

Energy efficient

Agricultural building ventilation with

OPTIDRIVE™ 



Applications



Ensure comfortable conditions for your animals and save on energy consumption

With Optidrive E3 IP66/NEMA 4X simply control all AC fan types

Significant and immediate Energy Savings

These savings are available for most sectors of agriculture. With energy costs continually increasing it is more important than ever to keep track of energy usage and to implement efficiency solutions in areas with high power consumption.



Wall Fan

Protect animal health & welfare

It is widely acknowledged that animal health and welfare are directly related to the conditions in which they are housed. Animals with poor health will require extra upkeep and associated costs. A significant risk factor within livestock accommodation is inadequate ventilation.

Robust and reliable

The Optidrive E3 IP66/NEMA 4X outdoor variable frequency drive (VFD) provides an ideal solution for controlling ventilation fan systems widely used in agricultural buildings.

No additional protection required

The fully enclosed design allows for simple mounting close to the fan. The IP66/NEMA 4X weather and environment protected design removes the need for a dedicated room or a control cabinet – simply install the VFD directly on the wall.

Accurate climate control

Climate control in livestock housing is the key benefit of using VFD's to control motor speed. Optidrive E3 can help to:

- ✓ provide optimum ventilation and air circulation
- ✓ provide the exact, required amount of fresh air
- ✓ maintain relative humidity
- ✓ minimise moisture and condensation
- ✓ maintain temperature at an optimal level



Celling Fan



Roof Mounted Fan



Turbulator
Recirculation Fan



Optidrive E3 IP66/NEMA 4X Outdoor:

✓ Outdoor rated

Tough polycarbonate enclosure designed to withstand degradation by UV, grease, oils and acids. Suitable for washdown when required for easy cleaning.

✓ Unrivalled simplicity of installation, connection and commissioning

Installing and commissioning the drive has never been easier.

✓ Built-in lockable isolator / mains disconnect

You can simply turn it on or off and lock it against unauthorised use

✓ Built-in potentiometer and control switch

Simply install the drive and use the built-in controls to start saving energy immediately

✓ Wide operating temperature range up to 50°C (122°F)

Robust enough to survive at -20°C (-4°F) even outdoors

✓ Protected circuit boards and coated heatsink

Designed to withstand tough ambient conditions.

✓ Bluetooth connectivity

Simply use your smartphone or PC to wirelessly commission or check your drive*

✓ Trip log with trigger on event function

Easy maintenance

✓ Mains loss ride through

Operation is maintained throughout short power dips and outages



Plate Fan



IP66 / NEMA 4X



✓ **Vector control for all AC motor types**

Provides reliable control for IE2, IE3, IE4 & IE5 motors. You can use it to precisely run an induction (IM), permanent magnet (PM), brushless DC (BLDC), synchronous reluctance (SynRM) or line start permanent magnet (LSPM) motors.

*Optional Bluetooth interface required

**Modbus RTU
CAN**

on-board as standard



OPTIDRIVE™ E³

IP66 Outdoor

Up to 22kW

Coated Heatsink as Standard

Ideal for hygiene based operations requiring washdown

Outdoor rated enclosed drives for direct machine mounting, dust tight and ready for washdown



- 1** 2 x RJ45 ports
eliminate the need for a splitter.
- 2** Easily accessible EMC disconnect
- 3** Easy to wire
due to the large, accessible chamber and removable gland plate.

Locally customisable

Flat front to terminal cover with mounting points for switches and an internal PCB.



Switched or non-switched

Conformal coating as standard



NFC
Bluetooth®

OPT-3-STICK-IN

Optistick Smart

Rapid Commissioning Tool

- Allows copying, backup and restore of drive parameters
- Provides Bluetooth interface to a PC running OptiTools Studio or the OptiTools Mobile app on a smartphone
- Onboard NFC (Near Field Communication) for rapid data transfer

Sensorless Vector Control for all Motor Types

| | | | | |
|---|------------------------------------|---|---|-------------------------------------|
| PM AC Permanent Magnet Motors | BLDC Brushless DC Motors | SynRM Synchronous Reluctance Motors | IM IE2 & IE3 Induction Motors | LSPM Line Start PM Motors |
|---|------------------------------------|---|---|-------------------------------------|

Precise and reliable control for motors

How much energy could you save?

Estimate potential energy savings, CO₂ emissions and financial savings for your application with the Invertek Drives **Energy Savings Calculator** app.



www.invertekdrives.com/calculator

Proven Worldwide Solution in Agriculture Building Ventilation Systems

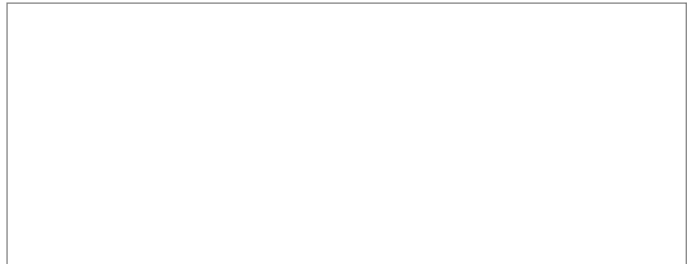
Hog barn ventilation system using Optidrive E3 IP66
Unites States of America

Chicken barn ventilation system using Optidrive E3 IP66
United Kingdom

Grain silo ventilation system using Optidrive E3 IP66
Columbia

Chicken barn ventilation system using Optidrive E3 IP66
United Kingdom

Hog barn ventilation system using Optidrive E3 IP66
Australia



www.invertekdrives.com

INVERTEK DRIVES LIMITED UK Headquarters

Offa's Dyke Business Park
Welshpool, Powys, UK
SY21 8JF

Tel: +44 (0)1938 556868
Fax: +44 (0)1938 556869
Email: sales@invertekdrives.com

