Directive 2014/32/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of measuring instruments (recast) (Text with EEA relevance)

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## SPECIFIC REQUIREMENTS

## 7. Sub-assemblies

The provisions for sub-assemblies may apply to sub-assemblies manufactured by the same or different manufacturers. Where a thermal energy meter consists of sub-assemblies, the essential requirements for the thermal energy meter apply to the sub-assemblies as relevant. In addition, the following apply:

7.1. The relative MPE of the flow sensor, expressed in %, for accuracy classes:

- Class 1:

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 $E_f = (1 + 0.01 q_p / q)$ , but not more than 5 %, Class 2:  $E_f = (2 + 0.02 q_p / q)$ , but not more than 5 %, Class 3:  $E_f = (3 + 0.05 q_p / q)$ 

, but not more than 5 %,

where the error  $E_f$  relates the indicated value to the true value of the relationship between flow sensor output signal and the mass or the volume.

7.2. The relative MPE of the temperature sensor pair, expressed in %:

 $E_t = (0,5 + 3 \times \Delta \theta_{\min} / \Delta \theta)$ 

where the error  $E_t$  relates the indicated value to the true value of the relationship between temperature sensor pair output and temperature difference.

7.3. The relative MPE of the calculator, expressed in %:

 $E_c = (0,5 + \Delta \theta_{\min} / \Delta \theta)$ 

where the error  $E_c$  relates the value of the thermal energy indicated to the true value of the thermal energy.

- 7.4. The critical change value for a sub-assembly of a thermal energy meter is equal to the respective absolute value of the MPE applicable to the sub-assembly (see points 7.1, 7.2 or 7.3).
- 7.5. Inscriptions on the sub-assemblies

Flow sensor:	Accuracy class
	Limits of flow rate
	Limits of temperature
	Nominal meter factor (e.g. litres/pulse) or corresponding output signal

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	Indication of the direction of flow
Temperature sensor pair:	Type identification (e.g. P <sub>t</sub> 100)
	Limits of temperature
	Limits of temperature difference
Calculator:	Type of temperature sensors—Limits of temperature—Limits of temperature difference—Required nominal meter factor (e.g. litres/pulse) or corresponding input signal coming from the flow sensor—Place of the flow sensor installation: flow or return