

# M1

Bourdon tube pressure gauges

## Technical Data Sheet



## Description

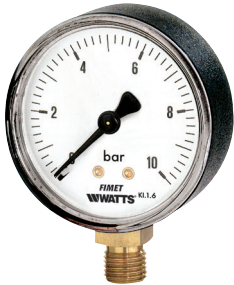
Dry black steel case powder coated bottom entry. For industry, gases and liquids not viscous, not aggressive and not crystallising.



### M1-40

DN40 pressure gauges.

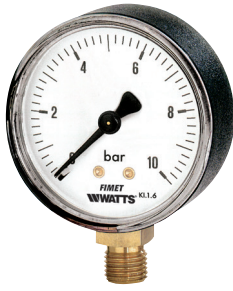
| Part No  | Pressure Range | Connection | Options* | Box/Master | Min. order |
|----------|----------------|------------|----------|------------|------------|
|          | 0-1.6 bar      | G1/8B      |          | 240/240    | 240        |
|          | 0-2.5 bar      | G1/8B      |          | 240/240    | 240        |
| PA150423 | 0-4 bar        | G1/8B      |          | 240/240    | 240        |
| PA150623 | 0-6 bar        | G1/8B      |          | 240/240    | 240        |
| PA151023 | 0-10 bar       | G1/8B      |          | 240/240    | 240        |
| PA151623 | 0-16 bar       | G1/8B      |          | 240/240    | 240        |
| PA152023 | 0-20 bar       | G1/8B      |          | 240/240    | 240        |
| PA152523 | 0-25 bar       | G1/8B      |          | 240/240    | 240        |
| PA154023 | 0-40 bar       | G1/8B      |          | 240/240    | 240        |
|          | 0-60 bar       | G1/8B      |          | 240/240    | 240        |
|          | 0-100 bar      | G1/8B      |          | 240/240    | 240        |
|          | 0-160 bar      | G1/8B      |          | 240/240    | 240        |
|          | 0-250 bar      | G1/8B      |          | 240/240    | 240        |
|          | 0-315 bar      | G1/8B      |          | 240/240    | 240        |
|          | 0-400 bar      | G1/8B      |          | 240/240    | 240        |



### M1-50

DN50 pressure gauges.

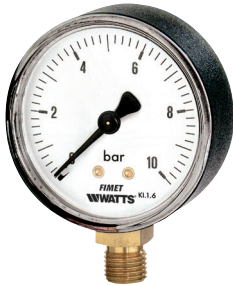
| Part No    | Pressure Range | Connection | Options* | Box/Master | Min. order |
|------------|----------------|------------|----------|------------|------------|
| PA2401BJ00 | -1/0 bar       | G1/4B      |          | 100/100    | 100        |
| PA240122   | 0-1 bar        | G1/4B      |          | 100/100    | 100        |
|            | 0-1.6 bar      | G1/4B      |          | 100/100    | 100        |
|            | 0-2.5 bar      | G1/4B      |          | 100/100    | 100        |
|            | 0-4 bar        | G1/4B      |          | 100/100    | 100        |
| PA250624   | 0-6 bar        | G1/4B      | D+C      | 100/100    | 100        |
| PA251024   | 0-10 bar       | G1/4B      | D+C      | 100/100    | 100        |
| PA251624   | 0-16 bar       | G1/4B      | D+C      | 100/100    | 100        |
|            | 0-20 bar       | G1/4B      |          | 100/100    | 100        |
|            | 0-25 bar       | G1/4B      |          | 100/100    | 100        |
|            | 0-40 bar       | G1/4B      |          | 100/100    | 100        |
|            | 0-60 bar       | G1/4B      |          | 100/100    | 100        |
| PA264822   | 0-100 bar      | G1/4B      | D+C      | 100/100    | 100        |
|            | 0-160 bar      | G1/4B      |          | 100/100    | 100        |
|            | 0-250 bar      | G1/4B      |          | 100/100    | 100        |
| PA266214   | 0-315 bar      | G1/4B      | D+C      | 100/100    | 100        |
|            | 0-400 bar      | G1/4B      |          | 100/100    | 100        |



## M1-63

DN63 pressure gauges.

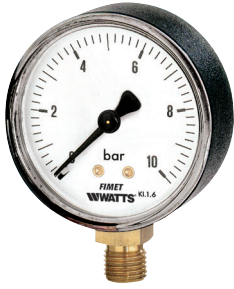
| Part No    | Pressure Range | Connection | Options* | Box/Master | Min. order |
|------------|----------------|------------|----------|------------|------------|
| PA3401BB03 | -1/0 bar       | G1/4B      | C+LF     | 100/100    | 100        |
|            | 0-1 bar        | G1/4B      |          | 100/100    | 100        |
|            | 0-1.6 bar      | G1/4B      |          | 100/100    | 100        |
|            | 0-2.5 bar      | G1/4B      |          | 100/100    | 100        |
| PA350414   | 0-4 bar        | G1/4B      | D+C      | 100/100    | 100        |
| PA350614   | 0-6 bar        | G1/4B      | D+C      | 100/100    | 100        |
|            | 0-10 bar       | G1/4B      |          | 100/100    | 100        |
| PA351614   | 0-16 bar       | G1/4B      | D+C      | 100/100    | 100        |
|            | 0-20 bar       | G1/4B      |          | 100/100    | 100        |
| PA352507   | 0-25 bar       | G1/4B      | D+C      | 100/100    | 100        |
| PA354014   | 0-40 bar       | G1/4B      | D+C      | 100/100    | 100        |
| PA364414   | 0-60 bar       | G1/4B      | D+C      | 100/100    | 100        |
| PA364814   | 0-100 bar      | G1/4B      | D+C      | 100/100    | 100        |
| PA365414   | 0-160 bar      | G1/4B      | D+C      | 100/100    | 100        |
| PA366014   | 0-250 bar      | G1/4B      | D+C      | 100/100    | 100        |
| PA366214   | 0-315 bar      | G1/4B      | D+C      | 100/100    | 100        |
| PA366614   | 0-400 bar      | G1/4B      | D+C      | 100/100    | 100        |



## M1-80

DN80 pressure gauges.

| Part No    | Pressure Range | Connection | Options* | Box/Master | Min. order |
|------------|----------------|------------|----------|------------|------------|
| PA449915   | -1/0 bar       | G3/8B      |          | 1/50       | 50         |
|            | 0-1 bar        | G3/8B      |          | 1/50       | 50         |
|            | 0-1.6 bar      | G3/8B      |          | 1/50       | 50         |
| PA450316   | 0-2.5 bar/psi  | G3/8B      | D        | 1/50       | 50         |
| PA4504BC03 | 0-4 bar        | G3/8B      |          | 1/50       | 50         |
| PA450615   | 0-6 bar/psi    | G3/8B      | D        | 1/50       | 50         |
| PA451015   | 0-10 bar/psi   | G3/8B      | D        | 1/50       | 50         |
| PA451615   | 0-16 bar/psi   | G3/8B      | D        | 1/50       | 50         |
|            | 0-20 bar       | G3/8B      |          | 1/50       | 50         |
| PA452515   | 0-25 bar/psi   | G3/8B      | D        | 1/50       | 50         |
|            | 0-40 bar       | G3/8B      |          | 1/50       | 50         |
|            | 0-60 bar       | G3/8B      |          | 1/50       | 50         |
|            | 0-100 bar      | G3/8B      |          | 1/50       | 50         |
|            | 0-160 bar      | G3/8B      |          | 1/50       | 50         |
|            | 0-250 bar      | G3/8B      |          | 1/50       | 50         |
|            | 0-315 bar      | G3/8B      |          | 1/50       | 50         |
|            | 0-400 bar      | G3/8B      |          | 1/50       | 50         |



## M1-100

DN100 pressure gauges.

| Part No    | Pressure Range | Connection | Options* | Box/Master | Min. order |
|------------|----------------|------------|----------|------------|------------|
| PA5001DD00 | -1/0 bar/inHg  | G1/2B      | D+C      | 1/30       | 30         |
| PA540151   | 0-1 bar        | G1/2B      |          | 1/30       | 30         |
| PA540251   | 0-1.6 bar      | G1/2B      |          | 1/30       | 30         |
| PA550316   | 0-2.5 bar/psi  | G1/2B      | D+C      | 1/30       | 30         |
| PA550416   | 0-4 bar/psi    | G1/2B      | D+C      | 1/30       | 30         |
| PA550616   | 0-6 bar/psi    | G1/2B      | D+C      | 1/30       | 30         |
| PA551016   | 0-10 bar/psi   | G1/2B      | D+C      | 1/30       | 30         |
| PA551616   | 0-16 bar/psi   | G1/2B      | D+C      | 1/30       | 30         |
| PA552016   | 0-20 bar/psi   | G1/2B      | D+C      | 1/30       | 30         |
| PA552516   | 0-25 bar/psi   | G1/2B      | D+C      | 1/30       | 30         |
| PA5540DL00 | 0-40 bar/psi   | G1/2B      | D+C      | 1/30       | 30         |
| PA564416   | 0-60 bar/psi   | G1/2B      | D+C      | 1/30       | 30         |
| PA564816   | 0-100 bar/psi  | G1/2B      | D+C      | 1/30       | 30         |
| PA565416   | 0-160 bar/psi  | G1/2B      | D+C      | 1/30       | 30         |
| PA566016   | 0-250 bar/psi  | G1/2B      | D+C      | 1/30       | 30         |
| PA566216   | 0-315 bar/psi  | G1/2B      | D+C      | 1/30       | 30         |
| PA566616   | 0-400 bar/psi  | G1/2B      | D+C      | 1/30       | 30         |

### \*Options included

D = Dual scale bar/psi (black/red)  
 LF = Finmet Watts logo on the dial  
 C = Accuracy class 1.6

## Options



## M1-80/T1 Steam

DN80 pressure gauges.

| Part No    | Pressure Range | Connection | Options* | Box/Master | Min. order |
|------------|----------------|------------|----------|------------|------------|
| PA4803BK00 | 0-2,5 bar      | G3/8B      | C+T1+VW  | 1/50       | 1          |
| PA4804BK00 | 0-4 bar        | G3/8B      | C+T1+VW  | 1/50       | 1          |
| PA4806BK00 | 0-6 bar        | G3/8B      | C+T1+VW  | 1/50       | 1          |
| PA4810BK00 | 0-10 bar       | G3/8B      | C+T1+VW  | 1/50       | 1          |
| PA4816BK00 | 0-16 bar       | G3/8B      | C+T1+VW  | 1/50       | 1          |
| PA4825BK00 | 0-25 bar       | G3/8B      | C+T1+VW  | 1/50       | 1          |



## M1-100/T1 Steam

DN100 pressure gauges.

| Part No    | Pressure Range | Connection | Options* | Box/Master | Min. order |
|------------|----------------|------------|----------|------------|------------|
| PA5803BL00 | 0-2,5 bar      | G1/2B      | C+T1+VW  | 1/30       | 1          |
| PA5804BL00 | 0-4 bar        | G1/2B      | C+T1+VW  | 1/30       | 1          |
| PA5806BL00 | 0-6 bar        | G1/2B      | C+T1+VW  | 1/30       | 1          |
| PA5810BL00 | 0-10 bar       | G1/2B      | C+T1+VW  | 1/30       | 1          |
| PA5816BL00 | 0-16 bar       | G1/2B      | C+T1+VW  | 1/30       | 1          |
| PA5825BL00 | 0-25 bar       | G1/2B      | C+T1+VW  | 1/30       | 1          |



## M1-63/R Red Pointer

DN63 pressure gauges.

| Part No    | Pressure Range | Connection | Options*    | Box/Master | Min. order |
|------------|----------------|------------|-------------|------------|------------|
| PA3804BB00 | 0-4 bar        | G1/4B      | C+R+QISP+CC | 100/100    | 100        |
| PA3806BB01 | 0-6 bar        | G1/4B      | C+R+QISP+CC | 100/100    | 100        |
| PA3810BB00 | 0-10 bar       | G1/4B      | C+R+QISP+CC | 100/100    | 100        |
| PA3816BB00 | 0-16 bar       | G1/4B      | C+R+QISP+CC | 100/100    | 100        |



## M1-80/R Red Pointer

DN80 pressure gauges.

| Part No    | Pressure Range | Connection | Options*    | Box/Master | Min. order |
|------------|----------------|------------|-------------|------------|------------|
| PA4804BK01 | 0-4 bar        | G3/8B      | C+R+QISP+CC | 50/50      | 50         |
| PA4806BK01 | 0-6 bar        | G3/8B      | C+R+QISP+CC | 50/50      | 50         |
| PA4810BK01 | 0-10 bar       | G3/8B      | C+R+QISP+CC | 50/50      | 50         |
| PA4816BK01 | 0-16 bar       | G3/8B      | C+R+QISP+CC | 50/50      | 50         |

## Customizations per minimum order quantity

| Customizations   | Model                                    |
|--|--|
| AT - PTFE sealing ring on parallel threads only  | M1-40/50/63/80/100                       |
| R - PTFE sealing ring on parallel threads only   | M1-50/63/80/100/R                        |
| T2 -40°C/+90°C - Aluminium dial + aluminium pointer (QA+I)                                       | M1-40/50/63/80/100/T                     |
| T1 -40°C/+120°C - Aluminium dial + aluminium pointer + bezel ring + instrument glass (QA+I+A+VV) | M1-40/50/63/80/100/T                     |
| Z - Restrictor hole 0.5 mm   | M1-40/50/63/80/100                       |
| A+V - Chrome-plated bezel ring + instrument glass window<br>CC - Chrome case                     | M1-40/50/63/80/100<br>M1-40/50/63/80/100 |
| Customized dials, other scale ranges or connections on request                                   | M1-40/50/63/80/100                       |



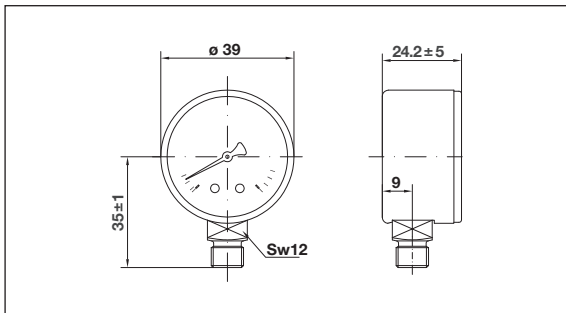
## Features

| Materials           | M1-40<br>M1-50  | M1-63<br>M1-80<br>M1-100  |
|---------------------|---|---|
| Case                | Black steel, powder coated  | Black steel, powder coated  |
| Window              | Clear plastic   | Clear plastic   |
| Dial                | White plastic   | White plastic   |
| Pointer             | Black plastic   | Black plastic   |
| Pressure connection | Cu-alloy, 12 mm flats   | Cu-alloy, 14 mm flats   |
| Pressure element    | Bourdon tube Cu-alloy, soft soldered ≤ 60 bar<br>C-type, > 60 bar helical type Sn-Ag soldered | Bourdon tube Cu-alloy, soft soldered ≤ 60 bar<br>C-type, > 60 bar helical type Sn-Ag soldered |
| Movement            | Cu-alloy  | Cu-alloy  |

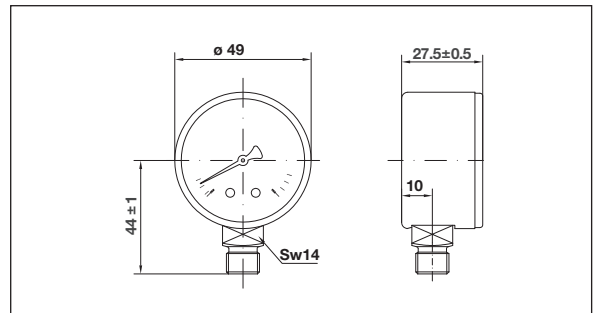
| Technical features   |   |
|----------------------|---|
| Design               | EN 837-1  |
| Working pressure     | Steady: 75% of full scale value<br>Fluctuating: 60% of full scale value<br>Short time: full scale value |
| Temperature limits   | Ambient: -40 ... +60°C<br>Medium: +60°C maximum<br>Storage: -40 ... +60°C                               |
| Temperature effect   | Deviation from reference temperature (+20°C): $\pm 0,04\%/1K$ of the span                               |
| Accuracy class       | cl. 2.5, cl. 1.6 on request   |
| Degree of protection | IP 31 per EN 60 529/IEC 529   |
| Individual weight:   |   |
| M1-40                | 0.060 kg  |
| M1-50                | 0.095 kg  |
| M1-63                | 0.115 kg  |
| M1-80                | 0.170 kg  |
| M1-100               | 0.255 kg  |

## Overall dimensions (mm)

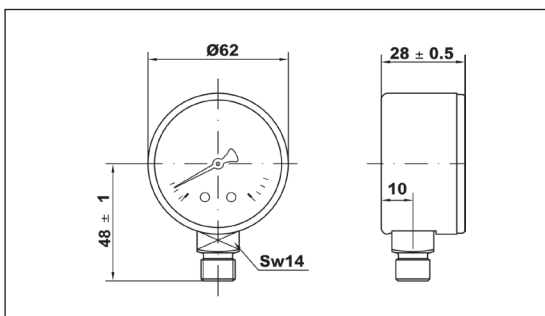
### M1-40



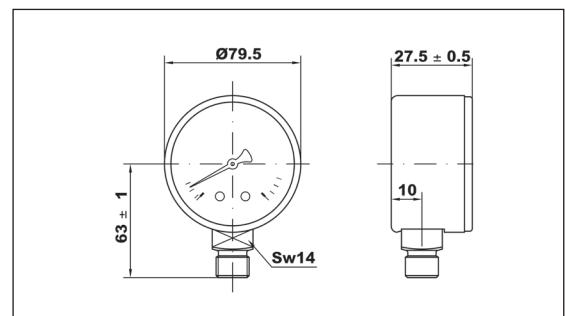
### M1-50



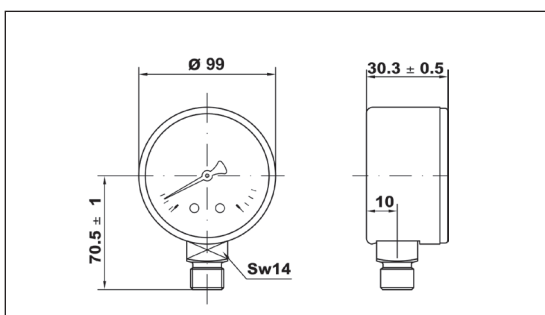
### M1-63



### M1-80



### M1-100



## Specification text

---

### **M1 Series**

Bourdon tube pressure gauge **M1 Series**, WATTS Brand, for industrial applications, gases and not viscous not aggressive and not crystallizing liquid. **Dry black steel case** DN 40-50-63-80-100 mm, bottom entry. Vacuum measures range -1/0 at high pressure up to 400 bar. Temperature limits + 60°C. Accuracy class 1.6. **Compliant with EN 837-1.**

### **M1/T1 Series**

Bourdon tube pressure gauge **M1/T1 Steam Series**, WATTS Brand, for industrial applications, gases and not viscous not aggressive and not crystallizing liquid. **Dry black steel case powder coated** DN 40-50-63-80-100 mm, **bottom entry**. Vacuum measures range from 2,5 to 25 bar. Temperature limits **+120°C**. Accuracy class 2,5. **Compliant with EN 837-1.**

### **M1/R Series**

Bourdon tube pressure gauge **M1/R Series**, WATTS Brand, for heating applications, gases and not viscous, not aggressive and not crystallizing liquid. **Dry steel chrome case** DN 63-80 mm, bottom **entry, red adjustable pointer on window**. Vacuum measures range from 4 to 16 bar. Temperature limits + 60°C. Accuracy class 1.6. **Compliant with EN 837-1**

---

The descriptions and photographs contained in this product specification sheet are supplied by way of information only and are not binding.

Watts Industries reserves the right to carry out any technical and design improvements to its products without prior notice. Warranty: All sales and contracts for sale are expressly conditioned on the buyer's assent to Watts terms and conditions found on its website at [www.wattsindustries.com](http://www.wattsindustries.com). Watts hereby objects to any term, different from or additional to

Watts terms, contained in any buyer communication in any form, unless agreed to in a writing signed by an officer of Watts.

---



**Watts Industries Italia S.r.l.**

Via Brenno, 21 • 20853 Biassono (MB) • Italy  
Tel. +39 039 4986.1 • Fax +39 039 4986.222  
[infowattsitalia@wattswater.com](mailto:infowattsitalia@wattswater.com) • [www.watts.com](http://www.watts.com)