Impulse Converter

Contact-Protection-Relay

AD-KI 100 GS

AD-KI 100 GS-O

Description

The contact protection pulse relay (switching amplifier, pulse shaper) serves preferably the protection of weak transducer contacts or the amplification of binary transducer signals. At the same time it converts the prepared input signals to output pulses with constant, adjustable lengths (via trimmer at the front). Typical input signals are reed contacts, signal generator according to Namur (DIN EN 60947-5-6), TTL level, voltage signals or resistance changes. Heavy-duty and potential-free contacts are available at the output. The version AD-KI 100 GSO has wear-free transistor outputs, which are also galvanic separated via opto-coupler. Further, the device has an electronic wide-range power pack, which supplies the AD-KI 100 GS(O) energy-efficient from a wide supply voltage range.

Application

Pulse reception of water meter or flow monitors for metering the through-flow quantity. Amplification and contact protection of weak transducer signals (reed contacts, limit switches, etc.), sound signal transmission in control circuits. Sound amplifier for inductive and capacitive proximity switches according to Namur (DIN 19234).



Specific characteristics

- support for all standard encoder types
- via front-trimmer adjustable output pulse length
- LEDs for signal display
- two independent potential-free relay output
- two independent semiconductor switches
- wide range power supply
- narrow Design

Business data

Order number

AD-KI 100 GS-N	with 2 independent relay outputs, Namur logic
AD-KI 100 GS-N-O	with 2 independent semiconductor outputs, Namur logic
AD-KI 100 GS-K	with 2 independent relay outputs, contact logic
AD-KI 100 GS-K-O	with 2 independent semiconductor outputs, contact logic

Information

Downloads

Safety instructions	ad-safety-instructions.pdf

Technical specifications

SALES & ADVICE

GRUBATEC MESS- UND REGELTECHNIK

MANUFACTURER

ADAMCZEWSKI Elektronische Messtechnik

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Subject to technical changes and printing errors.

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Technical specifications

Impulse input

Min. pulse width	2 ms
Namur supply voltage	ca. 8,2 V DC
Logic level for Namur signals	Low < 1,2 mA ... High > 2,1 mA
Max. input voltage (active)	30 V DC
Logic level for active signals	Low < 5 V ... High > 20 V
Type of contact	potential-free

Pulse processing

Adjustable output pulse length	0,2 ... 10 s (0,5 s factory default)

Relay outputs

Maximum switching load AC	250 V, 2 A
Maximum switching load DC	50 V, 2 A
Contact construction	potential-free changeover
Switching operations mechanical	10000000
At 230V/2A AC, cos(phi)=1	600000
At 230V/2A AC, cos(phi)=0,4	200000
At 24V/1 A DC	200000

Semiconductor outputs

Max switching voltage	30 V DC
Max. switching current	50 mA DC
Working voltage at pullup	10 ... 30 V DC
Internal pullup	5 kOhm

Supply

Voltage range AC	50 ... 253 V AC, 50/60 Hz
Nominal voltage AC	230 V AC
Voltage range DC	20 ... 253 V DC
Nominal voltage DC	24 V DC
Power consumption AC / DC	3 VA / 2W

Transmission behaviour

Temperature influence	100 ppm/K
Response time	~ 5 ms

Housing

Dimensions (WxHxD)	23x81x103 mm
Type of protection	IP 20
Connection method	screw clamp
Terminals, wire cross section	2,5 mm² flex wire / 4 mm² one wire
Bolting torque terminals	0,5 Nm
Weight	~ 115 g
Manner of fastening	35 mm DIN rail 35mm

Environmental conditions

Ambient temperature	-10 ... 50 °C
Storage and transport	-10 ... 70 °C (no condensation)

EMC

Product family standard	EN 61326-1 [1]
Emitted interference	EN 55011, CISPR11 Cl. B, Gr. 1

Electrical safety requirements

Product family standard	EN 61010-1
Overvoltage category	II
Pollution degree	2

Galvanic isolation, test voltages

Input / output	3,75 kV, 50 Hz (1 min.)
Signal / supply unit	4 kV, 50 Hz (1 min.)

Protection circuits

Input	electrical surge protection
Power supply	protection against over voltage, over temperature and reverse polarity

[1] During checking, slight signal deviations are possible.

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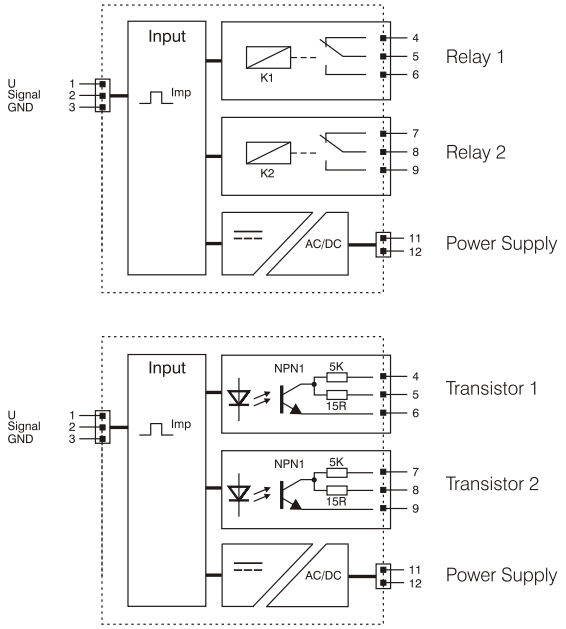
Impulse Converter

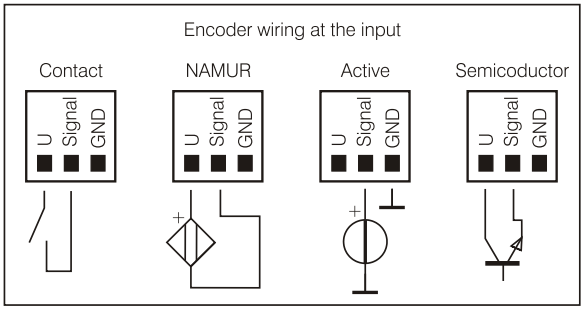
Contact-Protection-Relay

AD-KI 100 GS

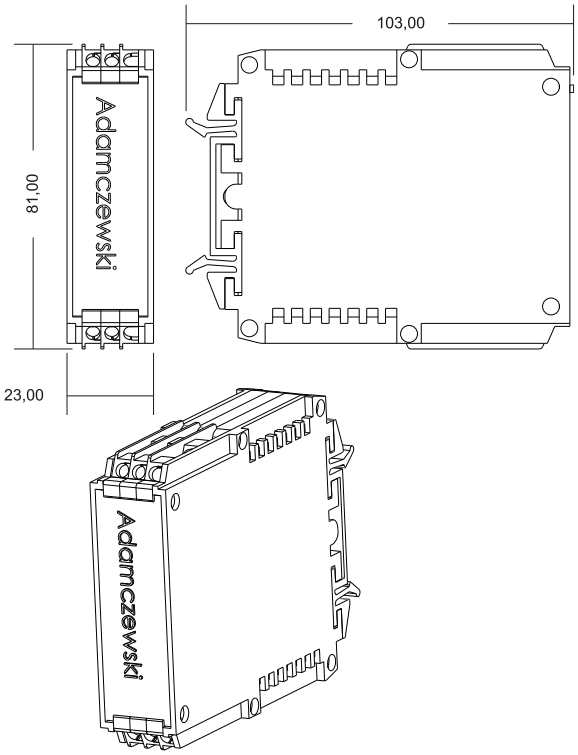
AD-KI 100 GS-O

Block and wiring diagram





Dimensions



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Circuit examples

Diagram: AD-KI 100 GS switching logic

