

The electronic fault indicator system ENQ4 offers in a compact form a complete control – and disturbance monitoring-system to stop the operating conditions, when unacceptable conditions arise on compressors, automatic-machines, vehicles, heating installations and air conditioning systems etc.



- Simplify maintenance
- Report faults
- Avoid damages
- Monitor equipment
- Reduce service costs
- Raise operational readiness

Installation

There are 4 fault-detection-inputs and a control input, which operates directly to the output relays of the unit.

Each fault will be indicated by a red LED at the front panel, the fault free operation is shown by a green LED.

ENQ4 has a plastic front panel IP54 with identification panel for the fault messages. A paperstrip for inscriptions is enclosed at each item. This strip can easily be pushed into the considered side pocket.

All electronic components are integrated in a switchboard mounting housing 48x48mm. The device is facially splash and dust proof.

In addition to each fault report display, space for text for customer specific formatting of the reports is provided. We will supply the devices with the appropriate text as per your text documentation for mass production requirements.

Several fault annunciators can be arranged next to each other in the form of a board.

The report is made through external break contacts so that separate cable monitoring is assured.

Various operating/reporting voltages up to AC 230V can be used.

Function

During fault free operation (all external transmitting relays closed) the central transmitting relay A1-14 is closed. A report coming through the fault reporting input S1-S4 (opening of the transmitting relay) causes the central transmitting relay A1-14 to be switched off in addition to activating the appropriate LED display.

As a result of this, for example, the machine/equipment being monitored is switched off. Each report channel has a report memory so that faults occurring even sporadically are recognised. The acknowledgment takes place with the interruption of the mains current of the fault annunciator system or the entire machine.

The condition „ready to service“ is shown by a green LED, which will deactivate in case of a fault message.

Special function test operation (input S5)

The closing of the input relay S5 activates the opening of the transmitting relay A1-14. The A1-14 relays will close with the opening of S5 provided that the input S1-S4 do not have a fault report.

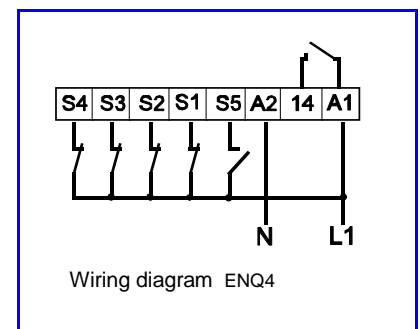
Hints for installation

Extensive technical switching measures guarantee the highest degree of operational safety. Every fault reporting input is galvanically separated from the processing electronics via an optocoupler.

Additionally each input is equipped with a signal delay of about 200ms for the purpose of filtering out any possible current interruptions occurring momentarily.

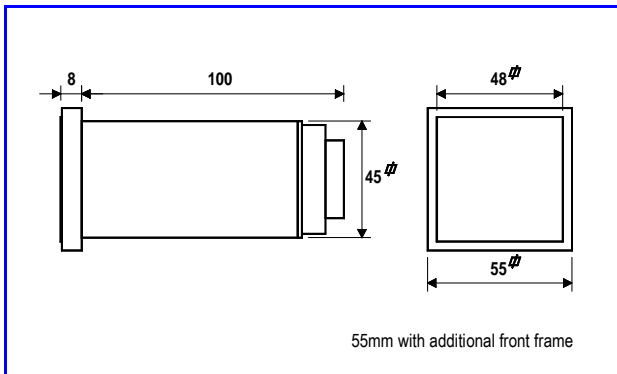
The central transmitting relay is also equipped with such a time delay. In this way, the switching on of the entire plant and the simultaneous closing of the transmitting relays do not lead to a fault report.

These measures permit the use of the equipment with unshielded input cable up to 100m in length.





Fault Indicator System ENQ4



Accessories

A plastic front frame with external dimensions of 55x55mm is available as an accessory.

If desired each ENQ4 is available without front foil and mounting material for back side installation in existing operator tableaus.

Specifications	
Operating voltage	AC 230V, 50-60Hz AC 115V, 50-60Hz DC 24V
Voltage tolerance	85..110% von U_N
Residual ripple (type DC)	5%
Power consumption	AC 1,5VA; DC 2W
Inputs	4 fault report inputs, reporting on opening, 1 additional function
Function	S1, S2, S3, S4 switching, reporting, storing S5 inverted switching without storing in memory
Report input voltage	as same as operating voltage
Reporting input current	< 10mA
Signal delay	approx. 200ms for each reporting input and additional 200ms for relay contact
Acknowledgement/reset	by interruption of mains supply
Protection	front IP54
Switching capacity	1 N/C, max. AC 250V, max. 8A
Contact life	mechanical 2×10^7 operations
Temperature range	0° - + 50°C (dew-free)
Dielectric strength	4kV DIN VDE 0110-1:1997-04
Temperature range	approx. 180g
Installation position	Any, as required

Order-No	Type
583000	ENQ4 AC230V
583001	ENQ4 AC115V
583002	ENQ4 DC24V
583010	Front frame ENQ4