



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



PLC-...-EIK 1-SVN 24P/P

PLC-...-EIK 1-SVN 24M

PLC Electronic Sensor Terminal Blocks for NAMUR Proximity Sensors



INTERFACE

Data Sheet
102895_04_en

© PHOENIX CONTACT - 04/2007

Description

The **PLC-...-EIK 1-SVN 24...** electronic sensor terminal block converts the variable resistance of a NAMUR sensor into a digital signal that can be read by a PLC.

In addition, the internal circuitry monitors the sensor side for a short circuit or wire break and indicates these errors via the integrated LED.

Thanks to a corresponding resistance circuit, the PLC-...-EIK 1-SVN 24... can be used to monitor all mechanical switches (N/C or N/O contacts) for short circuits and/or wire breaks.

In addition to a high packing density, this switching amplifier features the following:

- Stabilized supply voltage for the NAMUR proximity switch
- Defined recognition and evaluation of the analog sensor signal
- Monitoring of the sensor cable for short circuits and wire breaks; a fault is indicated by the red LED
- Status display (high signal) via green LED
- 24 V/50 mA digital output for directly connecting programmable logic controllers
- Positive or negative error output depending on the version
- Additional output for error messages
- Connection option for PLC V8 adapter
- Bridging and labeling with standard terminal block accessories



Make sure you always use the latest documentation.
It can be downloaded at www.download.phoenixcontact.com.
A conversion table is available on the Internet at
www.download.phoenixcontact.com/general/7000_en_00.pdf.



This data sheet is valid for all products listed on the following page:

Ordering Data

PLC Electronic Sensor Terminal Block for NAMUR Proximity Sensors

Description	Type	Order No.	Pcs./Pck.
PLC electronic sensor terminal block for NAMUR proximity sensors			
Positive switching, with screw connection	PLC-SC-EIK 1-SVN 24P/P	2982663	10
Positive switching, with spring-cage connection	PLC-SP-EIK 1-SVN 24P/P	2982676	10
Negative switching, with screw connection	PLC-SC-EIK 1-SVN 24M	2982595	10
Negative switching, with spring-cage connection	PLC-SP-EIK 1-SVN 24M	2982605	10

Accessories

Description	Type	Order No.	Pcs./Pck.
Double-level terminal block, with pre-assembled resistors	UKK 5-2R/NAMUR	2941662	50
Insulating plate	PLC-ATP BK	2966841	25



The PLC-ATP BK insulating plate should be used in the following cases: always fit at the start and end of a PLC terminal strip for voltages greater than 250 V (L1, L2, L3) between the same terminal points on adjacent modules (FBST 8-PLC... or FBST 500... can be used for potential bridging) and for safe isolation between adjacent modules.

For other accessories such as power terminal blocks and plug-in bridges please consult the INTERFACE catalog and www.phoenixcontact.com.

Technical Data

Power Supply

Nominal input supply voltage U_{VN}	24 V DC $\pm 20\%$
Typical input current at U_{VN}	14 mA, approximately
Transmission frequency f_{limit}	350 Hz, approximately
Input circuit	Green LED, protection against polarity reversal, surge protection

Control Circuit

Non-load voltage	8.2 V DC $\pm 10\%$
Switching point according to EN 60947-5-6	
In conductive state	≥ 2.1 mA
In disabling state	≤ 1.2 mA
In the event of short circuit	20 mA, approximately
In the event of wire break	12 mA, approximately
Switching hysteresis	0.2 mA, approximately
Internal resistance	1 k Ω , approximately
Protective circuit	Surge protection

Alarm Output

Operating voltage range (negative switching)	3 V DC ... 33 V DC
Operating voltage range (positive switching)	$U_{VN} - 1.5$ V
Limiting continuous current	100 mA
Voltage drop at maximum limiting continuous current	≤ 1.5 V
Output circuit	Red LED, surge protection

Signal Output

Limiting continuous current	50 mA
Voltage drop U_R at maximum limiting continuous current	≤ 1.5 V
Output voltage (positive switching)	
In conductive state	≤ 100 mV
In disabling state	$U_{VN} - U_R$
Output voltage range (negative switching)	3 V DC ... 33 V DC
Output circuit	Surge protection

General Data

Rated insulation voltage	50 V DC
Impulse voltage withstand level/insulation	0.4 kV/basic insulation
Ambient operating temperature range	-20°C ... 50°C
Nominal operating mode	100% operating factor
Inflammability class according to UL 94 (housing)	V0
Air and creepage distances between circuits	According to DIN EN 50178
Pollution degree	2
Surge voltage category	I
Mounting position	Any
Assembly	Can be aligned without spacing
Dimensions (W x H x D)	6.2 mm x 86 mm x 80 mm
Conductor cross section	
With screw connection	0.14 mm ² ... 2.5 mm ²
With spring-cage connection	0.2 mm ² ... 2.5 mm ²
Housing material	Polybutylene terephthalate PBT non-reinforced, green

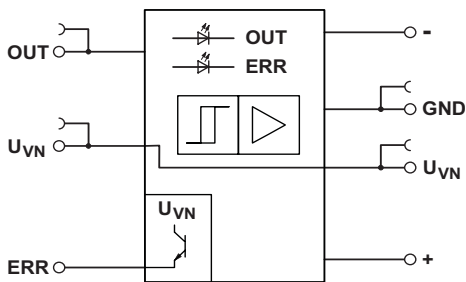
Block Diagrams**Positive Switching Error Output ERR**

Figure 1 Block diagram for terminal blocks with positive switching outputs (P/P): Both +24 V connection terminal blocks are bridged internally

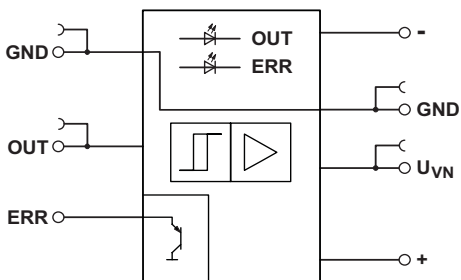
Negative Switching Error Output ERR

Figure 2 Block diagram for terminal blocks with negative switching (M) outputs: Both GND connection terminal blocks are bridged internally

Truth Table

Sensor status	Switching level		LED	
	OUT	ERR	green	red
Conductive	L	L	off	off
Disabling	H	L	ON	off
Short circuit	L	H	off	ON
Wire break	L	H	off	ON

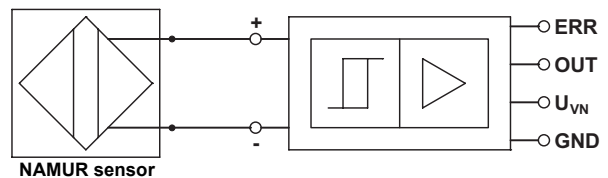
Application Examples

Figure 3 Application with NAMUR sensor

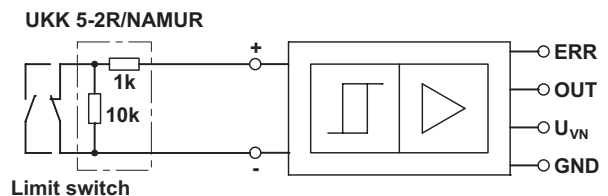


Figure 4 Application with limit switch

© PHOENIX CONTACT 04/2007