



## CMCP423VTA Compact Vibration Switch Manual



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An instruction is indicated by "▶":

Example: ▶ Check whether the unit operates correctly.



Important note

Non-compliance can result in malfunctions or interference



Information

Supplementary note

## SAFETY INSTRUCTIONS

- Please read the product description prior to set-up of the unit Ensure that the product is suitable for your application without any restrictions
- The unit conforms to the relevant regulations and EC directives.
- Improper or non-intended use may lead to malfunctions of the unit or to unwanted effects in your application
- That is why installation, electrical connection, set-up, operation and maintenance of the unit must only be carried out by qualified personnel authorized by the machine operator

## FUNCTIONS AND FEATURES

The vibration sensor detects the vibration in the system (measured / evaluated physical unit = vibration velocity) this is converted into an analogue signal at the current output The switching output behavior is determined using the two setting rings

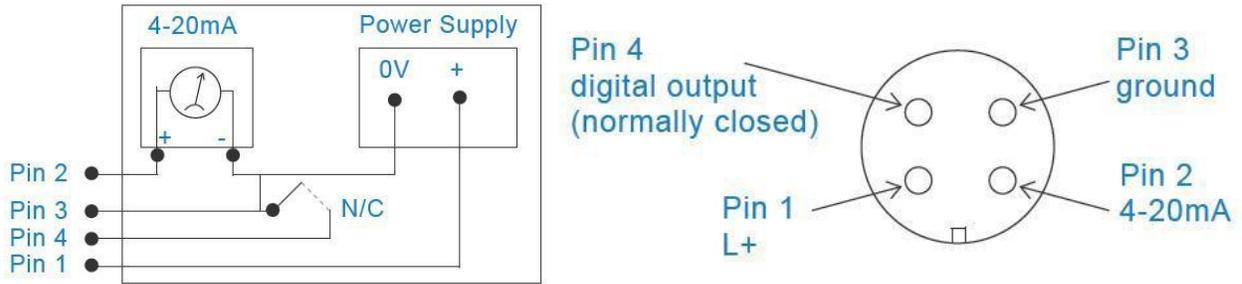
## INSTALLATION

- ▶ Mount only in a thick housing wall (e.g. transport thread).
- ▶ Ensure that the signal direction is correct
- ▶ Ensure a safe vibration transmission and allow no elastic intermediate layers
- ▶ Tighten the sensor with a tightening torque of 15 Nm

## ELECTRICAL CONNECTION



The unit must be connected by a qualified electrician. The national and international regulations for the installation of electrical equipment must be adhered to.



## SETTINGS

### RMS Set

Effective value of the switching threshold, defining the limit value of the vibration velocity

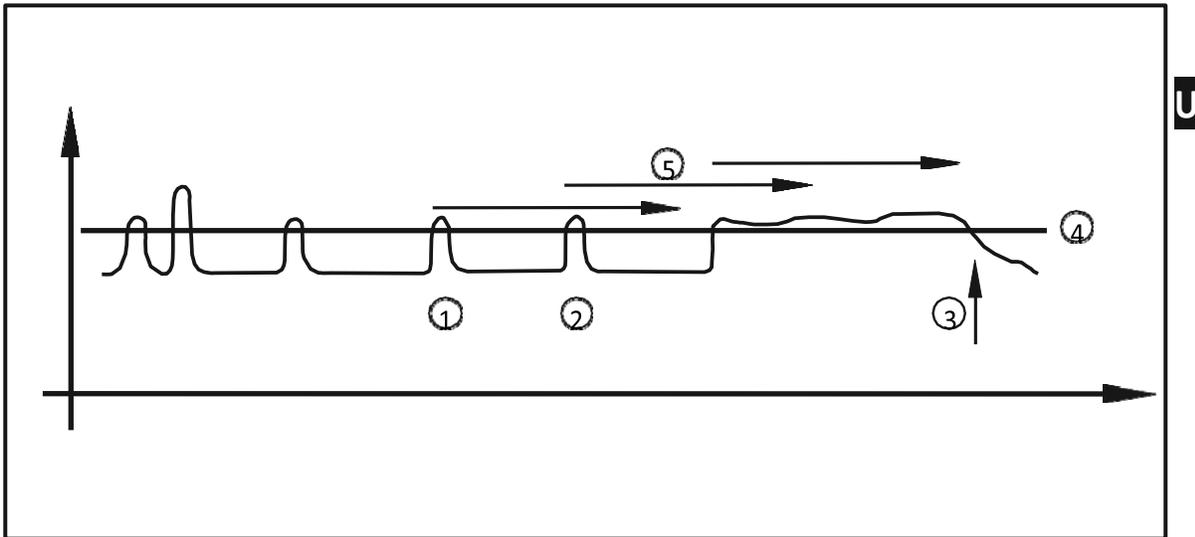
### Delay Set

Time in seconds during which the limit value must be effectively above the switching threshold (RMS Set) to activate the switching output (normally closed pin 4)

## MEASUREMENT RANGE

Velocity Range	0-25 mm/sec or 0-50mm/sec 0-1 IPS or 0-2 IPS
I <sub>out</sub>	4-20mA
Response delay	1- 60 sec

## SWITCHING OUTPUT BEHAVIOUR



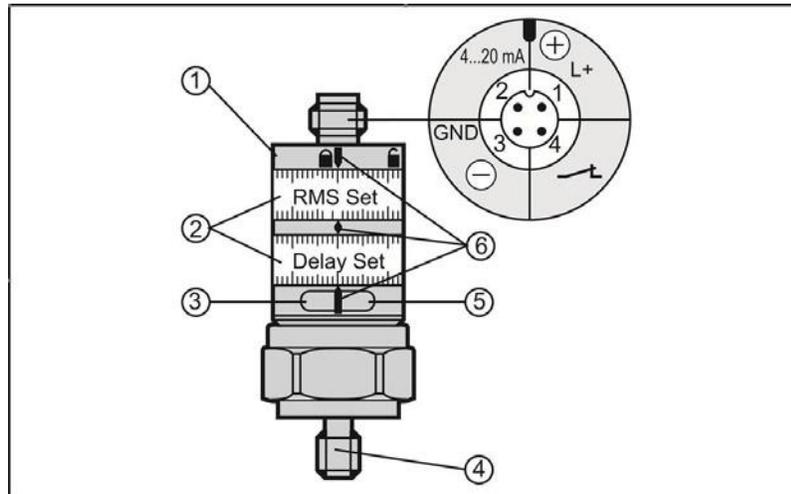
- 1: Time delay after the switching threshold has been exceeded
  - 2: Time delay after the switching threshold has been exceeded
  - 3: Switch-off
  - 4: Switching threshold
  - 5: Delay
- $V_{ss}$  = vibration  
velocity  $t$  = time

### Implementation of the time delays

The time delay starts when the defined switching threshold is exceeded (1) / (2)

The time delay is cancelled when the value falls below the switching threshold (without switch-off) the switch-off is triggered when the switching threshold is exceeded during a full time delay (3)

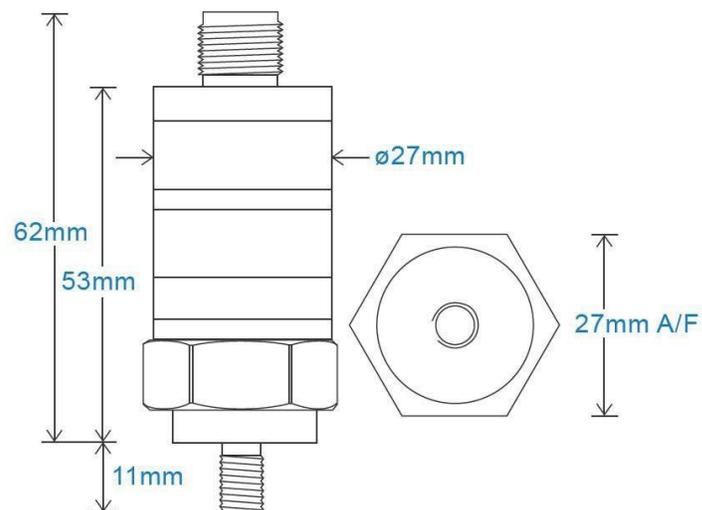
## OPERATING AND DISPLAY ELEMENTS



- 1) locking ring
- 2) setting rings (manually adjustable after unlocking)
- 3) LED green: voltage supply
- 4) M8 process connection
- 5) LED yellow: lights when switching threshold and time delay are exceeded
- 6) setting marks



To achieve the setting accuracy: first position the rings to the lower end stop value, then set the requested value



## MAINTENANCE, REPAIR AND DISPOSAL

The operation of the unit is maintenance-free. It is not possible to repair the unit. After use dispose of the unit in an environmentally friendly way in accordance with the applicable national regulations.

## TECHNICAL PERFORMANCE

Velocity Ranges:	to be specified with order, $\pm 10\%$ Nominal 80Hz at 22°C
Frequency response:	10Hz (600cpm) to 1kHz (60kcpm) $\pm 5\%$ - ISO10816
False Trigger Delay:	Adjustable up to 60 seconds
Trip Setting:	Fully adjustable

## ELECTRICAL

Current Output:	4-20mA DC proportional to Velocity Range
Supply Voltage:	18-32 Volts DC
Switching Output:	NC, PNP up to 500mA
Display OK LED:	Green
Trip LED:	Yellow
Current Consumption:	18-30volts DC at 50mA

## MECHANICAL

Case Material:	Stainless Steel 316L/Plastic
Mounting Torque:	15Nm
Weight:	116gms (nominal)
Screened Cable Assembly:	CMCP604M-01 (straight), CMCP604M-02 (right angle)
Mounting Threads:	M8 x 1.25mm male

## ENVIRONMENTAL

Operating Temperature Range:	-25 to 80°C
Sealing:	IP67
Maximum Shock:	100g
EMC:	EN61326-1:2013
Reverse Polarity:	Protected
MTBF:	510 years

