSURIZATION STILT LVL - 04 WING-A	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 130m		0.05	0.2	1.139	0.9112	4.1233	3.2986	0.4657	0.3726
18.R,Y,B	SPARE	-	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
19.R,Y,B	MS	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 287m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	1.4567	1.1654	4.1233	3.2986	1.4319	1.1455
1.R,Y,B	SMOKE SPILL FAN-LIFT LOBBYFIRE PUMP ROOM EXHAUST AIR BASEMENT - 1 LEVEL	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 287m		0.05	0.2	2.4855	1.9884	4.1233	3.2986	1.0282	0.8225
20.R,Y,B	SPARE	-	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-

Zs - Earth fault loop impedance report : DT3/MDB-12



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-12	2x3.5Cx185/95N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 50m	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0262	0.021	0.2094	0.1676	0.0217	0.0174
21.R,Y,B	MS	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 60m	MCCB 4P 20A Ir=20A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.5936	0.4749	6.5972	5.2778	0.5695	0.4556
1.R,Y,B	TUBE AXIAL FAN- TRANSFORMER ROOM - 2 EXHAUST AIR STILT- 01	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 60m		0.05	0.2	1.0816	0.8653	6.5972	5.2778	0.488	0.3904
22.R,Y,B	MS	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 266m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	2.5491	2.0393	4.1233	3.2986	2.5247	2.0198
1.R,Y,B	TUBE AXIAL FAN -STAIRCASE-3 PRESSURIZATION STILT LVL-01 WING-A	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 266m		360.56	0.2	4.7127	3.7702	4.1233	3.2986	2.1632	1.7306
23.R,Y,B	MS	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 70m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.6885	0.5508	4.1233	3.2986	0.6644	0.5315
1.R,Y,B	TUBE AXIAL FAN- TRANSFORMER ROOM - 3 EXHAUST AIR STILT-01	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 70m		0.05	0.2	1.2579	1.0063	4.1233	3.2986	0.5693	0.4554
24.R,Y,B	MS	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 310m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	2.9668	2.3734	4.1233	3.2986	2.9423	2.3539
1.R,Y,B	TUBE AXIAL FAN-STAIRCASE-4 PRESSURIZATION STILT LVL-01 WING-A	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 310m		489.01	0.2	5.4882	4.3906	4.1233	3.2986	2.5211	2.0169
25.R,Y,B	MS	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 55m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.5462	0.437	4.1233	3.2986	0.522	0.4176

Zs - Earth fault loop impedance report : DT3/MDB-12



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-12	2x3.5Cx185/95N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 50m	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0262	0.021	0.2094	0.1676	0.0217	0.0174
1.R,Y,B	TUBE AXIAL FAN-FIRE CORRIDOR FRESH AIR & EXHAUST AIR STILT LVL-01 WING-A	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 55m		0.05	0.2	0.9935	0.7948	4.1233	3.2986	0.4473	0.3578
26.R,Y,B	MS	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 100m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.9733	0.7786	4.1233	3.2986	0.9491	0.7593
1.R,Y,B	TUBE AXIAL FAN-FIRE CORRIDOR FRESH AIR & EXHAUST AIR STILT LVL-01 WING-A	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 72m		0.05	0.2	1.5589	1.2471	4.1233	3.2986	0.5855	0.4684
27.R,Y,B	MS	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 245m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	1.6943	1.3554	4.1233	3.2986	1.6698	1.3358
1.R,Y,B	TUBE AXIAL FAN-STAIRCASE-1 PRESSURIZATION STILT LVL - 01 WING-A	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 245m		0.05	0.2	3.0672	2.4538	4.1233	3.2986	1.3726	1.0981
28.R,Y,B	MS	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 42m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.4228	0.3382	4.1233	3.2986	0.3986	0.3189
1.R,Y,B	TUBE AXIAL FAN- TRANSFORMER ROOM - 1 EXHAUST AIR STILT -01	4Cx4mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 42m		0.05	0.2	0.7643	0.6114	4.1233	3.2986	0.3416	0.2733
29.R,Y,B	MS	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 350m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	2.4101	1.9281	4.1233	3.2986	2.3854	1.9083
1.R,Y,B	TUBE AXIAL FAN-STAIRCASE-5 PRESSURIZATION STILT LVL-01 WING-A	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 350m		310.24	0.2	4.3715	3.4972	4.1233	3.2986	1.9608	1.5687

Zs - Earth fault loop impedance report : DT3/MDB-12



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-12	2x3.5Cx185/95N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 50m	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0262	0.021	0.2094	0.1676	0.0217	0.0174
30.R,Y,B	MS	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 25m	MCCB 4P 32A Ir=32A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1947	0.1558	4.1233	3.2986	0.1704	0.1363
1.R,Y,B	TUBE AXIAL FAN-STAIRCASE-5 PRESSURIZATION STILT LVL-01 NEAR LT PANEL	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 25m		0.05	0.2	0.3347	0.2678	4.1233	3.2986	0.1401	0.1121
31.R,Y,B	SPARE	-	MCCB 4P 630A Ir=630A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-

REFERENCE

Zs - Earth fault loop impedance report : DT3/RISING MAIN-2B



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/RISING MAIN-2B	7x3.5Cx300/150N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Al Length: 120m	ACB 4P 2500A Ir=2500A/50kA Generic Adjustable ACB 50kA	0.08	5	0.0186	0.0149	0.0528	0.0422	0.013	0.0104
1.R,Y,B	STILT 4 LEVEL	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0189	0.0151	0.045	0.036	0.0003	0.0003
1.R,Y,B	TOP OF PODIUM	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0192	0.0154	0.045	0.036	0.0003	0.0003
1.R,Y,B	1ST FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0195	0.0156	0.045	0.036	0.0003	0.0003
1.R,Y,B	2ND FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0198	0.0158	0.045	0.036	0.0003	0.0003
1.R,Y,B	3RD FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0201	0.0161	0.045	0.036	0.0003	0.0003
1.R,Y,B	4TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0204	0.0163	0.045	0.036	0.0003	0.0003
1.R,Y,B	5TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0207	0.0166	0.045	0.036	0.0003	0.0003
1.R,Y,B	6TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.021	0.0168	0.045	0.036	0.0003	0.0003
1.R,Y,B	7TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0213	0.017	0.045	0.036	0.0003	0.0003
1.R,Y,B	8TH FLOOR	BTS 3200A Busbar Trunking System Length: 3m		0.08	5	0.0216	0.0173	0.045	0.036	0.0003	0.0003

Zs - Earth fault loop impedance report : DT3/MDB-3

Company	T & G Electrotech Pvt Ltd - India
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Designer	Nandu Gopan
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Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time sec	Max Disc. time sec	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
						Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-3	2x3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 247m	MCCB 4P 800A Ir=800A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1001	0.0801	0.1649	0.1319	0.0935	0.0748
1.R,Y,B	L+PDB-3.1	4Cx16mm ² 1x16mm ² E(and armour) SWA/XLPE90/Cu Length: 17m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1425	0.114	2.0944	1.6755	0.0433	0.0347
2.R,Y,B	L+PDB-3.2	4Cx16mm ² 1x16mm ² E(and armour) SWA/XLPE90/Cu Length: 17m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1425	0.114	2.0944	1.6755	0.0433	0.0347
3.R,Y,B	LDB-3.3	4Cx25mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 25m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1704	0.1363	2.0944	1.6755	0.0716	0.0572
4.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1422	0.1138	1.3194	1.0556	0.043	0.0344
1.R,Y,B	PASSENGER LIFT-01	4Cx25mm ² 1x16mm ² E(and armour) SWA/XLPE90/Cu Length: 15m		0.05	5	0.1632	0.1306	1.3194	1.0556	0.0211	0.0169
5.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1422	0.1138	1.3194	1.0556	0.043	0.0344
1.R,Y,B	PASSENGER LIFT-02	4Cx25mm ² 1x16mm ² E(and armour) SWA/XLPE90/Cu Length: 25m		0.05	5	0.1772	0.1418	1.3194	1.0556	0.0352	0.0281
6.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1422	0.1138	1.3194	1.0556	0.043	0.0344
1.R,Y,B	PASSENGER LIFT-03	4Cx25mm ² 1x16mm ² E(and armour) SWA/XLPE90/Cu Length: 25m		0.05	5	0.1772	0.1418	1.3194	1.0556	0.0352	0.0281

Zs - Earth fault loop impedance report : DT3/MDB-3

Company	T & G Electrotech Pvt Ltd - India
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Designer	Nandu Gopan
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Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-3	2x3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 247m	MCCB 4P 800A Ir=800A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1001	0.0801	0.1649	0.1319	0.0935	0.0748
7.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1422	0.1138	1.3194	1.0556	0.043	0.0344
1.R,Y,B	PASSENGER LIFT-04	4Cx25mm ² 1x16mm ² E(and armour) SWA/XLPE90/Cu Length: 15m		0.05	5	0.1632	0.1306	1.3194	1.0556	0.0211	0.0169
8.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1422	0.1138	1.3194	1.0556	0.043	0.0344
1.R,Y,B	PASSENGER LIFT-05	4Cx25mm ² 1x16mm ² E(and armour) SWA/XLPE90/Cu Length: 15m		0.05	5	0.1632	0.1306	1.3194	1.0556	0.0211	0.0169
9.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1422	0.1138	1.3194	1.0556	0.043	0.0344
1.R,Y,B	PASSENGER LIFT-06	4Cx25mm ² 1x16mm ² E(and armour) SWA/XLPE90/Cu Length: 20m		0.05	5	0.1702	0.1362	1.3194	1.0556	0.0281	0.0225
10.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1422	0.1138	1.3194	1.0556	0.043	0.0344
1.R,Y,B	PASSENGER LIFT-07	4Cx25mm ² 1x16mm ² E(and armour) SWA/XLPE90/Cu Length: 25m		0.05	5	0.1772	0.1418	1.3194	1.0556	0.0352	0.0281
11.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1422	0.1138	1.3194	1.0556	0.043	0.0344

Zs - Earth fault loop impedance report : DT3/MDB-3



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time sec	Max Disc. time sec	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
						Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-3	2x3.5Cx240/120N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 247m	MCCB 4P 800A Ir=800A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1001	0.0801	0.1649	0.1319	0.0935	0.0748
1.R,Y,B	PASSENGER LIFT-08	4Cx25mm ² 1x16mm ² E(and armour) SWA/XLPE90/Cu Length: 25m		0.05	5	0.1772	0.1418	1.3194	1.0556	0.0352	0.0281
12.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1422	0.1138	1.3194	1.0556	0.043	0.0344
1.R,Y,B	PASSENGER LIFT-09	4Cx25mm ² 1x16mm ² E(and armour) SWA/XLPE90/Cu Length: 15m		0.05	5	0.1632	0.1306	1.3194	1.0556	0.0211	0.0169
13.R,Y,B	MS	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1422	0.1138	1.3194	1.0556	0.043	0.0344
1.R,Y,B	FIRE LIFT-01	4Cx25mm ² 1x16mm ² E(and armour) SWA/XLPE90/Cu Length: 75m		0.05	0.2	0.2475	0.198	1.3194	1.0556	0.1055	0.0844
14.R,Y,B	DT3/PDB-3.4	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 25m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1706	0.1365	2.0944	1.6755	0.0717	0.0574
15.R,Y,B	DT3/PDB-3.3	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1422	0.1138	2.0944	1.6755	0.043	0.0344
16.R,Y,B	SPARE	-	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
17.R,Y,B	SPARE	-	MCCB 4P 100A Ir=100A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-

Zs - Earth fault loop impedance report : DT3/PDB-3.4



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/PDB-3.4	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 25m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1706	0.1365	2.0944	1.6755	0.0717	0.0574
1.R	R-PHASE	-	RCBO C 2P/63A/10kA/100mA/Class AC (Inst) Generic BS EN 61009 10kA RCBO 100mA Type C	-	-	-	-	-	-	-	-
1.Y	Y-PHASE	-	RCBO C 2P/63A/10kA/100mA/Class AC (Inst) Generic BS EN 61009 10kA RCBO 100mA Type C	-	-	-	-	-	-	-	-
1.B	B-PHASE	-	RCBO C 2P/63A/10kA/100mA/Class AC (Inst) Generic BS EN 61009 10kA RCBO 100mA Type C	-	-	-	-	-	-	-	-

REF ID: A1111111

Zs - Earth fault loop impedance report : R-PHASE



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R	R-PHASE	-	-	-	-	-	-	-	-	-	-
1.R	POWER LOAD 1	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.4844	1.1875	0.1174	0.0939
2.R	POWER LOAD 2	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.4844	1.1875	0.1174	0.0939
3.R	POWER LOAD 3	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.4844	1.1875	0.1174	0.0939
4.R	POWER LOAD 4	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.4844	1.1875	0.1174	0.0939
5.R	POWER LOAD 5	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.1875	0.95	0.1174	0.0939
6.R	POWER LOAD 6	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.1875	0.95	0.1174	0.0939
7.R	POWER LOAD 7	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.1875	0.95	0.1174	0.0939
8.R	POWER LOAD 8	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.1875	0.95	0.1174	0.0939

Zs - Earth fault loop impedance report : Y-PHASE



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
Y	Y-PHASE	-	-	-	-	-	-	-	-	-	-
1.Y	POWER LOAD 1	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.4844	1.1875	0.1174	0.0939
2.Y	POWER LOAD 2	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.4844	1.1875	0.1174	0.0939
3.Y	POWER LOAD 3	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.4844	1.1875	0.1174	0.0939
4.Y	POWER LOAD 4	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.4844	1.1875	0.1174	0.0939
5.Y	POWER LOAD 5	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.1875	0.95	0.1174	0.0939
6.Y	POWER LOAD 6	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.1875	0.95	0.1174	0.0939
7.Y	POWER LOAD 7	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.1875	0.95	0.1174	0.0939
8.Y	POWER LOAD 8	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.1875	0.95	0.1174	0.0939

Zs - Earth fault loop impedance report : B-PHASE



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
B	B-PHASE	-	-	-	-	-	-	-	-	-	-
1.B	POWER LOAD 1	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.4844	1.1875	0.1174	0.0939
2.B	POWER LOAD 2	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.4844	1.1875	0.1174	0.0939
3.B	POWER LOAD 3	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.4844	1.1875	0.1174	0.0939
4.B	POWER LOAD 4	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.4844	1.1875	0.1174	0.0939
5.B	POWER LOAD 5	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.1875	0.95	0.1174	0.0939
6.B	POWER LOAD 6	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.1875	0.95	0.1174	0.0939
7.B	POWER LOAD 7	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.1875	0.95	0.1174	0.0939
8.B	POWER LOAD 8	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2869	0.2295	1.1875	0.95	0.1174	0.0939

Zs - Earth fault loop impedance report : DT3/PDB-3.3



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/PDB-3.3	4Cx25mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1422	0.1138	2.0944	1.6755	0.043	0.0344
1.R	R-PHASE	-	RCBO C 2P/63A/10kA/100mA/Class AC (Inst) Generic BS EN 61009 10kA RCBO 100mA Type C	-	-	-	-	-	-	-	-
1.Y	Y-PHASE	-	RCBO C 2P/63A/10kA/100mA/Class AC (Inst) Generic BS EN 61009 10kA RCBO 100mA Type C	-	-	-	-	-	-	-	-
1.B	B-PHASE	-	RCBO C 2P/63A/10kA/100mA/Class AC (Inst) Generic BS EN 61009 10kA RCBO 100mA Type C	-	-	-	-	-	-	-	-

REF

Zs - Earth fault loop impedance report : R-PHASE



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R	R-PHASE	-	-	-	-	-	-	-	-	-	-
1.R	POWER LOAD 1	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.4844	1.1875	0.1174	0.0939
2.R	POWER LOAD 2	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.4844	1.1875	0.1174	0.0939
3.R	POWER LOAD 3	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.4844	1.1875	0.1174	0.0939
4.R	POWER LOAD 4	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.4844	1.1875	0.1174	0.0939
5.R	POWER LOAD 5	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.1875	0.95	0.1174	0.0939
6.R	POWER LOAD 6	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.1875	0.95	0.1174	0.0939
7.R	POWER LOAD 7	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.1875	0.95	0.1174	0.0939
8.R	POWER LOAD 8	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.1875	0.95	0.1174	0.0939

Zs - Earth fault loop impedance report : Y-PHASE



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
Y	Y-PHASE	-	-	-	-	-	-	-	-	-	-
1.Y	POWER LOAD 1	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.4844	1.1875	0.1174	0.0939
2.Y	POWER LOAD 2	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.4844	1.1875	0.1174	0.0939
3.Y	POWER LOAD 3	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.4844	1.1875	0.1174	0.0939
4.Y	POWER LOAD 4	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.4844	1.1875	0.1174	0.0939
5.Y	POWER LOAD 5	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.1875	0.95	0.1174	0.0939
6.Y	POWER LOAD 6	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.1875	0.95	0.1174	0.0939
7.Y	POWER LOAD 7	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.1875	0.95	0.1174	0.0939
8.Y	POWER LOAD 8	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.1875	0.95	0.1174	0.0939

Zs - Earth fault loop impedance report : B-PHASE



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
B	B-PHASE	-	-	-	-	-	-	-	-	-	-
1.B	POWER LOAD 1	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.4844	1.1875	0.1174	0.0939
2.B	POWER LOAD 2	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.4844	1.1875	0.1174	0.0939
3.B	POWER LOAD 3	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.4844	1.1875	0.1174	0.0939
4.B	POWER LOAD 4	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.4844	1.1875	0.1174	0.0939
5.B	POWER LOAD 5	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.1875	0.95	0.1174	0.0939
6.B	POWER LOAD 6	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.1875	0.95	0.1174	0.0939
7.B	POWER LOAD 7	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.1875	0.95	0.1174	0.0939
8.B	POWER LOAD 8	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.2583	0.2066	1.1875	0.95	0.1174	0.0939

Zs - Earth fault loop impedance report : DT3/MDB-5



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-5	3.5Cx35/16N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 94m	MCCB 4P 250A Ir=250A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.2351	0.1881	0.5278	0.4222	0.2322	0.1858
1.R,Y,B	DT3/L+PDB-5.1	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 14m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.3305	0.2644	2.0944	1.6755	0.0954	0.0763
2.R,Y,B	MS	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 30m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.3848	0.3078	2.0944	1.6755	0.1497	0.1197
1.R,Y,B	SHUTTER LIFT-1	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 30m		0.05	0.2	0.4922	0.3938	2.0944	1.6755	0.1075	0.086
3.R,Y,B	MS	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 35m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.4097	0.3278	2.0944	1.6755	0.1746	0.1397
1.R,Y,B	SHUTTER LIFT-2	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 35m		0.05	0.2	0.5351	0.4281	2.0944	1.6755	0.1254	0.1003
4.R,Y,B	MS	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 30m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.3848	0.3078	2.0944	1.6755	0.1497	0.1197
1.R,Y,B	SHUTTER LIFT-3	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 30m		0.05	0.2	0.4922	0.3938	2.0944	1.6755	0.1075	0.086
5.R,Y,B	MS	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 35m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.4097	0.3278	2.0944	1.6755	0.1746	0.1397
1.R,Y,B	SHUTTER LIFT-4	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 35m		0.05	0.2	0.5351	0.4281	2.0944	1.6755	0.1254	0.1003

Zs - Earth fault loop impedance report : DT3/MDB-5



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-5	3.5Cx35/16N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 94m	MCCB 4P 250A Ir=250A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.2351	0.1881	0.5278	0.4222	0.2322	0.1858
6.R,Y,B	SPARE	-	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
7.R,Y,B	SPARE	-	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-

REFERENCE

Zs - Earth fault loop impedance report : DT3/L+PDB-5.1



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/L+PDB-5.1	4Cx6mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 14m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.3305	0.2644	2.0944	1.6755	0.0954	0.0763
1.R	R-PHASE	-	RCBO C 2P/63A/10kA/100mA/Class AC (Inst) Generic BS EN 61009 10kA RCBO 100mA Type C	-	-	-	-	-	-	-	-
1.Y	Y-PHASE	-	RCBO C 2P/63A/10kA/100mA/Class AC (Inst) Generic BS EN 61009 10kA RCBO 100mA Type C	-	-	-	-	-	-	-	-
1.B	B-PHASE	-	RCBO C 2P/63A/10kA/100mA/Class AC (Inst) Generic BS EN 61009 10kA RCBO 100mA Type C	-	-	-	-	-	-	-	-

REFERR

Zs - Earth fault loop impedance report : R-PHASE



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R	R-PHASE	-	-	-	-	-	-	-	-	-	-
1.R	POWER LOAD 1	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.4844	1.1875	0.1174	0.0939
2.R	POWER LOAD 2	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.4844	1.1875	0.1174	0.0939
3.R	POWER LOAD 3	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.4844	1.1875	0.1174	0.0939
4.R	POWER LOAD 4	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.4844	1.1875	0.1174	0.0939
5.R	POWER LOAD 5	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.1875	0.95	0.1174	0.0939
6.R	POWER LOAD 6	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.1875	0.95	0.1174	0.0939
7.R	POWER LOAD 7	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.1875	0.95	0.1174	0.0939
8.R	POWER LOAD 8	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.1875	0.95	0.1174	0.0939

Zs - Earth fault loop impedance report : Y-PHASE



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
Y	Y-PHASE	-	-	-	-	-	-	-	-	-	-
1.Y	POWER LOAD 1	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.4844	1.1875	0.1174	0.0939
2.Y	POWER LOAD 2	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.4844	1.1875	0.1174	0.0939
3.Y	POWER LOAD 3	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.4844	1.1875	0.1174	0.0939
4.Y	POWER LOAD 4	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.4844	1.1875	0.1174	0.0939
5.Y	POWER LOAD 5	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.1875	0.95	0.1174	0.0939
6.Y	POWER LOAD 6	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.1875	0.95	0.1174	0.0939
7.Y	POWER LOAD 7	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.1875	0.95	0.1174	0.0939
8.Y	POWER LOAD 8	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.1875	0.95	0.1174	0.0939

Zs - Earth fault loop impedance report : B-PHASE



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
B	B-PHASE	-	-	-	-	-	-	-	-	-	-
1.B	POWER LOAD 1	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.4844	1.1875	0.1174	0.0939
2.B	POWER LOAD 2	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.4844	1.1875	0.1174	0.0939
3.B	POWER LOAD 3	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.4844	1.1875	0.1174	0.0939
4.B	POWER LOAD 4	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/16A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.4844	1.1875	0.1174	0.0939
5.B	POWER LOAD 5	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.1875	0.95	0.1174	0.0939
6.B	POWER LOAD 6	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.1875	0.95	0.1174	0.0939
7.B	POWER LOAD 7	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.1875	0.95	0.1174	0.0939
8.B	POWER LOAD 8	2Cx6mm ² 1x16mm ² E(and armour) SWA/XLPE90/AI Length: 15m	MCB C 1P/20A/25kA Generic BS EN 60898 25kA MCB Type C	0.01	0.2	0.4478	0.3582	1.1875	0.95	0.1174	0.0939

Zs - Earth fault loop impedance report : DT3/MDB-18



Company T & G Electrotech Pvt Ltd - India

Designer Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-18	2x3.5Cx185/95N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 205m	MCCB 4P 800A Ir=800A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0947	0.0758	0.1649	0.1319	0.0891	0.0713
1.R,Y,B	MS	3Cx150mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.11	0.088	0.3299	0.2639	0.0153	0.0122
1.R,Y,B	ELECTRIC DRIVEN-FIRE HYDRANT PUMP	3Cx150mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 25m		0.05	0.2	0.1355	0.1084	0.3299	0.2639	0.0254	0.0204
2.R,Y,B	MS	4Cx10mm ² 1x95mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 63A Ir=63A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1327	0.1062	2.0944	1.6755	0.0386	0.0309
1.R,Y,B	DIESEL MAIN-FIRE PUMP	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 30m		0.05	0.2	0.2393	0.1914	2.0944	1.6755	0.1075	0.086
3.R,Y,B	MS	4Cx10mm ² 1x95mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 40A Ir=40A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1327	0.1062	3.2986	2.6389	0.0386	0.0309
1.R,Y,B	FIRE SPRINKLER-MAIN ELECTRIC(HYDRANT SYSTEM)	4Cx10mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 25m		0.05	0.2	0.2215	0.1772	3.2986	2.6389	0.0896	0.0717
4.R,Y,B	MS	3.5Cx35/16N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 160A Ir=160A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.1312	0.105	0.8247	0.6597	0.0371	0.0296
1.R,Y,B	FIRE CURTAIN-MAIN ELECTRIC	3Cx150mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 30m		0.05	5	0.162	0.1296	0.8247	0.6597	0.0305	0.0244
5.R,Y,B	SPARE	-	MCCB 4P 40A Ir=40A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
6.R,Y,B	SPARE	-	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-

Zs - Earth fault loop impedance report : DT3/MDB-18



Company	T & G Electrotech Pvt Ltd - India
Designer	Nandu Gopan

Uo - Nominal Line Voltage to Earth: 250V

Way	Description	Conductor	Protective devices	Disc. time	Max Disc. time	Zs Calculated (Ω)		Max Zs Calculated (Ω)		R1+R2 Calculated (Ω)	
				sec	sec	Zs	Zs 80%	max Zs	max Zs 80%	R1+R2	R1+R2 80%
R,Y,B	DT3/MDB-18	2x3.5Cx185/95N mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 205m	MCCB 4P 800A Ir=800A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.0947	0.0758	0.1649	0.1319	0.0891	0.0713
7.R,Y,B	MS	3Cx150mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	5	0.11	0.088	0.3299	0.2639	0.0153	0.0122
1.R,Y,B	ELECTRIC DRIVEN-SPRINKLER PUMP	4Cx150mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 35m		0.05	5	0.1208	0.0966	0.3299	0.2639	0.0102	0.0081
8.R,Y,B	MS	4Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 40A Ir=40A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1517	0.1214	3.2986	2.6389	0.058	0.0464
1.R,Y,B	ELECTRIC DRIVEN-JOCKEY PUMP (SPRINKLER SYSTEM)	4Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 40m		0.05	0.2	0.2466	0.1973	3.2986	2.6389	0.0953	0.0762
9.R,Y,B	MS	4Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 40A Ir=40A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1517	0.1214	3.2986	2.6389	0.058	0.0464
1.R,Y,B	DIESEL MAIN-FIRE PUMP	4Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 40m		0.05	0.2	0.2466	0.1973	3.2986	2.6389	0.0953	0.0762
10.R,Y,B	MS	4Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 15m	MCCB 4P 40A Ir=40A/25kA Adjustable Generic Adjustable MCCB 25kA	0.05	0.2	0.1517	0.1214	3.2986	2.6389	0.058	0.0464
1.R,Y,B	DIESEL MAIN-FIRE PUMP	4Cx16mm ² 1x4mm ² E(and armour) SWA/XLPE90/Cu Length: 40m		0.05	0.2	0.2466	0.1973	3.2986	2.6389	0.0953	0.0762
11.R,Y,B	SPARE	-	MCCB 4P 40A Ir=40A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-
12.R,Y,B	SPARE	-	MCCB 4P 400A Ir=400A/25kA Adjustable Generic Adjustable MCCB 25kA	-	-	-	-	-	-	-	-