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Energy manifestation forms: Change (Transfer Movement), Potential (Rest Duration), Temperature, Light, Sound, Mass, Charge, Information, Communication, ...

Energy Total:

$$\begin{aligned} E_{Tot} &= motion + rest = linear + rotational + vibration + spin + \dots = \\ Work + Heatchange &= (F \cdot \Delta r) \mp \Delta Q = E_{kin} + E_{pot} = E_{magn} + E_{elec} = pv \\ &\stackrel{macro(continuum)}{=} \\ \frac{1}{2} \frac{p^2}{m} &= \frac{1}{2} m (\omega A)^2 \\ &\stackrel{thermal}{=} \frac{1}{2} f b T \stackrel{micro(quantum)}{=} \\ \hbar \omega = h \nu &= \frac{1}{2} \frac{(\hbar k)^2}{m} \stackrel{relativistic}{=} \\ \sqrt{(pc)^2 + (mc^2)^2} &\stackrel{Entropy}{=} \\ \dots &\stackrel{distributionFermion}{=} \\ \dots &\stackrel{distributionBoson}{=} \\ \dots &\stackrel{distributionBoltzmann}{=} \\ \dots & \end{aligned} \tag{1}$$