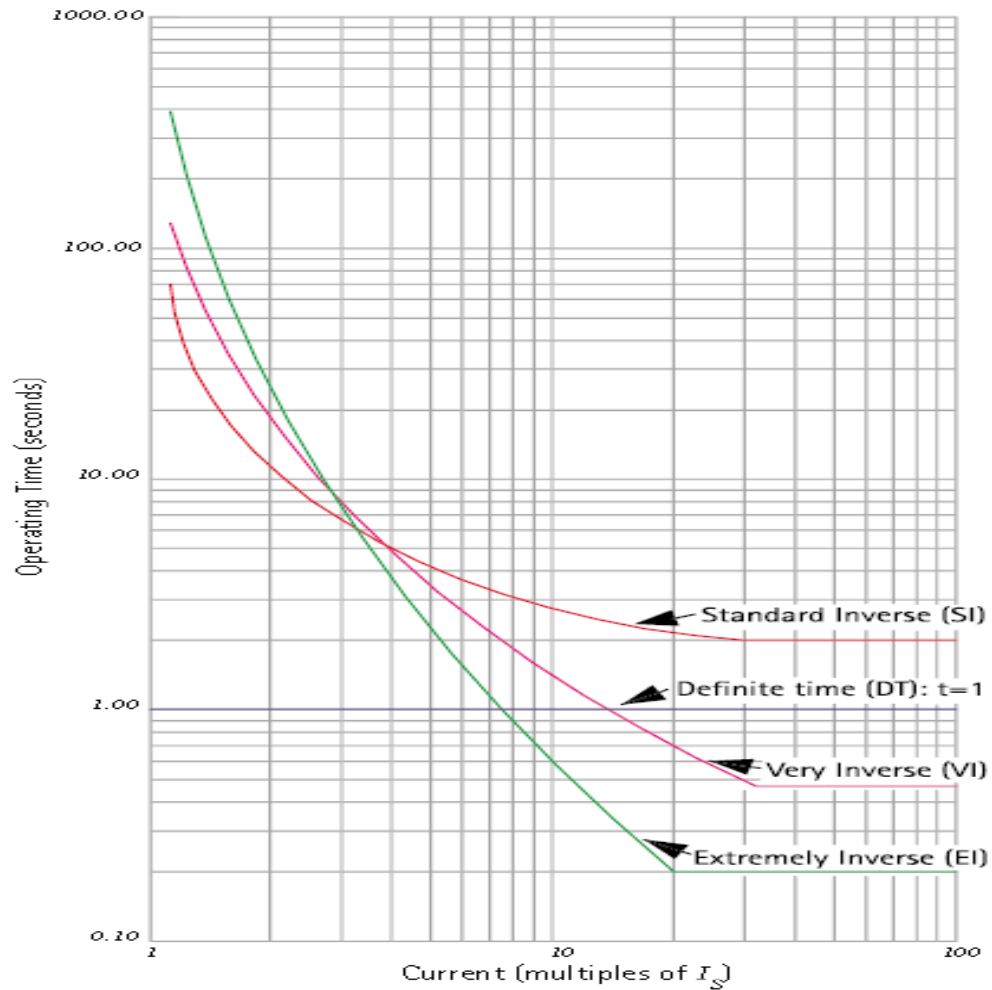# Electromagnetic, attracted and induction type relays

Relay characteristics
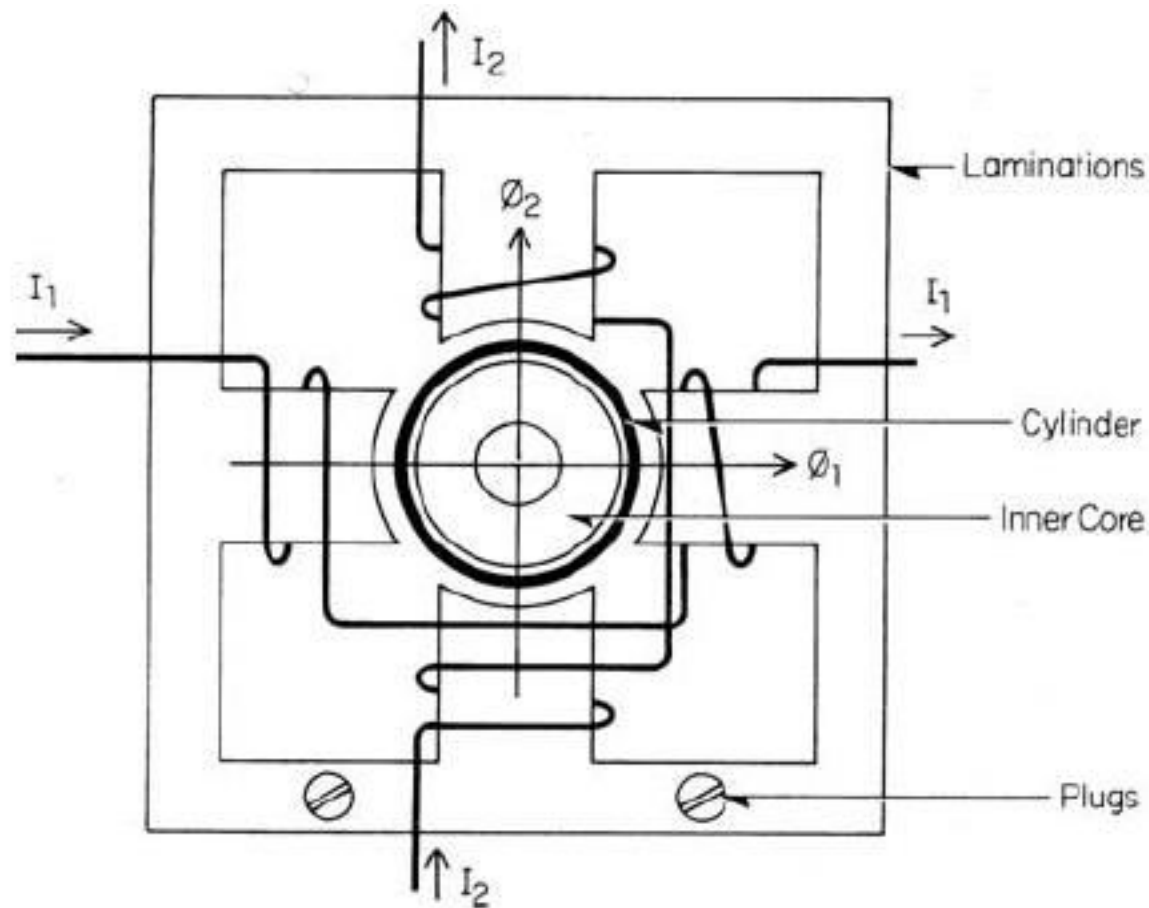

(a) IEC 60255 characteristics ; TMS=1.0
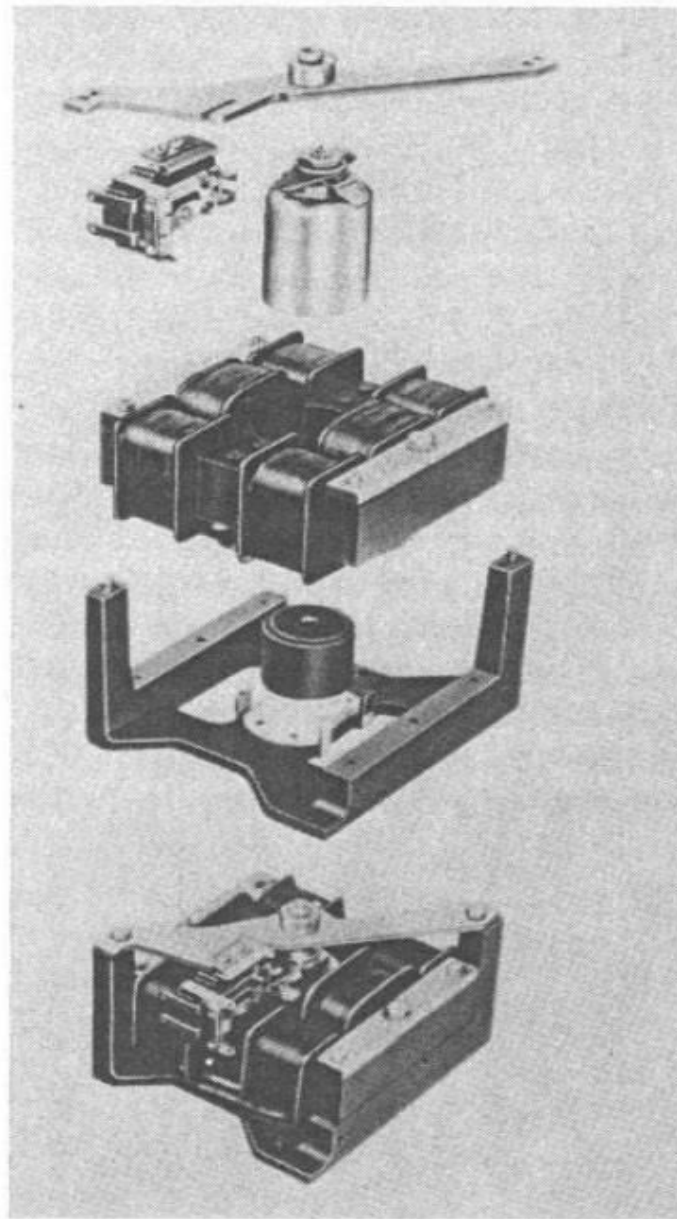
Relay Equations

Relay Characteristic	Equation (IEC 60255)
Standard Inverse (SI)	$t = TMS \times \dfrac{0.14}{I_r^{0.02} - 1}$
Very Inverse (VI)	$t = TMS \times \dfrac{13.5}{I_r - 1}$
Extremely Inverse (EI)	$t = TMS \times \dfrac{80}{I_r^2 - 1}$
Long time standard earth fault	$t = TMS \times \dfrac{120}{I_r - 1}$

Relay characteristics to IEC 60255

Induction Cup type relay

Exploded view of 4-pole induction cup relay (GEC Measurements