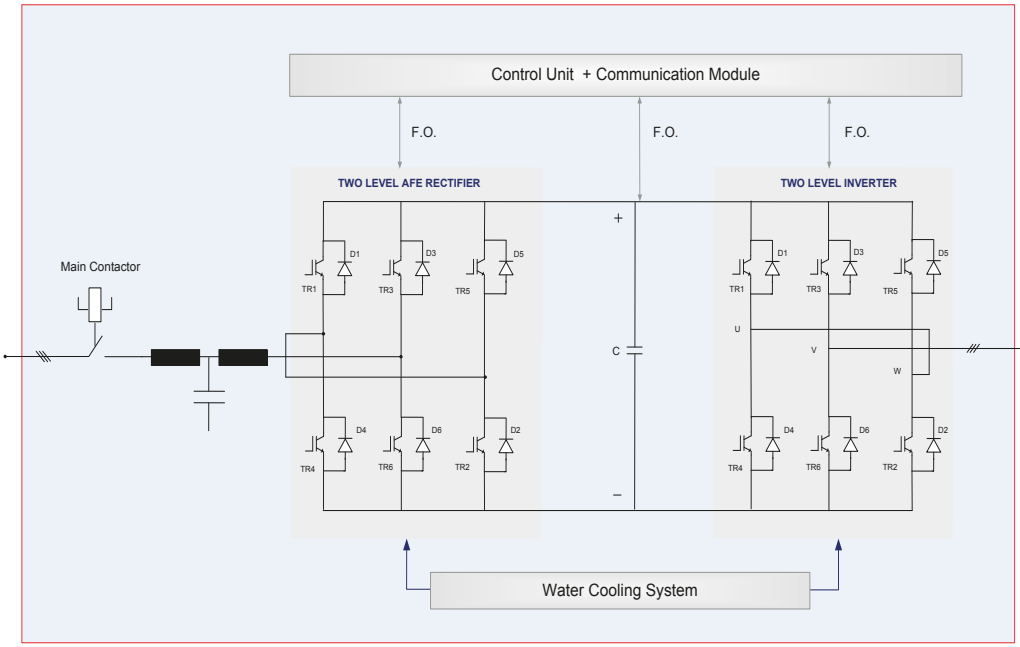
INGEDRIVE LV 800

Frequency converters
water-cooled, low-voltage

The **LV800** 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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Technical characteristics

INGEDRIVE LV 800

	LV800	
General data		
Inverter Type	Two-Level Voltage Source Inverter with LV-IGBT Power Semiconductors	
Rectifier Type	Diode Front End (DFE) 12P, 18P, 24P	Active Front End (AFE)
Main Supply Voltage Range	2x490 - 2x732 V AC	480 - 690 V AC
Output Power Range(1)	1495 kW - 8620 kW	1055 kW - 9090 kW
Supply Voltage Tolerance	Typically ±10 %	
Supply Frequency	50 / 60Hz (± 5%)	
Input Power Factor	0.96 for DFE rectifiers 1 for AFE rectifiers	
Output Voltage	0 to 440/660 V AC	0 to supply voltage
Output Frequency	0 to 120Hz (higher on request)	
Efficiency at Rated Load	Typically > 0.97 for DFE rectifiers Typically > 0.96 for AFE rectifiers	
Motor Types	Induction, Synchronous or Permanent Magnet Motor	
Converter Cooling	Water Cooled with Built-In Water to Water Heat Exchanger	
Control properties		
Control types	Vector Control (VC), Voltage Frequency Control (VF)(2)	
Static Speed Acc. (closed loop)(3)	< 0.01% in field weakening / < 0.01% in constant flux	
Static Torque Acc. (closed loop)(3)	< 1% in field weakening / < 1% in constant flux	
Static Torque Acc. (open loop)(3)	< 2% in field weakening / < 2% in constant flux (for synchronous motors) < 5% in field weakening / < 3% in constant flux (for induction motors)	
Torque Response Time	< 10ms	
Shaft Torque Ripple(3)	± 1 %	
Drive Protection Functions	Overcurrent, overvoltage and undervoltage monitoring; earth fault; short-circuit detection and protection; semiconductor failure monitoring; cooling supervision; phase loss and others	
Motor Protection Functions	Overload(4), overspee	
Enviromental cond.		
Ambient Temp. for Storage	-20 ºC to +55 ºC (for empty cooling system in water cooled version)	
Ambient Temp. for Transport	-25 ºC to +55 ºC (for empty cooling system in water cooled version)	
Operation Altitude	< 2000m above sea level (100% load capacity) > 2000m above sea level (with derating)	
Relative Air Humidity	5% to 95% (condensation not permitted)	
Paint Colour	RAL 7035 (others on request)	
Compliance with Standards	IEC 61800-2, IEC 60146-1-1, marine standards	
Noise	< 75dB (A) at a distance of 1m from the cubicle	
Ambient Temp. for Operation	+0 ºC to +45 ºC (higher with derating)	
Degree of Protection	IP44 (others on request)	
Primary Circuit Coolants Allowed	Seawater or freshwater	
Primary Coolant Temp. Allowed	+0 ºC to +38 ºC (higher with derating)	
Primary Circuit Pressure Drop	< 1bar	
Max. Primary Service Pressure	6bar	
Max. Primary ΔT	5 ºC	
Secondary Circuit Coolant	Controlled pre-mixed liquid (fresh water < 10µS/cm + anti-freezing)	
Secondary Circuit Features	Redundant pump	
Options		
Main Options	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

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