522 Series

Frequency / Rate Meter

Frequency / Rate meter
Type series 522

Description

- 6digit adding counter, resetable
- LED-Display with 8 mm high characters and very high luminosity
- Display range -199999..999999. (Overflow condition will be indicated by flashing of the display)
- Programming of count functions and operating parameters via the setting keys. During programming the display guides the user with text prompts.
- Optocoupler output (optional). Active at f=0 Hz.
- Programmable features:
  Input polarity (npn or pnp)
  Max. count frequency (30 Hz or 10 kHz)
  Decimal point
  Scaling factor
  Display mode
  1/min
  1/sec
  Time to wait until „0“ is displayed

1. Inputs

INP A
Dynamic count input. Max. count frequency 30 Hz or 10 kHz programmable via set up
INP B
Dynamic count input. Max. count frequency 30 Hz or 10 kHz programmable via set up

RESET
Dynamic reset input. Linked to the red reset key.

2. Optocoupler Output

Active at f=0. Can be used e.g. to activate a „No operation“ lamp.

3. Setting of the operating parameters

a. Hold down keys on front panel and switch on the supply voltage.
b. The display shows

c. After releasing the keys the display alternates between menu title and corresponding menu item at a frequency of 0.5 Hz. After any key is pressed down, only the menu item is displayed.
d. Pressing the right key, the menu item will be switched to next value.
e. Hold down the left key and press the right key to enter and switch to the next menu title.
f. After programming the last menu item, the programming routine will be left and the new values will be stored by switching the menu item to „YES“. If you chose „NO“, the programming routine will be passed through once again.

4. Programming routine

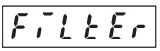
Following all programmable parameters are shown in succession. After one pass, the device is fully programmed.
In each case the first shown item is the factory preset.

4.1 Input polarity

npn: switching to 0 V

pnp: switching to +V(4-30)

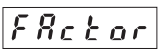
4.2 Activating the 30 Hz filter



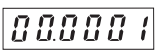
max. count frequency 10 kHz

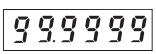
max. count frequency 30 Hz

4.3 Scaling factor (Multiplier)



Factor = 1÷ number of pulses per whole unit. Add resolution by selecting more decimal places under dP.tRch





Factor can be set from 00.0001 up to 99.9999.(Fixed decimal)
„0“ won't be accepted!

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4.4 Decimal point (Adds resolution)

dP.tAch — The decimal point indicates the number of decimal places.

0	no decimal place
0.0	one decimal place
0.00	two decimal places
0.000	three decimal places

4.5 Display mode frequency meter

diSPn

SEc - 1 — Calculating and displaying the value to 1/sec

Min - 1 — Calculating and displaying the value to 1/min

4.6 Max. time to wait until „0“ is displayed

This parameter indicates, how long it takes at active measuring, until „0“ is displayed

WAIt0

01.1 — max. time to wait 01.1 s (min. value)

99.9 — max. time to wait 99.9 s

4.7 End of programming

EndPro

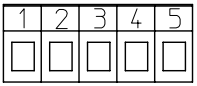
no — Programming routine will be passed through once again. All parameters can be checked.

YES — Programming routine will be left and the new parameters will be stored. Afterwards the device is ready to use.

5. Connections

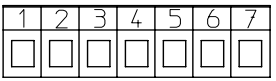
5.1 Without optocoupler output

1 10-30 VDC
2 0 V (GND)
3 INP A
4 INP B
5 SET



5.2 With optocoupler output (npn)

1 10-30 VDC
2 0 V (GND)
3 INP A
4 INP B
5 SET
6 Emitter
7 Collector



6. Technical data

Supply voltage:
10...30 VDC

Max. current consumption:
50 mA

Display:
6digit LED-Display, 8 mm high characters

Polarity of input signals:
programmable for both common inputs (npn or pnp)

Input resistance: appr. 10 kohm

Count frequency: 10 kHz can be damped to 30 Hz

Min. pulse length of the control inputs: 5 ms

Input sensitivity:
Low: 0 to 1 VDC
High: 4 to 30 VDC

Pulse shape: variable (Schmitt Trigger characteristic)

Optocoupler output:
Max. 30V (off), 10mA 1volt drop @ 10mA.

Data retention:
via EEPROM $1x10^6$ memory cycles or 10 years

Noise immunity:
EN 50081-2; EN 55011 class B; EN 50082-2

Ambient temperature: +14°F...+122°F (-10 °C...+50 °C)

Storage temperature: -13°F...+158°F (-25 °C...+70 °C)

Weight: appr. 1.76 oz.(50 g)

Protection: IP 65 (front)

Cleaning:
The front of the unit is only to be cleaned with a soft wet (water !) cloth.

7. Dimensions:

W = 1.88“ (48mm) H = .944“ (24mm) D = 2.32“ (59mm)

8. Cutout:

W = 1.78“ (45.2mm) H = .876“ (22.3mm)

With adaptor: W = 1.97“ (50mm) H = 0.99“ (25mm)