

TN system

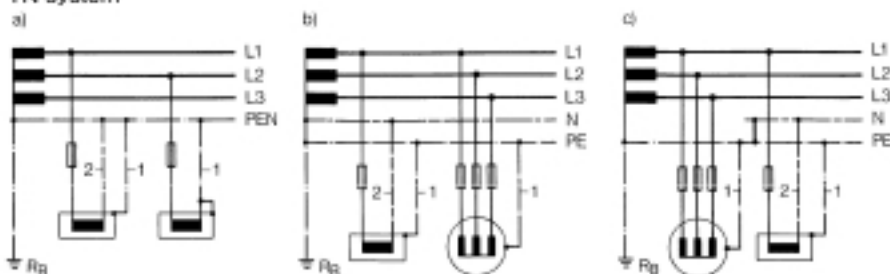


Fig. 5-5 (Part 1)

Overview of the types of earthing for systems:

- a) *TN-C system: Neutral conductor and protective conductor combined;*
 b) *TN-S system: Neutral conductor and protective conductor separate;*
 c) *TN-C-S system: Combination of layouts a) and b).*
 1 wire colour green/yellow, 2 wire colour light blue.

Table 5-1

Coordination of the type of earthing of the systems and protection devices

System	Protection devices	Application	Break condition
TN-S and TN-C-S	Overcurrent Fault current		$Z_S \cdot I_a \leq U_0$
TN-C	Overcurrent		
TT	Overcurrent Fault current Insulation monitoring	not always	$R_A \cdot I_a \leq 50 \text{ V}$
IT	Overcurrent Fault current Insulation monitoring	not always	$R_A \cdot I_0 \leq 50 \text{ V}$