

INTERNATIONAL ELECTROTECHNICAL COMMISSION  
COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

**IEC 60721-3-4**  
Edition 3.0 2019-05

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**CLASSIFICATION OF ENVIRONMENTAL  
CONDITIONS –**

**Part 3-4: Classification of groups of  
environmental parameters and their severities –  
Stationary use at non-weatherprotected  
locations**

**CLASSIFICATION DES CONDITIONS  
D'ENVIRONNEMENT –**

**Partie 3-4: Classification des groupements des  
agents d'environnement et de leurs sévérités –  
Utilisation à poste fixe, non protégé contre les  
intempéries**

**CORRIGENDUM 1**

Corrections to the French version appear after the English text.

Les corrections à la version française sont données après le texte anglais.

**Table 1 – Classification of climatic conditions**

*In the "Low absolute humidity" row, for climatic conditions 4K23, 4K24, 4K26 and 4K27, replace the existing values "0,2", "0,003", "0,1" and "0,003" with the new values "0,05", "0,004", "0,05" and "0,004", respectively, as shown:*

| Environmental parameter                    | Unit             | Classification      |                     |                    |                    |                    |
|--------------------------------------------|------------------|---------------------|---------------------|--------------------|--------------------|--------------------|
|                                            |                  | Sheltered           |                     | Open-air           |                    |                    |
|                                            |                  | 4K23                | 4K24                | 4K25               | 4K26               | 4K27               |
| Low air temperature                        | °C               | –45                 | –50                 | +5                 | –20                | –50                |
| High air temperature                       | °C               | +70                 | +70                 | +45 <sup>i</sup>   | +50 <sup>i</sup>   | +45 <sup>i</sup>   |
| Low relative humidity <sup>a</sup>         | %                | 4                   | 4                   | 30                 | 4                  | 10                 |
| High relative humidity <sup>a</sup>        | %                | 100                 | 100                 | 100                | 100                | 100                |
| Low absolute humidity <sup>a</sup>         | g/m <sup>3</sup> | 0,05                | 0,004               | 6                  | 0,05               | 0,004              |
| High absolute humidity <sup>a</sup>        | g/m <sup>3</sup> | 35                  | 20                  | 35                 | 30                 | 25                 |
| Rate of change of temperature <sup>b</sup> | °C/min           | 1,0                 | 1,0                 | 1,0                | 1,0                | 1,0                |
| Low air pressure <sup>c</sup>              | kPa              | 70                  | 70                  | 70                 | 70                 | 70                 |
| High air pressure <sup>c</sup>             | kPa              | 106                 | 106                 | 106                | 106                | 106                |
| Solar radiation                            | W/m <sup>2</sup> | h                   | h                   | 1 090 <sup>l</sup> | 1 090 <sup>l</sup> | 1 090 <sup>l</sup> |
| Heat radiation                             | Not specified    | f                   | f                   | No                 | No                 | No                 |
| Movement of surrounding air <sup>d</sup>   | m/s              | 5,0 <sup>d, f</sup> | 5,0 <sup>d, f</sup> | 22 <sup>f</sup>    | 22 <sup>f</sup>    | 22 <sup>f</sup>    |
| Condensation                               | Not specified    | Yes                 | Yes                 | Yes                | Yes                | Yes                |

| Environmental parameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Unit              | Classification   |                  |                  |                  |                  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   | Sheltered        |                  | Open-air         |                  |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   | 4K23             | 4K24             | 4K25             | 4K26             | 4K27             |
| Precipitation (rain, snow, hail, etc.) <sup>m</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Not specified     | Yes <sup>g</sup> | Yes <sup>g</sup> | Yes              | Yes              | Yes              |
| Rain intensity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | mm/min            | No <sup>g</sup>  | No <sup>g</sup>  | 15               | 15               | 15               |
| Driving rain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | m/s               | No               | No               | 18               | 18               | 18               |
| Snow load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | kg/m <sup>2</sup> | No               | No               | No               | g                | g                |
| Low rain temperature <sup>e</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | °C                | No <sup>g</sup>  | No <sup>g</sup>  | +5               | +5               | +5               |
| Water from sources other than rain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Not specified     | Dripping water   | Dripping water   | j                | j                | j                |
| Formation of ice and frost                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Not specified     | Yes              | Yes              | Yes <sup>k</sup> | Yes <sup>k</sup> | Yes <sup>k</sup> |
| <p><sup>a</sup> The low and high relative humidity levels are limited by the low and high absolute humidity. See Annex A.</p> <p><sup>b</sup> Averaged over a period of 5 min.</p> <p><sup>c</sup> The value of 70 kPa represents a limit for open-air conditions, normally at an altitude of 3 000 m. In some geographical areas, open-air conditions may occur at higher altitudes. Conditions in mines are not considered. If applicable, a special value may be selected from Table 2.</p> <p><sup>d</sup> A cooling system based on non-assisted convection may be disturbed by adverse movement of surrounding air.</p> <p><sup>e</sup> This rain temperature should be considered together with high air temperature and solar radiation. The cooling effect of the rain should be considered in connection with the surface temperature of the product.</p> <p><sup>f</sup> If applicable, a special value may be selected from Table 2.</p> <p><sup>g</sup> Applies only to wind-driven precipitation at sheltered locations.</p> <p><sup>h</sup> Thermal effect of solar radiation is included in the temperature.</p> <p><sup>i</sup> Thermal effect of solar radiation is not included in the temperature.</p> <p><sup>j</sup> Sources of water other than rain are encompassed in driving rain.</p> <p><sup>k</sup> Formation of frost can occur due to heat radiation to a clear sky.</p> <p><sup>l</sup> From sea level.</p> <p><sup>m</sup> See IEC 60721-2-2 for additional information.</p> |                   |                  |                  |                  |                  |                  |