

# 0-10 V Speed Controller

## Datasheet



<b>Item No.</b>	<b>312414</b>
Delivery scope	Poti with housing (without cable)
Housing material	Plastic
Protection class	IP 40
Connection	1x RJ45 connector to interface with fans suitable for 0-10 V control
Power supply (via RJ45)	10 VDC
Power supply (for error relay)	DC: 15-30 V AC: 24 V +/- 10 %
Dimensions L/W/H	85 x 85 x 36 mm
Max number of connectable FDs	8

## The Functionality

Potentiometer with housing that is suitable for group control of multiple fans with 0-10V interface.

All fans are connected in parallel and receive via RJ45 Pin4 the same 0-10V control signal for speed control.

The status of the fan chain is indicated by two built-in LEDs. The green LED indicates status "OK". The red LED indicates state of alarm "ERR", i.e. at least one fan in the group has failed and interrupted the group-alarm loop as a result of this.

If there is no failure in the chain, there will be a "closed loop connection" between RJ45 Pins 7 ↔ 8 (external alarm). Once GND signal is applied to terminal 8 / JP45-Pin8, the LEDs will change from red to green indicating no error and the alarm relay is energized at the same time.

## Intended Use

The fans are chained by patch-cable and connected to the RJ45 plug of the “speed controller 0-10 V”.

The “speed controller 0-10 V” is powered by the fan network (RJ45/Pin5=10 V and Pin3=GND).

The 0-10 V control signal can be adjusted between U<sub>min</sub> and 10 V via integrated rotary knob.

Offset U<sub>min</sub> can be varied between 0-2 V via second potentiometer located on the PCB inside the housing.

For group alarm function, the last fan in the chain must have a bridge between Pin7 and Pin8 of the last RJ45 connector.

This state of error can be relayed to an external DDC by fault indication relay (dry contact, changeover contact).

The ERR relay must be powered by a separate 24VAC or 24VDC supply voltage.

The ERR relay breaks for failure, i.e. is deenergized in case of failure. Hence if terminal 7 ↔ terminal 8 (internal pin) or RJ45-Pin7 ↔ Pin8 is bridged (external RJ45), status will change from ERR → OK.

If Jumper JP1 is placed (factory default setting), this bridges electronics-GND Pin3 and Pin7.

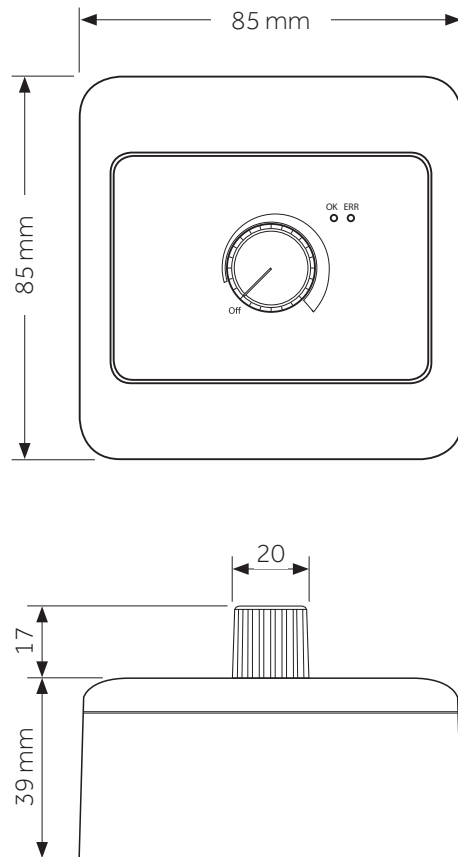


Fig. 1: Dimensions

Designation	Signal
Terminal 1 / RJ45-Pin 1	MODBUS RS A
Terminal 2 / RJ45-Pin 2	MODBUS RS B
Terminal 3 / RJ45-Pin 3	Electronics GND
Terminal 4 / RJ45-Pin 4	0-10V output
Terminal 5 / RJ45-Pin 5	10V power supply
Terminal 6 / RJ45-Pin 6	N.C.
Terminal 7 / RJ45-Pin 7	Alarm 1 (GND if JP1 is placed)
Terminal 8 / RJ45-Pin 8	Alarm 2
Terminal 9	ERR relay „make for failure“
Terminal 10	ERR relay common
Terminal 11	ERR relay „break for failure“
Terminal 12	Ext. power supply ~/+
Terminal 13	Ext. power supply ~/-

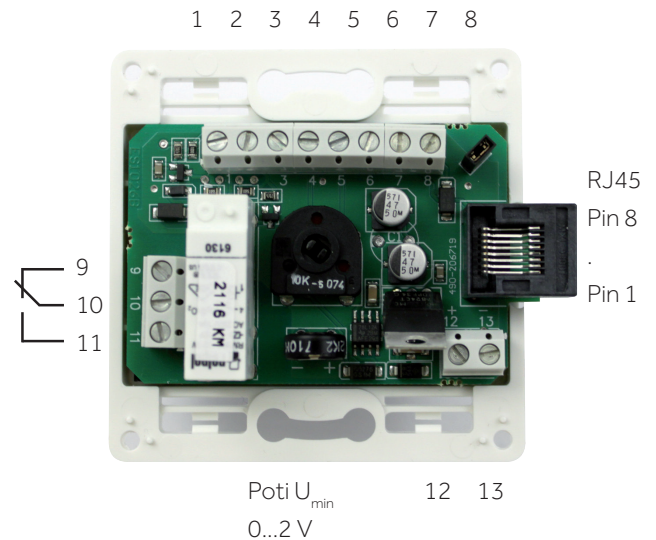


Fig. 2: Pin assignment

Exyte Technology GmbH  
 Rosine-Starz-Str. 2-4  
 71272 Renningen, Germany  
 Telefon +49 711 8804-8000  
 E-Mail info@exyte-technology.net

[exyte-technology.net](http://exyte-technology.net)