

Block BASE

The BASE block calculates the dynamic conductance value for unsteady heat transport via basement around an building. Calculation is based on EN ISO 13370.



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Inputs

None

Outputs

- 1 Dynamic conductance via basement floor [W/K]
- 2 Dynamic conductance via basement wall [W/K]
- 3 Static conductance [W/K]
- 4 Phase shift because of basement [mth.]

Parameters

- 1 Switch base-mode (0: no cellar without ins. band 1: no cellar with ins. band 2: heated cellar 3: unheated cellar)
- 2 Switch ins. band modulus (only for BP(1)=1) (0: horizontal 1: vertical)
- 3 Net volume cellar [m³]
- 4 Area of basement floor [m²]
- 5 External perimeter of basement floor [m]
- 6 Height of cellar wall [m]
- 7 Thickness of cellar wall [m]
- 8 Height cellar wall above ground [m]

- 9 Width of insulation band [m]
- 10 Thickness of ins. band [m]
- 11 Thermal resistance of wall under ground [$(\text{m}^2 \cdot \text{K})/\text{W}$]
- 12 Thermal resistance of ground plate [$(\text{m}^2 \cdot \text{K})/\text{W}$]
- 13 U-value cellar ceiling [$\text{W}/(\text{m}^2 \cdot \text{K})$]
- 14 Thermal resistance of insulation band (Dämmstreifen) [$(\text{m}^2 \cdot \text{K})/\text{W}$]
- 15 U-value wall above ground [$\text{W}/(\text{m}^2 \cdot \text{K})$]
- 16 Ventilation rate in cellar [1/h]
- 17 Thermal conductivity of soil [$\text{W}/(\text{mK})$]

Strings

None
