product specification
quadruple optocoupler: **Opto1-03**

☐ **Outputs potential-free**

☐ **Short circuit proof power supply integrated**

☐ **Operating status shown by LED**

☐ **Suitable for the tropics - epoxy resin casted**

☐ **Simple mounting on rail acc. to DIN 46277**

☐ **Extra low safety voltage**
PELV (EN 50178) SELV (EN 60950)

☐ **Conforms to EMC and low voltage directive** CE

☐ **Safety acc. to VDE, EN, UL, CSA**

CE

Application

The optocoupler Opto1-03 is applied for an effective protection of signal lines of e.g. PLC control systems against overvoltages and interferences. This is achieved through the galvanic isolation of the signals at the integrated optocouplers.

These unallowable overvoltages can arise from wiring errors. Also inappropriate measurements in a not de-energized state of the control system can lead to overvoltages at the input terminals of the PLC. A common cable routing of high voltage lines and PLC control lines, with poor or damaged insulation can as well lead to interferences or destroy the input circuitry of the PLC.

Because of the integrated power supply this quadruple optocoupler has very small dimensions, compared to 4 single optocouplers with external power supplies. All necessary interconnections, like the looping through of the voltage supply, are already realized. This reduces the expenditure of wiring.

Functional principle

The inverted optocoupler is construed as switchable voltage source with galvanic isolated input.
In this quadruple optocoupler 4 switches (S) put out the states of closed and open using transistor switches (TS) at the outputs, which are galvanically isolated from the inputs.

The Opto1-03 has an own internal power supply, whose terminal +24V has to be connected with the 4 switches. The switches are connected with the input terminals IN1 - IN4.

The transistor switches, which are galvanically isolated from the input circuit, need a postive voltage at the OUT+ terminal. This voltage is connected to the outputs OUT1 - OUT4, if the dedicated switch at the input is closed. The switching voltage at the input is 24VDC.
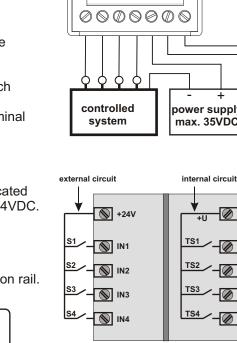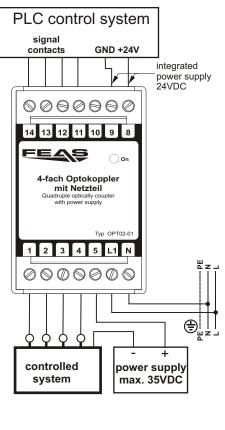
Design

Completely embedded with resin in a plastics housing for mounting on rail.

⚠ **Please read the data sheets and the user manual for further information**

PLC control system

signal contacts   GND +24V

integrated power supply 24VDC

4-fach Optokoppler mit Netzteil
Quadruple optically coupler with power supply

Typ OPT02-01

controlled system

- + power supply max. 35VDC

external circuit   internal circuit

+24V   +U   OUT+
S1 IN1   TS1   OUT1
S2 IN2   TS2   OUT2
S3 IN3   TS3   OUT3
S4 IN4   TS4   OUT4