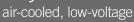
INGEDRIVE |

LV 200

Frequency converters











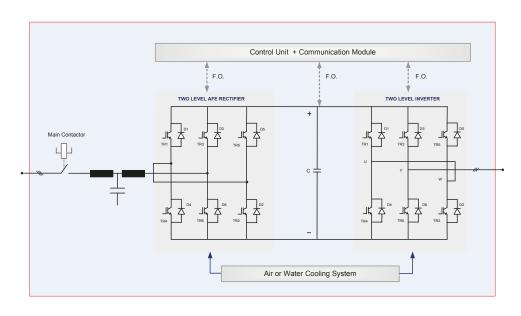


The **LV200** series of the INGEDRIVE™ converter range is composed of low-voltage frequency converters. They are designed to control induction, synchronous or permanent magnet motors in a wide range of industrial and marine applications. Its modular design makes it possible to encompass a wide range of powers and voltages while its intuitive structure facilitates its use and maintenance. The whole Ingedrive converter range offers a powerful configuration tool enabling the user to view and parameterise drives both locally using the touch screen and remotely via an Ethernet connection.

with IGBT Power Semiconductors



Applications:
Metals, water treatment, cement,
oil&gas, power generation, chemical and
marine



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General data

Inverter Type Rectifier Type Main Supply Voltage Range Output Power Range⁽¹⁾
Supply Voltage Tolerance
Supply Frequency
Input Power Factor

> Output Voltage Output Frequency Efficiency at Rated Load

> > Motor Types Converter Cooling

Control properties

Static Speed Acc. (closed loop)(3) Static Torque Acc. (closed loop)(3) Static Torque Acc. (open loop)(3)

> Torque Response Time Shaft Torque Ripple⁽³⁾ Drive Protection Functions

Motor Protection Functions

LV200

Two-Level Voltage Source Inverter with LV-IGBT Power Semiconductors Diode Front End (DFE) 6P, 12P Active Front End (AFE) 380 - 690 V AC 380 - 690 V AC 335 kW - 980 kW 375 kW - 1380 kW

Typically ±10 % 50 / 60Hz (± 5%) 0.91 to 0.96 for DFE rectifiers 1 for AFE rectifiers 0 to supply voltage 0 to 120Hz (higher on request) Typically > 0.97 for DFE rectifiers Typically > 0.96 for AFE rectifiers Induction, Synchronous or Permanent Magnet Motor Air Cooled

Vector Control (VC), Voltage Frequency Control (VF) $^{(2)}$ < 0.01% in field weakening / < 0.01% in constant flux < 1% in field weakening / < 1% in constant flux < 2% in field weakening / < 2% in constant flux (for synchronous motors) < 5% in field weakening / < 3% in constant flux (for induction motors) < 10ms

±1%

Overcurrent, overvoltage and undervoltage monitoring; earth fault; short-circuit detection and protection; semiconductor failure monitoring; cooling supervision; phase loss and others

Overload⁽⁴⁾, overspee

Environmental cond.

Ambient Temp. for Storage Ambient Temp. for Transport Operation Altitude

Relative Air Humidity Paint Colour Compliance with Standards Air cooled converter Ambient Temp. for Operation Degree of Protection

Options

Main Options

-15 °C to +75 °C -15 °C to +75 °C

< 2000m above sea level (100% load capacity) > 2000m above sea level (with derating) 5% to 95% (condensation not permitted) RAL 7035 (others on request) IEC 61800-2, IEC 60146-1-1, marine standards

< 80dB (A) at a distance of 1m from the cubicle +0 °C to +40 °C (higher with derating) IP23 (others on request)

Dynamic braking chopper, different communication modules, dv/dt filter, sinusoidal filter, input/output isolation switch, marine customization and others

- (1) Power rating are defined for 400V and 690V converters (2) Only for induction motors and quadratic torque loads. No speed sensor needed (3) Refers to maximum values of equipment
- (4) Depends on electrical characteristics