SENTERA CONTROLS

DRE

Digital electronic speed controller, DIN rail

DRE is a digital motor speed controller with a regulated output and unregulated output, minimum and maximum output voltage setting and kick start / soft start selection. All parameters are accessible via 3-button interface with 7-segment display or via a user-friendly software application for Windows (3SModbus), using implemented Modbus RTU (RS485) communication.

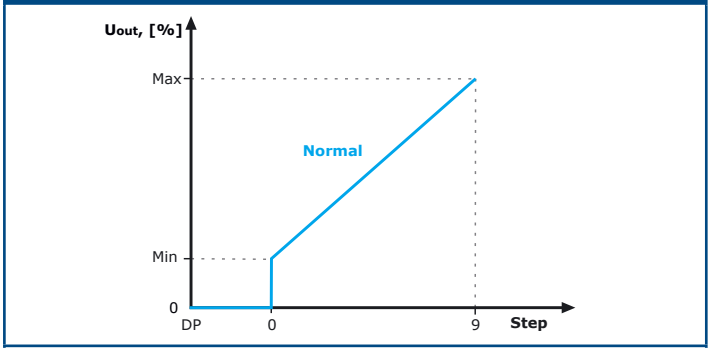
Key features

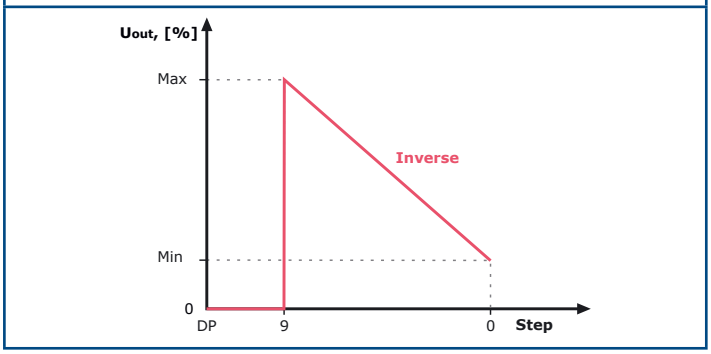
- 1-digit, 7-segment LED display and 3-button keyboard interface
- Step output voltage regulation in 9 steps
- Normal / Inverse mode selection
- Output voltage range: 30—100 % Us
- Minimum / maximum speed selection
- Kick start / soft start selection
- Modbus RTU (RS485) communication
- 3SModbus application for easy control, set up, and monitoring
- DIN rail mounting (DIN EN 60715:2003)
- Green LED operating indication

Technical specifications

Regulated output		30—100 % Us
Maximum load		2,5 A
Min. speed selection		30—65 % Us (approx. 70—150 VAC)
Max. speed selection		75—100 % Us (approx. 170—230 VAC)
Regulation		Normal or Inverse
Unregulated output		230 VAC / max. 0,5 A
Protection standard		IP30 (according to EN 60529)
Ambient conditions	Temperature	0—35 °C
	Rel. humidity	0—80 % rH (non-condensing)

Operational diagram(s)





Note: *All the diagrams refer to an ideal case of a resistive load. When using inductive loads, the output voltage might be lower depending on the inductance value! Adjust steps so that to set the required voltage.*

Article codes

	Supply	Max. rated current, [A]
DRE-1-25-DT	230 VAC ± 10 % - 50 / 60 Hz	2,5

Area of use

- Step speed control of voltage controllable motors in ventilation systems
- For indoor use only

Wiring and connections

L, N	Supply voltage, 230 VAC ± 10 % - 50 / 60 Hz
U2, U1	Regulated output (30—100 % Us)
L1, N	Unregulated output 230 VAC / max. 0,5 A
A	Modbus RTU (RS485) signal A
/B	Modbus RTU (RS485) signal /B
Connections	Cable cross section: max. 2,5 mm²

Caution: *If an AC power supply is used with any of the units in a Modbus network, the GND terminal should NOT BE CONNECTED to other units on the network or via the CNVT-USB-RS485 converter. This may cause permanent damage to the communication semiconductors and / or the computer!*

Standards

- Low Voltage Directive 2014/35/EC CE
- EMC Directive 2014/30/EC: EN 61326
- DIN rail EN 60715:2003
- EN 61000-6-3:2007/A1:2011/AC:2012
- WEEE Directive 2012/19/EU
- RoHs Directive 2011/65/EU

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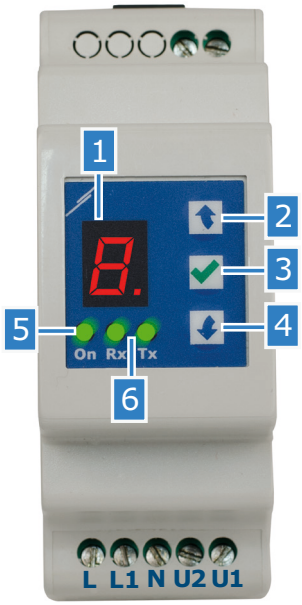
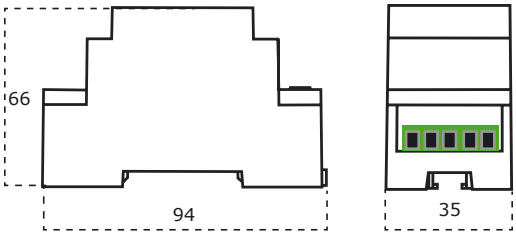


Settings

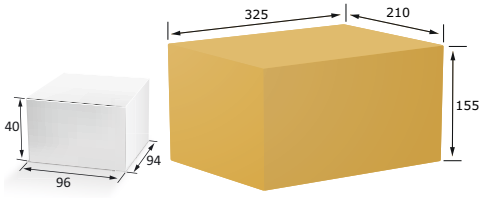
1. 7-segment LED display		Displays: • the output step in digits (0—9) • menu settings in letters ('n', 't', 'A', 'r', 'u', 'U', as per the menu structure) • unit operation status indication with: ('.'), ('d') or digit from 0 to 9*
2. Up button		Navigation through the menu, increasing values
3. OK button		Menu access, confirmation
4. Down button		Navigation through the menu, decreasing values
5. Normal operation LED indication	Constant green	Indicates normal operation
6. Modbus communication indication	Blinking green	**Rx:** Receiving
	Blinking green	**Tx:** Transmitting

** You can find the menu structure, default controller settings and detailed explanation about controller functionality and display indications in the mounting instructions. Download them from:*
http://www.sentera.eu

Fixing and dimensions



Packaging



Article code	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
DRE-1-25-DT	Unit (1 pc.)	96	94	40	0,13 kg	0,14 kg
	Box (20 pc.)	325	210	155	2,60 kg	3,060 kg