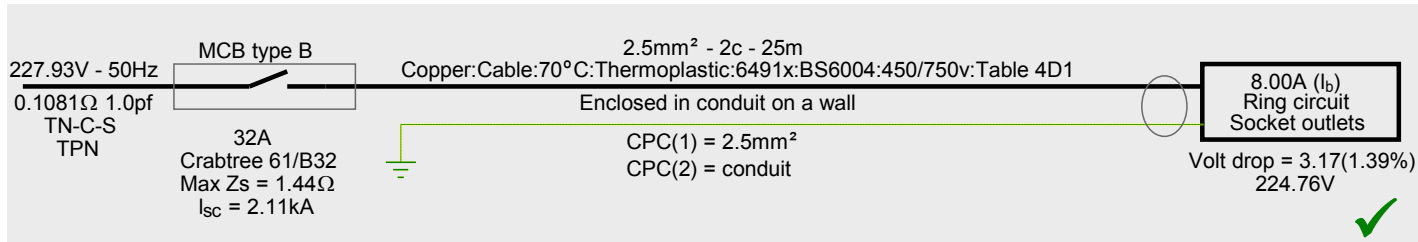


Factory

Supply - 4 - L1

Ring circuit 1



Cable Data			2.5mm ² - 2c - 25m	
Copper: Cable: 70°C: Thermoplastic: 6491x: BS6004: 450/750v: Table 4D1				
Cable Rating I _t (tabulated)	Table 4D5A Col-4	24A		
Cable Rating I _z (effective)		24A	I _z ≥ I _b	PASS
mV/A/mtr (tabulated)	Table 4D1B Col-3	18mV/A/m (r)		
mV/A/mtr (temperature corrected)	operating 34.44°C	15.867mV/A/m (r)		
Voltage drop (Design)	4.00%	9.12V		
Voltage drop (Calculated)	1.39%	3.17V		PASS

Correction Factors				C (total) = 1.000
Ambient temperature (C _a)	30°C	C _a = 1.000	Table 4B1	
Grouping (C _g)	1 ccts	C _g = 1.000	Table 4C1	
Thermal Insulation (C _i)	0mm	C _i = 1	Table 52.2	

Circuit Protective conductors (cpc)				Total cpc value = 0.0763Ω
Minimum CPC size (S = √I ² t/k)	1.58mm ²	k = 115	t = 0.100 sec	I = 576.12 A
Seperate cpc	2.5mm ²	2.5mm ²		
Conduit	16mm light duty	16mm light duty	CPC ≥ √I ² t/k)	PASS

Protective Device Details				
Crabtree 61/B32		32A Type-B 6kA MCB BS EN 60898 [1 module]		
Selected for	Overload and short-circuit protection			
Rating (I _n)	32		I _n ≥ I _b	PASS
Breaking capacity (I _{cn})	6kA	6 ≥ 2.11	I _{cn} ≥ I _{sc}	PASS
Operating current (I ₂)	43.20A	43.20 ≤ 69.60	I ₂ ≤ 1.45I _z	PASS
Calculated disconnection time	0.100 sec			PASS
Maximum permitted disconnection time	0.4 sec	Table 41.1		
Impedance of device (Z)	1.44Ω			

Earth Fault Data				
Earth fault loop impedance (Z _e)	0.1081Ω			
Circuit R1 value	0.1960Ω			
Circuit R2 value	0.0763Ω			
Circuit R1+R2 value	0.2875Ω			
Earth loop impedance (Z _s =Z _e +R1+R2)	0.3956Ω			
Earth fault current (I _a =U _o /Z _s)	576.12A	U _o = 227.93V	Z _s = 0.3956Ω	

Short Circuit Data				
Prospective short circuit current	16 kA			
Short circuit withstand time (t = k ² S ² /I ²)	0.249 sec	k = 115	S = 2.5mm ²	I = 576.12 A