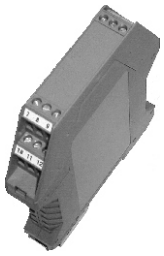
■ Rotation Direction Detection Unit with Enable Input Type DS 9001

Highlights

- **Direction detection of incremental encoders**
- **1 relay output**
- **1 opto-coupler output**
- **1 enable input**
- **High reliability**
- **Low power consumption**
- **Small dimensions**



General

The new unit **DS 9001** is used to find out the rotation direction of incremental encoders.
There are two input channels provided. These input channels are optically isolated from the internal circuitry. By this way disturbances by a noisy environment are reduced. The input pulses of the two channels must have 90 degrees out of phase. When using incremental encoders together with this unit the output signals at the output channels are indicating the rotation direction of the encoder.
When the power supply is applied to the unit, the relay is not excited and the opto-coupler output is non conducting. In addition there is a third input channel for setting the device to a predefined state (enable input).

Digital Inputs

These input channels can be used to connect an incremental encoder and if desired the enable input. The input channels have following features:

- Selectable input voltage: 5 V, 12 V and 24 V (adjustable by DIP switches). Tolerance of input channel voltage is up to 20% of the nominal input level.
- Input current must be ≥ 5 mA
- Input frequency up to 25 kHz will be accepted (other frequencies on inquiry)

Digital Outputs

There are one relay output channel and one optoisolated output channel.
For switching high currents respectively high voltages the relay output channel should be used. For fast switching requirements there is a opto-coupler output channel provided (“Open Collector”).

Construction

The unit **DS 9001** is provided for DIN-rail mounting according to EN 50022.
The case is of Polyamid PA 6.6 (color green).

Power Supply

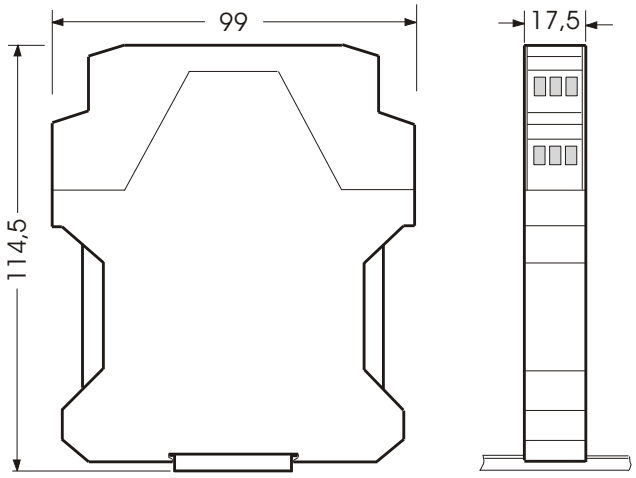
The unit is designed for a power supply from 12 to 32 VDC. The power supply is isolated from the input and output channels.

Specifications

Input channels	
Input voltage level	: 5 V, 12 V and 24 V (adjustable)
Tolerance of input level	: +/-20% of nominal input level
Input current per channel	: 5 mA source current
Input frequency	: max. 25 kHz
Isolation	: 2500 V
Relay contact ratings	
Voltage	: max. 250 VAC
Current	: max. 3 A
Opto-coupler output	:
Voltage	: max. 30 V
Current	: max. 10 mA
Power supply	
Voltage	: 12 V...32 V
Current	: max. 50 mA by 24 V
Construction	
CE	: 2014/30/EU, 2014/35/EU, 2011/65/EU+2015/863
Protection	: IP40
Mounting	: EN 50022
Operating temperature	: -5 to +55 °C
Dimensions	: 99 x 114.5 x 17.5

Ordering Information

DS 9001						



Technical Subjects To Change