



Tecumseh



MASTERFLUX®

Variable Speed
DC Compressors



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Tecumseh offers a wide range of Masterflux DC powered variable speed compressors for a variety of applications.

If you have a need for compact, high power, efficient, and lightweight compressors, Masterflux has the model for you.

Our compressors are well suited for a variety of applications covering the ordinary to the extraordinary.



Features and Benefits

SIERRA Compressor

- High efficiency, high capacity, BLDC compressor line
- Robust rotary design ideally suited for mobile & transport applications
- 400-15,000 Btu/h (114-4,400W) capacity range

CASCADE Compressor

- Low temperature compressor ideally suited for mobile applications
- High temperature models available for telecom applications
- 12/24V dual voltage models
- 24V and 48V Models
- Integrated electronic controller mounting



Applications

Heavy Duty Trucking

With today's new emissions requirements, legislative bans, and diesel prices, idling your engine is not an option. Masterflux's line of compressors is ideally suited for battery powered no-idle applications for OEM and aftermarket systems. With our lightweight and powerful 12 and 24V compressors, you will easily be able to cool down your cab and save your engine.

Automotive

Consensus of opinion is that electric compressors represent the future of automotive air conditioning. Masterflux compressors offer the automotive industry the "future" today. Our compressors are up to 40% smaller and lighter than competing belt driven automotive compressors and are available to handle input voltages of 12 to 600 VDC to meet today's electric vehicle requirements.

Medical/Scientific

Masterflux offers compressors to meet the demands of today's medical and scientific community for the higher cooling capacity requirements outside of the range of Peltier (thermo-electric) cells. Our compressors pack up to 50x the cooling/heating power of the largest Peltier cells. Because our compressors can be powered by low DC voltage, regulatory certification is greatly simplified.

Mass Transit

Masterflux compressors offer the mass transit market a cost effective option for your comfort cooling requirements. Our of DC compressors can be powered directly off of today's common Rail 74 VDC voltage bus.

Solar/Off-Grid Power

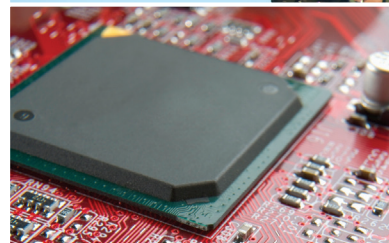
Masterflux offers a solution for DC systems running on solar, battery, or other off-grid power sources. The direct DC Masterflux hermetic compressor eliminates the need for an inverter and the inductive surge at start up associated with a traditional A/C compressor.

Military

Stealth mode in the desert. Need to keep your cool but lose your heat signature? Looking for the safety and reliability of a hermetically sealed cooling system but want to use DC power? Masterflux is again the answer to these problems. Our technology can be found in military applications from the use of chiller technology for cooling a soldier to powering thermal systems for electronic cooling.

Electronics

Getting the heat out of your electronics isn't an option, it's a necessity. Component failures double with every 18 degree F increase in temperature. With such demanding requirements for electronic cooling, Masterflux is at the forefront of the development of new cooling concepts for electronic systems.





Compressors

Two (2) series of compressors, SIERRA and CASCADE, provide the cooling range needed to cover almost any application whether it be commercial refrigeration or air conditioning.

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

*Custom voltage ranges are available

Refrigerant			
Code Table		Sierra	Cascade
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	-10° F (-23.3° C)
2	Medium / Commercial	+20° F (-6.7° C)
3	High / Air Conditioning	+45° F (7.2° C)

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

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

Displacement (in³)

Application

Refrigerant



Controllers

Each Masterflux compressor requires a Masterflux sensorless BLDC motor controller to operate.

These controllers are specifically tested and tuned for with each compressor and must be used.

For each model of compressor, there may be several versions of the controller to choose from.

Controller Key Functions:

- Start and run the compressor
- Provide locked-rotor protection
- Provide thermal protection and shutdown of the compressor and controller
- Vary the speed of the compressor
- Limit the power and current draw
- Provide diagnostic information
- Low voltage and high voltage shutdown

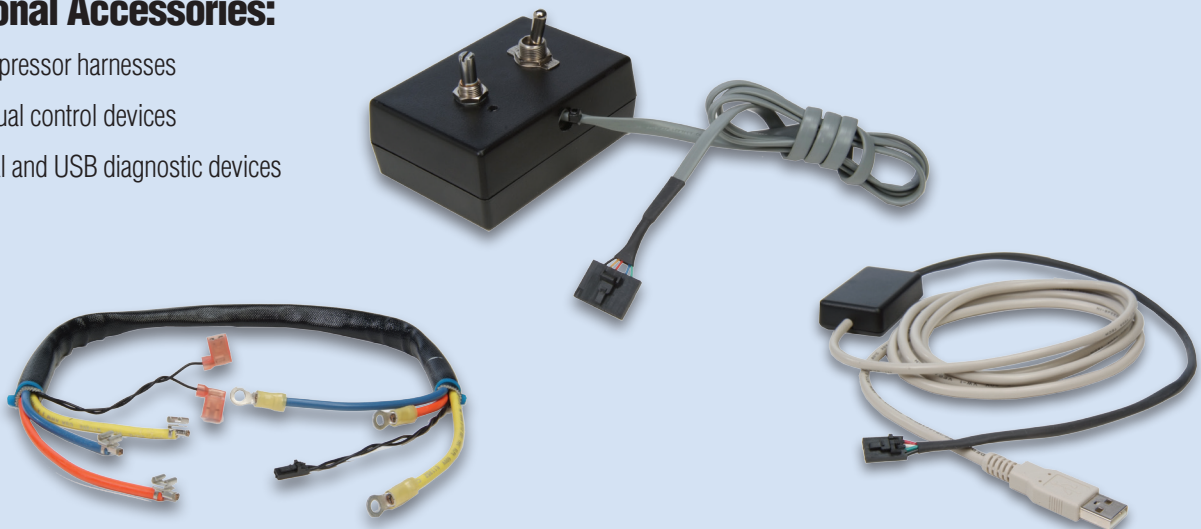
Options for the controllers:

- Custom heat sink designs
- Custom wire harness options
- IP rated enclosures
- Soft start capability
- Custom voltage ranges and trip limits



Optional Accessories:

- Compressor harnesses
- Manual control devices
- Serial and USB diagnostic devices





Make your choice:

Application	Model	Refrigerant	Cooling Capacity										
			30	60	120	240	470	940	1,900	3,800	7,500	15,000	Watt
			100	200	400	800	1,600	3,200	6,400	12,800	25,600	51,200	BTU/hr
HBP	Sierra	R134a											
		R1234yf											
		R290											
	Cascade	R134a											
MBP	Sierra	R134a											
		R404A											
LBP	Sierra	R134a											
		R404A											
	Cascade	R134a											

Sierra Compressor:

HIGH / AIR CONDITIONING: (performance rated at 7.2°C/45°F evap., 54.4°C/130°F cond., 11.1°C/20°F superheat, 8.3°C/15°F subcooling, 35°C/95°F ambient)										
Model Number	Part Number	Connection Description	Voltage	Refrigerant	Application	Capacity	Compressor Drawing	Oil (cc)	Wgt	UL
SIERRA02-0434Y3	SIERRA00163	3/8" Suction, 5/16" Discharge Copper Tubes	12-24 V	R134a	High Temp.	1,586-6,091 BTU/hr 465-1,785 Watts	DCMX33-001	290	10.5 lbs 4.8 kg	No
SIERRA02-0434Y3	SIERRA00164	#10 Suction, #8 Discharge SAE MIO Fittings	12-24 V	R134a	High Temp.	1,586-6,091 BTU/hr 465-1,785 Watts	DCMX27-001	290	10.8 lbs 5.1 kg	No
SIERRA03-0434H3	SIERRA00126	3/8" Suction, 5/16" Discharge Copper Tubes	24-48 V	R1234yf	High Temp.	1,595-6,320 BTU/hr 467-1,852 Watts	DCMX33-001	290	10.5 lbs 4.8 kg	No
SIERRA03-0434Y3	SIERRA00150	3/8" Suction, 5/16" Discharge Copper Tubes	24-48 V	R134a	High Temp.	1,628-5,606 BTU/hr 477-1,643 Watts	DCMX33-001	290	10.5 lbs 4.8 kg	Yes
SIERRA03-0434Y3	SIERRA00170	#10 Suction, #8 Discharge SAE MIO Fittings	24-48 V	R134a	High Temp.	1,628-5,606 BTU/hr 477-1,643 Watts	DCMX27-001	290	10.8 lbs 5.1 kg	Yes
SIERRA03-0434Y3	SIERRA00171	3/8" Suction, 5/16" Discharge Copper Tubes, High Ambient	24-48 V	R134a	High Temp.	1,628-5,606 BTU/hr 477-1,643 Watts	DCMX33-001	290	10.5 lbs 4.8 kg	No
SIERRA17-0434Y3	SIERRA00185	3/8" Suction, 5/16" Discharge Copper Tubes	48 V	R134a	High Temp.	1,707-6,500 BTU/hr 500-1,904 Watts	DCMX33-001	290	10.5 lbs 4.8 kg	Yes
SIERRA04-0434Y3	SIERRA00174	3/8" Suction, 5/16" Discharge Copper Tubes	48-100 V	R134a	High Temp.	1,707-3,700 BTU/hr 500-1,084 Watts	DCMX33-001	290	10.5 lbs 4.8 kg	No
SIERRA04-0434Y3	SIERRA00175	#10 Suction, #8 Discharge SAE MIO Fittings	48-100 V	R134a	High Temp.	1,707-6,500 BTU/hr 500-1,904 Watts	DCMX27-001	290	10.8 lbs 5.1 kg	No
SIERRA04-0434H3	SIERRA00127	3/8" Suction, 5/8" Discharge Copper Tubes	48-100 V	R1234yf	High Temp.	1,595-6,320 BTU/hr 476-1,852 Watts	DCMX33-001	290	10.8 lbs 5.1 kg	No



Sierra Compressor (cont'd):

HIGH / AIR CONDITIONING: (performance rated at 7.2°C/45°F evap., 54.4°C/130°F cond., 11.1°C/20°F superheat, 8.3°C/15°F subcooling, 35°C/95°F ambient)										
Model Number	Part Number	Connection Description	Voltage	Refrigerant	Application	Capacity	Compressor Drawing	Oil (cc)	Wgt	UL
SIERRA04-0434H3	SIERRA00178	#10 Suction, #8 Discharge SAE MIO Fittings	48-100 V	R1234yf	High Temp.	1,595-6,320 BTU/hr 467-1,852 Watts	DCMX27-001	290	10.8 lbs 5.1 kg	No
SIERRA05-0434Y3	SIERRA00179	3/8" Suction, 5/16" Discharge Copper Tubes	100-150 V	R134a	High Temp.	1,785-6,375 BTU/hr 523-1,868 Watts	DCMX33-001	290	10.5 lbs 4.8 kg	No
SIERRA05-0434Y3	SIERRA00180	#10 Suction, #8 Discharge SAE MIO Fittings	100-150 V	R134a	High Temp.	1,785-6,375 BTU/hr 523-1,868 Watts	DCMX27-001	290	10.8 lbs 5.1 kg	No
SIERRA06-0434Y3	SIERRA00182	3/8" Suction, 5/16" Discharge Copper Tubes	150-300 V	R134a	High Temp.	1,626-6,500 BTU/hr 476-1,904 Watts	DCMX33-001	290	10.5 lbs 4.8 kg	No
SIERRA06-0434Y3	SIERRA00184	#10 Suction, #8 Discharge SAE MIO Fittings	150-300 V	R134a	High Temp.	1,626-6,500 BTU/hr 476-1,904 Watts	DCMX27-001	290	10.8 lbs 5.1 kg	No
SIERRA02-0716Y3	SIERRA00160	1/2" Suction, 5/16" Discharge Copper Tubes	12-24 V	R134a	High Temp.	2,840-10,050 BTU/hr 832-2,945 Watts	DCMX25-002	355	14.7 lbs 6.6 kg	No
SIERRA02-0716Y3	SIERRA00151	#10 Suction, #8 Discharge SAE MIO Fittings	12-24 V	R134a	High Temp.	2,840-10,050 BTU/hr 832-2,945 Watts	DCMX38-002	355	15 lbs 6.8 kg	No
SIERRA02-0716Y3	SIERRA00161	#10 Suction, #8 Discharge SAE MIO Fittings	12-24 V	R134a	High Temp.	2,840-10,050 BTU/hr 832-2,945 Watts	DCMX41-002	355	14.7 lbs 6.6 kg	No
SIERRA02-0716Y3	SIERRA00156	M24 x 1.5 Suction, M22 x 1.5 Discharge Metric Terminals	12-24 V	R134a	High Temp.	2,840-10,050 BTU/hr 832-2,945 Watts	DCMX42-002	355	14.7 lbs 6.6 kg	No
SIERRA02-0716Y3	SIERRA00134	3/8" Suction, 5/16" Discharge Copper Tubes; Metric Terminals	12-24V	R134a	High Temp.	2,840-10,050 BTU/ hr 832-2,945 Watts	DCMX25-002	355	14.7 lbs 6.6 kg	No
SIERRA03-0716Y3	SIERRA00162	1/2" Suction, 5/16" Discharge Copper Tubes	24-48 V	R134a	High Temp.	2,840-11,300 BTU/hr 832-3,311 Watts	DCMX25-002	355	14.7 lbs 6.6 kg	Yes
SIERRA03-0716Y3	SIERRA00159	#10 Suction, #8 Discharge SAE MIO Fittings	24-48 V	R134a	High Temp.	2,840-11,300 BTU/hr 832-3,311 Watts	DCMX38-002	355	15 lbs 6.8 kg	Yes
SIERRA03-0982Y3	SIERRA00186	1/2" Suction, 5/16" Discharge Copper Tubes	24-48 V	R134a	High Temp.	3,950-15,461 BTU/hr 1,157-4,530 Watts	DCMX33-002	290	14.1 lbs 6.4 kg	Yes
SIERRA03-0982Y3	SIERRA00120	#10 Suction, #8 Discharge SAE MIO Fittings	24-48 V	R134a	High Temp.	3,950-15,461 BTU/hr 1,157-4,530 Watts	DCMX27-002	290	14.4 lbs 6.5 kg	Yes
SIERRA03-0982Y3	SIERRA00125	1/2" Suction, 5/16" Copper Tubes, High Capacity	24-48 V	R134a	High Temp.	3,950-15,461 BTU/hr 1,157-4,530 Watts	DCMX33-002	290	14.1 lbs 6.4 kg	Yes
SIERRA03-0982Y3	SIERRA00121	#10 Suction, #8 Discharge SAE MIO Fittings, High Capacity	24-48 V	R134a	High Temp.	3,950-15,461 BTU/hr 1,157-4,530 Watts	DCMX27-002	290	14.4 lbs 6.5 kg	Yes
SIERRA03-0982Y3	SIERRA00190	#10 Suction, #8 Discharge SAE MIO Fittings, High Capacity, Dual	24-48 V	R134a	High Temp.	3,950-15,461 BTU/hr 1,157-4,530 Watts	DCMX34-002	290	14.7 lbs 6.7 kg	Yes
SIERRA03-0982Y3	SIERRA00225	#10 Suction, #8 Discharge SAE MIO Fittings	24-48V	R134a	High Temp	3,950-15,461 BTU/hr 1,157-4,530 Watts	DCMX27-002	290	14.7 lbs 6.6 kg	No
SIERRA03-0982Y3	SIERRA00230	#10 Suction, #8 Discharge SAE MIO Fittings, Metric Terminal	24-48V	R134a	High Temp	3,950-15,461 BTU/hr 1,157-4,530 Watts	DCMX34-002	290	14.7 lbs 6.6 kg	No
SIERRA03-0982H3	SIERRA00129	3/8" Suction, 5/16" Discharge Copper Tubes, High CAP	24-48V	R1234yf	High Temp.	3,950-15,461 BTU/hr 1,157-4,530 Watts	DCMX33-002	290	14.4 lbs 6.5 kg	Yes



Sierra Compressor (cont'd):

HIGH / AIR CONDITIONING: (performance rated at 7.2°C/45°F evap., 54.4°C/130°F cond., 11.1°C/20°F superheat, 8.3°C/15°F subcooling, 35°C/95°F ambient)										
Model Number	Part Number	Connection Description	Voltage	Refrigerant	Application	Capacity	Compressor Drawing	Oil (cc)	Wgt	UL
SIERRA03-0982U3	SIERRA00139	3/8" Suction, 5/16" Discharge Copper Tubes, High CAP, Metric Terminal	24-48V	R290	High Temp.	4,800-19,700 BTU/hr 1,413-5,768 Watts	DCMX33-002	290	14.4 lbs 6.5 kg	No
SIERRA03-0982U3	SIERRA00140	#10 Suction, #8 Discharge SAE MIO Fittings, Dual, High CAP, Metric Terminal	24-48V	R290	High Temp.	4,800-19,700 BTU/hr 1,413-5,768 Watts	DCMX34-002	390	14.7 lbs 6.6 kg	No
SIERRA03-0982U3	SIERRA00142	#10 Suction, #8 Discharge SAE MIO Fittings, High CAP, Metric Terminal	24-48V	R290	High Temp.	4,800-19,700 BTU/hr 1,413-5,768 Watts	DCMX27-002	290	14.4 lbs 6.5 kg	No
SIERRA03-0982U3	SIERRA00226	#10 Suction, #8 Discharge SAE MIO Fittings, High Cap	24-48V	R290	High Temp.	4,800-19,700 BTU/hr 1,413-5,768 Watts	DCMX27-002	290	14.4 lbs 6.5 kg	No
SIERRA03-0982U3	SIERRA00227	3/8" Suction, 5/16" Discharge Copper Tubes, High CAP	24-48V	R290	High Temp.	4,800-19,700 BTU/hr 1,413-5,768 Watts	DCMX33-002	290	14.4 lbs 6.5 kg	No
SIERRA03-0982U3	SIERRA00228	#10 Suction, #8 Discharge SAE MIO Fittings, Dual, High Cap	24-48V	R290	High Temp.	4,800-19,700 BTU/hr 1,413-5,768 Watts	DCMX34-002	390	14.7 lbs 6.6 kg	No
SIERRA17-0982Y3	SIERRA00212	1/2" Suction, 5/16" Discharge Copper Tubes	48 V	R134a	High Temp.	4,160-8,090 BTU/hr 1,219-2,375 Watts	DCMX33-002	290	14.1 lbs 6.4 kg	Yes
SIERRA17-0982U3	SIERRA00213	1/2" Suction, 5/16" Discharge Copper Tubes, Terminals (Metric)	48 V	R290	High Temp.	4,824-10,872 BTU/hr 1,413-3,186 Watts	DCMX33-002	290	14.1 lbs 6.4 kg	No
SIERRA17-0982U3	SIERRA00214	#10 Suction, #8 Discharge SAE MIO Fittings, Metric Terminal	48 V	R290	High Temp.	4,824-10,872 BTU/hr 1,413-3,186 Watts	DCMX27-002	290	14.1 lbs 6.4 kg	No
SIERRA17-0982U3	SIERRA00229	#10 Suction, #8 Discharge SAE MIO Fittings	48V	R290	High Temp.	4,824-10,872 BTU/hr 1,413-3,186 Watts	DCMX27-002	290	14.1 lbs 6.4 kg	No
SIERRA04-0982Y3	SIERRA00153	M24 x 1.5 Suction, M22 x 1.5 Discharge, Metric Terminal	48-72V	R134a	High Temp.	4,160-15,200 BTU/hr 1,219-4,454 Watts	DCMX35-002	290	14.1 lbs 6.4 kg	No
SIERRA04-0982Y3	SIERRA00198	M24 x 1.5 Suction, M22 x 1.5 Discharge, Metric Terminal	48-72V	R134a	High Temp.	4,160-15,200 BTU/hr 1,219-4,454 Watts	DCMX35-002	175	14.1 lbs 6.4 kg	No
SIERRA04-0982Y3	SIERRA00218	1/2" Suction, 5/8" Discharge Copper Tubes	48-72 V	R134a	High Temp.	4,160-15,200 BTU/hr 1,219-4,454 Watts	DCMX33-002	290	14.4 lbs 6.5 kg	No
SIERRA04-0982Y3	SIERRA00219	#10 Suction, #8 Discharge SAE MIO Fittings	48-72V	R134a	High Temp.	4,160-15,200 BTU/hr 1,219-4,454 Watts	DCMX27-002	290	14.7 lbs 6.7 kg	No
SIERRA04-0982H3	SIERRA00200	M24 x 1.5 Suction, M22 x 1.5 Discharge, Metric Terminal	48-72V	R1234yf	High Temp.	3,600-12,500 BTU/hr 1,055-3,663 Watts	DCMX35-002	290	14.4 lbs 6.5 kg	No
SIERRA04-0982H3	SIERRA00201	M24 x 1.5 Suction, M22 x 1.5 Discharge, Metric Terminal	48-72V	R1234yf	High Temp.	3,600-12,500 BTU/hr 1,055-3,663 Watts	DCMX35-002	175	14.1 lbs 6.4 kg	No
SIERRA04-0982Y3	SIERRA00220	1/2" Suction, 5/8" Discharge Copper Tubes, Metric Terminal	48-72V	R134a	High Temp.	4,160-15,200 BTU/hr 1,219-4,454 Watts	DCMX33-002	290	14.7 lbs 6.7 kg	No
SIERRA04-0982Y3	SIERRA00223	#10 Suction, #8 Discharge SAE MIO Fittings, Dual	48-72V	R134a	High Temp.	4,160-15,200 BTU/hr 1,219-4,454 Watts	DCMX27-002	290	14.7 lbs 6.6 kg	No
SIERRA04-0892Y3	SIERRA00224	1/2" Suction, 5/8" Discharge Copper Tubes, Metric Terminal	48-72V	R134a	High Temp.	4,160-15,200 BTU/hr 1,219-4,454 Watts	DCMX33-002	290	14.4 lbs 6.5 kg	No
SIERRA04-0982H3	SIERRA00130	1/2" Suction, 5/16" Discharge Copper Tubes	48-100 V	R1234yf	High Temp.	3,600-14,800 BTU/hr 1,055-4,337 Watts	DCMX33-002	290	14.4 lbs 6.5 kg	No



Sierra Compressor (cont'd):

HIGH / AIR CONDITIONING: (performance rated at 7.2°C/45°F evap., 54.4°C/130°F cond., 11.1°C/20°F superheat, 8.3°C/15°F subcooling, 35°C/95°F ambient)										
Model Number	Part Number	Connection Description	Voltage	Refrigerant	Application	Capacity	Compressor Drawing	Oil (cc)	Wgt	UL
SIERRA04-0982Y3	SIERRA00194	1/2" Suction, 5/16" Discharge Copper Tubes	48-100 V	R134a	High Temp.	4,160-15,200 BTU/hr 1,219-4,454 Watts	DCMX33-002	290	14.1 lbs 6.4 kg	No
SIERRA04-0982Y3	SIERRA00195	#10 Suction, #8 Discharge SAE MIO Fittings	48-100 V	R134a	High Temp.	4,160-15,200 BTU/hr 1,219-4,454 Watts	DCMX27-002	290	14.4 lbs 6.5 kg	No
SIERRA05-0982Y3	SIERRA00202	1/2" Suction, 5/16" Discharge Copper Tubes	100-150 V	R134a	High Temp.	3,909-15,170 BTU/hr 1,163-4,190 Watts	DCMX33-002	290	14.1 lbs 6.4 kg	No
SIERRA05-0982Y3	SIERRA00203	#10 Suction, #8 Discharge SAE MIO Fittings	100-150 V	R134a	High Temp.	3,970-15,170 BTU/hr 1,163-4,190 Watts	DCMX27-002	290	14.4 lbs 6.5 kg	No
SIERRA06-0982Y3	SIERRA00205	1/2" Suction, 5/16" Discharge Copper Tubes	150-300 V	R134a	High Temp.	3,909-15,170 BTU/hr 1,145-4,445 Watts	DCMX33-002	290	14.1 lbs 6.4 kg	No
SIERRA06-0982Y3	SIERRA00206	#10 Suction, #8 Discharge SAE MIO Fittings	150-300 V	R134a	High Temp.	3,909-15,170 BTU/hr 1,145-4,445 Watts	DCMX27-002	290	14.4 lbs 6.5 kg	No
SIERRA06-0982Y3	SIERRA00208	#10 Suction, #8 Discharge SAE MIO Fittings, Dual	150-300V	R134a	High Temp.	3,909-15,170 BTU/hr 1,145-4,445 Watts	DCMX34-002	290	14.4 lbs 6.5 kg	No
SIERRA06-0982Y3	SIERRA00221	M24 x 1.5 Suction, M22 x 1.5 Discharge, Metric Terminal	150-300V	R134a	High Temp.	3,909-15,170 BTU/hr 1,145-4,445 Watts	DCMX35-002	290	14.4 lbs 6.5 kg	No
SIERRA10-0982Y3	SIERRA00114	#10 Suction, #8 Discharge SAE MIO Fittings, Dual	600V	R134a	High Temp.	3,909-15,170 BTU/hr 1,145-4,445 Watts	DCMX11-003	390	14.4 lbs 6.5 kg	No
SIERRA10-0982Y3	SIERRA00072	#10 Suction, #8 Discharge SAE MIO Fittings	600 V	R134a	High Temp.	3,909-15,170 BTU/hr 1,145-4,445 Watts	DCMX07-002	290	14.4 lbs 6.5 kg	No

LOW / FREEZER: (performance rated at -23°C/-10°F evap., 48.9°C/120°F cond., 27.4°C/50°F superheat, 0°C/0°F subcooling, 35°C/95°F ambient)										
Model Number	Part Number	Connection Description	Voltage	Refrigerant	Application	Capacity	Compressor Drawing	Oil (cc)	Wt	UL
SIERRA02-0434Y1	SIERRA00167	3/8" Suction, 5/16" Discharge Copper Tubes	12-24 V	R134a	Low Temp.	445-1,534 BTU/hr 121-437 Watts	DCMX33-001	290	10.5 lbs 4.8 kg	No
SIERRA02-0434Z1	SIERRA00168	3/8" Suction, 5/16" Discharge Copper Tubes	12-24 V	R404A	Low Temp.	720-2,600 BTU/hr 210-765 Watts	DCMX33-001	290	10.5 lbs 4.8 kg	No
SIERRA03-0434Z1	SIERRA00173	3/8" Suction, 5/16" Discharge Copper Tubes	24-48 V	R404A	Low Temp.	720-2,600 BTU/hr 210-765 Watts	DCMX33-001	290	10.5 lbs 4.8 kg	No
SIERRA03-0982Z1	SIERRA00192	1/2" Suction, 5/16" Discharge Copper Tubes	24-48 V	R404A	Low Temp.	1,700-6,150 BTU/hr 500-1,508 Watts	DCMX33-002	290	14.1 lbs 6.4 kg	No
SIERRA03-0982Z1	SIERRA00222	M24 x 1.5 Suction, M22 x 1.5 Discharge, Metric Terminal	24-48V	R404A	Low Temp.	1,700-6,150 BTU/hr 500-1,508 Watts	DCMX35-002	290	14.4 lbs 6.5 kg	No
SIERRA04-0982Z1	SIERRA00197	1/2" Suction, 5/16" Discharge Copper Tubes	48-100 V	R404A	Low Temp.	1,700-6,150 BTU/hr 500-1,508Watts	DCMX33-002	290	14.1 lbs 6.4 kg	No



Sierra Controller:

Controller Number	Nominal Voltage Range	Description	Compressor Models	Controller Drawing	Wiring Diagram	Manual Control Device	Comp. Harness	UL
025F0095	12-24 VDC	9-30 VDC	SIERRA02-0434XX	DGMX0022	DEMX0020	030A0117	040F0248	No
025F0219	12-24 VDC	Flanged Heatsink, 9-30 VDC		DGMX0055	DEMX0020	030A0117	040F0248	No
025F0200	12-24 VDC	9-30 VDC	SIERRA02-0716XX	DGMX0022	DEMX0020	030A0117	040F0248	No
025F0218	12-24 VDC	Flanged Heatsink, 9-30 VDC		DGMX0055	DEMX0020	030A0117	040F0248	No
025F0348	12-24 VDC	Dual, 9-30 VDC		DGMX0022	DEMX0033	030A0117	040F0248	No
025F0149	24-48 VDC	Flanged Heatsink, 19-59.9 VDC	SIERRA03-0434XX SIERRA03-0716XX SIERRA03-0982XX	DGMX0031	DEMX0010	030A0043	040F0250	Yes
025F0129	24-48 VDC	19-59.9 VDC		DGMX0033	DEMX0010	030A0043	040F0250	Yes
025F0349	24-48 VDC	Soft Start, Flanged Heatsink, 19-59.9 VDC		DGMX0031	DEMX0010	030A0043	040F0250	Yes
025F0216	24-48 VDC	Flanged Heatsink, Dual, 19-59.9 VDC		DGMX0031	DEMX0023	030A0043	040F0250	Yes
025F0350	24-48 VDC	Soft Start, 19-59.9 VDC		DGMX0029	DEMX0010	030A0043	040F0250	Yes
025F0158	48 VDC	Flanged Heatsink, 37-59.9 VDC	SIERRA04-0434XX SIERRA04-0982XX SIERRA17-0434XX SIERRA17-0982XX	DGMX0031	DEMX0010	030A0043	040F0250	Yes
025F0152	48 VDC	37-59.9 VDC		DGMX0033	DEMX0010	030A0043	040F0250	Yes
025F0164	80 VDC	Flanged Heatsink, 60-97 VDC		DGMX0051	DEMX02	030A0117	040F0248	No
025F0139	80 VDC	60-97 VDC		DGMX0042	DEMX02	030A0117	040F0248	No
025F0202	80 VDC	Dual, 60-97 VDC		DGMX0042	DEMX0032	030A0117	040F0248	No
025F0140-04	100 VDC	Flanged Heatsink, 55-110 VDC		DGMX012	DEMX06	030A0138	040F0268	No
025F0140-05	100 VDC	Flanged Heatsink, 75-125 VDC	SIERRA04-0434XX SIERRA04-0982XX SIERRA05-0434XX SIERRA05-0982XX	DGMX012	DEMX06	030A0138	040F0268	No
025F0140-07	100 VDC	Flanged Heatsink, 70-145 VDC		DGMX012	DEMX0006	030A0138	040F0268	No
025F0140-01	100-150 VDC	Flanged Heatsink, 90-165 VDC	SIERRA05-0434XX SIERRA05-0982XX	DGMX012	DEMX06	030A0138	040F0268	No
025F0140-06	100-150 VDC	Flanged Heatsink, 90-260 VDC		DGMX012	DEMX06	030A0138	040F0268	No
025F0140-02	150-300 VDC	Flanged Heatsink, 115-325 VDC	SIERRA06-0434XX SIERRA06-0982XX	DGMX012	DEMX06	030A0138	040F0268	No
025F0140-03	150-300 VDC	Flanged Heatsink, 120-420 VDC		DGMX012	DEMX06	030A0138	040F0268	No
025F0188-03	150-300 VDC	Flanged Heatsink, Dual, 120-420 VDC		DGMX012	DEMX0034	030A0138	040F0268	No
025F0195	600 VDC	Flanged Heatsink, 470-750 VDC	SIERRA10-0982XX	DGMX0054	DEMX0044	030A0138	040F0270	No
025F0248	600 VDC	Flanged Heatsink, Dual, 450-750 VDC		DGMX0054	DEMX0041	030A0138	040F0270	No



Cascade Compressor:

LOW / FREEZER: (performance rated at -23°C/-10°F evap., 54.4°C/130°F cond., 11.1°C/20°F superheat, 8.3°C/15°F subcooling, 35°C/95°F ambient)										
Model Number	Part Number	Connection Description	Voltage	Refrigerant	Application	Capacity	Compressor Drawing	Oil (cc)	Wgt	UL/CE
CASCADE17-0146Y1	CASCADE0024	5/16" Suction, 5/16" Discharge Copper Tubes, Mobile	12V-24 V, 48V	R134a	Low Temp.	106-237 BTU/hr 31-69 Watts	DCMX14-001	263	14.2 lbs 6.4 kg	Yes
CASCADE17-0231Y1	CASCADE0025	5/16" Suction, 5/16" Discharge Copper Tubes, Mobile	12V-24 V, 48V	R134a	Low Temp.	190-444 BTU/hr 56-130 Watts	DCMX14-002	263	14.2 lbs 6.4 kg	Yes

HIGH / AIR CONDITIONING: (performance rated at 7.2°C/45°F evap., 54.4°C/130°F cond., 11.1°C/20°F superheat, 8.3°C/15°F subcooling, 35°C/95°F ambient)										
Model Number	Part Number	Connection Description	Voltage	Refrigerant	Application	Capacity	Compressor Drawing	Oil (cc)	Wgt	UL/CE
CASCADE17-0306Y3	CASCADE0003	1/4" Suction, 3/16" Discharge Copper Tubes, Stationary	24V, 48V	R134a	High Temp.	983-2,274 BTU/hr 288-666 Watts	DCMX17	270	14.8 lbs 6.7 kg	Yes
CASCADE17-0244Y3	CASCADE0004	1/4" Suction, 3/16" Discharge Copper Tubes, Stationary	24V, 48V	R134a	High Temp.	1,475 BTU/hr 432 Watts	DCMX17	270	14.8 lbs 6.7 kg	Yes
CASCADE17-192Y3	CASCADE0005	1/4" Suction, 3/16" Discharge Copper Tubes, Stationary	24V, 48V	R134a	High Temp.	1,150 BTU/hr 337 Watts	DCMX17	270	14.8 lbs 6.7 kg	Yes
CASCADE17-0342Y3	CASCADE0006	1/4" Suction, 3/16" Discharge Copper Tubes, Stationary	24V, 48V	R134a	High Temp.	2,050 BTU/hr 600 Watts	DCMX17	270	14.8 lbs 6.7 kg	Yes
CASCADE17-0306Y3	CASCADE1003	1/4" Suction, 3/16" Discharge Copper Tubes, Mobile	24V, 48V	R134a	High Temp.	983-2,274 BTU/hr 288-666 Watts	DCMX17	270	14.8 lbs 6.7 kg	Yes
CASCADE17-0244Y3	CASCADE1004	1/4" Suction, 3/16" Discharge Copper Tubes, Mobile	24V, 48V	R134a	High Temp.	1,475 BTU/hr 432 Watts	DCMX17	270	14.8 lbs 6.7 kg	Yes
CASCADE17-192Y3	CASCADE1005	1/4" Suction, 3/16" Discharge Copper Tubes, Mobile	24V, 48V	R134a	High Temp.	1,150 BTU/hr 337 Watts	DCMX17	270	14.8 lbs 6.7 kg	Yes
CASCADE17-0342Y3	CASCADE1006	1/4" Suction, 3/16" Discharge Copper Tubes, Mobile	24V, 48V	R134a	High Temp.	2,050 BTU/hr 600 Watts	DCMX17	270	14.8 lbs 6.7 kg	Yes

Cascade Controller:

Controller Number	Nominal Voltage Range	Description	Compressor Models	Controller Drawing	Wiring Diagram	UL/CE
030F0121	12-24 VDC	Compressor Mounted Controller, 9.6-31.5 VDC	CASCADE17-XXXXY1	DGMX0044	DEMX0024	Yes
030F0137	48 VDC	Compressor Mounted Controller, 36-60 VDC	CASCADE17-XXXXY1 CASCADE17-XXXXY3	DGMX0050	DEMX0028	Yes
030F0152	24 VDC	Compressor Mounted Controller, 19-30 VDC	CASCADE17-XXXXY3	DGMX0050	DEMX0028	No
030F0175	48 VDC	Compressor Mounted Controller, 39-60 VDC; Flat Heatsink	CASCADE17-XXXXY1 CASCADE17-XXXXY3	DGMX0082	DEMX0028	Yes
030F0176	24 VDC	Compressor Mounted Controller, 39-60 VDC; Flat Heatsink	CASCADE17-XXXXY3	DGMX0082	DEMX0028	Yes

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