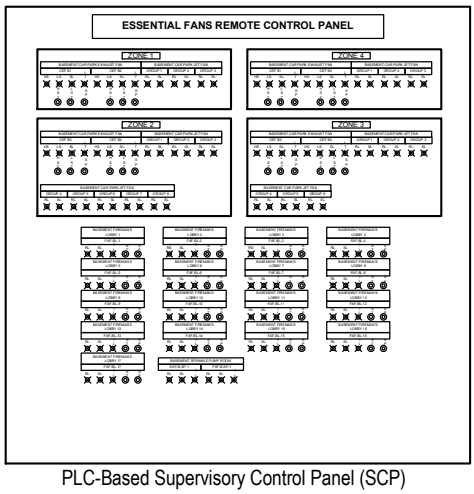
Application Note

iPanel

MV Fans Supervisory Control System - The Coast @ Sentosa



PLC-Based Supervisory Control Panel (SCP)

Project Scope :

Design, supply, testing, commissioning and maintenance of Car Park MV Fan Supervisory Control System - IP3C Digital Starter Panel, IP2 Starter Panels and PLC-Based Supervisory Control Panel

Nos. of Starter Panels :

- CP Exhaust Fans : 8
- CP Jet Fans : 8
- Fresh Air Fans : 18
- Exhaust Air Fans : 1

Description Of 2-Wire System Architecture

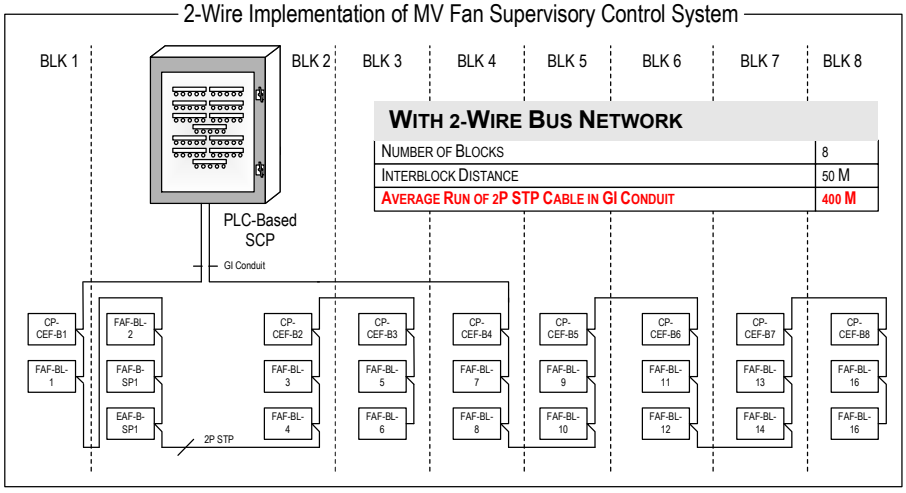
The Car Park MV Fan system consists of the Supervisory Control Panel (With LED Status Indicating Lamps and Push Buttons), FP2 Master PLC, IP3C Digital Starter Panels and IP2 Starter Panels.

Remote Monitoring And Control

The PLC of the Supervisory Control Panel (SCP) is programmed with Timer schedule for the MV Fans. Under normal conditions the MV fans are switched On/ Off based upon the Timer schedule.

Fire Control Mode

On detection of fire, all MV fans are all command to RUN by the SCP. The command is broadcasted over the 2-wire network. Upon activation of the FIREMAN SWITCH, the MV fans can be switched ON/ OFF from the SCP.

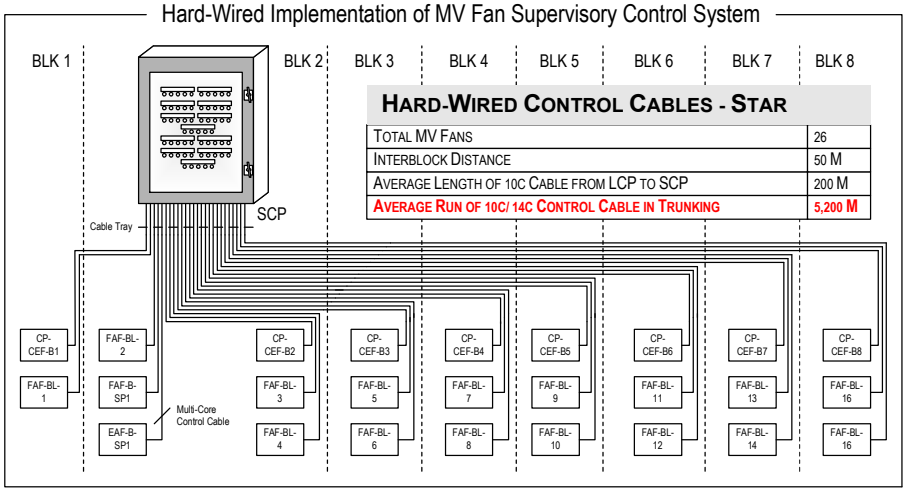


WITH 2-WIRE BUS NETWORK	
NUMBER OF BLOCKS	8
INTERBLOCK DISTANCE	50 M
AVERAGE RUN OF 2P STP CABLE IN GI CONDUIT	400 M

Advantageous Of 2-Wire System Architecture

The use of 2-wire Network Significantly reduces Overall cabling works by as much as Half ! For example, Reduced cable support (Cable Tray/ Conduit), Material (5,200M of multi-core cable/ 400M of 2P STP) and Manpower Costs.

Apart from the very substantial cost savings in cabling infrastructure, another advantage of this PLC-based system is the ability to sequence the Starting of MV fans. Thus, reducing starting current and not tripping Incoming supply, especially when running on Generators.



HARD-WIRED CONTROL CABLES - STAR	
TOTAL MV FANS	26
INTERBLOCK DISTANCE	50 M
AVERAGE LENGTH OF 10C CABLE FROM LCP TO SCP	200 M
AVERAGE RUN OF 10C/ 14C CONTROL CABLE IN TRUNKING	5,200 M

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