Cable Calculation Report



Document No: Created On : Med Miffed By: Rev No: Contact By : Notified By: Rev No: Cancel As an intervention of the secondance with BS : Calculated in accordance with BS : Contact From: Lo No: (2/22) Nome: MCCIG(P) Connector From: ModBala To: MCCIG(P) Design Current Ib (A): 30.7 Connector Schwider Compact INSC MCCI Micrologic 2.2 Design Current Ib (A): 30.7 Connector Schwider Compact INSC MCCI Micrologic 2.2 Eating In (A): 100 (f) Overcurent protection: (a) = Auto, (f) = Frond, (g) = Connectors Predit PF400 Fire resistant cable Cu Arrangement: Horizontal Durating Transmitter Is 1 + 1 + 4. Size (mr) : 30 Arrangement: Horizontal Durating Transmitter Transmenter: Horizontal Durating Transmitter Is 1 + 1 + 4. Size (mr) : 30 Arrangement: Horizontal Durating Transmenter: Horizontal Durating Transmitter Not subject to Simultaneous Overlaad Arrangement: Horizontal Durating Transmitter Not subject to Simultaneous Overlaad Not subject to Simultaneous Overlaad Arrangenert: <	Project Reference:			Job N	umber:						
Construction Calculated in accordance with BS : Circuit Id Nos: (2/22) Name: MCL8(5) Connected From: EMBDD1 To: MCL8(5) Comments: What is the meaning of simultaneous overload? Protective Device [a] – Auto, [f] – Foed, [m] – Res Overcurrent protection: Scinged Compact NSX MCCB NSLIDEH Morelogic 2.2 Rating In (b): 100 [f] Overload Setting Ir (b): 63 [f] Conductors [a] – Auto, [f] – Foed, [m] – Res [a] – Auto, [f] – Foed, [m] – Res Protective Device [a] – Auto, [f] – Foed, [m] – Res [a] – Auto, [f] – Foed, [m] – Res Overcurrent protection: Scinged Compact NSX MCCB NSLIDEH Morelogic 2.2 Rating In (b): 100 [f] Conductors [a] – Auto, [f] – Foed, [d] – Dou Foed Starts, [f] – Foed, [d] – Dou Foed Starts, [f] – Foed, [d] – Dou Protective Device [a] – Auto, [f] – Foed, [d] – Dou Foed Starts, [f] – Foed, [d] – Dou Is (a) – Auto, [f] – Foed, [d] – Dou Protective Device [a] – Auto, [f] – Foed, [d] – Dou Foed Starts, [f] – Foed, [d] – Dou Is (a) – Foed, [m] – Foed, [d] – Dou Protective Device [a] – Auto, [f] – Foed, [d] – Dou Foed Starts, [f] – Foed, [d] – Dou <td< th=""><th>Document No:</th><th colspan="3"></th><th colspan="3">Created On :</th><th>Rev Dat</th><th colspan="3">Rev Date :</th></td<>	Document No:				Created On :			Rev Dat	Rev Date :		
Charles Source: TX 1 Control (Control (Contro				Houn				Calculated	l in accordance v	with BS 7671	
Circuit Line:: (2/22) Name: MCC16(2) Design Current.1b (A): 30.7 Comments: What is the meaning of simultaneous overload? Design Current.1b (A): 30.7 Comments: What is the meaning of simultaneous overload? (a) = Auto, (l) = Fixed, (m) = Main overload? Protective Device (a) = Auto, (l) = Fixed, (m) = Main overload? (a) = Auto, (l) = Fixed, (m) = Main overload? Overcurrent protection: Scheder Compact NXX MCCE NXXLOB NXXLO	Active Source: TX 1							Calculated			
Id No: (2/22) Nume: MCLIA(F) Connected Prove Example Distribution Board Design Current Ib (A): 30.7 Comments: What is the meaning of simultaneous overload? Protective Device (a) = Auto, (f) = Fixed, (m) = Max Descurrent protection: Scheder Compact MSX MCER NSX MCER N	Circuit										
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Call Priority Production Lx Lx 4c Size (mm ²): 33 Neutral: 35 mm² (a) Length (m): 180 31 - On horizontal/vertical perforated tray Arrangement: Horizontal Touching Length (m): 180 Rating Factors Image: Company (C) = 30.0 Ca = 1.00 [ES 7671, Table 481] Circuits in Group 1 Size (mn ²): 33 No. of trays = 1 No. of chruits per tray = 12 3rd Harmonics (%) = 0.00 Ch = 1.00 What is Iz? How this value is arrived at? Cable sizing (A) Sized For: Phase Current Carrying Capacity Auto-sized for current-carrying capacity and voltage drop I Design Current: Ib = 39.7 Device Rating In 100 Overload Setting Ir = 63 [Ir ≥ Ib] Imin. Cable Capacity Iz = 66.3 [Is 5771, Appendix 4.5, Formula (3/4)] Actual Cable Rating Ir = 162.0 [It ≥ Iz] Is this the actual Current carrying capacity of the cable without any clerating factors? Load Current to (A) 0.0 0.0 0.0 0.0 0.0 State from: Ficatult (V/%) 3.30 / 1.44 3.30 / 1.44 3.30 / 1.44 3.30 / 1.44	Conductors [a] = Auto, [f] = Fixed, [d] = Double										
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Actual Cable Rating It= 162.0 $[It \ge Iz]$ Is this the actual current carrying capacity of the cable without any derating factors?Load Current and Voltage DropL1L2L3NeutralDesign Current Ib (A/PF)30.7 / 0.9530.7 / 0.9530.7 / 0.950.03rd Harmonic Current (A)0.00.00.00.0Voltage Drop - This circuit (V/%)3.30 / 1.443.30 / 1.443.30 / 1.44Value Drop - From Source (V/%)5.49 / 2.395.49 / 2.395.49 / 2.39Earth FaultCircuit Protective Conductor (mm²)Separate 25 [f][a] = Auto, [f] = fEarth FaultCircuit Protective Conductor (mm²)Separate 25 [f][a] = Auto, [f] = fDisconnection time (s)From characteristic: 0.08Maximum for circuit: 5.00Earth FaultCircuit Protective Conductor (mm²)CPC Section = Separate 25Total = 25.0Min. Section = 1.45Current (kOrder Separate 25Total = 25.0Min. Section = 1.45Current (kThese FaultCurrent Max./Min. (kA)Source End: "34.629 / 28.856Load End: "2.360 / 0.944Phase Fault Current Max./Min. (kA)Source End: "34.629 / 28.856Load End: "2.360 / 0.944Phase Fault Current Max./Min. (kA)Source End: "34.629 / 28.856Load End: "2.360 / 0.944Phase Fault Current Max./Min. (kA)Source End: "34.629 / 28.856Load End: "2.360 / 0.944Phase Fault Current Max./Min. (kA) <th< td=""><td colspan="8">Min. Cable Capacity Iz=66.3[BS 7671, Appendix 4.5, Formula (3/4)]</td><td></td></th<>	Min. Cable Capacity Iz=66.3[BS 7671, Appendix 4.5, Formula (3/4)]										
Is this the actual current carrying capacity of the cable without any derating factors?Load Current and Voltage DropL1L2L3NeutralDesign Current Ib (A/PF) $30.7 / 0.95$ $30.7 / 0.95$ $30.7 / 0.95$ 0.0 3rd Harmonic Current (A) 0.0 0.0 0.0 0.0 Voltage Drop - This circuit (V/%) $3.30 / 1.44$ $3.30 / 1.44$ $3.30 / 1.44$ Voltage Drop - From Source (V/%) $5.49 / 2.39$ $5.49 / 2.39$ $5.49 / 2.39$ Earth FaultCircuit Protective Conductor (mm²)Separate 25 [f][a] = Auto, [f] = fDisconnection time (s)From characteristic: 0.08 Maximum for circuit: 5.00 Circuit Protective Conductor (mm²)Separate 25 [f] a Circuit Protective Conductor (mm²)Separate 25 [f] 0.73 Note: Earth Fault Current and Max Zs have been factored by Cmin"Includes motor fault contribution"Phase Fault Current Max/Min. (kA)Source End: "34.629 / 28.856Phase Fault Current Max/Min. (kA)Source End: "34.629 / 28.856Phase Fault Current Max/Min. (kA)Source End: "34.629 / 28.856Phase Fault Current Max/Min. (kA)Cur: 70Ic: 70Ic: 70Adiabatic Check:CPD Energy Let-through (A²s): 70.83 x 10 ³ Adiabatic Limit k²S² (A²s): 25.05 x 10 ⁶	Actual Cable Rating It=162.0 $[It \ge Iz]$										
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Adiabatic Check:CPD Energy Let-through (A^2s) : 70.83 x 10^3 Adiabatic Limit k^2S^2 (A^2s) : 25.05 x 10^6	Protective Device Breaking Capacity (kA)		Icu: 70	Ics: 70							
	Adiabatic Check:	C	PD Energy Let-thr	rough (A²s)	: 70.83 x 10 ³		Ad	liabatic Limit k²S² (A	A²s): 25.05 x 10	6	

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