

TECHNICAL DATA SHEET

ELECTRICAL CONTROL PANEL INVERTER START-UP



Total control, maximum efficiency, and high system integration

Iperjet electrical panels with inverter start-up represent the most complete and advanced solution for fan control in air extraction and filtration systems. They are designed to ensure continuous speed control, energy optimization, process control, and full integration of safety systems and accessories.

Safe area and ATEX versions available, with UL certifications for international markets

TECHNICAL FEATURES

APPLICATION FIELD

- Motor power: from 1.1 kW to 200 kW
- Industrial air extraction and filtration systems
- Variable-speed fans
- Standard and ATEX applications
- High energy-efficiency systems

INVERTER START-UP

The control panel integrates industrial inverters for:

- continuous control of fan speed
- reduced energy consumption
- smooth start-up and shutdown
- mechanical and electrical motor protection

The inverter is fully parameterized and tested directly by Iperjet.

STANDARD EQUIPMENT

Standard equipment

- Power supply: 3-phase + PE – 400 Vac, 50/60 Hz
- Main isolator with door interlock
- Manual / automatic selector
- Provision for external / remote automatic start
- Start / stop pushbutton
- Inverter alarm reset pushbutton
- Emergency mushroom pushbutton
- Safety transformer
- Fuse protection

Indicator lights:

- power supply present
- fan operation
- thermal protection trip
- Industrial enclosure RAL 7035 – IP54 / IP65
- Electrical wiring diagram, testing, and declaration of conformity included

AVAILABLE ACCESSORIES

SAFETY SYSTEMS

Certified devices for:

- emergency stop functions
- safety guard door management
- integration with fire detection/control panels
- dedicated safety relays (fail-safe)

ATEX AND EXPLOSION PROTECTION SAFETY

Solutions for systems installed in hazardous areas:

- ATEX dampers
- ATEX safety non-return valves
- Explosion relief panels
- ATEX inductive sensor kits for panel opening detection
- Safety devices with IFM-NAMUR modules
- Automatic system shutdown in the event of an ATEX condition

DIFFERENTIAL PRESSURE (dP) CONTROL

Dedicated electronics for:

- continuous monitoring of filter condition
- minimum and maximum dP alarms
- local and remote signaling
- integration with supervision and monitoring systems

ADVANCED INVERTER MANAGEMENT

- Manual / automatic control
- Pressure or airflow stabilization
- Control via on-board LCD panel
- RS485 communication / analog signals

PRESSURE AND STABILIZERS

- Pressure parameter control and regulation
- Optimization of system operating conditions

DUST DISCHARGE DEVICE CONTROL

Rotary valves

- manual / automatic control
- programmable shutdown timer

Screw conveyors

- manual / automatic control
- programmable shutdown timer

ELECTRICAL CONTROL PANEL INPUTS

- Terminal-block input signals
- Emergency inputs from external devices
- Permissive and command signals from the customer's system

ELECTRICAL CONTROL PANEL OUTPUTS

- Dry contact outputs NO / NC
- Control panel status signaling
- Voltage presence signaling
- Outputs to PLC and supervision systems

ANALOG SIGNALS

- Analog outputs (e.g. 4–20 mA / 0–10 V)
- Real-time process data transmission
- Full integration with SCADA systems

INDUSTRIAL CONSTRUCTION

- Enclosure by CEB / Zanardo / Rittal

Top-tier components:

- Siemens
- Schneider Electric
- Finder / Omron
- WAGO
- Design compliant with CE and ATEX standards
- Modular and highly customizable solution

ADVANTAGES

- ✓ Power range 1.1 ÷ 200 kW
- ✓ Maximum energy efficiency
- ✓ Complete process control
- ✓ Full integration of accessories
- ✓ Advanced safety and ATEX compliance
- ✓ Iperjet top-of-the-range solution