



FlexConv U/I/f - U/I Converter

Inputs: Current, voltage, frequency and period signals

Outputs: Current and voltage signals

2 kV_{dc} isolation between input, output and supply

Fully configurable input and output via PC.

Frequency ranges 0.01...1100 Hz

AC/DC supply



Description

Input and output as well as supply are mutually galvanically separated, which gives optimal safety under all operating conditions.

The input signal is digitalized and processed by the microprocessor which calculates the output signal based upon data configured by the customer and stored in EEPROM.

FlexConv U/I/f-U/I is a universal module which can be used for conversion and galvanic separation of analogue and impulse signals. The input can be configured for current, voltage, frequency or period, and the output can be configured for current or voltage signals.

Configuring with the FlexProgrammer can be done from a standard PC, providing a high degree of flexibility.



Technical Data

Voltage input

Measuring range	0...1.1 V _{dc} / 0...11 V _{dc}
Minimum span	50 mV _{dc} / 500 mV _{dc}
Input impedance	Min. 500 kOhm
Sample time	Max. 0.2 sec.
Resolution	13 bit (8192 counts)
Accuracy	Typ. < 0.1% of measuring range

Current input

Measuring range	0...22 mA
Minimum span	1 mA
Input impedance	Max. 150 Ohm
Sample time	Max. 0.2 sec.
Resolution	13 bit (8192 counts)
Accuracy	Typ. < 0.1% of measuring range

Frequency/period input

(Refer to table)

Input impedance	Typ. 5 kOhm (NPN) Typ. 10 kOhm (PNP)
Sample time	Max. 0.1 sec. + 2 periods
Pulse level max.	> 3.8 V (Max. 35 V _{dc})
Pause level min.	< 1.8 V
Accuracy:	
Frequency	1 Hz ± 0.02 Hz
Frequency	10 Hz ± 0.02 Hz
Frequency	100 Hz ± 0.03 Hz
Frequency	1000 Hz ± 2.0 Hz
Time	0.1...11 sec. Typ. < 5 msec. 1...110 sec. Typ. < 50 msec.

Voltage output

Signal range	0...11 V _{dc} (11...0 V _{dc})
Minimum span	1 V _{dc}
Output impedance	< 5 Ohm
Resolution	12 bit (4096 counts)
Accuracy	Typ. < 0.05% of signal range
Load	> 2 KOhm

Current output

Signal range	0...22 mA (22...0 mA)
Min. span	2 mA
Loop supply	Min. 12 V _{dc}
Resolution	12 bit (4096 counts)
Accuracy	Typ. < 0.05% of signal range

Common data

Temperature drift	Typ. < 0.005% per °C
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Power supply

Supply range	12...35 V _{dc} / 10...28 V _{dc}
Power consumption	< 50 mA at 24 V _{dc}
Isolation voltage	2 kV _{dc}
Transfer capacity	Typ. 40 pF

Environmental conditions

Operating temperature	-10...60°C
Storage temperature	-35...85°C
Humidity	< 90% RH, non condensing
Vibrations	Lloyds Register, test 1

EMC data

Immunity	EN 50082-2
Emission	EN 50081-2

Mechanical data

Dimensions	62 x 88 x 45 mm
DIN-rail mounting	DIN 46277
Protection class	Housing: IP 30 Terminals: IP 10
Weight	0.12 kg

Disposal of product and packing

According to national laws or by returning to Bourdon-Haenni

Ordering Details - FlexConv U/I/f - U/I Converter

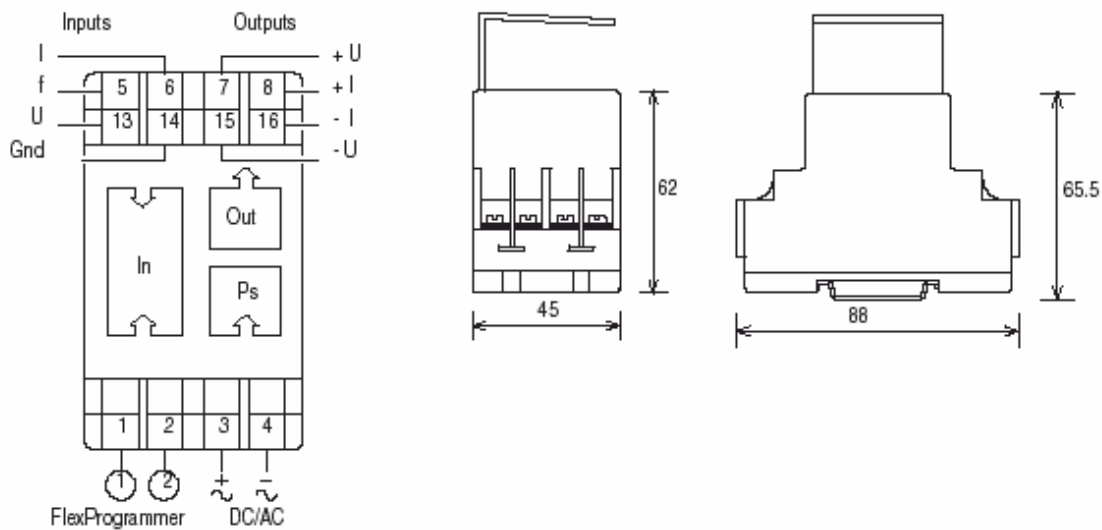
Configuration	7 digit	82 42 - 51x
Not configured		4
Configured according to customer specifications		5

Measuring Ranges

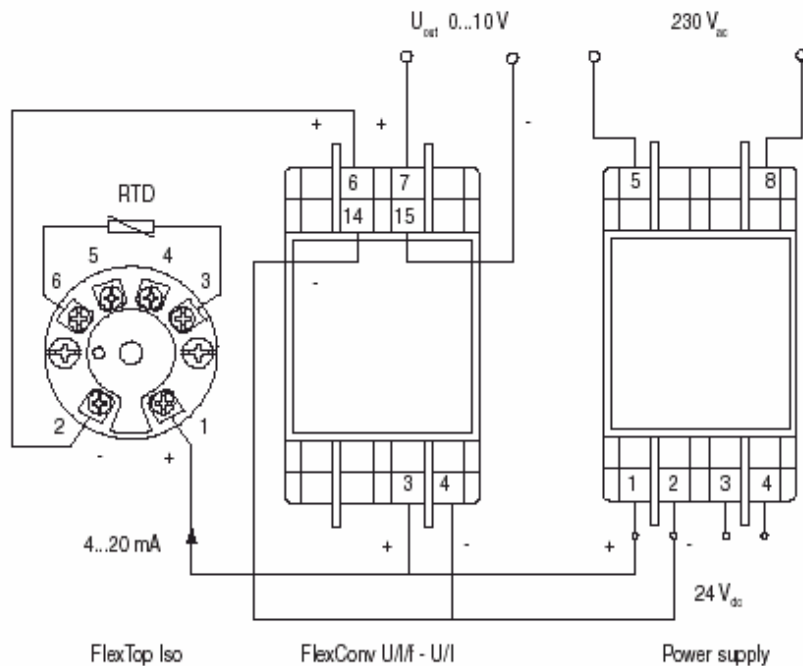
Measuring range	Span	Period time	Pulse time	Pause time	Bounce suppression	Frequency range
0...110 Hz	≥ 1 Hz		> 0.5 msec.	> 25 μ sec.	0.3 msec.	0...1 kHz
0...550 Hz	≥ 100 Hz		> 0.1 msec.	> 25 μ sec.	0.06 msec.	0...5 kHz
0...1100 Hz	≥ 500 Hz		> 0.1 msec.	> 25 μ sec.	0.03 msec.	0...10 kHz
0...11 sec.	≥ 1 sec.	> 0.1 sec.	> 50 msec.	> 25 μ sec.	30 msec.	
0...110 sec.	≥ 10 sec.	> 1 sec.	> 500 msec.	> 25 μ sec.	300 msec.	
0...1.1 V	0.05 V					
0...11 V	0.5 V					
0...22 mA	1 mA					

(Cut Off occurs at 1% of span, max. 2 Hz)

Electrical Installation



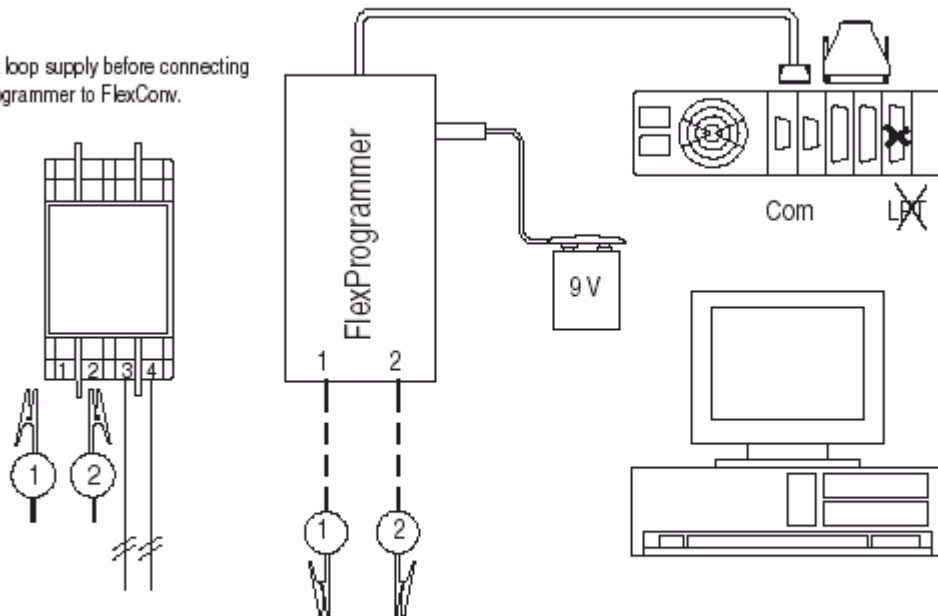
Example of Application



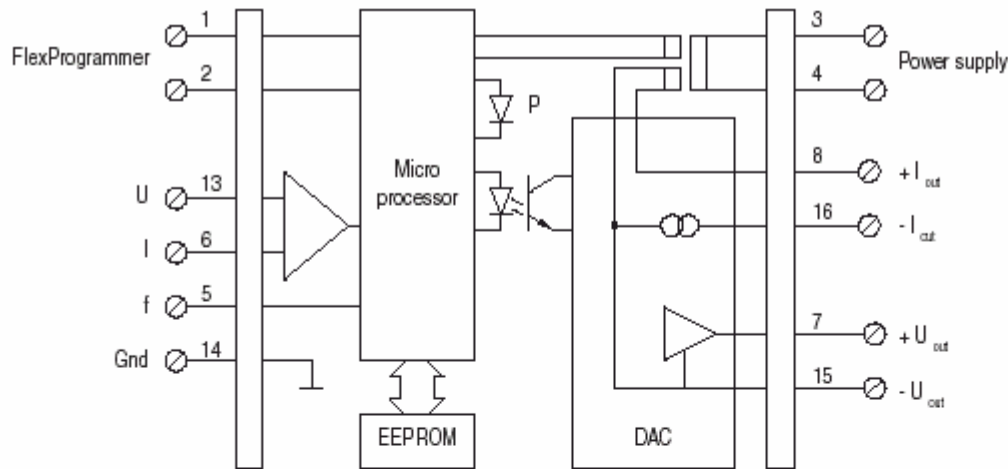


Configuration

Note:
Disconnect loop supply before connecting
the FlexProgrammer to FlexConv.



Block Diagram



Accessories

FlexProgrammer configuration set,
type number 82 23-903 comprises:

- FlexProgrammer with 9 pole RS232C cable
- 3.5" Program diskettes
- Battery plug
- Cable with test plugs



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