

WIRING DIAGRAMS

Address:

Owner:

Contractor:

Designer:

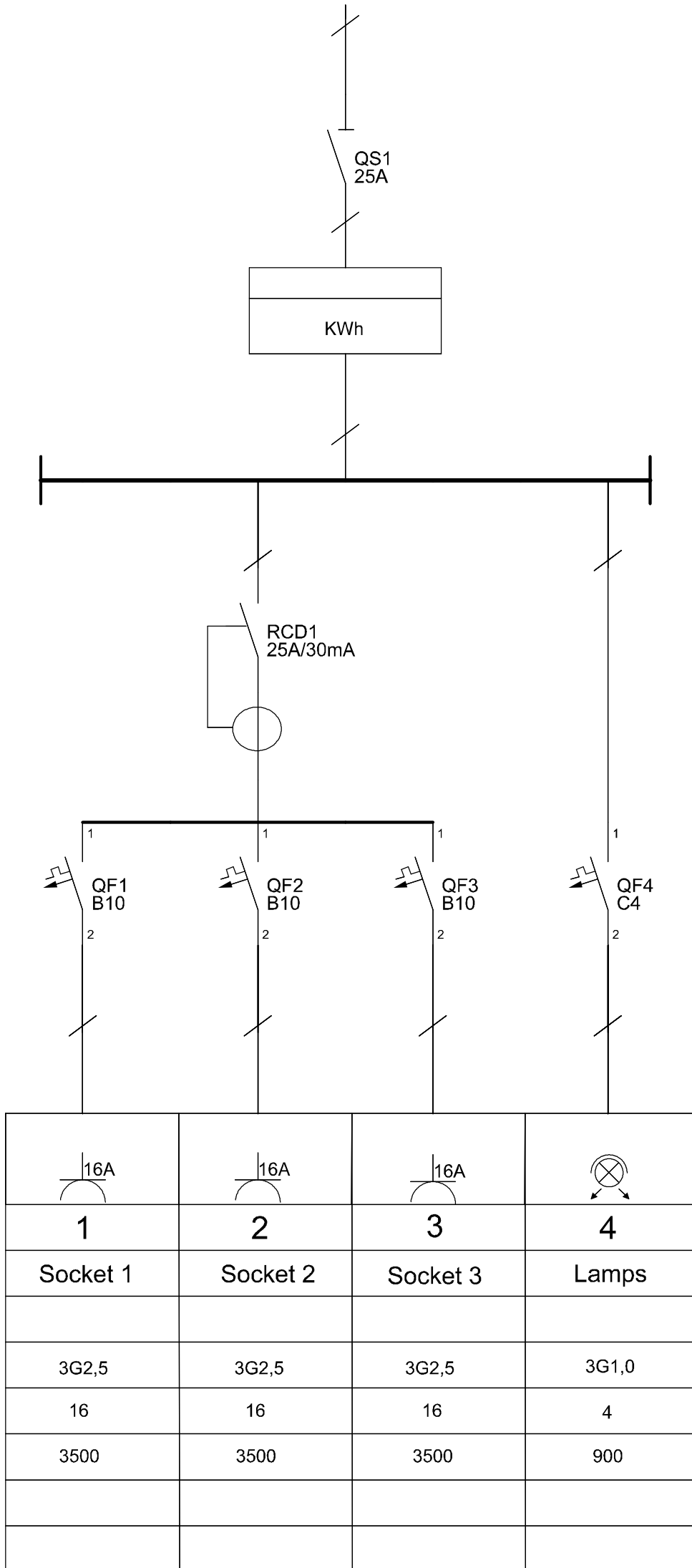
Director:

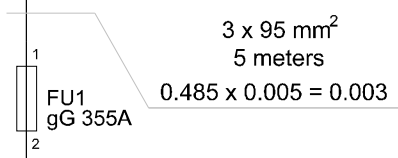
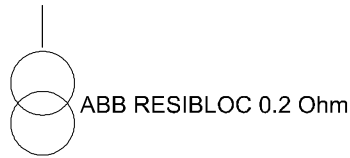
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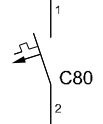
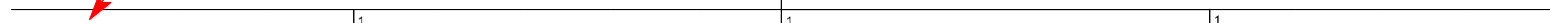
SPECIFICATIONS

Main cable:	10kV
Ground:	TN-S
Voltage:	10kV and 230/400V
Power:	215 kW
Main fuse:	315A



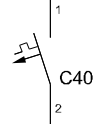


$I(s) = 1130A$



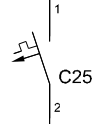
NYM 5G35
65 meters
 $1.25 \times 0.065 = 0.081$

$I(s) = 807A$



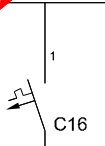
NYM 5G10
65 meters
 $4.36 \times 0.065 = 0.284$

$I(s) = 460A$



NYM 5G6
65 meters
 $7.26 \times 0.065 = 0.472$

$I(s) = 312A$

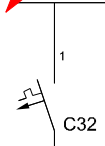


NYM 3G4
180 meters
 $10.9 \times 0.18 = 0.872$

$I(s) = 807A$

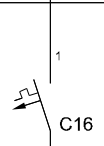


NYM 3G2.5
80 meters
 $17.37 \times 0.08 = 1.4$
 $I(s) = 136A$



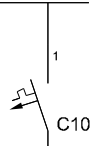
$I(s) = 320A$

NYM 5G6
30 meters
 $7.26 \times 0.03 = 0.218$



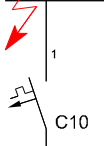
$I(s) = 190A$

NYM 3G2.5
40 meters
 $17.37 \times 0.04 = 0.7$



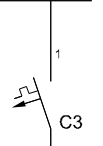
$I(s) = 120A$

NYM 3G2.5
80 meters
 $17.37 \times 0.08 = 1.4$

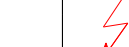
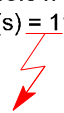
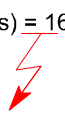


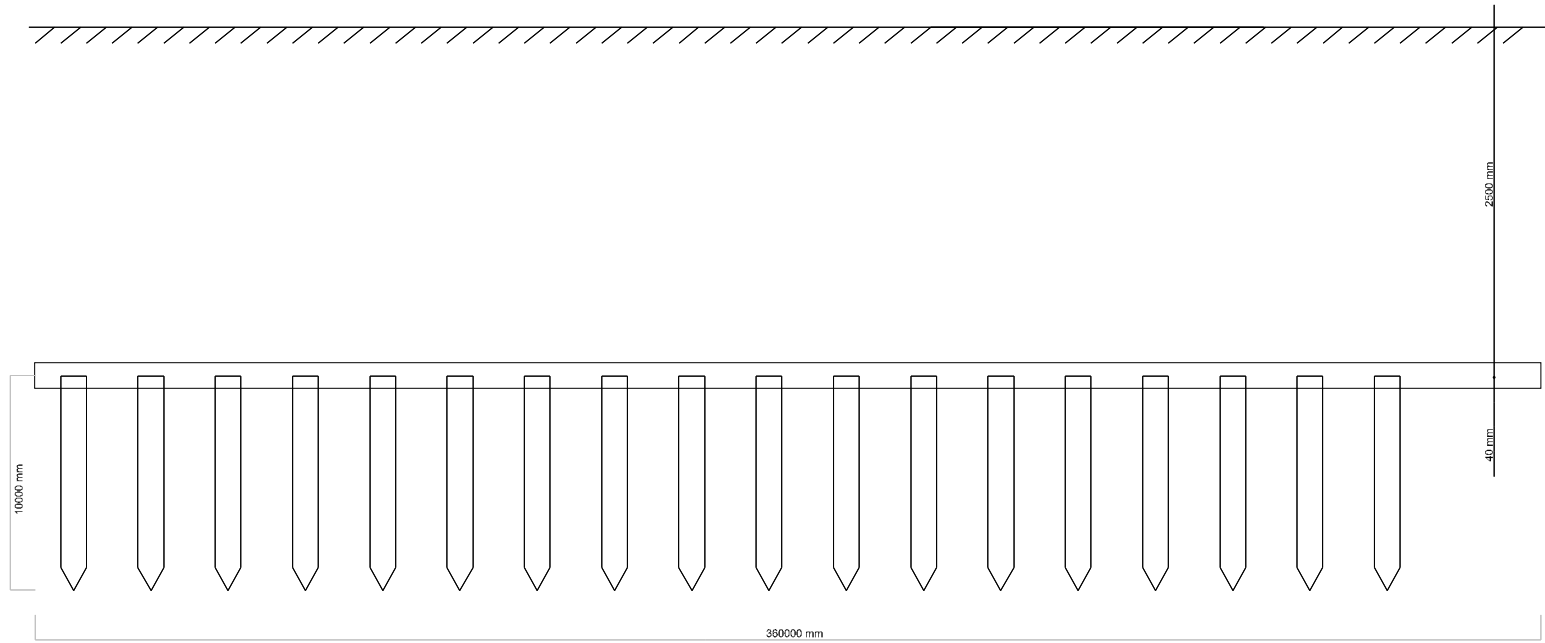
NYM 3G1.5
10 meters
 $29 \times 0.01 = 0.29$

$I(s) = 165A$



NYM 3G1.0
20 meters
 $43.6 \times 0.02 = 0.872$
 $I(s) = 113A$





Ground impedance:

Horizontal:

$$R(\text{tape}) = \frac{0.366 \times \rho}{L} \times \lg \frac{2L^2}{B \times T} = 4.06 \times 6.414 = 26.041 \text{ Ohm}$$

Vertical:

$$R(1 \text{ electrode}) = \frac{0.366 \times \rho}{L} \times \left(\lg \frac{2L}{D} + 0.5 \lg \frac{4T + L}{4T - L} \right) = 4.06 \times (2.6021 + 0.24) = 11.54$$

$$R(18 \text{ electrodes}) = \frac{R(1 \text{ el})}{Kp + N} = 0.7124$$

$$R(\text{full}) = \frac{R(h) \times R(v)}{R(h) + R(v)} = \frac{26.041 \times 0.7124}{26.041 + 0.7124} = 0.7 \text{ Ohm}$$

