



# IP3 DIGITAL STARTER PANELS



## Digital Starter Panels for Building Automation System

### Technology Overview

ACMV Controls, Building Automation System (BAS) and Programmable Logic Controls (PLC Controls) are the essentials of control, energy management and energy savings of modern buildings.

PLC Controls are commonly used in commercial ACMV systems and energy management applications in building automation.

Building owners save hundreds of thousands if not millions of dollars every year by efficiently controlling their ACMV equipment.

### Industry's First All-In-One (AIO)

IPanel's IP3 Digital Starter Panel (DSP) is Industry's first All-In-One (AIO) combination of Starter Panel, Energy Meter and PLC Remote Terminal.

The IP3 DSP is where mechanical and electrical systems of ACMV equipment are integrated together using microcontrollers that communicate with each other using Fieldbus networks.

IP3 DSP caters for both energy management as well as control of ACMV equipment in the building.

### Expensive Hardware

Investment in PLC Controls is expensive because of the piece-meal implementation of ACMV automation.

As illustration, firstly, electrical control for AHU requires a Starter Panel. Secondly, to monitor energy, an Energy Meter is required in the Starter Panel. Thirdly, to communicate the AHU's I/O points and energy readings to Central Computer requires PLC Controls.

That is investments in -- Starter Panel, Energy Meter and PLC Hardware.

### Integrated AIO Solution

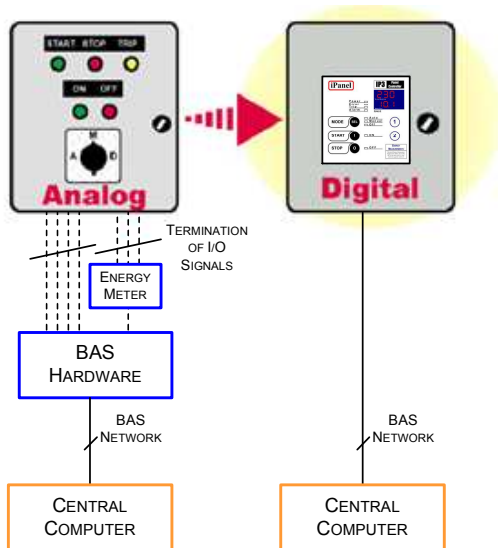
The IP3 DSP being an integrated AIO solution, costs less when compared with normal Starter Panel equipped with Energy Meter and PLC Controls. In short. IP3 DSP = Starter Panel + Energy Meter + PLC.

Depending upon size of building, a realistic estimate for overall cost savings (Building Automation using IP3 DSP) is about 30 - 50 percent.

# IP3 DIGITAL STARTER PANELS

IP3 Digital Starter Panel (IP3 DSP) is innovative, fieldbus communication technology that integrates mechanical and electrical systems of ACMV equipment using microcontrollers.

This technology opens up the doors of numerous applications in building automation that otherwise require expensive BAS hardware.



Being Network-Enabled, IP3 DSP communicates directly with Central PC. Thus, eliminates the need of BAS hardware and site work associated with interfacing of signals.

## Energy Management

Energy Management Systems, using IP3 DSP is definitely the way of the future and are replacing older less efficient building automation systems. Some features of IP3 DSP for building automation include the following.

- ❖ Set up schedules of operation for the ACMV equipment so that energy savings can be realized when the building spaces are unoccupied.
- ❖ Optimal start so that the equipment can be turned on/ off at an appropriate time to ensure space set points are achieved before occupation.

- ❖ Monitor energy usage of ACMV equipment and in conjunction with appropriate energy savings software to offer economizing control based on temperature calculations and/or CO2 set point control.
- ❖ During peak demand, cycle off non-essential equipment like water heaters and water fountains.
- ❖ Send alarms via email and SMS to alert building managers of problems and system failures.
- ❖ Energy metering, allows Management companies to setup billing system of tenants for energy usage.



CHILLERS



COOLING TOWERS



AC PUMPS



MV FANS



DOMESTIC PUMPS

FIELDBUS NETWORK



CENTRAL PC

## BUILDING AUTOMATION WITH IP3 DSP

*Please Contact...*

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