

$\int \sin(x) dx = -\cos(x)$ $\int \sin^2(ax) dx = \frac{x}{2} - \frac{1}{4a} \sin(2ax) = \frac{x}{2} - \frac{1}{2a} \sin(ax) \cos(ax)$	$\int \cos(x) dx = \sin(x)$ $\int \cos^2(ax) dx = \frac{x}{2} + \frac{1}{4a} \sin(2ax) = \frac{x}{2} + \frac{1}{2a} \sin(ax) \cos(ax)$
$\int \sin(ax) \cos(ax) dx = \frac{1}{2a} \sin^2(ax)$	$\sin(-x) = -\sin(x)$ $\cos(-x) = \cos(x)$
$\sin^2(x) + \cos^2(x) = 1$ $\sin(x) = \sqrt{1 - \cos^2(x)}$ $\cos(x) = \sqrt{1 - \sin^2(x)}$	$\sin(2x) = 2 \sin(x) \cos(x)$ $\sin(x \pm y) = \sin(x) \cos(y) \pm \cos(x) \sin(y)$ $\cos(x \pm y) = \cos(x) \cos(y) \mp \sin(x) \sin(y)$
$\sin\left(\frac{\pi}{2} \pm x\right) = \cos(x)$ $\sin(\pi \pm x) = \mp \sin(x)$ $\sin\left(\frac{3\pi}{2} \pm x\right) = -\cos(x)$ $\sin(2\pi - x) = -\sin(x)$	$\cos\left(\frac{\pi}{2} \pm x\right) = \mp \sin(x)$ $\cos(\pi \pm x) = -\cos(x)$ $\cos\left(\frac{3\pi}{2} \pm x\right) = \pm \sin(x)$ $\cos(2\pi - x) = \cos(x)$

**Zložky ekvivalentných prenosov**

(Ekvivalentný prenos je  $G_N(A) = \frac{a_1 + jb_1}{A}$ )

<b>Relé (ideálne)</b> $a_1 = \frac{4M}{\pi}$	<b>Saturácia</b> $a_1 = \frac{2kA}{\pi} \left[ \arcsin\left(\frac{d}{A}\right) + \frac{d}{A} \sqrt{1 - \left(\frac{d}{A}\right)^2} \right]$ $k = \frac{M}{d}$
<b>Relé s necitlivosťou bez hysterézy</b> $a_1 = \frac{4M}{\pi} \frac{\sqrt{A^2 - d^2}}{A}$	<b>Saturácia s necitlivosťou</b> $d_2 > d_1 > 0$ $k = \frac{M}{d_2 - d_1}$ $a_1 = \frac{2kA}{\pi} \left( \arcsin\left(\frac{d_2}{A}\right) - \arcsin\left(\frac{d_1}{A}\right) + \frac{d_2}{A} \sqrt{1 - \frac{d_2^2}{A^2}} - \frac{d_1}{A} \sqrt{1 - \frac{d_1^2}{A^2}} \right)$
<b>Relé s hysterézou bez necitlivosti</b> $a_1 = \frac{4M}{\pi} \frac{\sqrt{A^2 - d^2}}{A}$ $b_1 = -\frac{4M}{\pi} \frac{d}{A}$	<b>Necitlivosť</b> $k = tg(\varphi)$ $a_1 = \frac{2kA}{\pi} \left( \frac{\pi}{2} - \arcsin\left(\frac{d}{A}\right) - \frac{d}{A} \sqrt{1 - \frac{d^2}{A^2}} \right)$
<b>Relé s necitlivosťou a hysterézou</b> $a_1 = \frac{2M}{\pi} \frac{(\sqrt{A^2 - d_1^2} + \sqrt{A^2 - d_2^2})}{A}$ $b_1 = \frac{2M}{\pi} \frac{(d_2 - d_1)}{A}$ $d_1 > d_2 > 0$	<b>Relé s hysterézou bez necitlivosti – špeciálny prípad pre <math>A = d</math></b> $a_1 = 0$ $b_1 = -\frac{4M}{\pi}$ $G_N(A) = -j \frac{4M}{\pi A}$
<b>Hysteréza</b> $k = tg(\varphi)$ $a_1 = \frac{kA}{\pi} \left\{ \arcsin\left(\frac{b + \frac{M}{k}}{A}\right) - \arcsin\left(\frac{b - \frac{M}{k}}{A}\right) + \frac{b + \frac{M}{k}}{A} \sqrt{1 - \left(\frac{b + \frac{M}{k}}{A}\right)^2} - \frac{b - \frac{M}{k}}{A} \sqrt{1 - \left(\frac{b - \frac{M}{k}}{A}\right)^2} \right\}$ $b_1 = -\frac{4M}{\pi} \frac{b}{A}$	
<b>Hysteréza – špeciálny prípad pre <math>A = b + \frac{M}{k}</math></b> $a_1 = \frac{kA}{\pi} \left[ \frac{\pi}{2} - \arcsin\left(\frac{2b}{A} - 1\right) - \left(\frac{2b}{A} - 1\right) \sqrt{1 - \left(\frac{2b}{A} - 1\right)^2} \right]$ $b_1 = \frac{4kb}{\pi} \left( \frac{b}{A} - 1 \right)$	