

escodrives.com

Frequency inverter
EDS3 IP66 Outdoor/Nema 4x
For Power Rating from 0,37 - 22kW
with and without switch elements



Outdoor rated - water and dust-tight

escodrives presents the new **escodrives** frequency inverter.

The escodrives frequency inverter series S3 impresses with its wide range of applications, simple operation and the numerous accessories. In the power range from 0.37 kW to 22 kW we offer a closed, dust tight product for direct wall mounting or on your machines - for the optimization of your applications.

Simply switch on and the **escodrives** S3 is ready to start!

The precise motor control is already set in the factory setting.

Intelligent macro functions reduce the programming effort significantly.

With only 60 parameters complex settings are realized.



Power supply	Recommended motor rating (kW)										
	0.37	0.75	1.5	2.2	4	5.5	7.5	11	15	18.5	22
1ph- 200-240V	████████████████████										
3ph- 200-240V	██										
3ph- 380-480V	██										

Main features

- ✓ Integrated EMC filter C1
- ✓ Integrated PI control
- ✓ Integrated braking chopper from 2.2kW
- ✓ Dual Analog Inputs
- ✓ **Bluetooth** connectivity with the optional **escodrives** Stick
- ✓ Model for single-phase motors up to 10,5A available
- ✓ Water and dust-tight design
- ✓ Conformal coating as standard
- ✓ Various accessories available
- ✓ Only four different sizes for the entire power range
- ✓ Application macros for industrial-, fan- and pump operations
- ✓ ModbusRTU® und CANopen® built-in
- ✓ Real-time display of all relevant values
- ✓ Sensorless Vector Control (Induction Motor, Permanent Magnet Motor, Synchronous-Reluctance Motor, Brushless DC Motor, Line-Start-Permanent Magnet Motor)
- ✓ Models in the range 3 x 220V available

esco – Your strong partner for electric drive system solutions

- Competent consulting and engineering
- Approved and future-proof technology
- Complete drive projects with products offering highest quality and best performance
- Europe-wide pre and after-sales service
- Extensive stock

A future-oriented partnership at the service of the customer

esco antriebstechnik gmbh stands for modern concepts of electrical and mechanical drive technology. The future-oriented company is part of the **esco** group, which operates throughout the world.

The esco delivery program:

Electric drive technology

Frequency inverter

Soft Starter

Automation and Control

technology:

Touch panel and panel PCs

PLC

SCARA robots

Mechanical drive technology

Service, consulting and system solutions





IP66 / Nema 4X outdoor rated

Built with tough polycarbonate plastics specifically chosen to withstand degradation by ultra violet (UV), greases, oils and acids. Also robust enough not to be brittle at -20°C.



Application Macros

Switch between Industrial, Pump and Fan mode to optimise the **escodrivives** S3 IP66 OUTDOOR for your application.



Washdown ready

With a sealed ABS enclosure and corrosion resistant heatsink.



Intuitive Keypad Control

A significant reduction of the required time than usual for parameterization.



Coated Heatsink

Ideal for hygiene based operations requiring washdown - such as food and beverage
- High-pressure cleaner suitable -



escodrivives for Single Phase Motors

Revolutionary motor control for the application of Capacitor or Shaded-Pole Single Phase induction motors.



escodrivives STICK

Rapid parameter cloning as well as to wireless connection to the **escodrivives** Tools software



Modbus RTU CANopen

On-board as standard



2 x RJ45 ports

The insertion of a splitter is, at connection of several participants in a communication line, not longer necessary.

Easy accessible EMC disconnect

Easy to wire

due to the large, accessible chamber and removeable gland plate



For ultimate ease of use

Local Speed Potentiometer

Run Reverse / Off / Run Forward Switch

Lockable Mains Disconnect/Isolation



Drive commissioning and parameter back-up

- Real-time parameter editing
- Simultaneous programming and monitoring of up to 63 frequency inverter
- Parameter upload, download und storage
- Real-time scope function and data logging
- Connection to the PC via cable or via **escodrivives** Bluetooth Stick

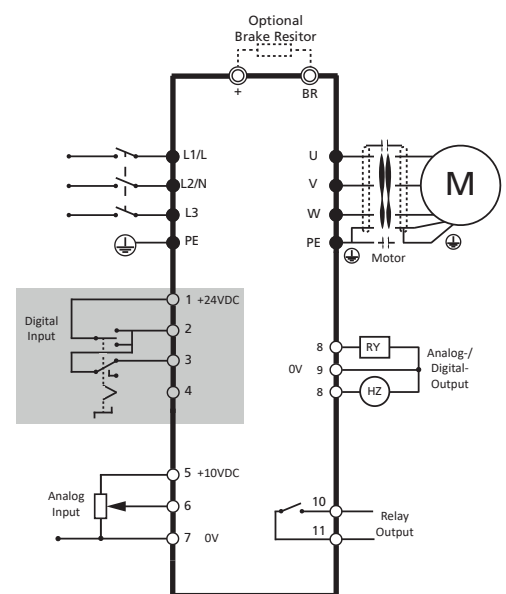
Technical Data ED-S3 (Protection class IP66 OUTDOOR)															
Model		200V - 240V 1 Phase Input				380 - 480V 3 Phase Input									
		Power Rating [kW]	0,37	0,75	1,5	2,2	0,75	1,5	2,2	4	5,5	7,5	11	15	18,5
Output Current [A]	2,3	4,3	7	10,5	2,2	4,1	5,8	9,5	14	18	24	30	39	46	
Supply Voltage, Supply Frequency	1 Ph. 200V ... 240V (+10%), 50/60Hz (±5%)				3 Ph. 380V ... 480V (+10%), 50/60Hz (±5%)										
Output Voltage	0,0V to max. input voltage														
Overload Capacity	150% for 60s, 175% for 2,5s														
Output Frequency	0 ... 500Hz (resolution 0,1Hz)														
Programming	Keypad	Integrated keypad as standard, optional remote control panels													
	Display	7-Segment LED													
	PC Software	escodrives Tools													
Reglerfunktionen	Control Method	Linear V/F characteristic, energy saving function, sensorless vector control for all Motor Types (IM, PM, BLDC; SynRM, LSPM)													
	PWM Carrier Freq.	4-32kHz effective													
	Stopping Mode	Ramp to stop: User Adjustable 0,1 - 600 secs, Coast to stop													
	Braking Chopper					integr.				integrated					
	Skip Frequency	individually adjustable incl. Hysteresis													
	Setpoint	Analog	Potentiometer, 0 - 10V, 10 - 0V; 0 - 20mA, 20 - 0mA; 4 - 20mA, 20 - 4mA												
	Control	Digital	Keypad, Modbus RTU, CANopen, fixed frequencies, various fieldbus connections (optional)												
E/A-Funktionen	Power Supply	24VDC (100mA), Short Circuit Protected, 10VDC (10mA) for Potentiometer													
	Programmable Inputs	4 (2)x Digital, 2 (1)x Analog selectable													
	Digital Inputs	8 - 30 VDC internal or external supply, Response time <4ms													
	Analog Inputs	Resolution: 12 bits, Response time: <4ms, Accuracy: ±2% full scale, Parameter adjustable scaling and offset													
	Programmable Outputs	1x Analog/ 1x Digital selectable, 1 Relay													
	Relay Outputs	Maximum Voltage: 250VAC / 6A; 30VDC / 5A; optionally expandable													
	Analog Outputs	0 ... 10V, max. 20mA													
EMC Filter	integrated (IEC 61800-3 Kategorie C1)														
Safety functions	Fire Mode (NO/NC) Selectable Speed Setpoint (Fixed / PI / Analog / Fieldbus), Emergency stop, Quick stop														
Protection class	IP66 / Nema 4x														
Ambient Conditions	Storage Temperature: -40°C to +60°C; Operating: -10°C to +40°C; Humidity: 95% Max, non condensing														
Conformance	CE, cULus, RCM														

Dimensions and Weight

Model		Dimensions (mm) W x H x D			Weight (kg)
200V - 240V 1 Phase	EDS3S-2004PL-66S1/N1	161	232	162 / 148	2,5
	EDS3S-2007PL-66S1/N1	161	232	162 / 148	2,5
	EDS3S-2015PL-66S1/N1	161	232	162 / 148	2,5
	EDS3S-2022PL-66S1/N1	188	257	182 / 170	3,5
380V - 480V 3 Phase	EDS3-4007PL-66S1/N1	161	232	162 / 148	2,5
	EDS3-4015PL-66S1/N1	161	232	162 / 148	2,5
	EDS3-4022PL-66S1/N1	188	257	182 / 170	3,5
	EDS3-4037PL-66S1/N1	188	257	182 / 170	3,5
	EDS3-4055PL-66S1/N1	210,5	310	238 / 222	7,0
	EDS3-4075PL-66S1/N1	210,5	310	238 / 222	7,0
	EDS3-4110PL-66S1/N1	210,5	310	238 / 222	7,0
	EDS3-4150PL-66S1/N1	240	360	275 / 262	9,5
	EDS3-4185PL-66S1/N1	240	360	275 / 262	9,5
EDS3-4220PL-66S1/N1	240	360	275 / 262	9,5	



Switch example (depend on model)



(Depending on programming, up to two analog inputs or up to four digital inputs are available)



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