

CATEGORY:

- ☐ Temperature
- ☐ Pressure
- ☐ Flow
- ☐ Speed
- ☐ Weighing
- ☒ General Info

OHM'S LAW

$$E = I \times R$$

OHM'S LAW is the relationship between current, voltage and resistance. It states that current varies directly with voltage and inversely with resistance.

E (voltage) is the electrical potential that exists between two points and is capable of producing a flow of current when a closed circuit is connected between the two points. The unit of measure for voltage is the volt (V). One volt will send one ampere of current through a resistance of one ohm.

I (current) is the flow of electrons past a point in a specified period of time, usually one second.. The unit of measure for current is the ampere (A). One ampere of current is 6.24×10^{18} electrons passing a point in one second. Ampere is often shortened to amp.

R (resistance) is the opposition to current flow offered by a resistive component. The unit of measure for resistance is the ohm (Ω). One ohm is the resistance through which a current of one ampere will flow when a voltage of one volt is applied..

WIRE RESISTANCE IN OHMS(Ω) PER 1000 FT

AWG	0 C	20 C	50 C
10	0.9203	0.9989	1.117
12	1.463	1.588	1.775
14	2.327	2.525	2.823
16	3.7	4.016	4.489
18	5.883	6.385	7.138
20	9.355	10.15	11.35
22	14.87	16.14	18.05
24	23.65	25.67	28.7
26	37.61	40.81	45.63
28	59.8	64.9	72.55
30	95.08	103.2	115.4
32	151.2	164.1	183.4

Did You Know ... ?

That Api has UL, C_{UL} and CSA approval as well as a LIFETIME WARRANTY on our products.