SIZE	DWG NO.
A	841-731
AP	SM065

GENERAL 4120 NETWORK FIELD WIRING GUIDELINES AND PRECAUTIONS

NOTES:

1. NETWORK NODES MUST BE WIRED RIGHT TO LEFT PORT, REGARDLESS OF THE MEDIA TYPE SELECTED.

2. STYLE 7 PROTECTION IS ACHIEVED BY WIRING THE NODES IN A LOOP FASHION. A SINGLE FAULT (EXCEPT AN EARTH FAULT) WILL CAUSE THE NETWORK TO RECONFIGURE FOR DEGRADED STYLE 7 (STYLE 4) OPERATION. A SECOND FAULT (EXCEPT AN EARTH FAULT) WILL RESULT IN THE NETWORK DIVIDING INTO TWO SEPARATE NETWORKS.

3. STYLE 4 IS ACHIEVED BY WIRING THE NODES IN A LINEAR FASHION. STYLE 4 NETWORKS ARE NOT FAULT TOLERANT AND A SINGLE FAULT (EXCEPT AN EARTH FAULT) WILL RESULT IN THE NETWORK DIVIDING INTO TWO SEPARATE NETWORKS.

4. EARTH FAULT DETECTION IS PERFORMED ON THE LEFT PORT ONLY. THEREFORE, WHEN A NETWORK EARTH FAULT OCCURS, THE TROUBLE IS ONLY REPORTED ON THE NODE WHOSE LEFT PORT IS CONNECTED TO THE SPAN.

5. ALL 1.5 mm^2 WIRING USED WITH "WIRED NETWORK CARDS" MUST BE TWISTED SHIELDED PAIR. ALL 24 AWG (TELEPHONE CABLE) USED WITH "WIRED NETWORK CARDS" MUST BE TWISTED PAIR. WHEN SHIELDED CABLE IS USED, THE SHIELD MUST BE TERMINATED TO CHASSIS EARTH ON THE LEFT PORT ONLY.

6. IT IS PERMISSIBLE TO USE MIXED MEDIA IN A 4120 NETWORK. FOR EXAMPLE, SOME SPANS MAY BE "WIRED MEDIA" WHILE OTHERS ARE OPTICAL FIBER OR TELEPHONE MODEM.

7. EACH NETWORK INTERFACE CARD HAS A JUMPER FOR SELECTING BETWEEN NETWORK DATA RATES OF 57.6 kbps AND 9.6 kbps. ALL CARDS IN THE NETWORK MUST BE SET FOR THE SAME RATE. WHEN MODEM MEDIA OR PHYSICAL BRIDGING ARE USED, THE DATA RATE MUST BE SET FOR 9.6 kbps.

8. EACH NETWORK INTERFACE CARD HAS A JUMPER FOR SELECTING BETWEEN 8 AND 9-BIT NETWORK PROTOCOLS. ALL CARDS IN THE NETWORK MUST BE SET FOR THE SAME NETWORK PROTOCOL. WHEN MODEM MEDIA OR PHYSICAL BRIDGING ARE USED, THE PROTOCOL MUST BE SET FOR 8-BIT.

9. ALL NETWORK WIRING, EXCEPT THE SHIELD IS SUPERVISED.

10. ALL 4120 NETWORK WIRING IS POWER LIMITED.

11. WHEN NETWORK WIRING LEAVES A BUILDING, OVERVOLTAGE PROTECTORS (SIMPLEX MODEL 2081-9044) ARE REQUIRED. ONE MUST BE INSTALLED WHERE IT LEAVES THE BUILDING AND ONE WHERE IT ENTERS THE NEXT BUILDING.

12. MAXIMUM WIRING DISTANCES ARE SHOWN IN THE FOLLOWING TABLE.

MEDIA	SIZE	DATA RATE	MAX. DISTANCE
"WIRED"	24 AWG	57.6 kbps	2000 mts
		9.6 kbps	3500 mts
	1.5 mm^2	57.6 kbps	3000 mts
		9.6 kbps	5000 mts
OPTICAL FIBER	50/125 um	57.6 OR 9.6 kbps	3000 mts
	62.5/125 um	57.6 OR 9.6 kbps	4500 mts
MODEM	24 AWG DRY	9.6 kbps	4500 mts
RS232	18 AWG	57.6 kbps	15 mts
		9.6 kbps	90 mts

REVISIONS				
ISSUE	DESCRIPTION	DATE	BY	CHECKED
A	ISSUED FOR GENERAL INFORMATION	01/08/01	G.Fiala	

REFERENCE DRAWINGS - TITLES

1
2
3

Simplex INTERNATIONAL PTY. LTD.
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IT IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO VERIFY OVERALL DIMENSIONS, CABLE ENTRIES AND SITE ACCESS FOR THE POSITIONING OF ALL EQUIPMENT.

DESIGNED	G.Fiala
DRAWN	MVL
CHECKED	
DATE	01/08/01
SCALE	NTS

CLIENT

DRAWING TITLE: 4100 FIELD WIRING DIAGRAM

PROJECT: FIELD WIRING DIAGRAM

DRAWING NUMBER	841A-731-1B
SHEET SIZE	A4
ISSUE	A
DRAWING STATUS	INTERNAL
FOREIGN NUMBER	8417311E

DWG LOCATION : C:\CAD FILES\4100\Field Wiring\ PLOT DATE : 07/09/01 13:19
RE-PLOT DATE :

DWG NAME : 841-731-1E.dwg
DWG DATE : 07/09/01 13:18

CAD DRAWING - DO NOT HAND MODIFY