

ISO 7726:2025-10 (E)

Ergonomics of the thermal environment - Instruments for measuring and monitoring physical quantities

| Contents | | Page |
|--------------------|---|-------------|
| Foreword | | v |
| Introduction | | vi |
| 1 | Scope | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions | 1 |
| 4 | Symbols and abbreviation | 1 |
| 5 | General | 2 |
| 5.1 | Specifications and methods | 2 |
| 5.2 | The heat exchanges between human body system and its environment | 2 |
| 6 | Physical quantities characterizing heat exchanges | 3 |
| 6.1 | General | 3 |
| 6.2 | Basic physical quantities | 3 |
| 6.2.1 | Quantities | 3 |
| 6.2.2 | Air temperature | 3 |
| 6.2.3 | Radiation | 3 |
| 6.2.4 | Plane radiant temperature | 4 |
| 6.2.5 | Dew point temperature | 4 |
| 6.2.6 | Relative humidity | 4 |
| 6.2.7 | Surface temperature | 4 |
| 6.2.8 | Air velocity | 4 |
| 6.2.9 | Globe temperature | 4 |
| 6.2.10 | Psychrometric wet-bulb temperature | 4 |
| 6.2.11 | Natural wet-bulb temperature | 4 |
| 6.3 | Derived physical quantities | 5 |
| 6.3.1 | General | 5 |
| 6.3.2 | Mean radiant temperature | 5 |
| 6.3.3 | Radiant temperature asymmetry | 5 |
| 6.3.4 | Operative temperature | 5 |
| 6.3.5 | Water vapour partial pressure | 6 |
| 6.3.6 | Humidity ratio | 6 |
| 6.3.7 | Turbulence intensity | 6 |
| 7 | The characteristics of physical quantity measuring instruments | 6 |
| 7.1 | General | 6 |
| 7.2 | Characteristics of instruments for measuring the basic quantities | 6 |
| 7.3 | Characteristics of integrating types of measuring instruments | 8 |
| 8 | Specifications relating to measuring methods | 9 |
| 8.1 | General | 9 |
| 8.2 | Specifications relating to variations in the physical quantities within the space surrounding the subject | 9 |
| 8.3 | Specifications relating to the variations in the physical quantities with time | 10 |
| 9 | Specifications relating to monitoring methods | 11 |

| | | |
|------|---|----|
| 10 | Measurement uncertainty | 11 |
| 11 | Specifications related to the processing of measurement results | 11 |
| 11.1 | Spatial maps of measured data | 12 |
| | Annex A (informative) Measurement of air temperature | 13 |
| | Annex B (informative) Measurement and calculation of the mean radiant temperature | 15 |
| | Annex C (informative) Measurement of plane radiant temperature | 26 |
| | Annex D (informative) Measurement of the absolute humidity of the air | 32 |
| | Annex E (informative) Measurement of air velocity | 39 |
| | Annex F (informative) Measurement of surface temperature | 42 |
| | Annex G (informative) Measurement of operative temperature | 44 |
| | Annex H (informative) Measurement of the natural wet-bulb temperature | 46 |
| | Bibliography | 48 |