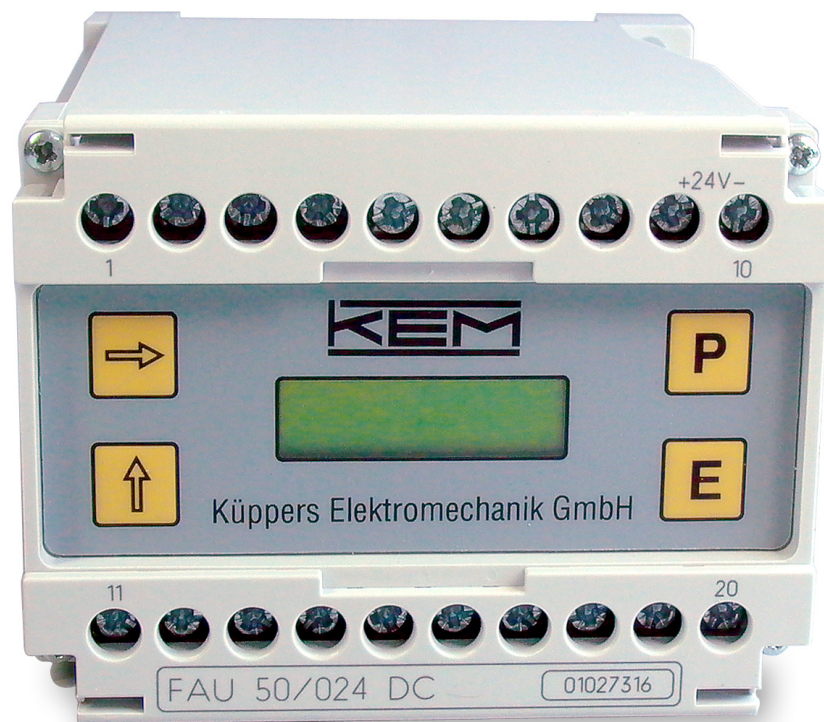


Technical datasheet



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

¹⁾ Durchschnittswerte mit Einzelaufnehmer. Für höhere Auflösung sind Doppelaufnehmer erhältlich.

²⁾ 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 (± 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 ²
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: $U_L < 6$ V; $U_H > 9$ V; $U_{max} = 30$ V
Control Inputs	Reset/hold: active for $U_L < 3$ V ($t_{min} = 100$ 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

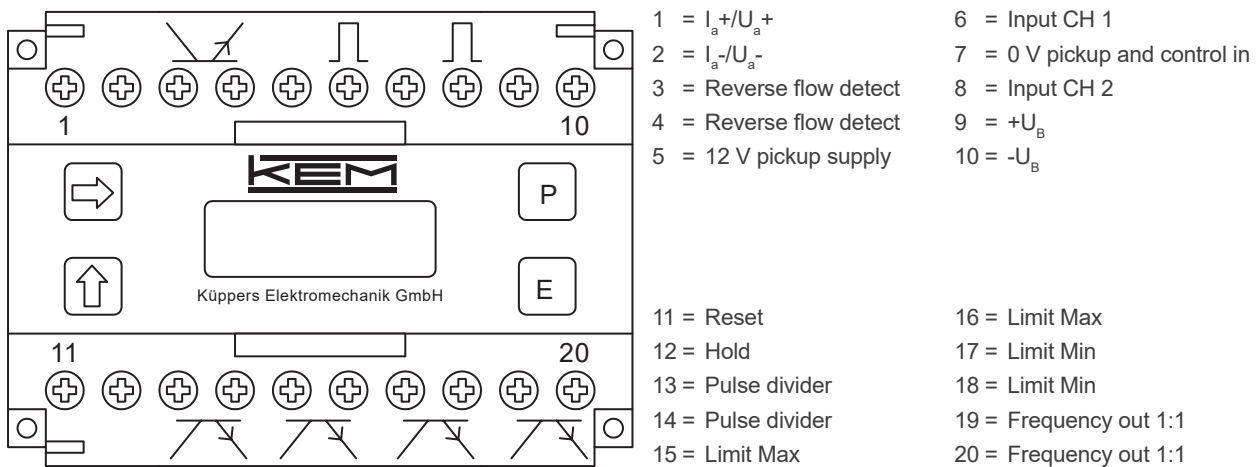
Forward/Backward Output

open collector, galvanically free

Limit Output

open collector, galvanically free

Terminals

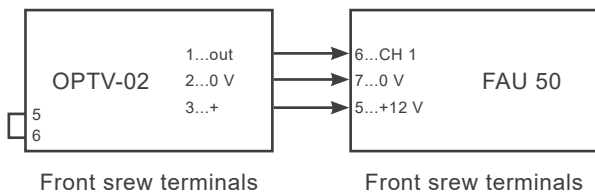
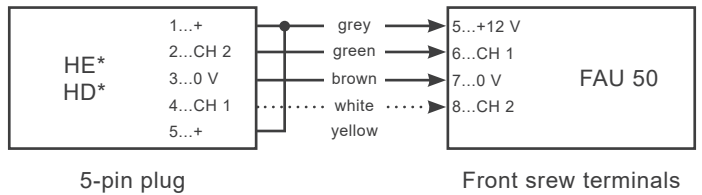
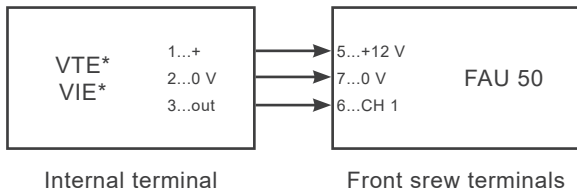
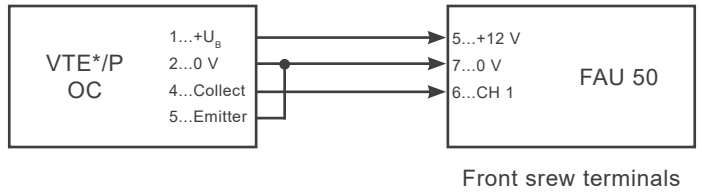
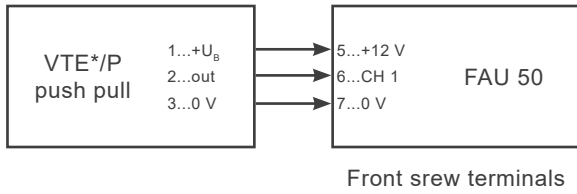


Note:

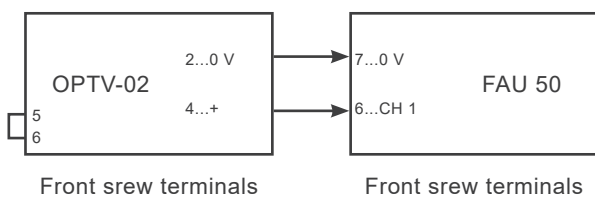
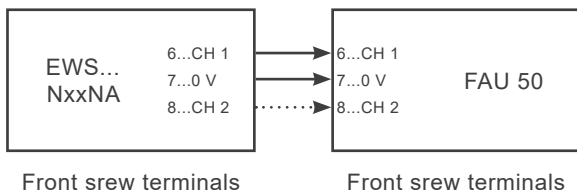
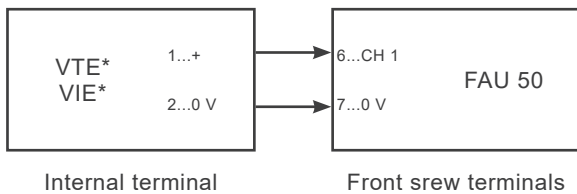
If the inverse input (terminal 8) is not used, connect terminal 7 and 8.

Connections

Three-Wire Connection



Two-Wire Connection



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