VFD CP

Variable Frequency Drive Control Panel

QUICK FACTS

- Connected to the LNS5 damper control system,
- Control of duty stand-by operation,
- Indication of VFD (variable frequency drive) or fan status,
- Fan test functions,
- Fan override option,
- Typically up to eight different fan speeds.

Variable Frequency Drive Control Panel

The VFD Control Panel is used together with the LNS5 damper control system.

The VFD Control Panel interfaces with variable frequency drives (VFDs) to control fans and indicate the system status – typically for smoke extract or smoke clearance and for supply of replacement air, but also for daily ventilation.

On receiving the signal from the damper control panel, it enables the fans to run at the speeds programmed for the activated zone (typically up to eight preset speeds depending on the VFD make and model).

The status of each VFD is indicated at the panel.

The VFD Control Panel can also be networked with the firefighter's control panel (via the damper control panel).

WARNING: If the equipment is used in a manner not specified by Actionair by Swegon, the protection provided by the equipment may be impaired.

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Technical Information

Components (typically)	• Digital Input Output Interface (DIO), • Power supply, • Switches, • Relays, • Timers, • LED lights.
Customisations (typically)	• Lockable glazed door, • Flush mount flange.
Modbus network system	• Radial Circuit, or • Loop Circuit.

Panel enclosure	
Colour	RAL 7035
Ingress Protection (IP) Rating	IP30
Maximum ambient temperature	60°C (must be in a ventilated environment)

Supply	
Input voltage	(230 ± 23) V AC, 50 Hz
Maximum power consumption	750 VA

Inputs	
Contact type	Volt free dry contacts
Maximum power consumption	10 mA at 12 V DC per input

Outputs	
Contact type	SPCO mechanical relay contacts
Maximum switched load	1 A at 24 V AC/DC

Environmental	
Operating temperature	-5°C to 60°C
Storage temperature	-40°C to 85°C
Humidity	80% RH to 31°C decreasing linearly to 50% RH at 40 °C
Maximum altitude	2000 m

Compliance	
Agency Listing	CE
Electromagnetic Compatibility (EMC)	EN 55011: 2009 + A1:2010 EN 61000-6-1: 2016 EN 61000-3-2: 2014 EN 61000-3-3: 2013
Low Voltage Directive (LVD)	EN 61010-1: 2010 + Corr 1

LEDs and Switches

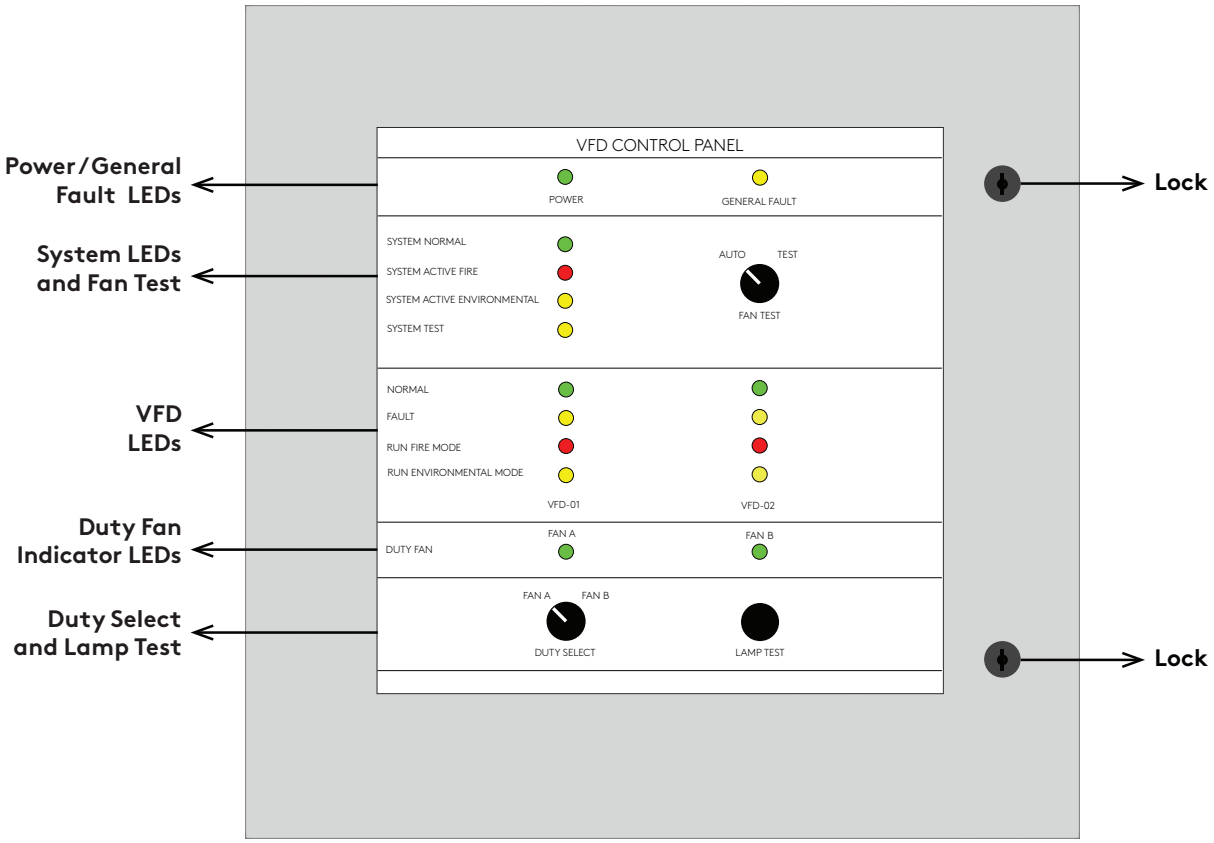

Image 1. LEDs and Switches.

LED		Description	Function
Power		Steady green	Power available.
General fault		Steady yellow	Fault with the system.
Override		Steady yellow	Override active.
System normal		Steady green	System normal without fault.
System active (fire)		Steady red	System in fire mode.
System active (environ.)		Steady yellow	System in environment mode.
System test		Steady yellow	System in test mode.
VFD normal		Steady green	VFD normal without fault.
VFD fault		Steady yellow	VFD is in fault.
VFD run (fire mode)		Steady red	VFD in operation (fire mode).
VFD run (environ. mode)		Steady yellow	VFD in operation (environmental mode).
Fan (e.g A, or B)		Steady green	Selected duty fan.

Table 1. LEDs.

Switch	Position	Function
Manual Test	Auto	System working as programmed.
	Test	System in test mode.
Duty Select	Fan A	Fan A selected.
	Fan B	Fan B selected.
Lamp Test Push Button	Push	Test LED lamps.

Table 2. Switches.

Networking (typical)

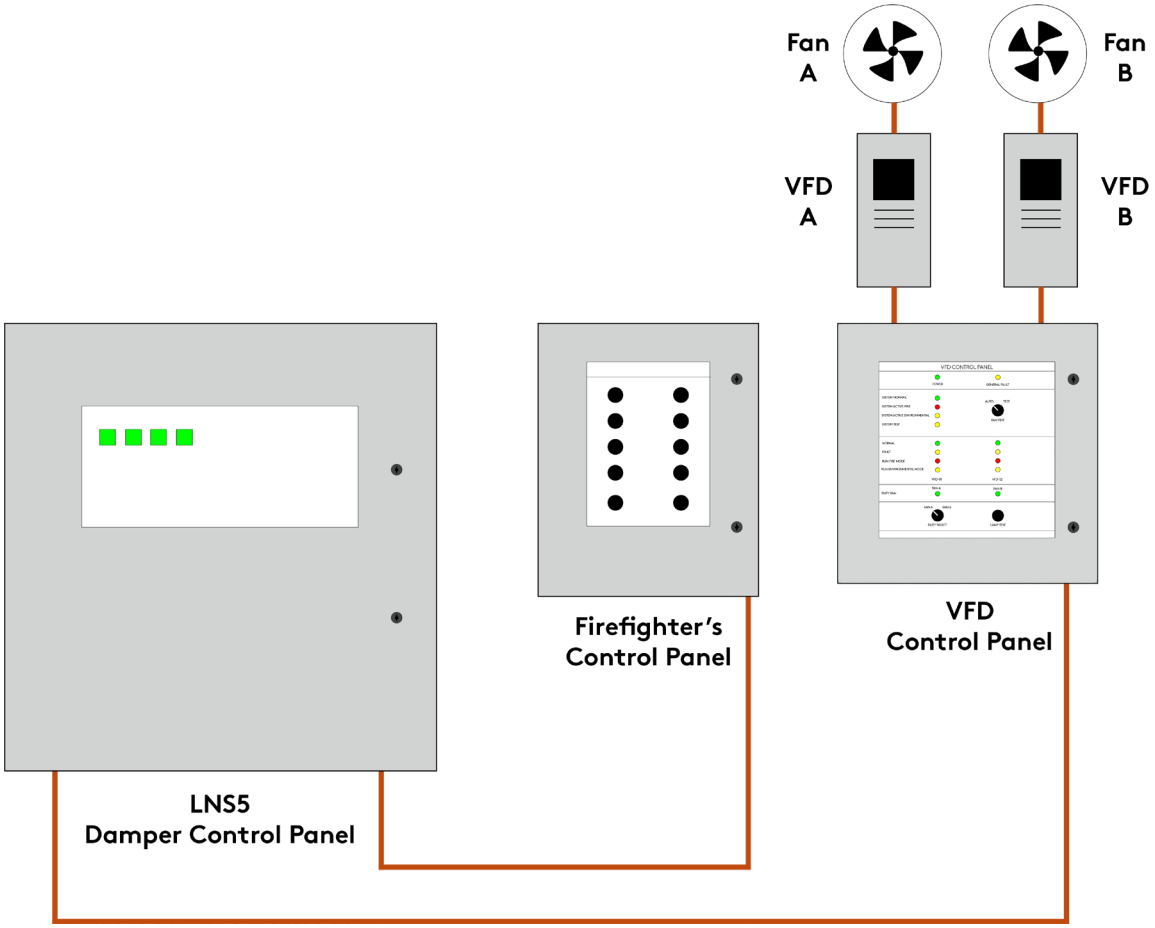

Image 2. Typical Networking.

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