

# DIN EN 17526:2025-11 (E)

## Gas meter - Thermal-mass flow-meter based gas meter (includes Amendment :2025)

---

<b>Contents</b>		<b>Page</b>
European foreword .....		4
<b>1</b>	<b>Scope .....</b>	<b>5</b>
<b>2</b>	<b>Normative references .....</b>	<b>5</b>
<b>3</b>	<b>Terms, definitions and symbols .....</b>	<b>8</b>
<b>3.1</b>	<b>Terms and definitions .....</b>	<b>8</b>
<b>3.2</b>	<b>Symbols .....</b>	<b>12</b>
<b>4</b>	<b>Working conditions .....</b>	<b>13</b>
<b>4.1</b>	<b>General .....</b>	<b>13</b>
<b>4.2</b>	<b>Base conditions .....</b>	<b>13</b>
<b>4.3</b>	<b>Flow range .....</b>	<b>13</b>
<b>4.4</b>	<b>Maximum working pressure .....</b>	<b>14</b>
<b>4.5</b>	<b>Temperature range .....</b>	<b>14</b>
<b>4.6</b>	<b>Range of gases .....</b>	<b>15</b>
<b>4.7</b>	<b>Installation orientation .....</b>	<b>15</b>
<b>5</b>	<b>Metrological performance .....</b>	<b>15</b>
<b>5.1</b>	<b>General .....</b>	<b>15</b>
<b>5.2</b>	<b>Test mode comparison .....</b>	<b>16</b>
<b>5.3</b>	<b>Permissible errors .....</b>	<b>17</b>
<b>5.4</b>	<b>Gas-air relationship .....</b>	<b>19</b>
<b>5.5</b>	<b>Pressure absorption .....</b>	<b>20</b>
<b>5.6</b>	<b>Metrological stability .....</b>	<b>21</b>
<b>5.7</b>	<b>Immunity to contaminants in gas stream (dust test) .....</b>	<b>22</b>
<b>5.8</b>	<b>Flow disturbances .....</b>	<b>25</b>
<b>5.9</b>	<b>Zero flow .....</b>	<b>29</b>
<b>5.10</b>	<b>Reverse flow .....</b>	<b>30</b>
<b>5.11</b>	<b>Low flow registration (starting flow rate) .....</b>	<b>30</b>
<b>5.12</b>	<b>Overload flow rate .....</b>	<b>30</b>
<b>5.13</b>	<b>MM - Pulsed (unsteady) flow .....</b>	<b>31</b>
<b>6</b>	<b>Construction and materials .....</b>	<b>31</b>
<b>6.1</b>	<b>Mechanical interference .....</b>	<b>32</b>
<b>6.2</b>	<b>Unauthorized interference .....</b>	<b>32</b>
<b>6.3</b>	<b>Robustness of meter case .....</b>	<b>33</b>
<b>6.4</b>	<b>Connections .....</b>	<b>37</b>
<b>6.5</b>	<b>Resistance to vibration .....</b>	<b>42</b>
<b>6.6</b>	<b>Corrosion protection .....</b>	<b>44</b>
<b>6.7</b>	<b>Flame retardance of external surfaces .....</b>	<b>45</b>
<b>6.8</b>	<b>Requirements for rubber components in the gas path .....</b>	<b>46</b>
<b>6.9</b>	<b>Resistance to storage temperature range .....</b>	<b>46</b>
<b>6.10</b>	<b>Resistance to toluene/iso-octane vapour .....</b>	<b>46</b>
<b>6.11</b>	<b>Resistance to water vapour .....</b>	<b>48</b>
<b>6.12</b>	<b>Ageing .....</b>	<b>49</b>
<b>7</b>	<b>Optional features .....</b>	<b>50</b>
<b>7.1</b>	<b>Pressure measuring point .....</b>	<b>50</b>
<b>7.2</b>	<b>Electrical insulating feet (optional) .....</b>	<b>51</b>
<b>7.3</b>	<b>Resistance to high ambient temperatures .....</b>	<b>51</b>

7.4	Additional functionalities (if fitted) .....	53
7.5	Use in hazardous zones .....	54
8	Index .....	54
8.1	Recording and storage .....	54
8.2	Display .....	54
8.3	Display functionality .....	55
8.4	Non-volatile memory .....	56
9	Marking .....	57
9.1	All meters .....	57
9.2	Two-pipe meters .....	57
9.3	Durability and legibility of marking and labels .....	58
9.4	Indelibility of marking .....	59
10	Software .....	59
10.1	Requirements .....	59
10.2	Test .....	60
11	Communications .....	61
11.1	General .....	61
11.2	Metrological influence of radio communication function .....	61
11.3	Test mode .....	62
11.4	Data optical port (optional) .....	62
11.5	Galvanic port (optional) .....	62
11.6	Diagnostics .....	62
12	Battery .....	64
12.1	General .....	64
12.2	Additional requirements .....	64
13	Immunity to electromagnetic disturbances .....	64
13.1	General .....	64
13.2	Electrostatic discharge .....	65
13.3	Radio frequency electromagnetic field .....	65
13.4	Electromagnetic induction (power frequency) .....	66
13.5	Electromagnetic induction (pulsed field) .....	66
13.6	Radio interference suppression .....	66
14	Instructions .....	67
15	Meters supplied for testing .....	67
16	Production requirements .....	70
	Annex A (informative) Key physical property of gases for meter performance testing .....	71
	Annex B (normative) Gases for meter performance testing .....	73
	Annex C (informative) Meters without temperature or pressure conversion .....	75
	Annex D (normative) Production requirements for gas meters .....	76
	Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2014/32/EU Measuring Instruments Directive aimed to be covered .....	78
	Bibliography .....	83