Name: APELUX224V01
Type: Earth station, Receiving and Transmitting

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

Required Input Parameters:
gain

Validation Warnings/Errors:

<table>
<thead>
<tr>
<th>Type</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error</td>
<td>Gmax () is less than 8 (). Gmax is too low.</td>
</tr>
</tbody>
</table>

Co-Polar Component:

\[
G = \begin{cases} 
G_{\text{max}} & \text{for } 0^\circ \leq \phi < \phi_1 \\
G_1 & \text{for } \phi_1 \leq \phi < \phi_r \\
\text{CoeffA} - \text{CoeffB} \times \log \phi & \text{for } \phi_r \leq \phi < \phi_b \\
G_{\text{min}} & \text{for } \phi_b \leq \phi \leq 180^\circ 
\end{cases}
\]

where:

\[
\phi_1 = 16^\circ \\
\phi_r = \left(\frac{44}{25}\right) (57^\circ) \\
\phi_b = 10^\circ \\
G_1 = 8 \\
\text{CoeffA} = 41 \\
\text{CoeffB} = 25 \\
G_{\text{min}} = -3
\]