

MCC Build Specification	
Control Panel Specification	Colt Standard
Control Panel Form	2a
Application	Smoke Control
Fireman's Override	Not Required
Fire System Test/Reset	OPV
Standby Fan Test	OPV
Panel Material	Steel
Colour	RAL7035
Location	Internal
Cable Entry	Top
OPV Communication Network	Apollo/DPIO
BMS (HUI) Protocol	N/A
ATS Supplied	By Colt
ATS Location	Internal
Estimated ATS Rating (Amp)	40
ATS Bypass Type	Single Bypass
Brake Resistor	N/A
Fan Cascade	N/A
Estimated Panel Size (mm)	800W x 1200H x 300D
NOTE:	

Fan Data Table									
Fan Ref No	Description	Type	By Pass	Operation	Voltage	Power (KW)	FLC (A)	Start (A)	Speed (RPM)
EF-03	Duty Extract	VSD	ESM MODE	N/A	400	6.6	12.24	12.24	2880
EF-04	Standby Extract	VSD	ESM MODE	N/A	400	6.6	12.24	12.24	2880

NOTE:
SOME SECONDARY CONTAINMENT BY COLT, ALL OTHER
CONTAINMENT NOT IN COLT SCOPE OF WORKS.

SYSTEM EQUIPMENT

- 1

ELECTRICAL INSTALLATION IS CARRIED OUT TO :-
COLT TECHNICAL SPECIFICATION 1947.
- 2

J

JUNCTION BOX.
- 3

J

LOCAL FAN ISOLATOR, MUST BE PADLOCKED IN THE 'ON'
POSITION ONCE THE SYSTEM HAS BEEN COMMISSIONED.
- 4

ADD:??

MCP

MANUAL CONTROL POINT.
MOUNTED 1400mm +/- 200mm FROM FFL
- 5

OPV DISPLAY PANEL.

MOUNTED 1400mm +/- 200mm FROM FFL
- 6

OPV HEART MODULE.

MOUNTED WITHIN ELECTRICAL RISER @ MAXIMUM 1800mm
FROM FFL
- 7

CSIO 2

ADD:??

COLT STANDARD INPUT/OUTPUT UNIT (AC/DC),
3 AMP MAX LOAD PER RELAY. MOUNTED WITHIN ELECTRICAL
RISER @ MAXIMUM 1800mm FROM FFL
- 8

DPIO 2

ADD:??

AC/DC INPUT/OUTPUT UNIT AND PRESSURE SENSOR
3 AMP MAX LOAD PER RELAY. MOUNTED WITHIN ELECTRICAL
RISER @ MAXIMUM 1800mm FROM FFL
- 9

HIGH/LOW PRESSURE SENSOR COVER CAP.
- 10

ATS

AUTOMATIC TRANSFER SWITCH.
- 11

EF:??

SMOKE EXTRACT AXIAL FAN, CLASS F300 IN ACCORDANCE WITH
BS EN 12101-3:2002. FAN DETAILS ARE PROJECT SPECIFIC.
- 12

ADV:??

(EN) SEEFIRE VENTILATOR
230 Vac, 0.15 AMP PER MOTOR.
SPRING OPEN/POWER CLOSE, FAILSAFE OPEN.
- 13

J

DEFENDER SMOKE CONTROL DAMPER.
230 Vac, 0.03 AMP MOTOR.
POWER OPEN/POWER CLOSE, FAILSAFE CURRENT POSITION,
WITH MICRO SWITCHES FOR POSITION MONITORING.
COMPLIANT WITH BS EN 12101-8.
- 14

LV:??

APOLLO DATA CABLE CONNECTIONS ARE SHOWN FOR
COMPLETENESS ONLY. EQUIPMENT ON DATA CABLE MAY BE
CONNECTED IN ANY SEQUENCE, DAISY CHAINED ONLY
CABLES SPECIFIED TO:
PH120 - BS EN 50200
F120 - BS 7846-2009
- 15

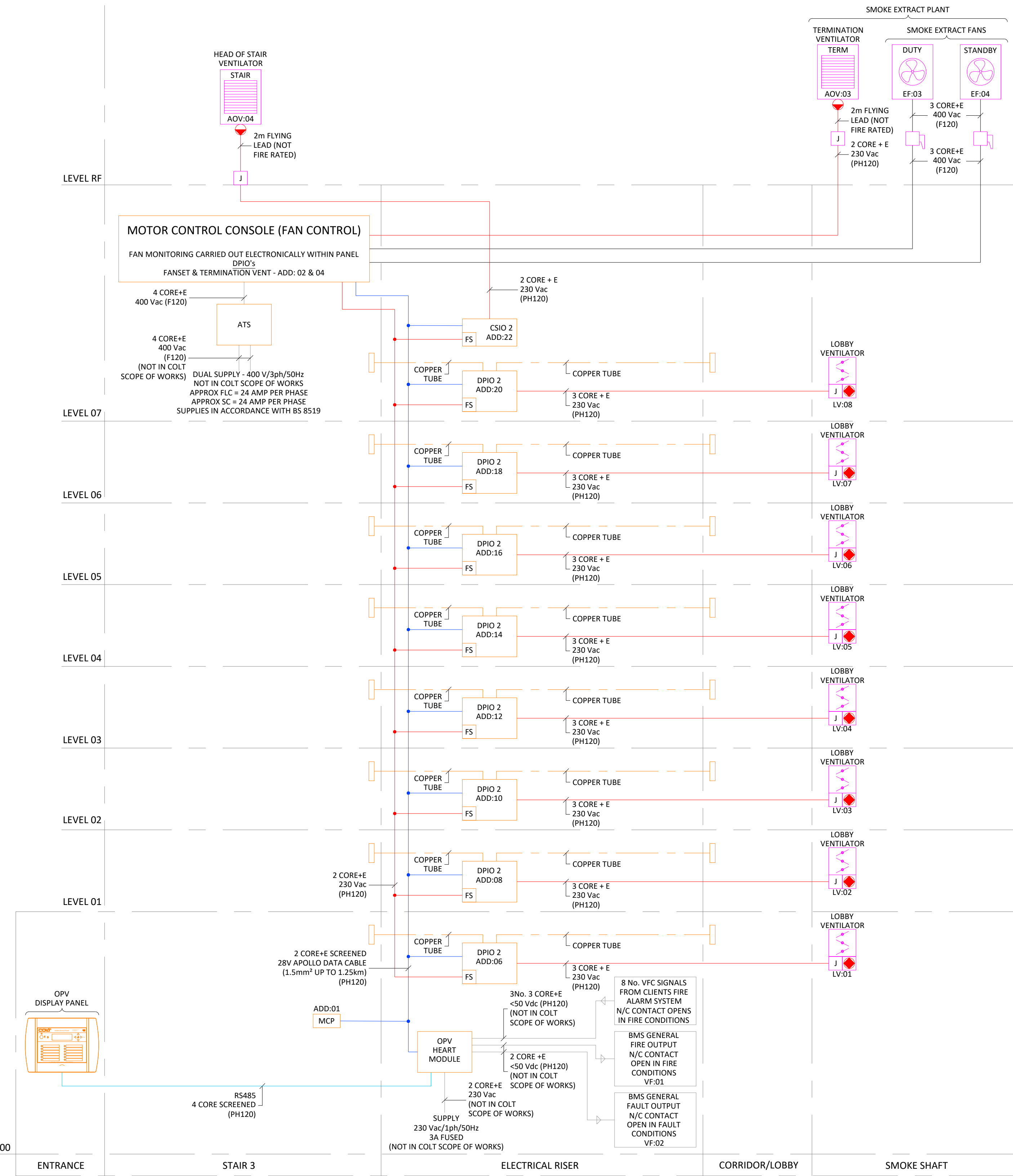
ALL ELECTRICAL WIRING IS BY COLT,
UNLESS OTHERWISE SPECIFIED.
- 16

CONTROL PANEL TO BE BUILT TO COLT TECHNICAL
SPECIFICATION 1946.
- 17



KEY PLAN

FOR THE AVOIDANCE OF DOUBT,
ALL INCLUSIONS AND EXCLUSIONS ARE AS
DETAILED IN THE COLT SPECIFICATION & ESTIMATE



Apollo Addressable Network						Ref.	Level	Location	Add.	OP
Equipment						LV: 01	00	Smoke Shaft	06	01
Lobby Ventilator						LV: 02	01	Smoke Shaft	08	01
Lobby Ventilator						LV: 03	02	Smoke Shaft	10	01
Lobby Ventilator						LV: 04	03	Smoke Shaft	12	01
Lobby Ventilator						LV: 05	04	Smoke Shaft	14	01
Lobby Ventilator						LV: 06	05	Smoke Shaft	16	01
Lobby Ventilator						LV: 07	06	Smoke Shaft	18	01
Lobby Ventilator						LV: 08	07	Smoke Shaft	20	01
Duty Smoke Extract Fan						EF: 03	04	Smoke Shaft	02	01
Standby Smoke Extract Fan						EF: 04	04	Smoke Shaft	04	01
Termination Ventilator						ADV: 03	04	Smoke Shaft	Hard wired	
Head of Stair Ventilator						ADV: 04	04	Stair 3	22	01

Operation	Level	Location	Add.	Input	Priority
Default Condition	All	All	N/A	N/A	0
MCP - Open	00	Stair 3	01	01	5
Fire Alarm Signal Min. 'Full Speed' Extract Rate (m³/s)					
Fire Alarm Signal	00		01		
Fire Alarm Signal	01		02		
Fire Alarm Signal	02		03		
Fire Alarm Signal	03		04		
Fire Alarm Signal	04		05		
Fire Alarm Signal	05		06		
Fire Alarm Signal	06		07		
Fire Alarm Signal	07		08		
OPV Override Min. 'Full Speed' Extract Rate (m³/s)					
OPV Override - Active	00		01		
OPV Override - Inactive	00		01		
OPV Override - Active	01		02		
OPV Override - Inactive	01		02		
OPV Override - Active	02		03		
OPV Override - Inactive	02		03		
OPV Override - Active	03		04		
OPV Override - Inactive	03		04		
OPV Override - Active	04		05		
OPV Override - Inactive	04		05		
OPV Override - Active	05		06		
OPV Override - Inactive	05		06		
OPV Override - Active	06		07		
OPV Override - Inactive	06		07		
OPV Override - Active	07		08		
OPV Override - Inactive	07		08		

Key
"VSD" Variable Speed Drive.
"X" inactive/Off/Closed
"++" Refer to Default Condition.
"O" Active/Open

Additional Addresses
None

Priorities and Scenario Description
(Number 7 is highest Priority and highest active Priority takes Effect)

Priority 5
Scenario - Operation via firefighter's override controls on OPV Main Display panel

OPV Override "Active" - Opens the lobby ventilator on that floor only, opens the head of stair ventilator and starts the duty smoke extract fan in variable speed mode.
OPV Override "Inactive" - Closes the lobby ventilator on that floor, closes the head of stair ventilator and stops the duty smoke extract fan.

Priority 5

Scenario - Operation via Fire Alarm Signal

Fire Alarm Signal "Active" - Opens the lobby ventilator on that floor only, opens the head of stair ventilator and starts the duty smoke extract fan in variable speed mode.

Scenario - Operation via Manual Control Point (Stair only)

MCP "Open" - Opens head of stair ventilator.

Priority 0

Scenario - Normal operation (i.e. Non-Fire)

All ventilators closed and all fans off.

System Reset

Upon manual override the system will remain overridden until all overrides are returned to the "Auto" state.

The OPV Panel automatically resets once a fire alarm signal has been cleared.

Notes

The system is interlocked such that only one fire is reacted to automatically until the system is reset or overridden. Duty fan failure is detected via electronic current monitoring within the MCC panel. On failure of the duty fan, the standby fan will automatically start with the same operation.

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STAGE 2 CONCEPT
STAGE 3B DRAWING DEVELOPED DESIGN
STAGE 4A DRAWING TECHNICAL DESIGN
STAGE 4B DRAWING COORDINATED WORKING
STAGE 5 DRAWING INSTALLATION DRAWING/RECORD
DRAWING

For full definitions refer to BSRIA BG6/2014 Table 1

C01	PPH	FM/JS	14.08.25	ISSUED FOR CONSTRUCTION
P01	ACM	GW/JS/SA	24.01.25	PRELIMINARY ISSUE
Rev	Dm	Ck'd	Date	Description

Scale
AS INDICATED @

Original Size
A1

AS - FOR AUTHORISATION AS STAGE COMPLETE



Client
ETIHAD

Title
COMMERCIAL - SMOKE EXTRACT SYSTEM
ELECTRICAL SCHEMATIC AND CAUSE & EFFECT
STAIR 3

Drawing No.
NSE-SEE-CM-ZZ-DR-M-102002

Revision
C01

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COLT REF: ANAC87