

DFA 8.□□

DFA 8.□□ Frequency-Transducer

Features:

housing for door installation or top hat rail housing

pulse conversion

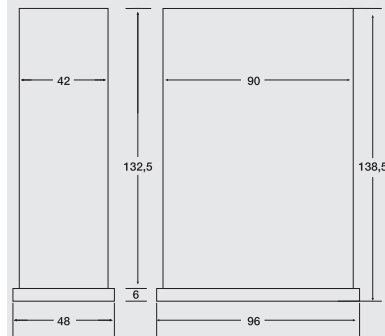
universal power supply, range 20 ... 253V AC/DC

continuous frequency conversion

0,01 Hz ... 10 kHz

switching outputs with integrated divider

control of contact and two-wire initiator according to DIN (optional)



analog outputs I, U, galvanically isolated measuring- and supply circuit

on-site indication by integrated display

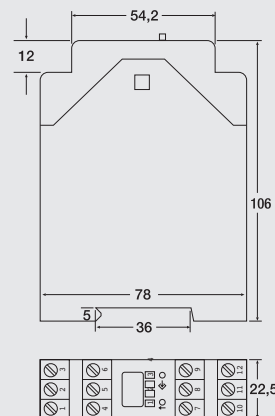
optional optical coupler inputs, generator voltage, etc.

Application:

Conversion of pulses generated by various sensors. The signal generated by a sensor is converted into a standard signal. The signal may come from various sources (sensors) such as, e.g. an impeller driven by flowing liquids, inductive sensor of speed, measuring sensor with pulse output. The main applications are flow measurements for liquids, suitable for sensors with pulse outputs, control of speed, motors, pumps, assembly lines or other moving equipment.

The DFA 8.□□ Frequency Transducer is provided with a flow meter, an indication of consumption for the control of quantity as well as optionally with a flow switch for the pulse conversion and with a limiting value output. This limiting value transmitter has a min./max. display of the last hour or last 24 hours. The frequency divider enables the conversion of digital pulses. The pulse

conversion is used for different applications, e.g. indication of quantity, determination of number of pieces, event counting, time-pulse metering, conversion of a too high frequency for the PLC-input, conversion of consumption value of current, water, etc.. The following input signals can be processed: two-wire initiator according to EN 50227 (NAMUR) or potential-free contact. The input and output circuits are galvanically isolated among each other and from the auxiliary power. By parameterization a relay can be used as an alarm relay, as pulse output with conversion or as limiting value transmitter for metering purposes. Optionally up to 2 digital outputs are available. Optional second pulse input: use as adder together with a further sensor. Further options are in preparation, e.g. input of measured value for additional functions.



Function:

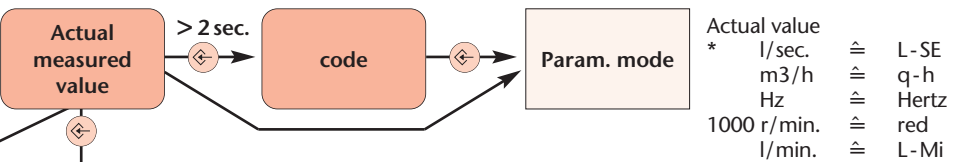
The microprocessor controlled electronic converts the input signal into different standard

signals, e.g. 4...20mA, 0...20mA, 0...10V or inverts 20...4mA, 20...0mA and 10...0V.

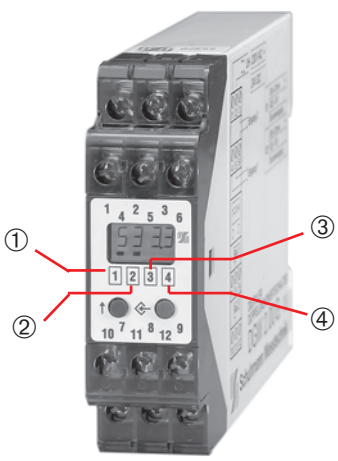
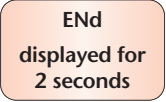
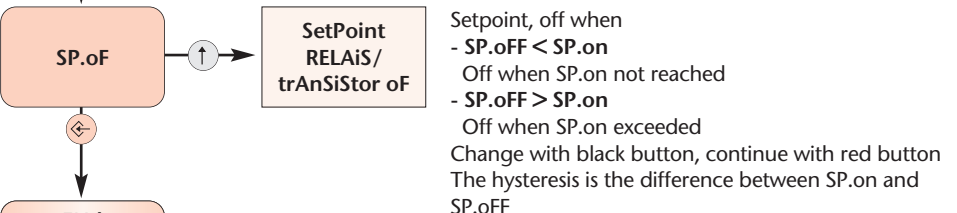
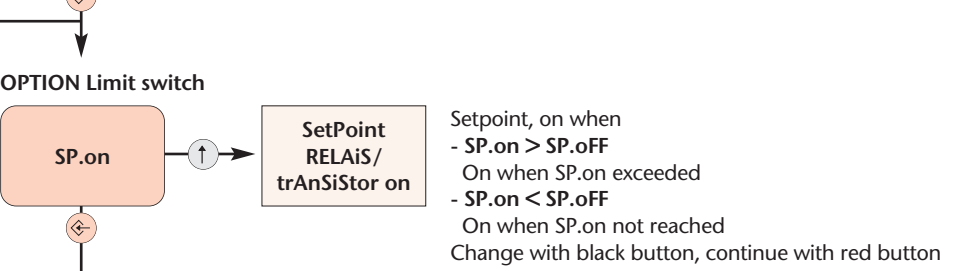
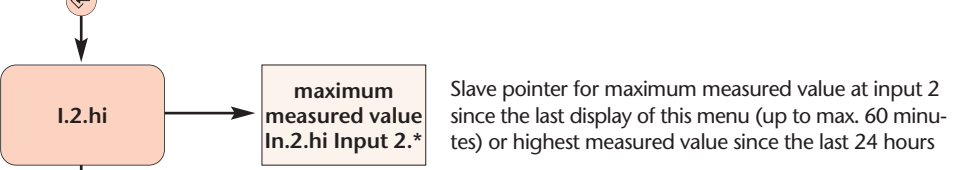
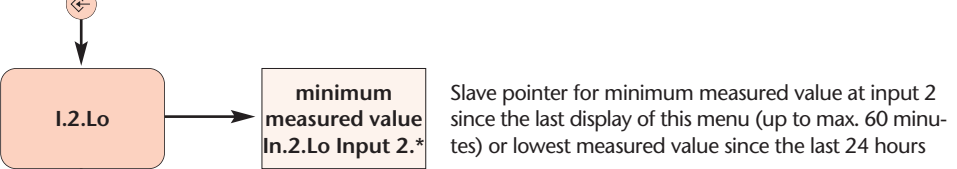
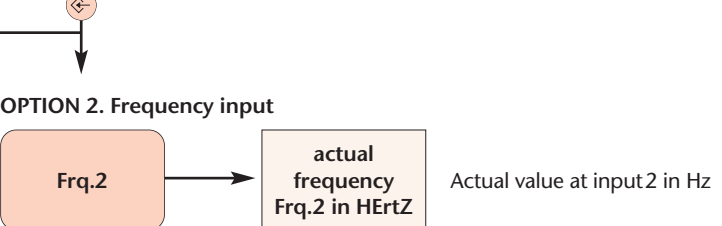
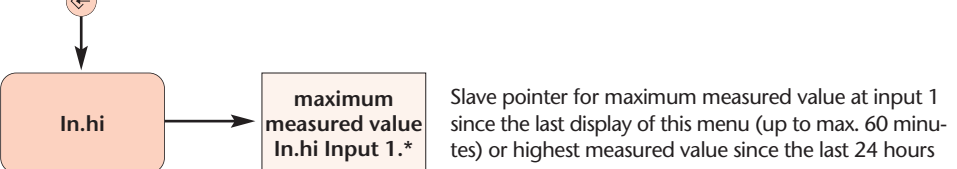
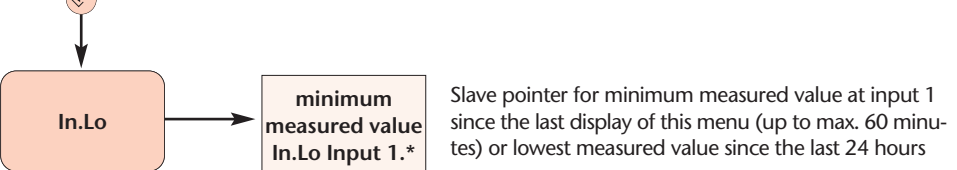
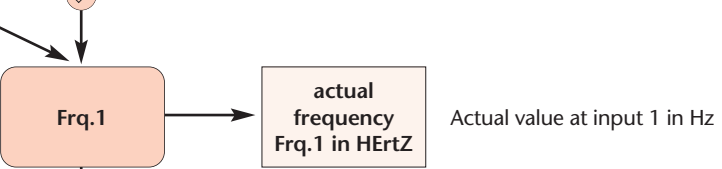
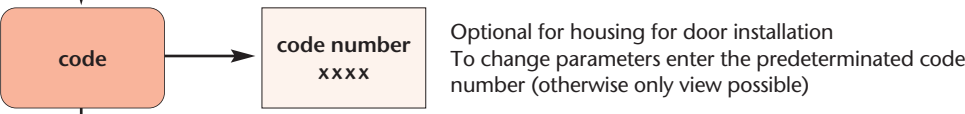


MENU CONTROL

Main menu Submenu Description



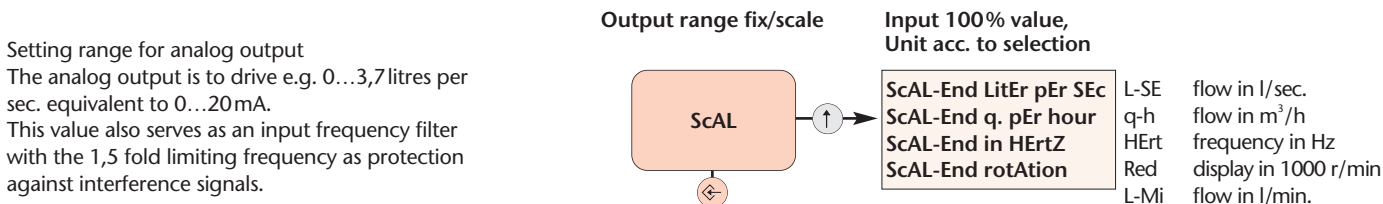
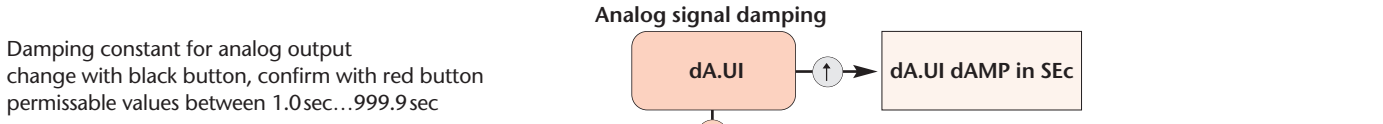
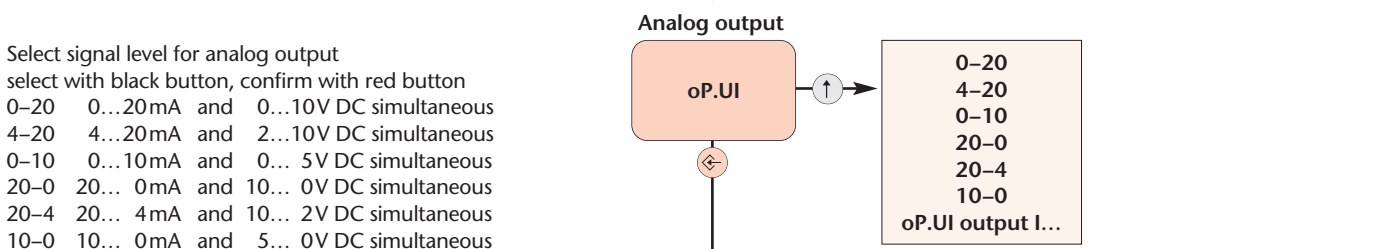
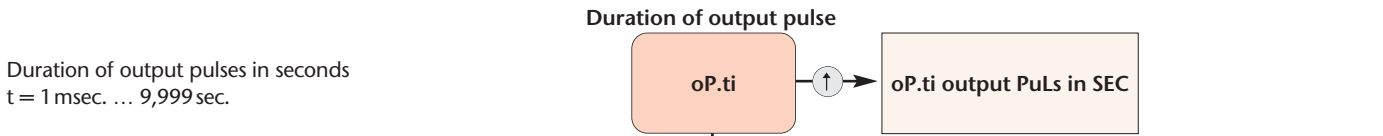
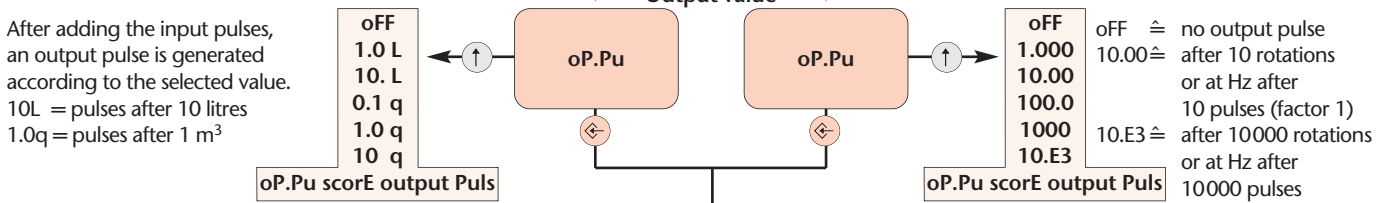
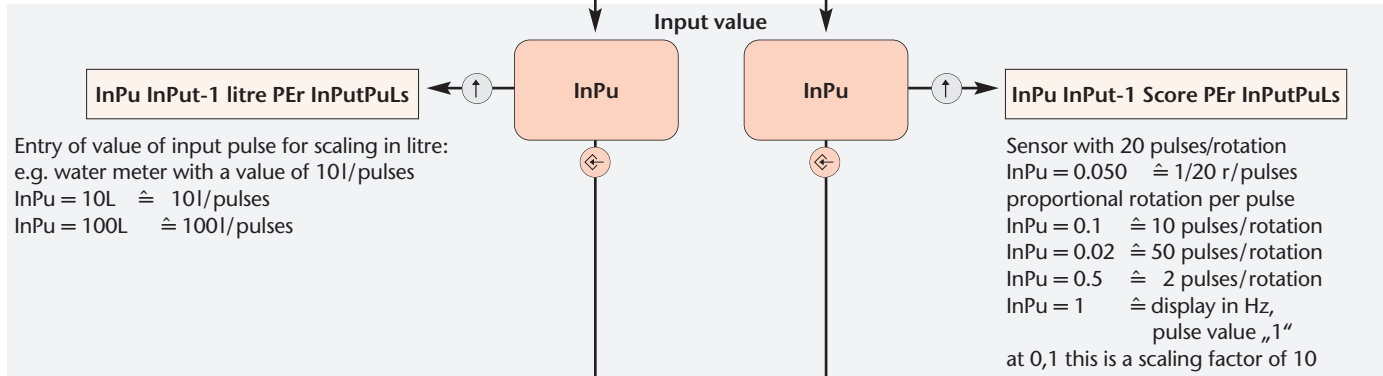
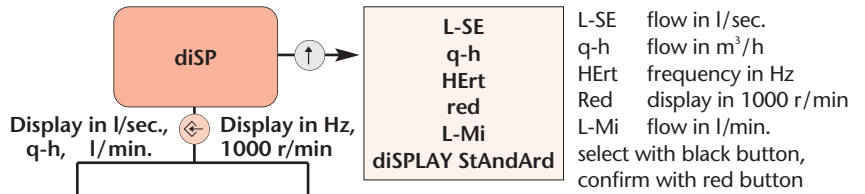
Actual value	≐	L-SE
* l/sec.	≐	q-h
m3/h	≐	Hertz
Hz	≐	red
1000 r/min.	≐	L-Mi
l/min.	≐	



- ① Display Input signal 1
- ② Display Input signal 2
- ③ Status Output pulse
- ④ Status Limit output

PARAMETERIZATION

Selection of standard display:
Depending on the particular application a suitable units display can be selected, on which all parameterization settings and measured value displays are based.



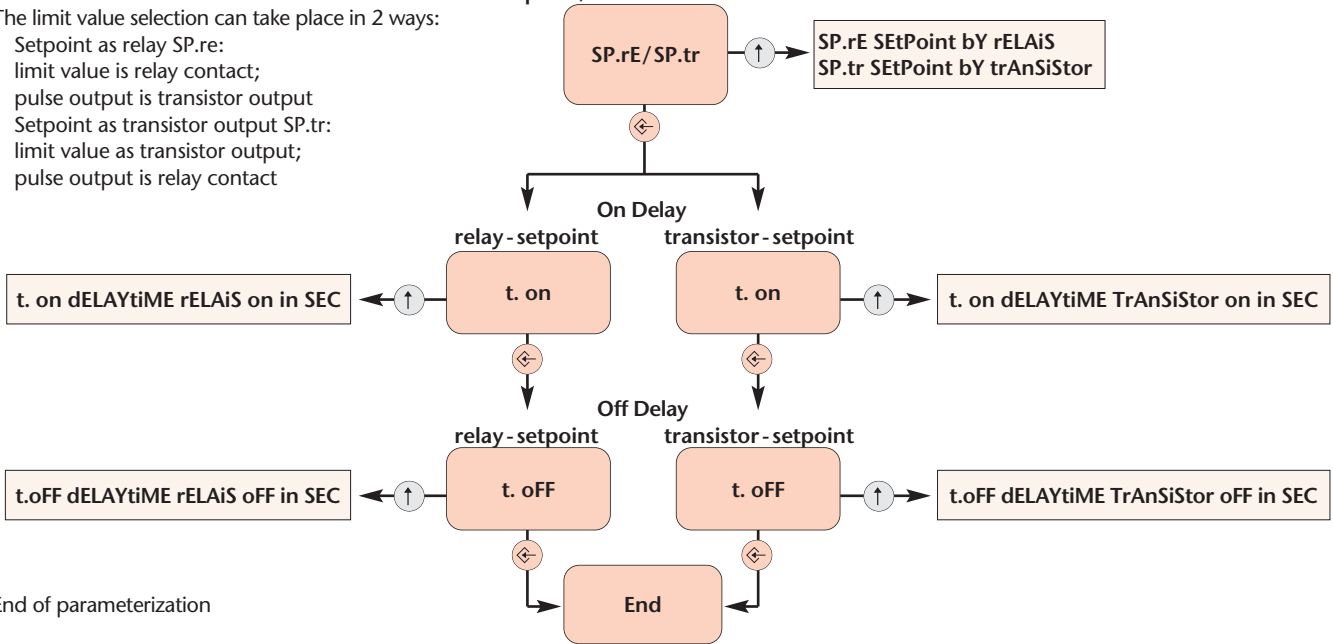
OPTION LIMIT SWITCH/SETPOINT
Setpoint/Limit value selection

OPTION LIMIT SWITCH/SETPOINT

Setpoint/Limit value selection

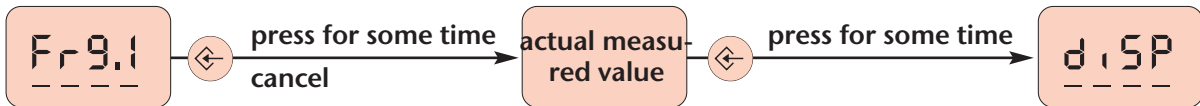
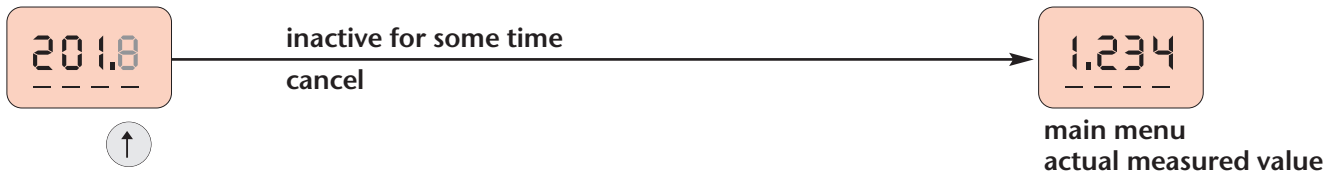
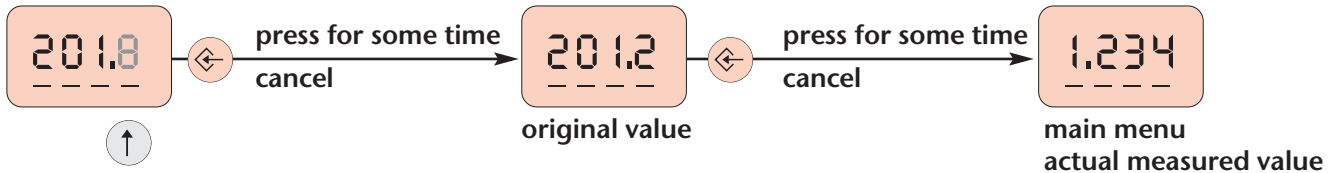
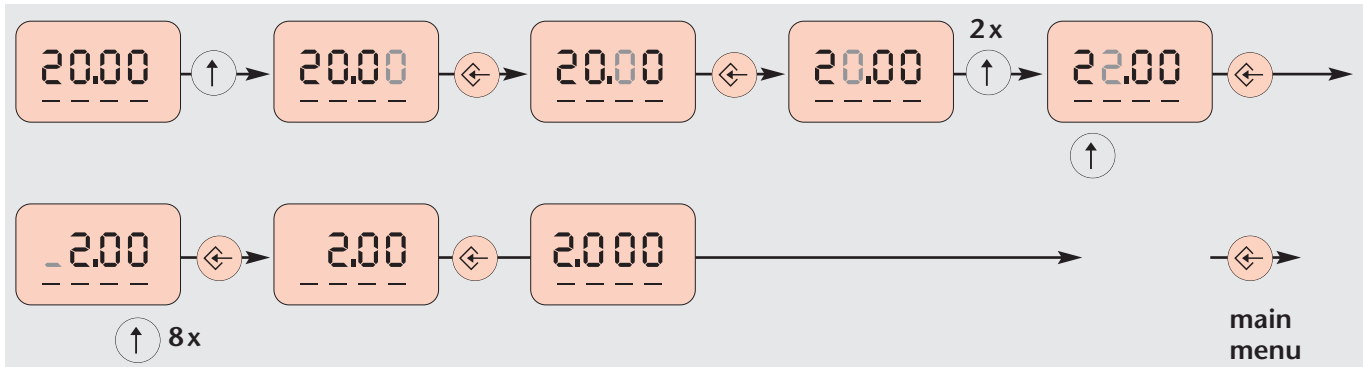
The limit value selection can take place in 2 ways:

- Setpoint as relay SP.re:
limit value is relay contact;
pulse output is transistor output
- Setpoint as transistor output SP.tr:
limit value as transistor output;
pulse output is relay contact



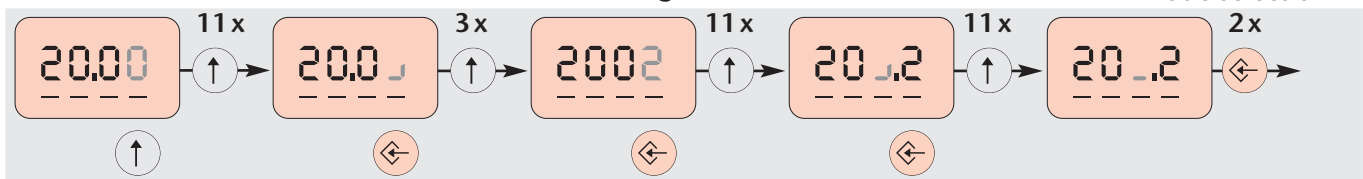
End of parameterization

MENU GUIDANCE "CHANGE OF VALUES" e.g. from 20,00 to 2,00



change-over parameterization mode selection

MENU GUIDANCE "CHANGE OF DECIMAL POINTS" e.g. from 20,00 to 0,20



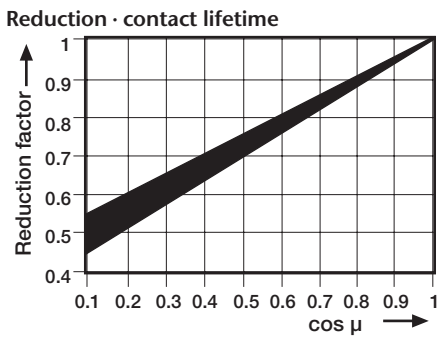
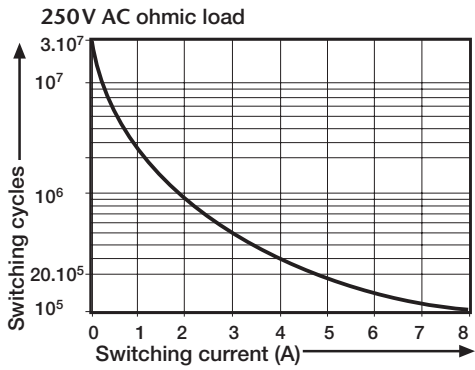
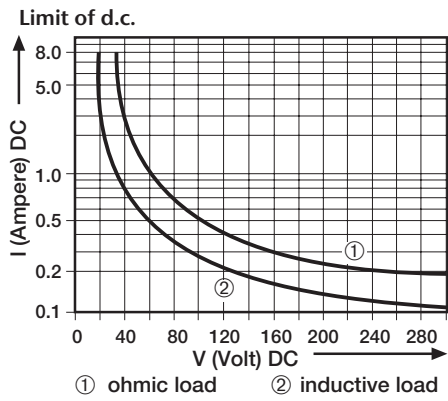
Notes on operation:

After approx. 1 minute without pressing the buttons, the actual measured value is reset on the display. At the end of the parameterization mode the main menu starts to branch off. Optional an input monitoring for circuit break and short circuit is also available.

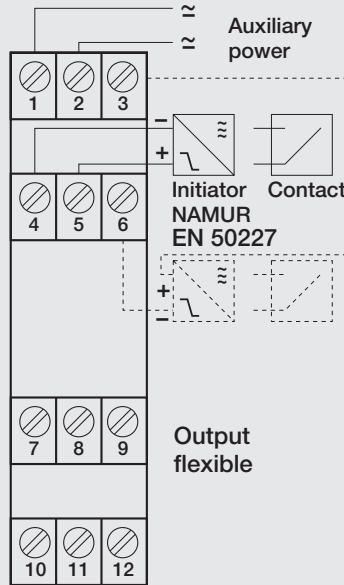
Legend:

- grey lined numbers : flashing on display
- J : decimal points
- : blank
- ↑ : selection
- ← : setting

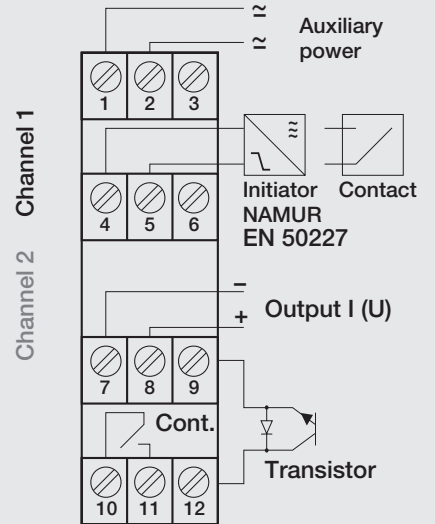
CONTACT DUTY



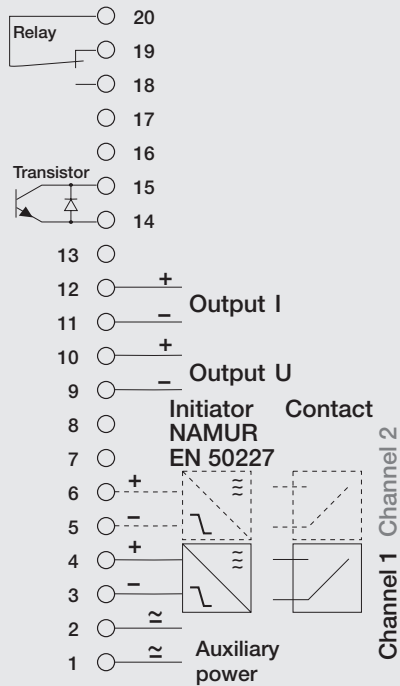
DFA 8.4 G



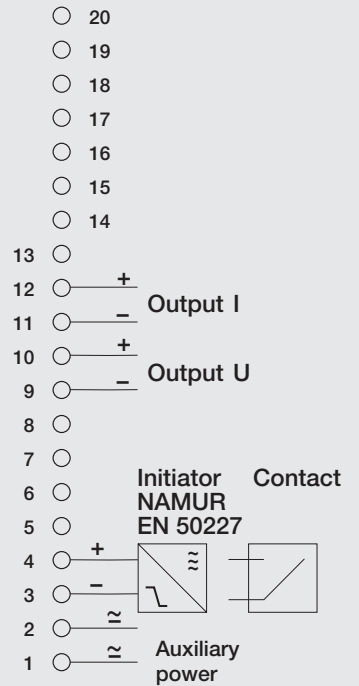
DFA 8.31(32) G



DFA 8.30T



DFA 8.00T



**Input:**

Input: according to Namur EN 50227
or potential free contact

Max. voltage $U_{\max} = 8V$
Max. current $I_{\max} = 8mA$
Further options on request

Environmental conditions:

Storage temperature: $-40...+70^{\circ}C$
Operating temperature: $0...55^{\circ}C$
Isolation voltage: $> 4kV$ input-output
 $> 4kV$ auxiliary voltage
AC/DC

Auxiliary power:

Wide range power: $20...253V$ AC/DC
($50...60Hz$) power consumption approx. 3 VA
First voltage range: $24V$ UC ($20...30V$) power consumption approx. 50 mA

On voltage interruption the on-delay time has to be considered; values from the temporary storage get lost.

Data storage non-volatile EEPROM

Electromagnetic compatibility law

Germany in accordance with
EMC Directive: 2004/18/EG*
Low-Voltage Directive: 2006/95/EG

Mounting details:**Housing for top hat rail**

Type of protection: IP 40 housing/IP 10 clamps
22,5 mm

Rail-mounting fixed according to
EN 50022-35 x 7,5mm

Weight : 210 g

For safety reasons we recommend to mount
the top hat rail housing with a distance of
approx. 5 mm to each other.

Housing for door installation

Type of protection: IP 54 front
Front panel: 96 x 48mm
Mounting depth: 138,5mm
Housing material: PC/ABS self-extinguishing
according to UL94V-0

Electrical connections via removable screw
terminal strips

Weight: 290 g

Output:

Scale adjusting: pulse value adjustable
via parameter

Potential free alternating contacts:

Contact duty: max. 250V at 8A AC
Switching capacity: 2000VA
Pulse duration: standard 0,5sec.
Adjustable range: 0,1...10sec.
Contact lifetime: 10^5 cycles (8A)
Mechanical lifetime: 10^7 cycles

Transistor output:

Pulse duration: standard 0,5sec.
Adjustable range: 0,01...10sec.
max. 50Hz, max. 50V,
max. 50mA

Analog output:

I: impressed d.c. = $0(4)...20mA$
permissible load $\leq 600\Omega$
U: impressed d.c. voltage = $0(2)...10V$
permissible load $> 3k\Omega$

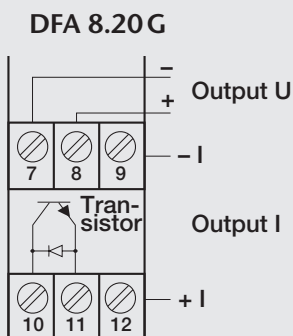
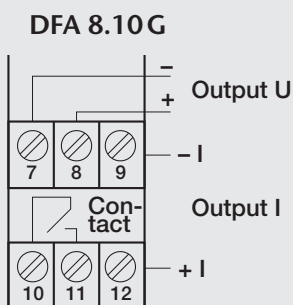
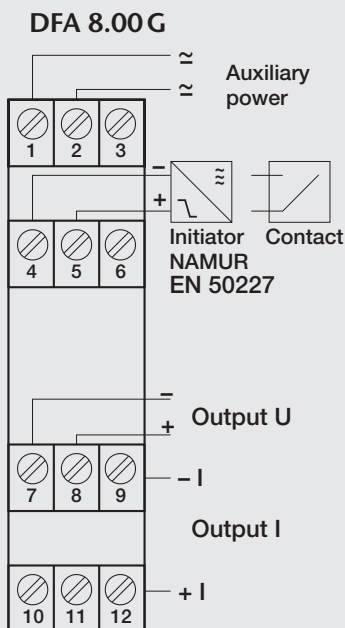
Damping setting time is parameterizable

Linearity error: $< 0,1\%$
Temperature error: $< 0,01\%/^{\circ}C$

Ordering information:

- Type: **DFA 8.00G** Housing for top hat rail
Analog output I, U
DFA 8.10G Housing for top hat rail
Analog output I, U
Contact output
DFA 8.20G Housing for top hat rail
Analog output I, U
Transistor output
DFA 8.31G Housing for top hat rail
Analog output I, Contact
output and transistor output
DFA 8.32G Housing for top hat rail
Analog output U, Contact
output and transistor output
DFA 8.04 Special inputs
DFA 8.05 Special outputs
DFA 8.00T Housing for door installation
Analog output I, U
DFA 8.30T Housing for door installation
Analog output I, U
Contact output and
transistor output
DFA 8.50 Speed controller
Range 0,01...10kHz
Optional ...100kHz
Contact and transistor output
DFA 8.51 Function like DFA 8.50
with analog output
- 2 frequency inputs:
DFA 8.40GW Housing for top hat rail
Analog output I, U
Contact output
Wide range power
DFA 8.41GW Housing for top hat rail
Analog output I,
Contact output and
transistor output
Wide range power
DFA 8.42GW Housing for top hat rail
Analog output U,
Contact output and
transistor output
Wide range power

Power supply: **W** Wide range
UC First voltage range



* minimum deviations possible during HF-radiation influence