



Tecumseh

- ▶ Wide DC range
- ▶ Variable speed
- ▶ High efficiency
- ▶ Compactness

SIERRA

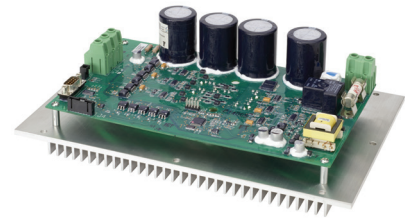
The highest level of reliability.

KEY FEATURES AND BENEFITS

- ▶ **Reduce energy consumption:**
High efficiency motors with variable speed control.
- ▶ **Compact size:**
Robust rotary and lightweight design ideally suited for mobile and transport applications.
- ▶ **Suitable options:**
Dual compressor configurations for increased capacity.
- ▶ **Extensive application range:**
Large voltage ranges from 12VDC to 600VDC, and compressors available in multiple refrigerants including A2L.



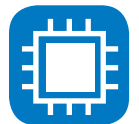
MASTERFLUX



APPLICATIONS

Some of these applications are listed below:

- ▶ Heavy Duty Trucking
- ▶ Automotive
- ▶ Mass Transit
- ▶ Medical / Scientific
- ▶ Military
- ▶ Electronics





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COMPRESSOR INFORMATION

Capacity range*:

- ▶ LBP: from 130 - 1802 Watts
- ▶ HBP: from 465 - 5772 Watts

Refrigerant:

- ▶ R134a, R404A, R1234yf, R290

Application(s):

- ▶ LBP temperature: -40°C to -12°C
- ▶ Air conditioning temperature: -23.3°C to +12.7°C

*LOW / FREEZER: performance rated at -23.3°C evap., 49°C cond., 27.4°C superheat, 0°C subcooling, 35°C ambient.

HIGH / AIR CONDITIONING: performance rated at 7.2°C evap., 54.4°C cond., 11.1°C superheat, 8.3°C subcooling, 35°C ambient.

Voltages Available (DC)*									
	12/24	24/48	24	48	80	48/100	100/150	150/300	600
Sierra	■	■		■	■	■	■	■	■

*Custom voltage ranges are available

Refrigerant		
Code Table		Sierra
Y	R134a	■
Z	R404A	■
H	R1234yf	■
U	R290	■
M	R600a	

□ Models in development

Options for the Compressors

- Dual / Tandem compressor configurations for increased capacity
- S.A.E. – M.I.O. automotive fittings (Standard or Metric)
- Custom voltage ranges
- Threaded Terminal Connection (Standard or Metric)



Application Code Table		
Application Code	Evaporator Temperature	Rating Point
1	Low	-23.3° C
2	Medium / Commercial	-6.7° C
3	High / Air Conditioning	7.2° C

Voltage Code Table	
VOLTAGE CODE	NOMINAL VOLTAGE RANGE DC
C1	12
C2	12/24
C3	24/48
C4	48/100
C5	100/150
C6	150/300
C7	150
C8	300
C9	420
10	600
17	48
18	24

Compressor Model Naming Convention

The Masterlux model naming convention is very simple. A sample model and the breakdown of each of the parts is shown below. Please remember that a model may have several different part numbers depending on the particular configuration.

SIERRA02-0434Y3



CONTROLLER INFORMATION

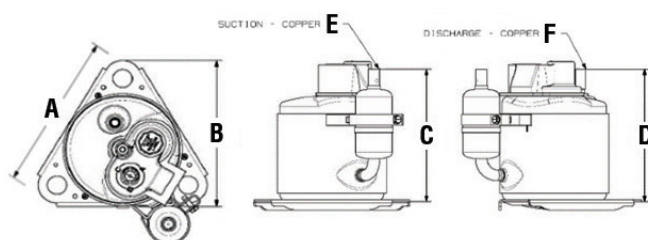
Voltage range: 12-600 VDC, 50/60 Hz.

Key features:

- ▶ Start and Run the compressor
- ▶ Locked-Rotor protection
- ▶ Thermal protection
- ▶ Speed control
- ▶ Power and current control
- ▶ Provide diagnostic information
- ▶ Low and high voltage shutdown
- ▶ Additional features (software, bus connection)

DIMENSIONS

COMPRESSOR DISPLACEMENT		A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
0434 (7.1cc)	w/o Fittings	130	154	154	152	9.6 - 9.8	8.0 - 8.2
	w/ Fittings	130	154	177	168		
0716 (11.7cc)	w/o Fittings	130	154	160	180	12.8 - 12.9	8.0 - 8.2
	w/ Fittings	130	154	184	196		
0982 (16.1cc)	w/o Fittings	130	154	154	177	12.8 - 12.9	8.0 - 8.2
	w/ Fittings	130	154	177	193		



For more information on products by Tecumseh, please visit our website www.tecumseh.com