Limit switch
EGS80

Description

Limit switches EGS80 are suitable for a lot of measuring tasks.

2- and 3-wire transmitters as well as active power supplies with 0 / 4 mA ... 20 mA signal can be connected. Two relays and an active 0/4 mA ... 20 mA current output are available as outputs. The current output is freely scaleable. The relay contacts can be integrated in security relevant circuits.

The limit switch has a measured value display with 17 different indicating devices (kg, t, N, bar etc.).

The device is operated via the control surface on the front panel or with the free software which is easy to use. A file with the setting parameters can be created, stored and be loaded into any EGS80.

A connection cable for the PC connection with „SUB-D9/25 to phone jack" or „USB A to phone jack" can be supplied optionally.
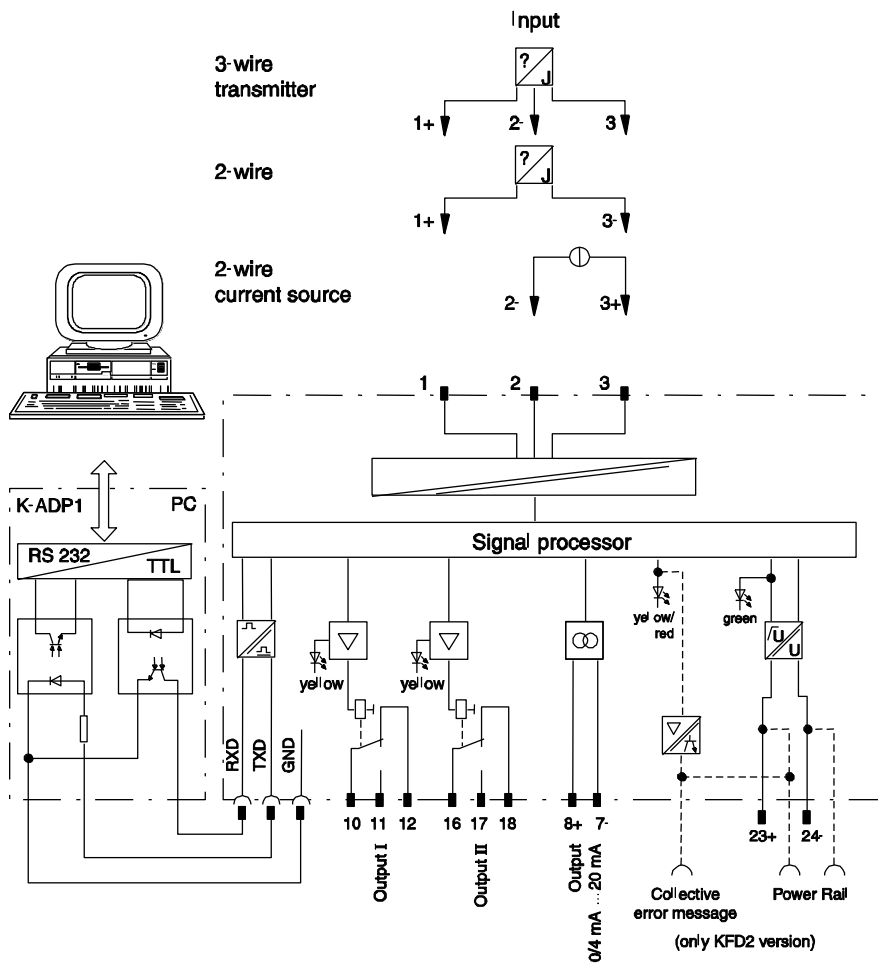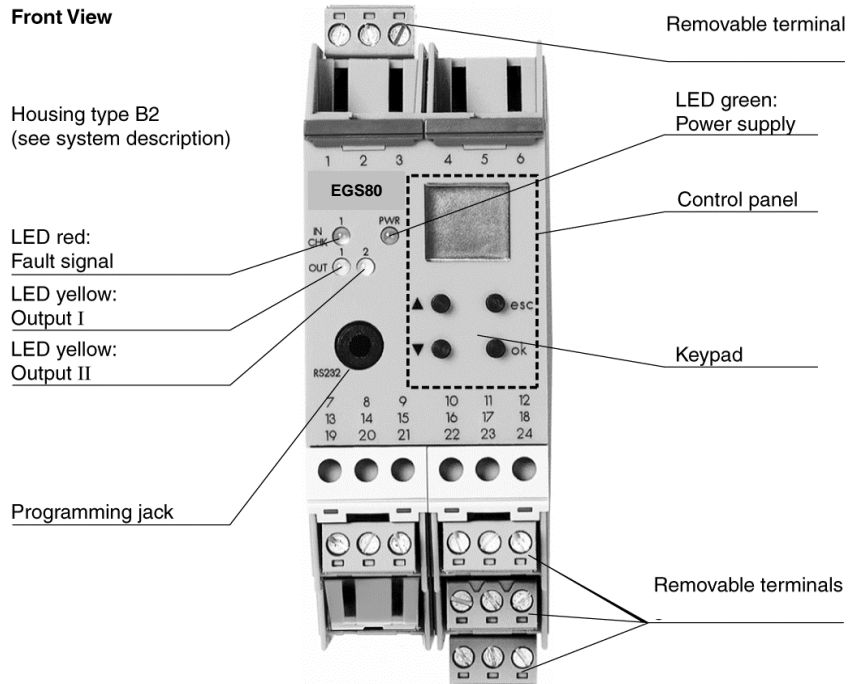
Features

• 1-channel

• Analogue input 0/4 mA ... 20 mA

• Analogue output 0/4 ... 20 mA

• 2 relay outputs

• Each relay output individually parameterisable as high or low alarm or error message output

• Display and different status LED

• Linearisation function (max. 20 points)

• Lead breakage (LB) monitoring and short-circuit (SC) monitoring

• Parameterisation control panel or PC

• Indicating device selectable: N, t, kg, %, mA, bar, °C etc.

• Usable up to SIL 2 acc. to IEC 61508

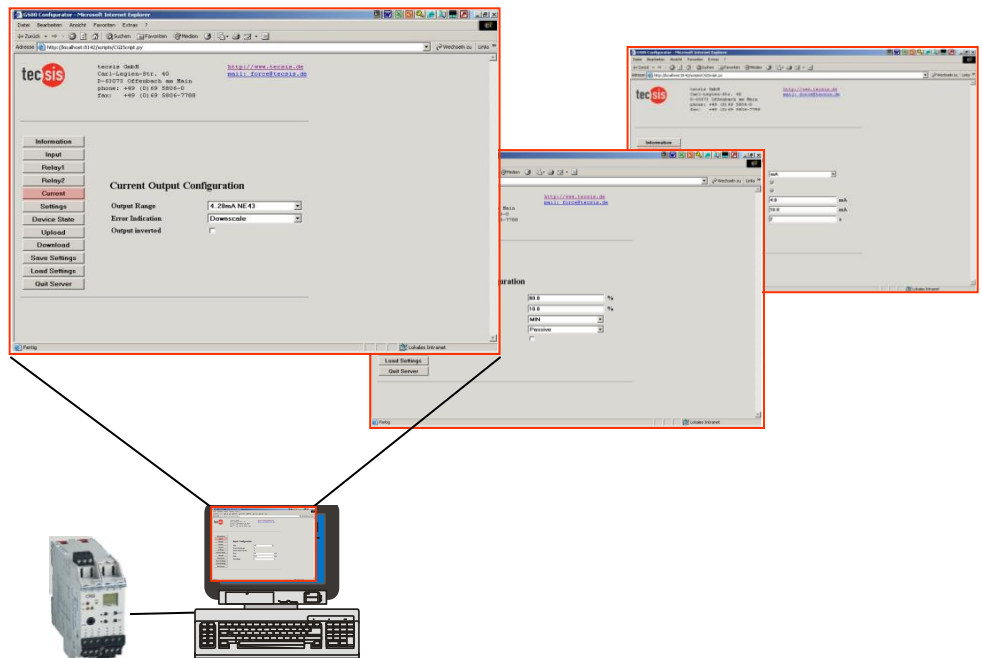• UL-certification

Model: EGS80X002001

Technical data

Model		EGS80
Supply	Connection	Power Rail or terminals 23+, 24-
	Rated voltage	20 ... 90 V DC or 48...253 V AC 50/60Hz
	Rated current	approx. 100 mA
	Power loss	2 W / 3 VA
	Power consumption	2,2 W / 4 VA
Input	Connection	terminals 1, 2, 3
	Open circuit voltage / Short-circuit current	24 V / 33 mA
	Input signal	0 ... 20 mA / 4…20 mA
	Available voltage	≥ 15 V @ 20 mA
	Input resistance	45 Ohm (terminals 2, 3)
	Lead monitoring	Breakage I < 0,2 mA; short circuit I > 21,5 mA acc. to NAMUR NE 43
Output	Connection	output I : terminals 10, 11, 12
		output II: terminals 16, 17, 18
		output: analogue, terminals 8+, 7-
	Output I and II	signal, relay
	Contact loading	250 V AC / 2 A / cos φ ≥ 0,7 ; 40 V DC / 2 A
	Mechanical life	5×10^{7} switching cycles
	Energised / de-energised delay	approx. 20 ms / approx. 20 ms
	Output III	signal, analogue
	Current range	0 ... 20 mA or 4 ... 20 mA
	Open loop voltage	≤ 24 V DC
	Load	≤ 650 Ohm
	Fault signal	downscale I ≤ 3,6 mA, upscale I ≥ 22 mA (acc. NAMUR NE 43)
Transfer characteristics	Input (Measuring time)	≥ 100 ms deflexion
	Accuracy (Input)	< 30 µA / 0,2 % of F.S.
	Resolution/Accuracy Output	≤10 µA /< 20 µA
	Temperature	Current measurement 0.003 % / °C (30 ppm)(Input)
		Current measurement 0.005 % / °C (50 ppm)
		Current measurement and Current output 0,006 % / °C (60 ppm)
Electrical Isolation	Input / other circuits	safe electrical isolation acc. to IEC 61140, rated insulation voltage 300 V$_{eff}$
	Output I, II / other circuits	reinforced insulation according to IEC 61140, rated insulation voltage 300 V$_{eff}$
	Output I, II, III, against each other	reinforced insulation according to IEC 61140, rated insulation voltage 300 V$_{eff}$
	Output III / Power supply	reinforced insulation according to IEC 61140, rated insulation voltage 300 V$_{eff}$
	Interface / Power supply	reinforced insulation according to IEC 61140, rated insulation voltage 300 V$_{eff}$
Ambient conditions	Temperature Protection type	-20 ... 60 °C (253 ... 333 K) IP 20
Standard conformity	EMV directive 2004/108/EG	EN 61326-1:2006 , EN61000-6-4:2007
	Low voltrage directive 2006/95/EG	EN 50178:1997
	Input	acc. to DIN EN 60947-5-6
	Insulation coordination	acc. to IEC 62103
	Electrical Isolation	acc. to IEC 62103
Zulassungen Mechanische Daten	Protection type	acc. to IEC 60529
	Electromagnetic compatibility	acc. to NE 21
	Protection against electric shock	acc. to IEC 61140
	UL-Zulassung SIL2	UL508 gemäß IEC 61508
	Dimensions Mass	40 x 119 x 115 mm 300 g
Accessories		SUB-D9/25 to phone jack r : EZE53X001010; Adapter cable EZE53X001014 USB Typ A to phone jack; CD with configuration software EZE53X030003 will be delivered with the adapter cable)

Construction

Front View

Housing type B2
(see system description)

LED red:
Fault signal

LED yellow:
Output I

LED yellow:
Output II

Programming jack

Removable terminal

LED green:
Power supply

Control panel

Keypad

Removable terminals

Input

3-wire transmitter

1+   2-   3

2-wire

1+   3-

2-wire current source

2-   3+

1   2   3

Signal processor

K-ADP1   PC

RS 232   TTL

RXD TXD GND

yellow   yellow

yellow/red   green

10 11 12   16 17 18   8+ 7-

Output I   Output II   Output 0/4 mA ... 20 mA

23+   24-

Collective error message
(only KFD2 version)

Power Rail

Optional PC configuration software fot limit switch EGS80X002001

Configuration software
EGS80 EZE53X030003

Accessories :

Adapter cable EZE53X001010
Sub-D9/25 to phone jack

Adapter cable EZE53X001014
USB Typ A to phone jack

Advantage:

- Simple, fast and safe parametrisation of the device with 11 screen masks
- Current device status can be selected
- A file with the setting parameters can be loaded in an other device
- Attention: Adapter cable with galvanic isolation must be used for PC connection (supply inclusive software CD)

Subject of technical changes