

Evaluation unit Type KAG2

Evaluation unit non-contact overhead wire contact

KAV1



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Description

The evaluation device Type-KAG2 is used for the signal evaluation of the contact less overhead line contact Type 8474 (TLC4).

Both an isolation- and a signal evaluation stage are housed in a modular plastic housing.

The evaluation stage evaluates the incoming signals. Depending on their number, the input signals are stored, evaluated and serially output as standard pulses.

At the top of the housing, there are eight DIP switches on the side.

A change in the standard pulse duration can be realized by the switch **S1** according to the operating requirements (S1 »off« = 0.6s, S1 »on« = 1s).

The user can change the input splitter by actuating the switch **S2**:

S2 »off« (1: 1) \times 1 input- = 1 output pulse;

S2 »on« (2: 1) \times 2 input- = 1 output pulse (1 current collector with 2 coils).

In addition to signal processing, the signals are monitored for faults. The signals or switching states which are received on the 2 signal lines are permanently compared with one another. Only antivalent signals are permitted as useful signals in a very narrow time window. If antivalent signals outside the time window or common-mode signals are detected, these are interpreted as a fault. In the event of a fault, the transmission of an output signal is blocked and the fault on the device is indicated by means of the red LED in the front. A potential-free change-over contact is available for further indication of the fault. The relay for the signaling of the fault can be operated in the quiescent or working current principle.

The DIP switch **S3** in »off« position means that the relay is operated in the »quiescent current principle«, that is, it is controlled in the normal case. In the event of a fault, the yellow light-emitting diode goes out and the red light-emitting diode flashes.

In this operating mode, monitoring of the connection lines to the overhead line contact and the function of the latter also allows monitoring of the operating voltage.

In position S3 »on«, the relay operates according to the »working current principle«, that is, if a fault is present,

the relay is activated and the red light-emitting diode flashes. The fault indication remains active until the fault is cleared and the fault is acknowledged at the evaluation unit or via a remote contact (terminal 19/20).

The switch **S4** acts on the relay output Switch 2 in such a way that the relay is switched between quiescent and working current mode (S4 »off«, S4 »on«).

The switch **S5** can be a filter in the input (S5 »on«).

Thereby spurious pulses, the occur within 4 ms after a regular pulse.

The switches **S6/S7/S8** are intended for other functions, which have no meaning in this version.

The evaluation unit KAG2 is only designed for a auxiliary DC-voltage. This can be fed via the connector terminals 17 (+) and 18 (GND), or via the contacts 1 (+) and 2 (GND) into the DIN rail connectors.

ATTENTION:

Only DC 24V can be supplied via the contacts in the DIN rail!

If an AC supply is to be built up, this can be done via a power supply AC/DC 24V (for example, KAG-NT), which can be supplied via the DIN rail adapter.

All connections on the housing are designed as 4-pin connectors.



Technical data

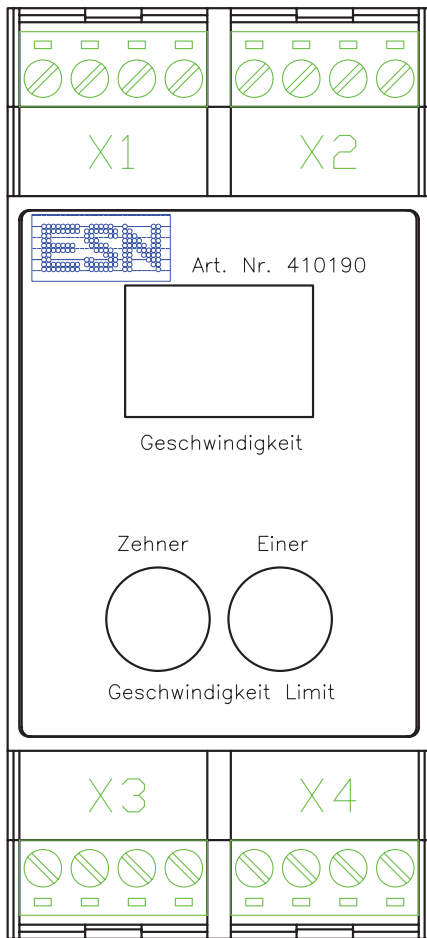
Dimensions	WxHxD 45/99/117 mm
Housing material	Polyamid 6.6, class V0 in accord. to UL94
Attachment	standard carrying rail as per DIN EN 50022
Weight	approx. 0.3 kg
Type of protection	Housing: IP 20; terminals: IP 10
Ambient temperature	-20°C to +70°C
Supply voltage	terminal 17 (VCC); 18 (GND) DC 18V to 75V, only DC 24V via the contact elements into the DIN rail terminal 1 (+) and 2 (GND), AC 230V with separate power supply AC 230V/DC 24V
Current drawn	approx. 10VA /10W
Sensor connection	TLC4: terminal 1 (+); terminal 2 (-) resistant to short-circuits
Open-circuit voltage:	max. DC 30V± 5%
max. current	approx. 200 mA
Signal inputs:	TLC4: 2 antivalent inputs, terminals 3 and 4
max. current	max. 35 mA (limited)
Input divider	see table next side
Input memory	max. 15 signal pulses can be stored
Relay outputs	2 changeover contacts (zero-potential), terminals 6,7,8 and 10,11,12, Voltage Current cos ϕ AC 250 V 8.0 A > 0.7 DC 80 V 0.5 A ohmic load
Signal duration	see table next side
Fault	1 changeover contact (zero-potential), terminals 14,15,16, Voltage Current cos ϕ AC 250 V 8.0 A > 0.7 DC 80 V 0.5 A ohmic load Can be switched between working current and quiescent current
Ext. acknowledgement	Remote acknowledgment (zero-potential), terminals 19, 20 (with DC 24V)
Voltage at the terminals	DC 24V; $I_k < 35$ mA
Test voltage	5 kV _{eff}

Ordering information

Type	Part No.
KAG2	410190

Cabinets wired to hold a maximum of 4/8 evaluation units, are available on demand.

KAG2



Legend:

PWR: LED, auxiliary voltage available

SWT: LED, Relay Switch 1 energized

ERR: LED, error detected

Quit: button, reset fault

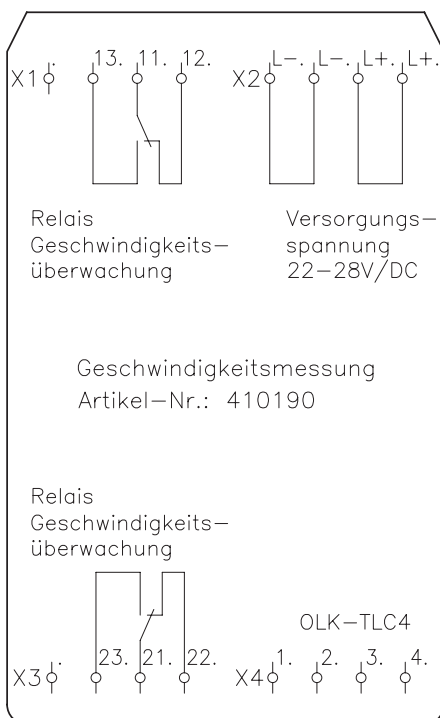
Fault: relay, report an error

Switch 1/2: Relay, signal output

TLC4: Overhead contact connection

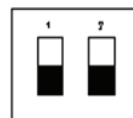
Connection DIN rail adapter:

View from above.

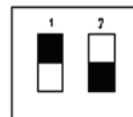


Function of the DIP-switches:

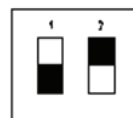
Abstand Kohleschleifleisten:



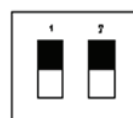
Abstand 25cm



Abstand 30cm



Abstand 35cm



Abstand 40cm