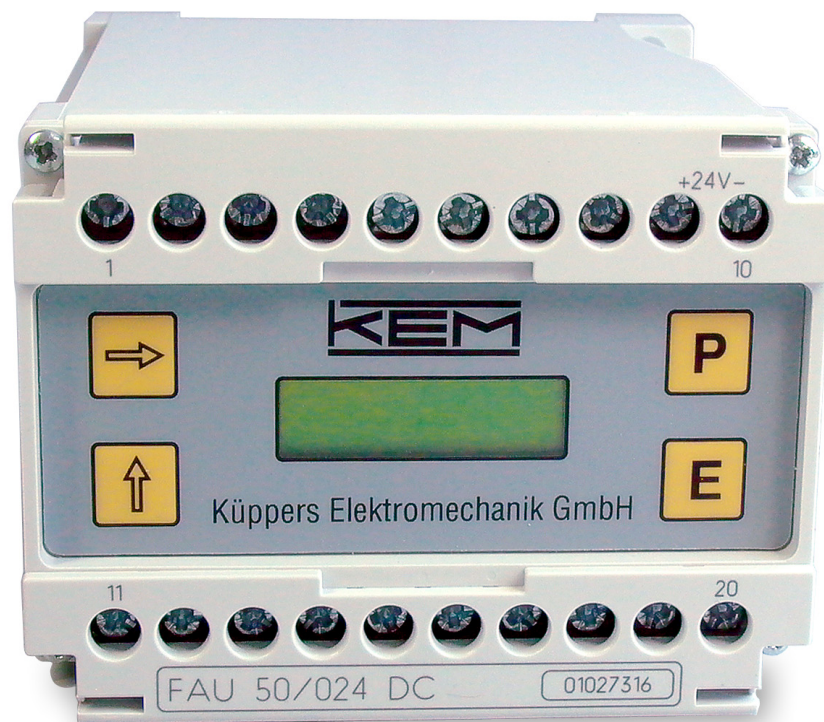


## Technical datasheet



### FAU 50

Frequency to Analog Converter

## Description

The FAU 50 is a microprocessor-based unit to convert frequencies from 3 Hz up to 5,000 Hz into a potential-free analogue signal with a resolution of 13 bit.

The FAU 50 is operated via a front-panel touch-keyboard and a two-line LCD-display. The FAU is user-guided for easy parameter setting. Preset units for all values make conversions superfluous. The versatile and adjustable transmission behaviour provides for perfect adaptability to the process.

## Features

- High accuracy: 0.015%
- Short response time
- Easy parameter setting

## Operation

### *Real-time flow monitoring*

by MIN- and MAX limits: hysteresis and transmission behaviour adjustable

### *Pulse divider*

high resolution, with adjustable pulsetime

### *Detection of rotational direction*

polarity of analogue output changes with reverse direction

### *Integral totaliser*

counting up and down in accordance with rotational direction

### *Pickup power supply*

for pickups and amplifiers of KEM flow meters

### *LCD display and touch-keyboard*

for operation and indication of all operating values and parameter settings

<sup>1)</sup> Durchschnittswerte mit Einzelaufnehmer. Für höhere Auflösung sind Doppelaufnehmer erhältlich.

<sup>2)</sup> Genaue Typenbezeichnung auf Anfrage.

## Technical Data

Linearity	0.015 % of final value
Temperature Drift	0.050 % per 10 K
Residual Ripple	0.050 % of final value
Adjustable Range	Depending on the programmed K-factor
Protection Class	IP20 Terminals shock-protected as per VBG4 and VDE0106 part 100
Allowable Ambient Temperature	0 °C up to +45 °C [+32 °F up to +113 °F]
Supply Voltage	230 V, 115 V/50 Hz, AC or 24 V DC ( $\pm 15\%$ ) (please indicate with order)
Power Consumption	4 VA
Lifetime of Battery	8 years with storage and at least 10 years with daily 8-hour-operation
Pickup Supply	12 V DC, 20 mA
Connections	Screw terminals, max. wire size 2.5 mm <sup>2</sup>
Housing	Plastic for mounting rail DIN/EN 500022-35 or wall mounting Dimensions: L = 100, W = 77, D = 114 (mm)
Weight	DC-version: 350 g AC-version: 500 g
Frequency Range	3 up to 5,000 Hz
Frequency Inputs	CH 1 and CH 2 Current switch level: NAMUR DIN 19234 Voltage switch level: $U_L < 6\text{ V}$ ; $U_H > 9\text{ V}$ ; $U_{\max} = 30\text{ V}$
Control Inputs	Reset/hold: active for $U_L < 3\text{ V}$ ( $t_{\min} = 100\text{ ms}$ ) Switched for analogue output and totaliser Potential reference 0 V of pickup supply (terminal 7)
Analogue Output	0/2 up to 10 V or 0/4 up to 20 mA, Switchable via external switch on the housing, Resolution: 13 bit, Polarity of output signal changes with rotational direction
Impedance	Current output: $< 1,000\ \Omega$ Voltage output: $> 3,000\ \Omega$
1:1 Frequency Output	Galvanically free, open collector: 30 V, 50 mA
Divider Pulse Output	0.8 Hz up to 10 kHz
Adjustable Range of Divider	Depending on programmed K-factor
Limit Output MIN and MAX	Galvanically free, open collector: 30 V, 50 mA
Hysteresis of limits	0 % up to 9.9 % of programmed limit
Adjustable Range of Limits	Depending on programmed K-factor
Forward/Backward Output	Galvanically free, open collector: 30 V, 50 mA

## In- and Outputs

Separation between inputs and outputs

### Frequency Inputs

3 up to 5,000 Hz, NAMUR DIN 19234

### Control Inputs

for reset- and hold function

### Analogue Output

current- (0/4 up to 20 mA) or voltage output (0/2 up to 10 V) switchable, transmission behaviour adjustable

### Pulse Output

for external counters, open collector, galvanically free

### 1:1 Frequency Output

open collector, galvanically free

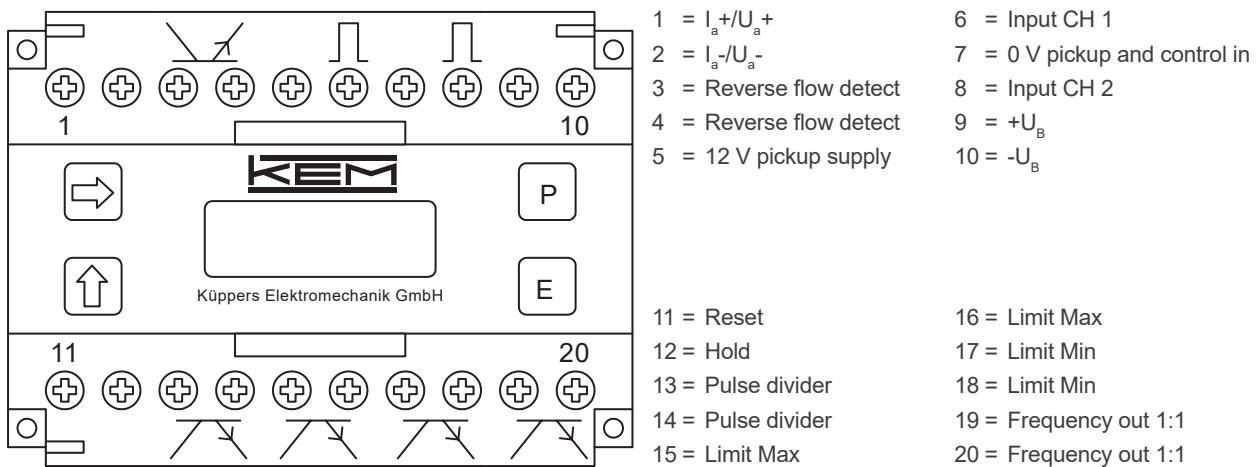
### Forward/Backward Output

open collector, galvanically free

### Limit Output

open collector, galvanically free

## Terminals

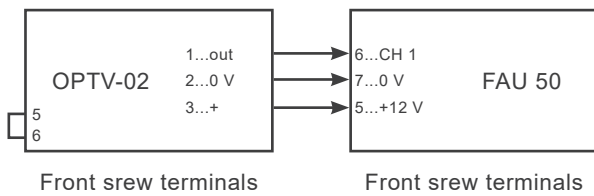
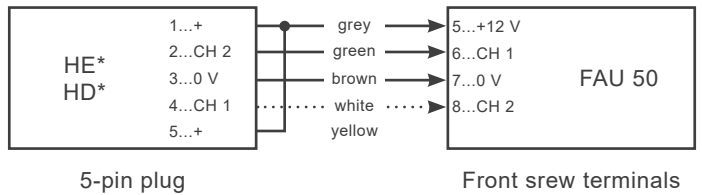
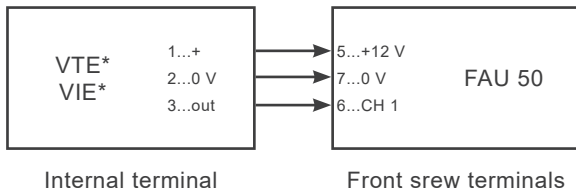
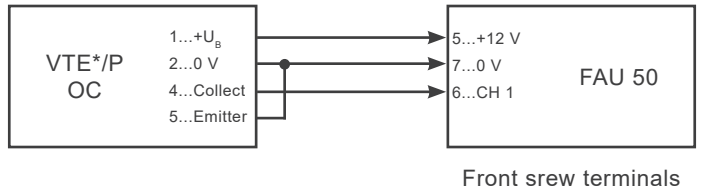
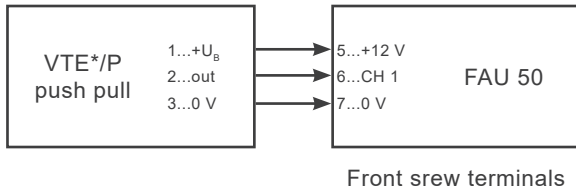


Note:

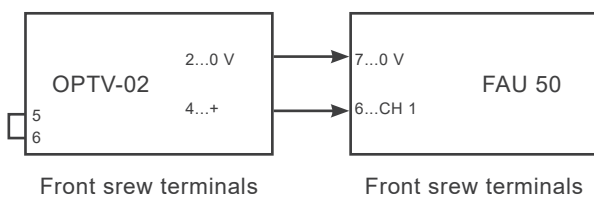
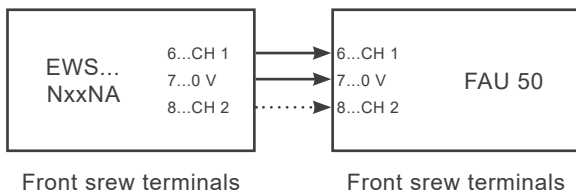
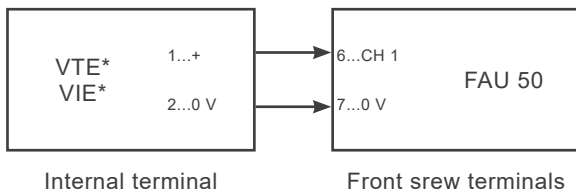
If the inverse input (terminal 8) is not used, connect terminal 7 and 8.

**Connections**

**Three-Wire Connection**



**Two-Wire Connection**





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