

**Name:** APELUX224V01**Description:****Type:** Earth station, Receiving and Transmitting

Earth station antenna pattern submitted by LUX for earth station types TER-B and TER-M(M).

**Required Input Parameters:**

gain

**Validation Warnings/Errors:**

Type	Message
Error	Gmax () is less than 8 (). Gmax is too low.

**Co-Polar Component:**

$$G = G_{\max} \quad \text{for } 0^\circ \leq \varphi < \varphi_1$$

$$G = G_1 \quad \text{for } \varphi_1 \leq \varphi < \varphi_r$$

$$G = \text{CoefA} - \text{CoefB} * \log \varphi \quad \text{for } \varphi_r \leq \varphi < \varphi_b$$

$$G = G_{\min} \quad \text{for } \varphi_b \leq \varphi \leq 180^\circ$$

where:

$$\varphi_1 = 16^\circ$$

$$\varphi_r = 21^\circ$$

$$\varphi_b = 10 \left( \frac{44}{25} \right) (57^\circ)$$

$$G_1 = 8$$

$$\text{CoefA} = 41$$

$$\text{CoefB} = 25$$

$$G_{\min} = -3$$