VFD CP

Variable Frequency Drive Control Panel

QUICK FACTS

- Connected to the V5 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 designed for use with the V5 Damper Control System and provides control and monitoring of variable frequency drives (VFDs) connected to ventilation fans.

Typically used for smoke extract, smoke clearance, and supply of replacement air, it can also support day-to-day ventilation applications.

When a signal is received from the damper control panel, the VFD Control Panel enables the fans to operate at the speed programmed for the activated zone. Depending on the VFD manufacturer and model, up to eight preset fan speeds can be selected.

The status of each connected VFD is displayed on the panel, providing clear system monitoring and fault indication.

The panel can also be networked to the Firefighter's Control Panel via the damper control panel, allowing centralised system monitoring and control.

To meet specific project requirements, the VFD Control Panel can be customised to suit individual customer needs.

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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.

Moodbus Network System

- Radial Circuit, or
- Loop Circuit.

Enclosure

Colour	RAL 7035
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

Environmental

Operating Temperature	-5°C–60°C
Storage Temperature	-40°C–85°C
Humidity	80% RH at 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

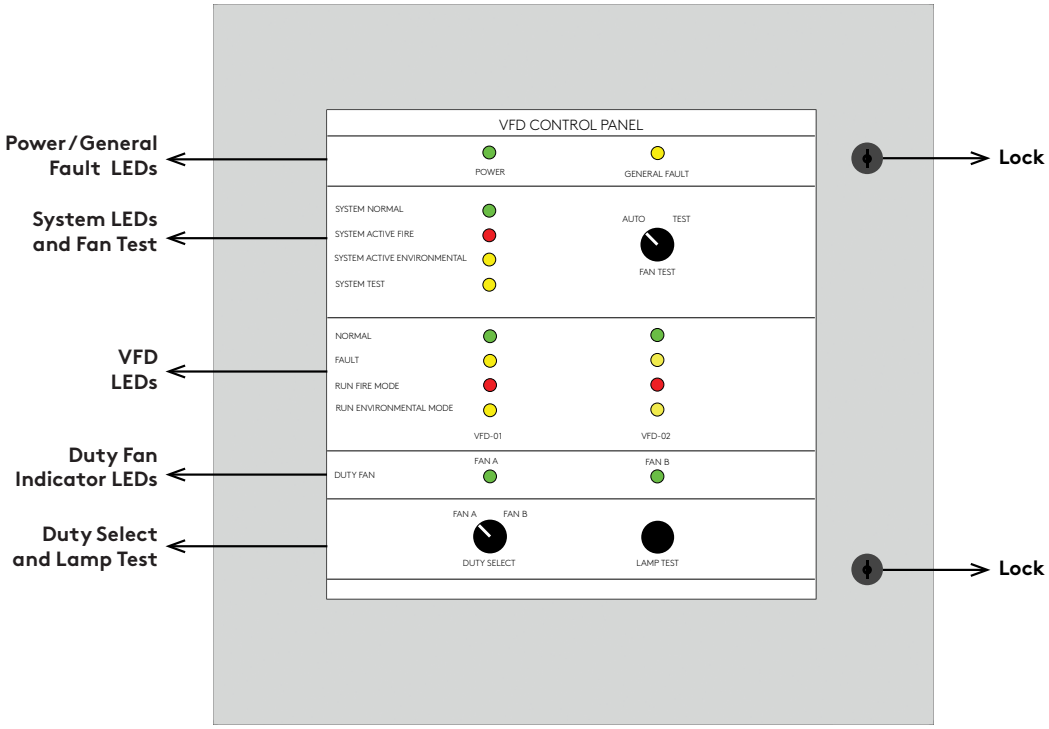

Figure 1. LEDs and Switches.

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.

Typical LNS5 Modbus Network

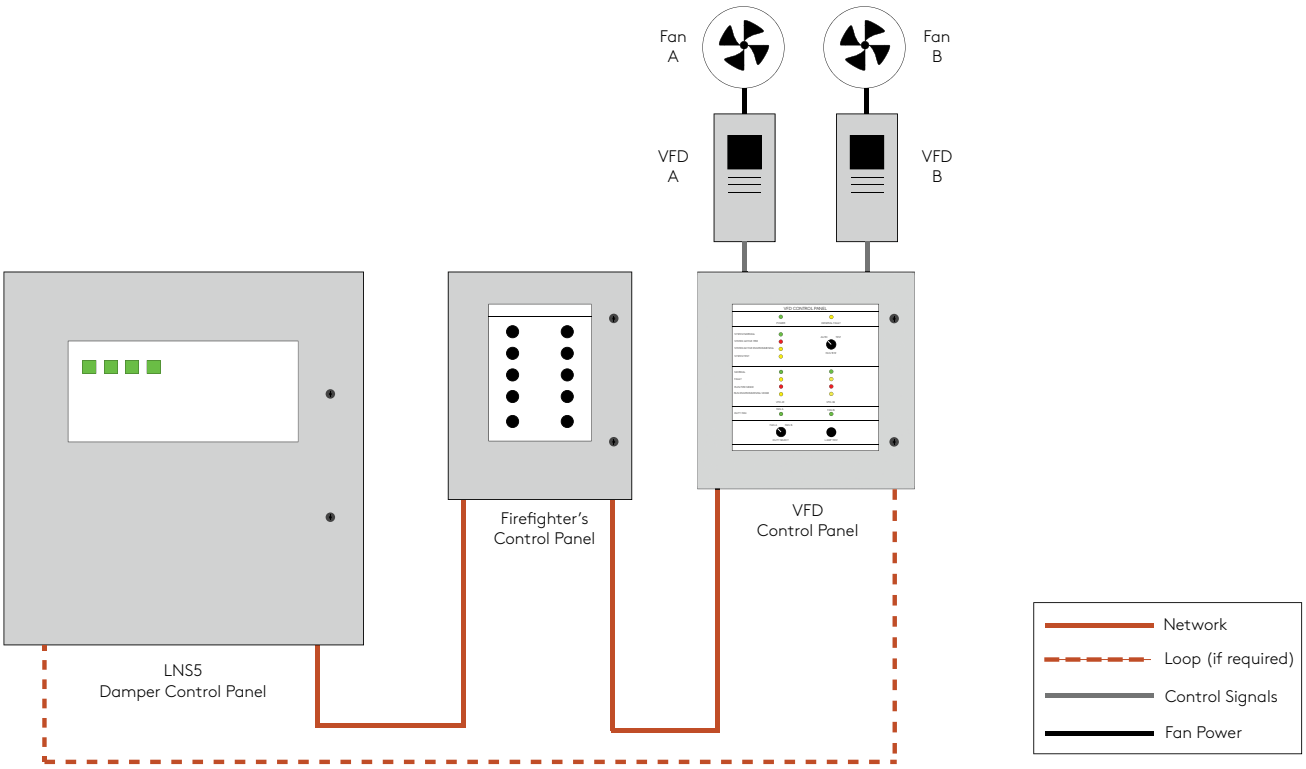

Figure 2. Typical LNS5 Modbus Network

Disclaimers

- The information herein is subject to change without notice. Actionair by Swegon do not assume any liability arising out of the use of this product.
- Purchase of goods and services is subject to Swegon Terms and Conditions.
- If not agreed otherwise, all wiring is by others.

Warnings ⚠

- This product forms part of a life-safety system. Failure to correctly store, handle, install, and maintain the product will directly put at risk the lives of the occupants and the fabric of the building.
- The responsible body shall be made aware that, if the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Unauthorised modifications to Actionair by Swegon panels and devices are not allowed, and will render the warranty void.

Safety Notes

- Only allow trained and qualified personnel to install, replace, or service this equipment.
- Adhere to the relevant local safety standards.
- The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Related Documentation

- Actionpac LNS5 Product Sheet.
- LNS55 Damper Control Panel Product Sheet.
- LNS5 Damper Control Panel Installation and Maintenance.