Mbsm.pro, Formule AMP, KW, KVA, HP pour les tensions AC et DC.

Category: expertise
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E = Voltage / I = Amps / PF = Power Factor / EFF = Efficiency / HP = Horsepower				
To Find	Direct Current	Alternating Current		
		Single Phase	Two-Phase* Four-Wire	Three Phase
Amperes when Horsepower is known	HP x 746 / E x EFF	HP x 746 / E x EFF x PF x 2	HP x 746 / 2 x E x EFF x PF	HP x 746 / E x EFF x PF x 1.73
Amperes when Kilowatts are known	KW x 1000 / E	KW x 1000 / E x PF	KW x 1000 / 2 x E x PF	KW x 1000 / E x PF x 1.73
Amperes when "KVA" is known		KVA x 1000 / E	KVA x 1000 / 2 x E	KVA x 1000 / E x 1.73
Kilowatts	E x I / 1000	E x I x PF / 1000	I x E x 2 x PF / 1000	E x I x 1.73 x PF / 1000
Kilovolt-Amperes "KVA"-		I x E / 1000	I x E x 2 / 1000	E x I x 1.73 / 1000
Horsepower (Output)	E x I x EFF / 746	E x I x EFF x PF / 746	I x E x 2 x EFF x PF / 746	E x I x EFF x PF x 1.73 / 746

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To Find	Direct Current	Alternating Current		
		Single Phase	Two-Phase* Four-Wire	Three Phase
Amperes when Horsepower is known	$\frac{HP \times 746}{E \times EFF}$	$\frac{HP \times 746}{E \times EFF \times PF \times 2}$	$\frac{HP \times 746}{2 \times E \times EFF \times PF}$	$\frac{HP \times 746}{E \times EFF \times PF \times 1.73}$
Amperes when Kilowatts are known	$\frac{KW \times 1000}{E}$	$\frac{KW \times 1000}{E \times PF}$	$\frac{KW \times 1000}{2 \times E \times PF}$	$\frac{KW \times 1000}{E \times PF \times 1.73}$
Amperes when "KVA" is known		$\frac{KVA \times 1000}{E}$	$\frac{KVA \times 1000}{2 \times E}$	$\frac{KVA \times 1000}{E \times 1.73}$
Kilowatts	$\frac{E \times I}{1000}$	$\frac{E \times I \times PF}{1000}$	$\frac{I \times E \times 2 \times PF}{1000}$	$\frac{E \times I \times 1.73 \times PF}{1000}$
Kilovolt-Amperes "KVA"-		$\frac{I \times E}{1000}$	$\frac{I \times E \times 2}{1000}$	$\frac{E \times I \times 1.73}{1000}$
Horsepower (Output)	$\frac{E \times I \times EFF}{746}$	$\frac{E \times I \times EFF \times PF}{746}$	$\frac{I \times E \times 2 \times EFF \times PF}{746}$	$\frac{E \times I \times EFF \times PF \times 1.73}{746}$