

## FREQUENCY MEASURING TRANSDUCER Type: FAMA

000000 31 B2 75.0 mm 100,0 mm - 105,0 mm -

## **FEATURES**

– 35,0 mm ·

FAM/

- High input resistance
- Low response time
- **Excellent linearity**
- All ranges class 0.5 according to EN60688.
- 8 outputs available

**FUNCTION DIAGRAM** 

AC Supply

- Isolation > 4kV. Input. output and supply.
- All standard AC voltages for power supply. • Optional combined AC and DC supply.

### Description:

The transducer type FAMA is used to measure the frequency of an input voltage. The output is a load independent DC voltage or current signal. The input can be connected directly or via transformers.

#### **Operation:**

The input voltage is transformed to a suitable signal level. At each zero-crossing the input creates a rectangular pulse with a constant height and width. The pulse train, with a frequency proportional to that of the input voltage, is filtered and in amplifier converted to a load independent DC output. The input voltage can also be used as supply voltage. The supply voltage is galvanically separated by the plug-in transformer.

### Applications:

Instrumentation, PLCs, PC and microprocessor control systems .

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Output

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ACTUATOR

 $\triangleright$ 

DC output

Supply Isolation

AC input

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Signal Isolatio

OUTPUT

Ο. 5 V

0 - 10 V

2 - 10 V

R1

(4)

(3)

0 - 10 mA 2 - 10 mA 0 - 20 mA 4 - 20 mA

5 V

6 (5)

B2

(8)

(9)

A2

## AC/DC Supply

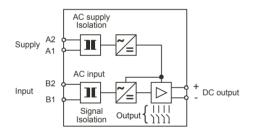
B2

R1

Socket mounting

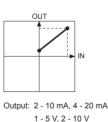
Supply A1

Input



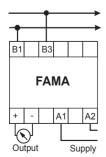
## **OUTPUT CHARACTERISTICS**





Output: 0 - 10 mA, 0 - 20 mA 0 - 5 V, 0 - 10 V

## **CONNECTION DIAGRAM** Rail mounting



#### **SPECIFICATIONS**

#### INPUT FAMA

Nominal input V<sub>N</sub> Max. continuous input

Input resistance

## AC frequency range

# PERFORMANCE PARAMETERS TIMING

Response time ELECTRICAL Precision Linearity Supply dependence Temp. dependence Ripple

#### OUTPUT

The output amplifier is protected against open and short circuit.

AC voltage

0 to 5000 Hz

Class 0.5

< 1 % pp

AC voltage Specify from 10 to 600 V  $40\sqrt{U_N}$  V rms. 10 V <  $U_N$  < 300 V 720 V rms.  $U_N$  > 300 V approx. 2 KΩ / V

< 200 msec. 0-90% or 100-10%

< 0.2 % < ± 0.01 % / % DU supply < ± 0.01 % / °C

SUPPLY AC and DC 18-360 VDC and 20-264 VAC

with isolated switchmode su	upply
AC supply range with transformer	24 V (From 20 to 28 V) 110 V (From 99 to 140 V) 230 V (From 198 to 264 V) 400 V (From 342 to 484 V)
Frequency range Power consumption Frequency range	45 to 440 Hz (transformer) 2.5 VA, 1.1 W 45 to 440 Hz

F Power consumption 25 VA 15 W PLUG-IN supply module According to specifications

GENERAL Temperature range Humidity Dielectric test voltage

Weight

## CE

EMC directive 89/336:

Low voltage directive 73/23:

- 25 °C to + 55 °C Up to 90 % RH non-condensing Input to output 4000 VAC Input to supply (internal)

4000 VAC 4000 VAC

Output to supply (internal) 0.20 kg with internal supply International Standards EN50081 - Emission EN50082 - Immunity EN60255 - Electrical Relays EN60688 - Measuring transducers

#### **ORDERING INFORMATION**

EXAMPLE:	FAMA 450 1 550 1 400 2 B 230 D A 3 C
TYPE Frequency measuring transducer	ғама —
FREQUENCY RANGE Lower level The first three figures of the frequency in Hz, e.g. 45.0 Hz	xxx
Followed by: 0 for Hz = 1.00 to 9.99 1 for Hz = 10.0 to 99.9 2 for Hz = 100 to 999	
High level The first three figures of the frequency in Hz, e.g. 55.0 Hz	xxx
Followed by: 0 for Hz = 1.00 to 9.99 1 for Hz = 10.0 to 99.9 2 for Hz = 100 to 999	
VOLTAGE RANGE The first three figures of the voltage in Volt, e.g. 400 V	400
Followed by: 1 for V = 10.0 to 99.9 2 for V = 100 to 999	12
SUPPLY VOLTAGE 18-360 VDC and 20-264VAC 20-28VAC 99-140VAC 198-264VAC 342-484VAC	E400 B024 B110 B230 B400
OUTPUT Programmable with dipswitch 0 - 10 mA, 2 - 10 mA, 0 - 20 mA, 4 - 20 mA, 0 - 5 V, 1 - 5V 0 - 10 V, 2 - 10 V	D
HOUSING Rail mounting with internal supply Rail mounting with Plug-in supply module Socket 11 pin with internal supply Socket 11 pin with Plug-in supply module	E
SIZE 35 mm.	3
CODE	

E

CODE Code end Extended code

80