P #17

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$l = 50.0\,m$
$V = 9.11\,V$
$I = 36.0\,A$

$r = (2.00mm) \div 2 = 1.00mm = .001\,m$

$A = \pi \cdot r^2 = \pi \cdot (.001m)^2 = 3.14 \times 10^{-6}\,m^2$

$V = I \cdot R$ so $(9.11\,V) = (36.0\,A) \cdot R$

$R = .253\,\Omega$

$R = \frac{\rho \cdot l}{A}$ so $.253\,\Omega = \frac{\rho \cdot (50.0m)}{(3.14 \times 10^{-6} m^2)}$

$\rho = 1.6 \times 10^{-8}\,\Omega \cdot m$

Silver