OPDE*plus XS*

HIGH PERFORMANCE AC DRIVE

TECHNICAL DESCRIPTION

UNIQUENESS AND TECHNOLOGICAL EXCELLENCE

The **OPDEplus series** distinguishes itself in the market through the uniqueness and technological innovation of its solutions.

- Ensures **optimal performance and simplicity of use**
- Complies with internationally recognized standards such as: **CE** (Europe), **UL** (USA/Canada).
- **Easy installation and commissioning**
- Ideal for **three-phase asynchronous motors** (IM), **Permanent Magnet Synchronous Motors** (PMSM) and **Synchronous Reluctance Motors** (SynRM)
- **Microprocessor** architecture on **unified software** and an integrated **IEC 61131-3 programmable PLC**
- All OPDEplus series drives can be programmed from a PC using the **"OPDExplorer"** configurator

	OPDE*plus XS*					
	4 A		8 A		12 A	
Available Size	**Pn [kW]***	**In [A]#**	**Pn [kW]***	**In [A]#**	**Pn [kW]***	**In [A]#**
Heavy overload: 200% x 3 sec. + 155% x 30 sec.	1,5	4	3,2	8	5,5	12
Light overload: 120% x 30 sec.	1,8	4,7	3,8	9,5	6,5	14,2
Standard overload: 150% x 30 sec.	1,6	4,2	3,4	8,4	5,8	12,6
Strong overload: 200% x 30 sec.	1,3	3,4	2,7	6,8	4,7	10,2
Dimensions	H= 277,6 x L = 72,5 x P/D = 164,2 mm; Kg = 2,7					

* Nominal power Pn @ 400Vac
\# Nominal Current In

TECHNICAL DATA SHEET| OPDE*plus XS*	**TYPE**	
	CM (CANbus-Multifeedback)	MM (MultiFieldbus-Multifeedback)
Supply voltage	• AC input : 3 x (200V-10% ÷ 480 V + 10%) • DC input : Vdc (280V-10% ÷ 680 V + 10%) • +24Vdc auxiliary supply voltage (standard version) * * For sizes 4A /8A the self-powered version is also available	
PC programming and device interfacing	Modbus RTU RS485, Modbus TCP/IP	
Fieldbuses	CANbus	PROFINET/EtherCAT
Digital/analog I/O	• n° 2 configurable opto-isolated digital outputs (max output current = 1A) • n° 3 configurable opto-isolated digital inputs, expandable to 5 inputs if the STO function is not present (to be requested during the ordering phase) • S.T.O. function SIL3/PLe • n° 1 configurable analog input ± 10V o 4 ÷ 20 mA • n° 1 motor thermal protection input (PTC, NTC, KTY84-130, KTY83-110, PT1000)	
Feedback supported	Resolver, Hiperface (ST/MT), Hiperface DSL (HDSL), SinCos Incremental, SinCos Absolute, EnDat 01/02/21/22 (linear & rotary ST/MT), Biss B/C (linear & rotary ST/MT), Tamagawa (ST/MT), TTL/HTL & TTL+Hall (single ended e diff. mode)	

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OPDE*plus XS*

Permanent Magnet Synchronous motors (PMSM)	Closed-loop control using one of the two possible feedbacks managed by the OPDEplus	**Synchronous Reluctance Motors (Synk & AsynRM)**	Closed-loop control using one of the two possible feedbacks managed by the OPDEplus
	Integrated control for anisotropic motors (PMSM-IPM such as MTPA and d-axis phasing@standstill		Optimized, sensorless closed-loop control with flow curves
	Sensorless (wide range) optimized for low speeds and high torques, and high-speed spindles		Motor control over a wide flux weakening range
		PWM	~ Max 18 [KHz]*
Asynchronous motors (IM)	FOC with feedback (vector with feedback)	**Control loop bandwidth**	Current loop: 1400~2000 [Hz] Max
	Scalar V/F control, V/F control (FOC), and Optimized V/F control with torque compensation		Speed loop: Max 200 [Hz]
	Sensorless (wide range) optimized for low speeds and high torques, and high-speed spindles	* For switching frequencies above 18 kHz, please contact the technical office of BDF Digital Spa	

MAIN CONTROL FEATURES

- Integrated EMC filter compliant with EMC standard EN 61800-3
- Advanced PLC in the standard IEC 61131-3 programming environment
- On-the-fly IM/PMSM/SynRM recovery
- Integrated dynamic braking module with the option for internal or external resistance to the drive (to be specified during the ordering phase)
- Standstill auto-tuning (AT) for identification of the equivalent mathematical model parameters of each electric machine
- Coated electronic boards
- Cooling fans with activation/deactivation control
- DC bus sharing (option for DC power supply)
- Book format design that saves space inside the cabinets
- Removable terminals (power and signal) for quick installation/maintenance

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