

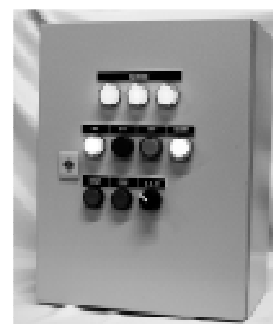
Control Panels for ACMV and Domestic Plumbing Applications

General Description

Value Panel (VP) is a range of PLC-based Control Panels commonly used in projects, made available as standard offer and kept ex-stock, ready for installation.

Features

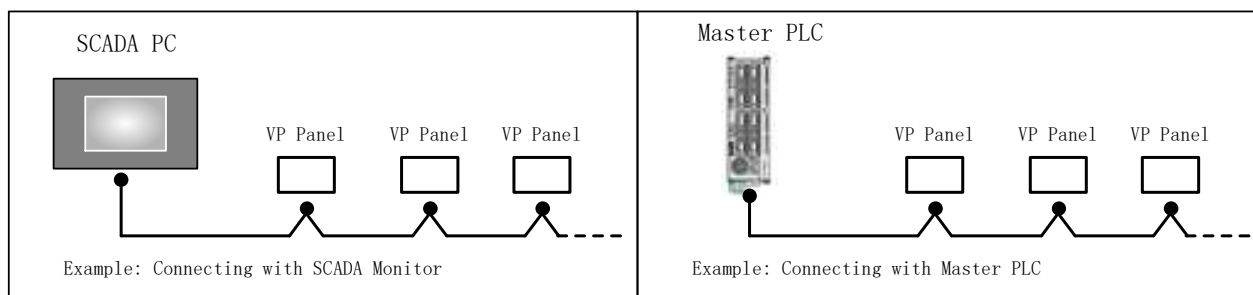
- ❖ IP55/ 65 Enclosure
- ❖ IP2 Modus RTU Controller
- ❖ Mains MCB, Contactor with Overload protection
- ❖ LED Indicating Lamps for Incoming Supply, On, Off, Trip and Alarm Status
- ❖ AOM Mode Selector Switch
- ❖ Local Start/ Stop Buttons
- ❖ External Start/ Stop and Interlock with Fire Alarm
- ❖ Volt-Free contacts for Interface with BAS
- ❖ RS485 MODBUS RTU network to SCADA systems



IP55/ 65 Enclosure

Modbus RTU

With Modbus RTU, VP Control Panels can be remotely monitored using Master Programmable Logic Controller (PLC) or SCADA PC with RS485 network. This allows for implementation of SCADA-based Building Automation System.



| Models | Description of Control Panels |
|-----------------|--|
| VP3-DOL | DOL Starter <3kW |
| VP3-SD5.5 | SD Starter <5.5kW |
| VP3-DL | 2 Speed Fan <3kW Dahlander Winding |
| VP3-DS | 2 Speed Fan <3kW Separate Winding |
| VP-2FCU | 12 Hours Duty-Standby Aircon Control Panel for 2 x FCU |
| VP3-2DOL-SP/ BP | Sump/ Booster Pumps Control Panel With Automatic Change-Over |
| VP3-2DOL-EFF | Kitchen Exhaust and Fresh Air Fans Control Panel |

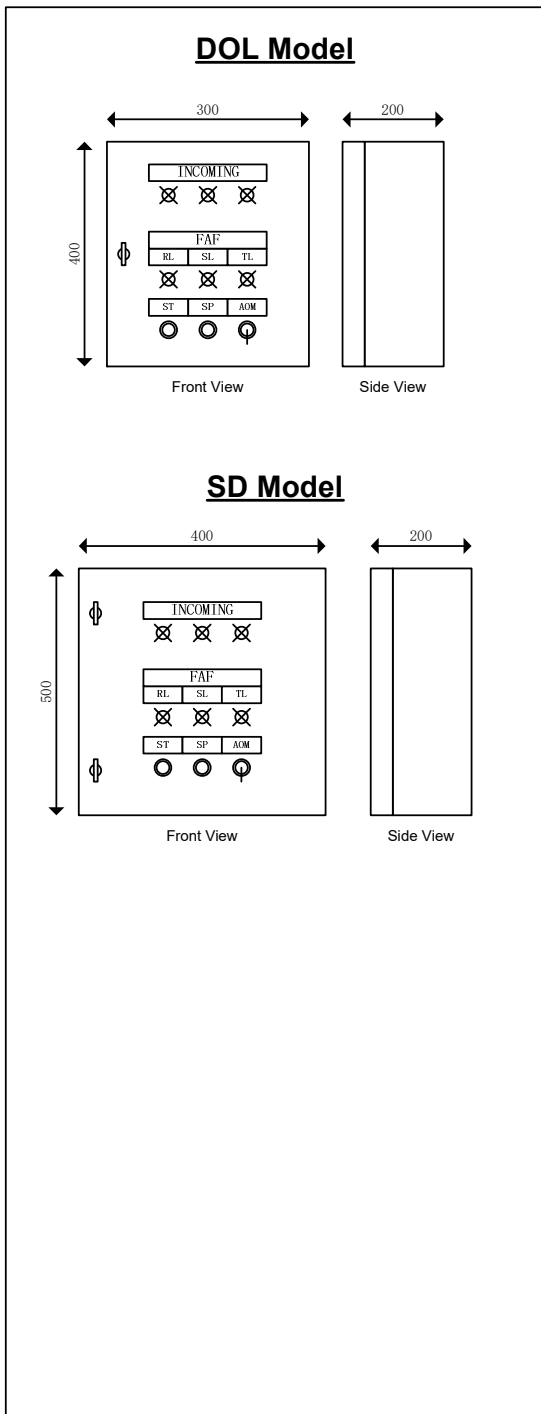
Above are common models and kept as standard. For Other requirements, please contact us for costing

General Description

Control Panel with DOL/ SD Starter

General Features

- ❖ IP55 Enclosure. Incoming MCB and Control Fuse. DOL/SD Starter with Thermal Overload Protection
- ❖ AOM Model Selector. Local Start/ Stop Buttons. LED Indicating Lamps for Incoming/ Run/ Stop/ Trip Status
- ❖ Interlock with Fire Alarm. Volt-Free contacts for status monitoring from BMS system
- ❖ Optional Weekly Timer



DOL Model (< 3kW)

| | |
|----------------------|---------------------|
| Single Phase 230V | Three Phase 400V |
| VP-DOL- [kW] | |
| | VP3-DOL- [kW] |

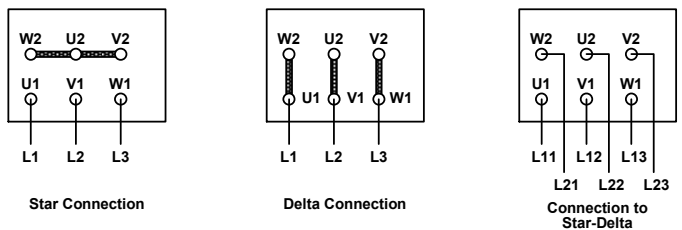
Note: [kW], indicates kW rating of Motor

SD Model

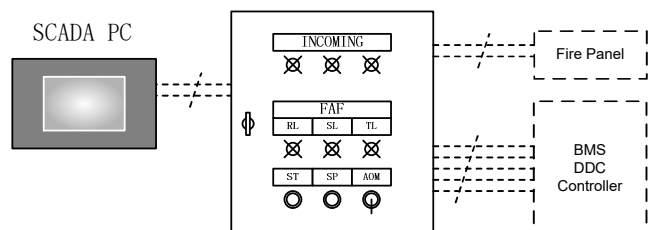
| |
|---------------------|
| Three Phase 400V |
| VP3-SD- 5.5 |
| VP3-SD- 7.5 |
| VP3-SD- 11 |

Other KW Ratings, Please call in Inquire.

Three Phase Motor With Cage Rotor



Interfaces

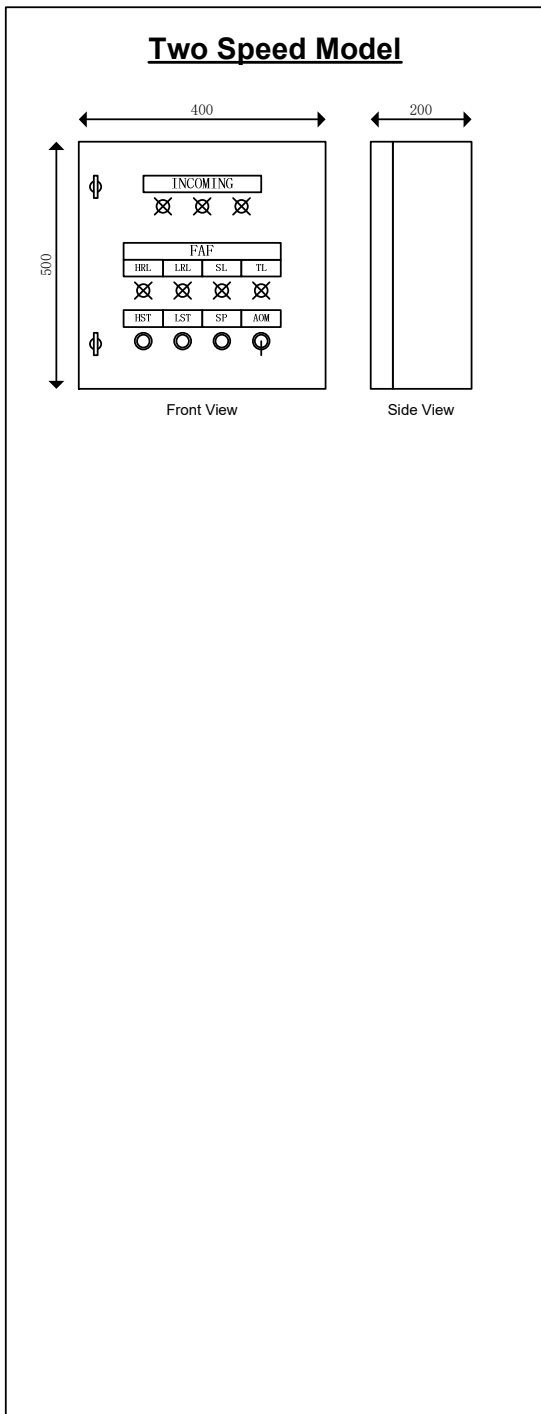


General Description

Control Panel for Two Speed Motor of Tapped/ Separate Windings with DOL Starter (<3kW)

General Features

- ❖ IP55 Enclosure. Incoming MCB and Control Fuse. DOL Starter with Thermal Overload Protection
- ❖ AOM Model Selector. Local High & Low Start/ Stop Buttons.
- ❖ LED Indicating Lamps for Incoming/ High & Low Run/ Stop/ Trip/ Status.
- ❖ Interlock with Fire Alarm. Volt-Free contacts for status monitoring from BMS system
- ❖ Weekly Timer

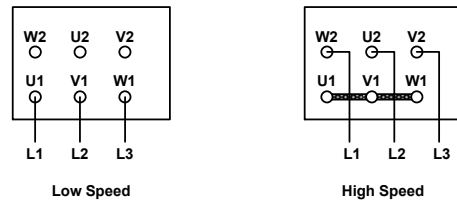


DOL Model for Tapped Single Winding

Three Phase 400V <3kW
Tapped Winding

VP3-DL - [H/ L kW] / Dahlander Connection

Note: [H/ L kW], indicates High/ Low Run kW ratings of Motor.
TOR is size for Low Run kW rating

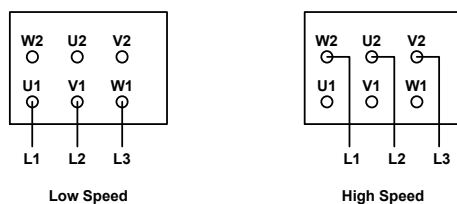


DOL Model for Separate Winding

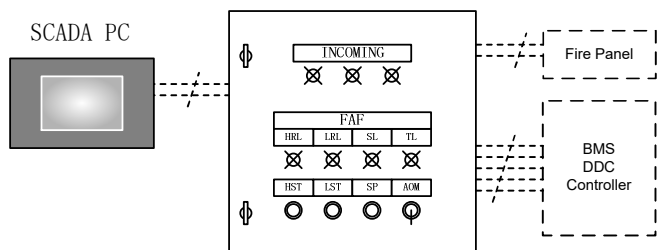
Three Phase 400V < 3kW
Separate Winding

VP3-DS - [H/ L kW]

Note: [H/ L kW], indicates High/ Low Run kW ratings of Motor.
TOR is size for Low Run kW rating

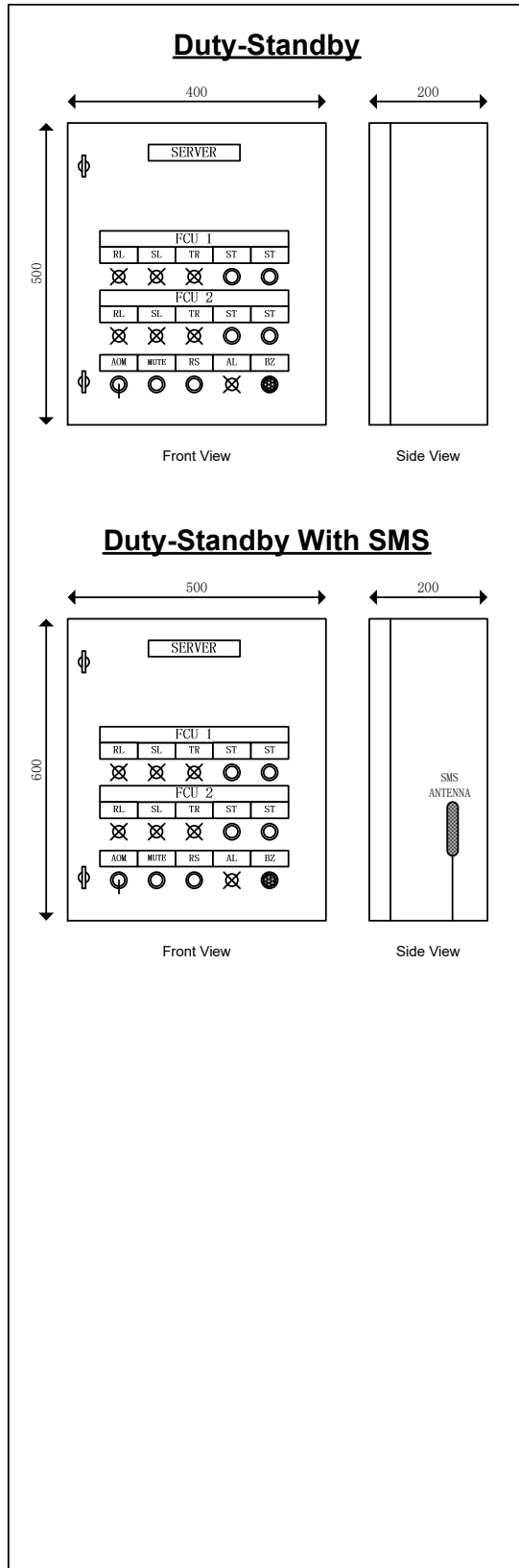


Interfaces



General Description

Control Panel for 12-Hours Duty-Standby Air-conditioning for essential service rooms



General Features

- ❖ IP55 Enclosure. Incoming MCB and Control Fuse.
- ❖ Control for 2 x numbers of FCU via Adapter Card#
- ❖ AOM Model Selector. Local Start/ Stop buttons. LED Indicating Lamps for Run/ Stop/ Trip/ High Temperature Status
- ❖ Weekly Timer. Automatic 12-Hours duty-standby operation
- ❖ Interlock with External High Temperature Thermostat
- ❖ **Automatic start of standby unit in event of duty trip or room high temperature status**
- ❖ **Delay-Off timing to avoid temporary loss of air-conditioning during auto-change over transitional period**
- ❖ Buzzer with mute and reset buttons.
- ❖ Interlock with Fire Alarm.
- ❖ Volt-Free contacts for status monitoring from BMS system
- ❖ Optional upgrade with 3G SMS controller for automatic SMS alerts (Maximum three mobile numbers)
- ❖ # Requires 3G SIM Card and mobile subscription

Models

Control Via Adapter Card

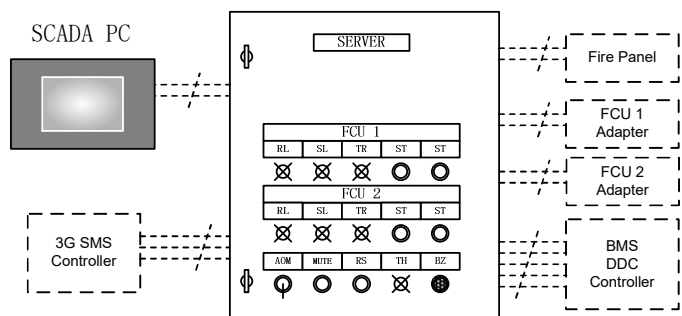
VP-2FCU

VP-2FCU-3GSMS (# Exclude 3G SIM card and subscription)

Applicable FCU Models With Adapter Card such as (#Adapter Card Not Included)

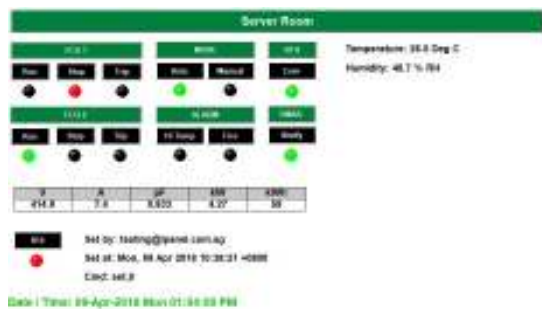
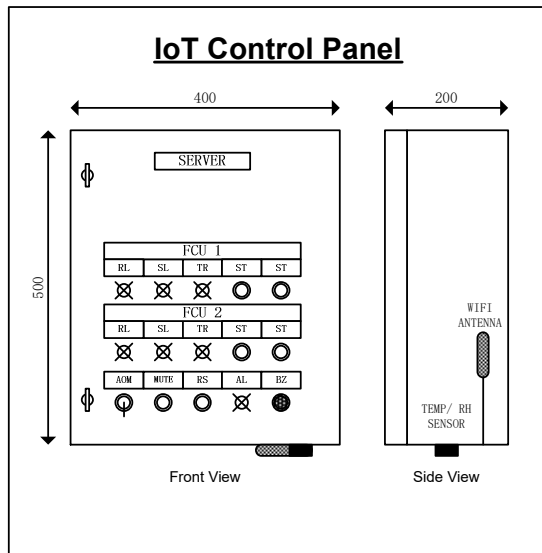
- ❖ Daikin KRP4AA5* (Volt-Free)
- ❖ Daikin KRP413A* (Transistor)
- ❖ Mitsubishi CN51/ CN32 (Voltage)
- ❖ Fujitsu AS*18/ A25/ A30 JC CN14/ CN16 (Voltage)
- ❖ Toshiba TCB-IFCB-4E2 (Voltage)

Interfaces



General Description - VP-2FCU-IoT

Internet of Things (IoT) Control Panel for Server Room -- Duty-Standby of Air-conditioning units, Email Alerts, Web page monitoring, Data logging and Cloud Storage with One Drive.



Web Page and Email Features

- Automatic Email alerts on Alarm conditions (eg. Trip, High Temperature/ Humidity, Fire Alarm)
- Web page monitoring
- Data Logging (Temperature/ Humidity/ Electrical Power) via OneDrive Cloud Storage

General Features

- ❖ IP55 Enclosure. Incoming MCB and Control Fuse.
- ❖ Control for 2 x numbers of FCU via Adapter Card#
- ❖ AOM Model Selector. Local Start/ Stop buttons. LED Indicating Lamps for Run/ Stop/ Trip/ High Temperature Status
- ❖ Weekly Timer. Automatic 12-Hours duty-standby operation
- ❖ Interlock with External High Temperature Thermostat
- ❖ Automatic start of standby unit in event of duty trip or room high temperature status
- ❖ Delay-Off timing to avoid temporary loss of air-conditioning during auto-change over transitional period
- ❖ Buzzer with mute and reset buttons
- ❖ Interlock with Fire Alarm
- ❖ Volt-Free contacts for status monitoring from BMS system
- ❖ Integrated digital Temperature/ RH sensor
- ❖ Modbus RTU for power monitoring in electrical DB**
- ❖ IoT controller with Wifi 802.11 b/g/n#
- ❖ Alarm and Data Logging, Email Alerts, Web page monitoring and One Drive Cloud Storage
- ❖ # Requires access to Office Router for Internet access
- ❖ ** Optional upgrade with Power Meter (Line voltages, current, power factor, active energy, active power)

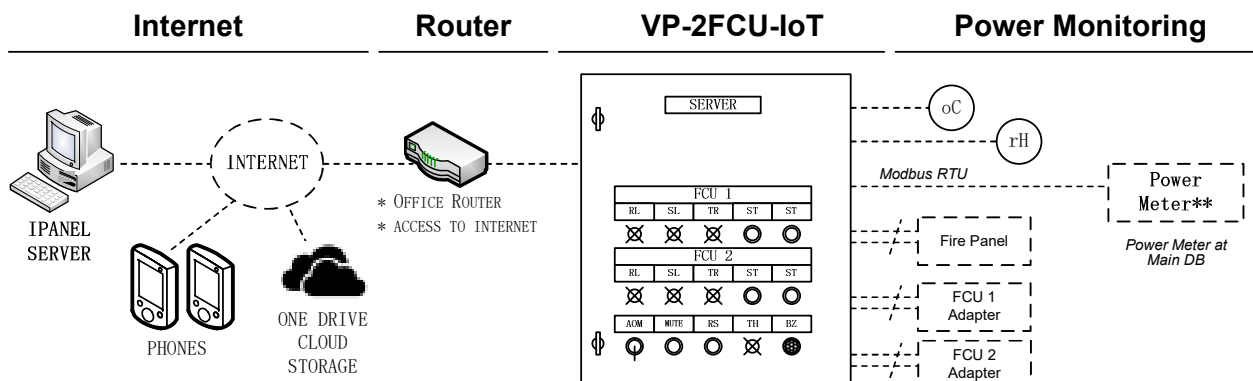
Models

Control Via Adapter Card

VP-2FCU-IoT (# Exclude Internet Router and subscription)

Applicable FCU Models With Adapter Card such as (#Adapter Card Not Included)

- ❖ Daikin KRP4AA5* (Volt-Free)
- ❖ Daikin KRP413A* (Transistor)
- ❖ Mitsubishi CN51/ CN32 (Voltage)
- ❖ Fujitsu AS*18/ A25/ A30 JC CN14/ CN16 (Voltage)
- ❖ Toshiba TCB-IFCB-4E2 (Voltage)

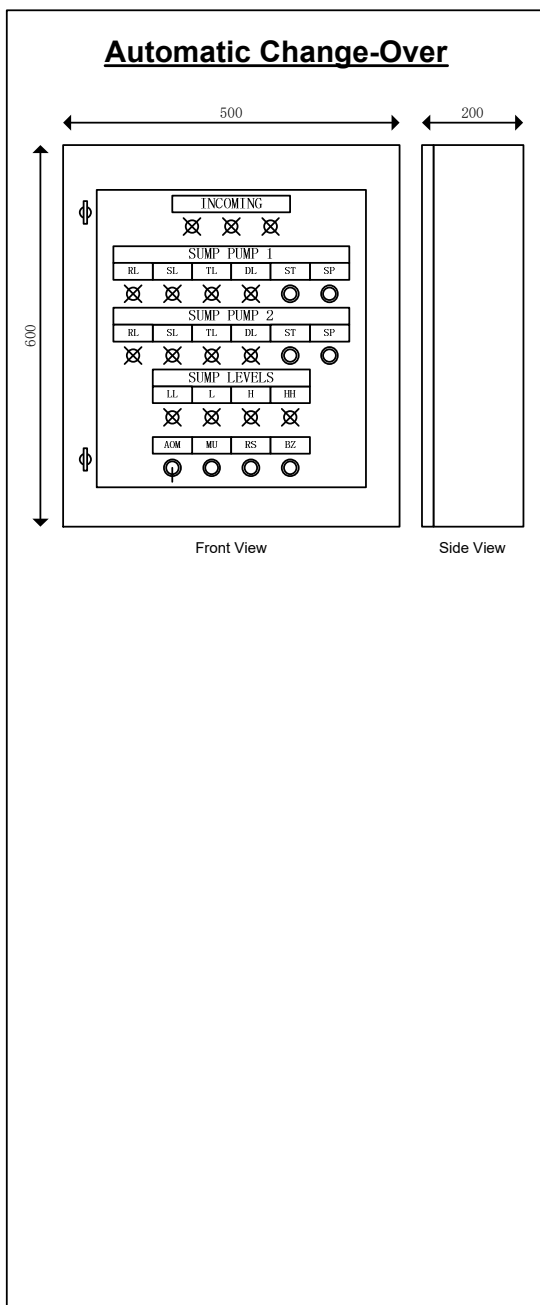


General Description

Control Panel with Automatic Change-Over for Domestic Sump Pumps (Plumbing System)

General Features

- ❖ IP65 Enclosure (Weather Proof). Incoming MCB and Control Fuse
- ❖ Two sets Outgoing MCB with DOL Starters and Thermal Overload Protection
- ❖ AOM Model Selector. Local Start/ Stop Buttons.
- ❖ LED Indicating Lamps for Incoming/ Run/ Stop/ Trip/ Status.
- ❖ Interlock with Low-Low/ Low/ High/ High-High Sump Level switches
- ❖ Volt-Free contacts for status monitoring from BMS system
- ❖ Duty-Standby Operation. Duty Pump automatically start when High level and stops at Low level. Standby automatically takes-over when Duty trips. Both pumps runs when High-High level.
- ❖ High-High level alarm with Buzzer, Mute and Reset buttons
- ❖ Automatic Change-Over after each start/ stop operation to even pump run hour usage

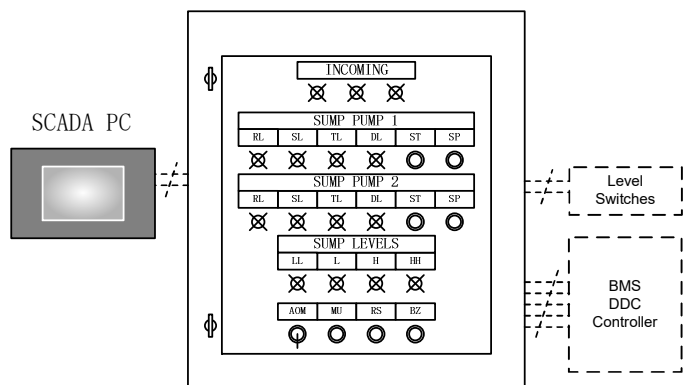


DOL Model (< 3kW)

| | |
|----------------------|---------------------|
| Single Phase 230V | Three Phase 400V |
| VP-2DOL- SP [kW] | |
| | VP3-DOL-SP [kW] |

Note: [kW], indicates kW rating of Motor

Interfaces

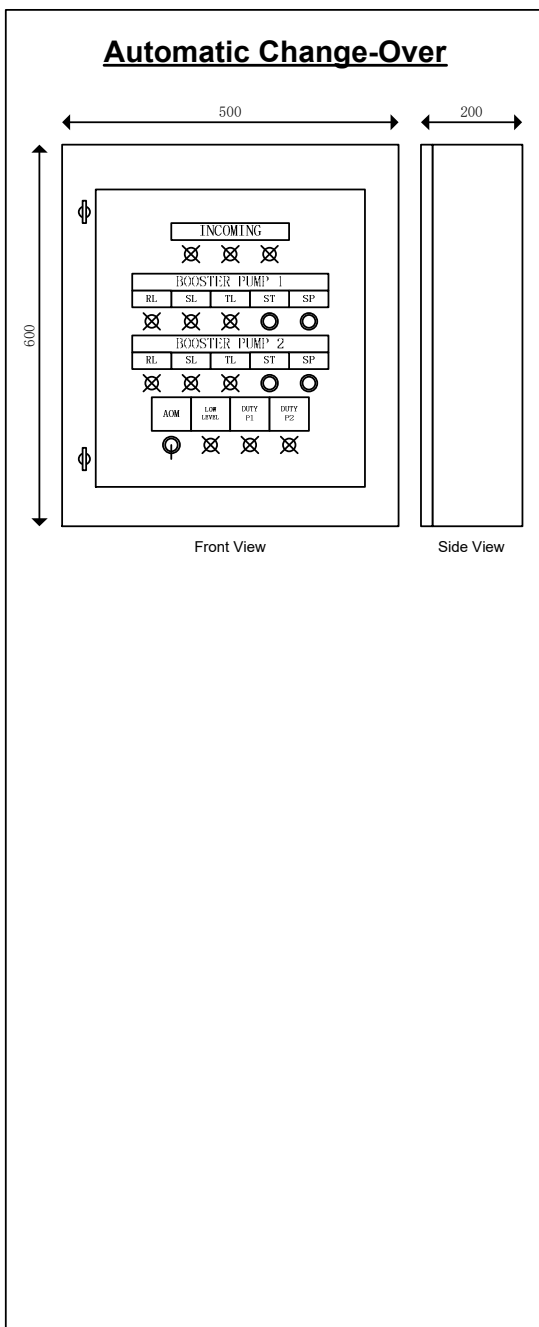


General Description

Control Panel with Automatic Change-Over for Domestic Booster Pumps (Plumbing System)

General Features

- ❖ IP65 Enclosure (Weather Proof). Incoming MCB and Control Fuse
- ❖ Two sets Outgoing MCB with DOL Starters and Thermal Overload Protection
- ❖ AOM Model Selector. Local Start/ Stop Buttons.
- ❖ LED Indicating Lamps for Incoming/ Run/ Stop/ Trip/ Status.
- ❖ Interlock with 1st and 2nd Stage Pressure switches and Tank Low Level cut-off contact
- ❖ Volt-Free contacts for status monitoring from BMS system
- ❖ Duty-Standby Operation. Duty Pump automatically start/ stop with 1st Stage Pressure Switch. Standby automatically takes-over when Duty trips. Both Pumps runs with 2nd Stage Pressure Switch
- ❖ Automatic Change-Over after each start/ stop operation to even pump run hour usage

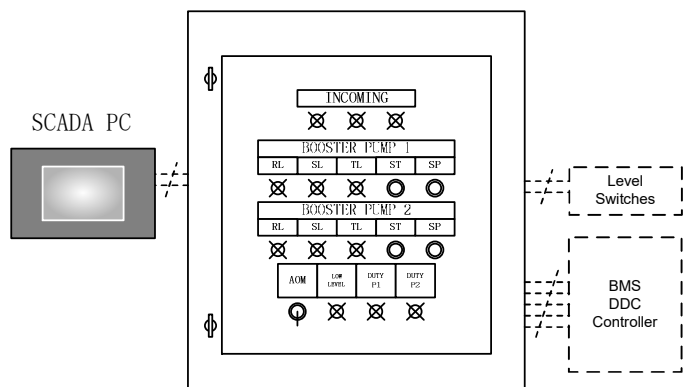


DOL Model (< 3kW)

| | |
|----------------------|---------------------|
| Single Phase 230V | Three Phase 400V |
| VP-2DOL- BP [kW] | |
| | VP3-DOL-BP [kW] |

Note: [kW], indicates kW rating of Motor

Interfaces



General Description

Control Panel for Commercial Kitchen Exhaust and Fresh Air Fans. Interlocking with Fire Alarm, Gas Panel and UV Lamp



General Features

- ❖ IP65 Enclosure (Weather Proof). Incoming MCB and Control Fuse
- ❖ Two sets Outgoing MCB with DOL Starters and Thermal Overload Protection for Exhaust and Fresh Air fans
- ❖ AOM Model Selector. Local Start/ Stop Buttons.
- ❖ LED Indicating Lamps for Incoming/ Run/ Stop/ Trip/ Status
- ❖ Fresh air fan interlocks with Exhaust fan
- ❖ Interlock with Fire Alarm, Gas Panel and UV Lamp
- ❖ Volt-Free contacts for status monitoring from BMS system

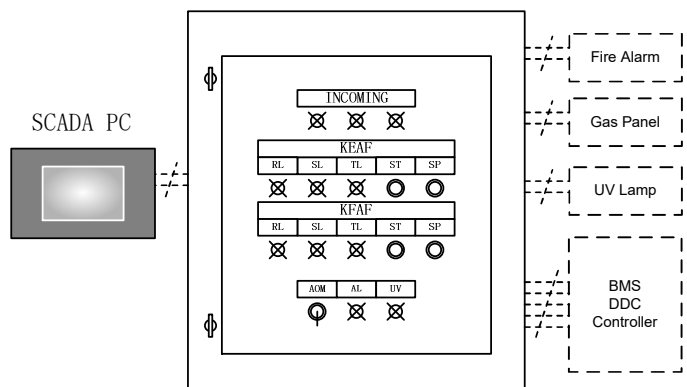
DOL Model (< 3kW)

Three Phase
400V

VP3-2DOL-EFF- [kW1/ kW2]

Note: [kW1/ kW2], indicates kW rating of KEAF/ KFAF Motors

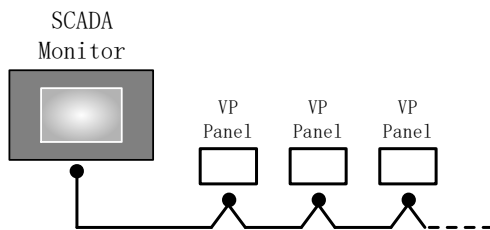
Interfaces



General Description

VP Panels are equipped with Modbus RTU for direct network with any SCADA Software. The VP-SCADA is specially bundled low-cost SCADA solution. Pre-configured and performs the basic functions of remote monitoring and control. Features include such as Graphics User Interface (GUI), Alarm management, data logging, Email of daily logs, FTP and web page monitoring.

VP-SCADA Bundled System



Features



Graphics User Interface



Alarm Summary



Web-page Monitoring

General Features

- ❖ Full HD LED Monitor
- ❖ Intel ATOM Quad-Core CPU with Windows 10
- ❖ Modbus RTU network to VP Control Panels
- ❖ Licensed DaqFactory SCADA runtime and pre-configured for remote monitoring of VP control panels :
 - ❖ Graphics User Interface — remote monitoring
 - ❖ Alarming — multiple notifications options for screen flash, color change, local horn, signal light or Email with acknowledgement
 - ❖ Data Logging — create daily logs. Email or FTP daily logs
 - ❖ FTP for web page monitoring

Models

VP-SCADA is specially bundled low-cost system optimized for small SCADA implementation. VP-SCADA is only available as Optional add-on when ordering together with VP Control Panels. Deliverables include the following items:-

- ❖ 1 x Nos of 21" Full HD LED monitor (Acer/ HP/ Samsung/ LG/ Philips)
- ❖ 1 x Nos Intel ATOM Quad-Core CPU with 1G DDR3 RAM, 16GB ROM, Wifi 802.11 b/g/n/ and Windows 10
- ❖ 1 x Lot Licensed SCADA runtime and pre-configured for remote monitoring of VP control panels with Modbus RTU network.

MODELS

VP-SCADA-N

- Supports up to maximum of Nth Numbers of VP Panels