SIERRA

Sierra Compressors. The hightest level of reliability.

► Wide DC range

► Variable speed

► High efficiency

► Compactness

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.
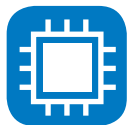

MASTERFLUX

APPLICATIONS

Some of these applications are listed below:

► Heavy Duty Trucking
► Automotive
► Mass Transit
► Medical / Scientific
► Military
► Electronics

Cooling for a Better Tomorrow™

SIERRA

Sierra Compressors. The hightest level of reliability.

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

Compressor Model Naming Convention

The Masterflux 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

Compressor Type
Compressor Voltage Code
Application
Refrigerant
Displacement (in³)

Voltage Code Table

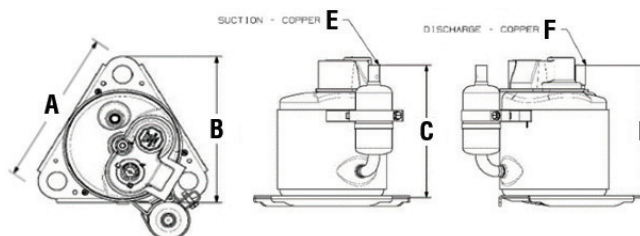| VOLTAGE CODE	NOMINAL VOLTAGE RANGE DC
01	12
02	12/24
03	24/48
04	48/100
05	100/150
06	150/300
07	150
08	300
09	420
10	600
17	48
18	24

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		

SUCTION - COPPER E   DISCHARGE - COPPER F

A   B   C   D