Page

SPORLAN ELECTRONICS

SYSTEM CONTROLLERS

TEMPERATURE CONTROL BOARD

TCB

Part No.	Description	Price
TCB*	Temperature Control Board w/ Potentiometer	$915.32
952792*	Temperature Control Board for SDR, CDS (1 or 2)	$906.46
952714*	Temperature Control Board, Quick Response	$1,729.68
952741*	Potentiometer only	$73.12
952793*	Temperature Control Board w/ Potentiometer, High Amp	$956.94

INTERFACE BOARD

• Digits in alternate number indicates number of steps controlled

IB-G

Part No.	Description	Use with	Price
IB-G*	Interface Board, Quick Response	SEI/SER/SEH/SEV/ESX, CDS, SDR	$425.74

TEMPERATURE/PRESSURE SENSOR

952669

Part No.	Description	Price
952669*	Air Temperature Sensor	$207.58
952565*	High Temperature Surface Sensor, 98.6k, 15' Long Cable	$165.32
952662*	Surface Temperature Sensor	$145.90
230072*	Surface Temperature Sensor, 10K Ohm, 6.1 m, orange	$46.04
230073*	Air Temperature Sensor, 10K Ohm, 6.1 m, green	$46.04
230076*	Surface Temperature Sensor, 10K Ohm, 6.1 m, green	$46.04
230075*	Surface Temperature Sensor, 10K Ohm, 6.1 m, yellow	$46.04
230545*	Surface Temperature Sensor, 10K Ohm, 6.1 m, Black	$140.68
953192*	Cable, 2 meter	$48.80
952795*	Well Temperature Sensor	$207.58
953100*	Cable, 5 meter	$109.16
952576*	Pressure Transducer, 500 psi, less cable	$284.48
952579*	Pressure Transducer, 652 psig, less cable	$284.48
952574*	Pressure Transducer, 300 psi, less cable	$284.48
952572*	Pressure Transducer, 150 psi, less cable	$284.48

SUPERHEAT CONTROLLER, HI TEMP DX

• 1 pressure, 2 temperature inputs
• 2 numeric displays
• Controls 1 valve (SER, SEI, ESX, SEHI)

952754

Part No.	Use with	Price
952754*	SEI=11, SER	$195.38
952859*	SEI30	$2,074.64
952734*	SEI50, SEH	$1,037.32
952755*	SEI=11, SER	$2,074.64
952860*	SEI30	$2,074.64
952735*	SEI50, SEH	$2,074.64
952757*	SEI=11, SER	$1,037.32
952862*	SEI30	$2,074.64
952737*	SEI50, SEH	$2,074.64
952756*	SEI=11, SER	$195.38
952861*	SEI30	$2,136.90
952736*	SEI50, SEH	$2,136.90

PRESSURE CONTROLLER

• 1 pressure input
• 2 numeric displays
• Controls 1 valve (CDS or SDR)

952759

Part No.	Description	Use with	Price
952759*	Pressure Controller	SDR3	$2,136.90
952761*	Pressure Controller	CDS9	$2,136.90
952762*	Pressure Controller	CDS16/17	$2,136.90

SUBCOOLER CONTROLLER

• Monitors and controls superheat and subcooling
• Precise EEV control
• 16 different refrigerants
• Multiple selectable sensor and transducer curves

952570

Part No.	Use with	Price
952570*	SEI, SER, SEH	$982.80

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

952567

KELVIN II CONTROLLER

This standalone superheat controller may also be connected with a Modbus® master for remote access to pressure and temperature readings in addition to viewing and editing the controller's setpoints. A remote display unit is optional.

- Optional room temperature control
- 4-digit LED display and input knob
- OEM version available without display
- Optional remote display unit
- Optional display networking for 2-valve control
- Optional controller networking for remote access
- Four temperature inputs (Sporlan surface or air sensors)
- One pressure input (Sporlan transducer)
- One digital input (for external switch or relay)

Part No.	Description	Price
952567*	KelvinIIsd Controller, With Display	$907.88
952569*	KelvinIIs Controller, Less Display	$599.22
952568*	Remote Display Unit Only, Kelvin IId	$565.16
953444*	Kelvin power supply 100-240 VAC/24VDC	$92.94

PSK223N5EXBS

DIGITAL REFRIGERATION CONTROLLER

Sporlan's PSK Series electronic controllers manage low and medium temperature refrigeration units by controlling compressors, defrost, lights and fans.

PSK221/231

- Single Relay Output
- Medium temperature applications, controlling compressor and off-cycle defrost
- Available in 8A-30A output (1/3HP - 2HP)
- Available with 1-2 inputs

PSK223/233

- Three Relay Outputs
- Low temperature applications, controlling compressor, evaporator fans, and electric/hot gas defrost
- Available in 8A-30A output (1/3HP - 2HP)
- Available with 2-3 inputs

PSK214

- Four Relay Outputs
- Offers entire system management by controlling compressor, evaporator fan(s), electric/hot gas defrost, and auxiliary (light, anti-sweat heater, etc.)
- HACCP compliant data logging
- Available with 3-4 inputs
- Real Time Clock (RTC) for added control
  Sensor Probes: NTC or PTC (must be configured
  Sensor Range: -40 to 220°F for NTC; -50 to 300°F for PTC

PSK Models	PSK221N5EXBS PSK221N7EXBS	PSK231N5EXBS PSK231N7EXBS	PSK223N5EXBS PSK223N7EXBS	PSK214N9EXBS	PSK233N5EXBS PSK233N7EXBS
✓ standard					
Inputs					
NTC/PTC Temperature Sensor	1	1	2	2	2
Door Switch	–	–	1	1	1
Multipurpose	1	1	–	1	–
Relay Outputs					
Compressor	16A	30A	8A	16A	30A
Evaporator Fan	–	–	5A	8A	5A
Defrost Solenoid	–	–	8A	8A	8A
Multipurpose	–	–	–	8A	–
Features					
IP65 Rated Front Panel	✓	✓	✓	✓	✓
Extractable Terminals	✓	✓	✓	✓	✓
TTL Serial Communication Port	✓	✓	✓	✓	✓
Built-In Alarm Buzzer	✓	✓	✓	✓	✓
Energy Saving Mode	✓	✓	✓	✓	✓
HACCP Data Logging	–	–	–	✓	–
Real Time Clock (RTC)	–	–	–	✓	–
Power					
115 VAC, 50/60 Hz	N5	N5	N5	–	N5
230 VAC, 50/60 Hz	N7	N7	N7	–	N7
115-230 VAC, 50/60 Hz	–	–	–	N9	–

Part No.	Description	Price
PSK223N5EXBS*	Controller, Low Temp, 120V, 1/3 HP	$274.64
PSK233N5EXBS*	Controller, Low Temp, 120V, 1 HP	$274.64
PSK223N7EXBS*	Controller, Low Temp, 230V, 1/2 HP	$274.64
PSK233N7EXBS*	Controller, Low Temp, 230V, 2 HP	$274.64
PSK221N5EXBS*	Controller, Medium Temp, 120V, 1/3 HP	$219.70
PSK231N5EXBS*	Controller, Medium Temp, 120V, 1 HP	$252.68
PSK221N7EXBS*	Controller, Medium Temp, 230V, 1 1/2 HP	$219.70
PSK231N7EXBS*	Controller, Medium Temp, 230V, 2 HP	$252.68
PSK214N9EXBS*	Controller, 115-230V, 4 Relay	$398.20
952898*	Temperature Probe, 10'	$29.64
PSKEY*	Programming Key	$274.64

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

ELECTRONIC EXPANSION VALVE

PARKER - MICRO THERMO TECHNOLOGIES

SERIF-7X9

ELECTRONIC STEPPER

- Step motor operated for precise control
- High resolution drive assembly
- Solenoid tight seating
- Corrosion resistant materials used throughout
- Field proven reliability

- Low power consumption (less than 4 watts)
- Compatible with HCFC and HFC refrigerants and oils, in addition to subcritical CO
- Self lubricating materials used for long life
- High linear force output
- Operating temperature: -50° to 155°F
- MOPD: 580 Psid (500 for SERIG)
- 2500 steps

Features of SER-A and AA:

With advanced pin and port geometry and precision machined components, these bi-flow
valves provide unmatched resolution under the lightest load conditions. By leveraging the unique uni-body construction of the SER-B, -C and -D, the SER-AA and SER-A can offer increased corrosion resistance, reduced leak paths, and improved mounting flexibility over competitive designs

		Connection Size (In.)			
Part No.	Configuratio	Inlet	Outlet	Height (In.)	Price
SERIF-7X9*	Angle	7/8	1 1/8	8.56	$939.64

MTW95

MODULATING 3-WAY VALVE

Allows control of refrigerant flow through two outlet ports. T wo valve pistons are attached to a connecting rod and also to the stepper motor . As the MTW valve modulates one port opens and the other port closes. The move - ment of the valve pistons relative to the two ports is inversely proportional.

- Simplified system piping enables piping material cost reductio
- Reduced install time enables labor cost reduction
- Single actuator reduces control and wiring complexity
- Utilizes standard 42mm stepper motor
- 6,386 steps of resolution
- 75 Ω bipolar stepper motor
- 160 mA per winding
- Bi-sealing piston assembly
- Compatible with the Sporlan Kelvin II Series valve controllers

	Connection Size (In.)			
Part No.	Inlet	Outlet	Overall Height (In.)	Price
MTW95*	5/8	5/8	6.71	$1,398.62
MTW97*	7/8	7/8	6.71	$1,398.62
MTW99*	1 1/8	1 1/8	6.71	$1,398.62
MTW1711*	1 3/8	1 3/8	8.25	$1,815.22
MTW1713*	1 5/8	1 5/8	8.25	$1,815.22
MTW1717*	2 1/8	2 1/8	8.25	$1,834.94

961-651D

CASE CONTROLLER

Using highly accurate v alve profile coupled with advanced control algo-rithms, the Micro Thermo Technologies Case Controller can prevent significan under / over shoot. This can reduce temperature shocks to food and provide up to an estimated 2% impact (savings) on food loss. Better control of electric expansion valves results in lower energy usage, while better maintaining temperature and food quality.

- Uses advanced alarm schemes to safeguard food. Monitors cumulative temperature fluctuations over time. These additional alarms can provide early warnings that help protect food quality and intelligently predict system failures.
- Features control of an electric expansion valve, fans, defrost, anti-sweat, and lighting for complete case control.
- Easily integrates into the Micro Thermo Technologies Alliance Platform, which provides a simple user interface for easy setup, comprehensive data recording, and local / remote oversight.
- Compatible with all of today's common refrigerants, including CO2
- Windows® interface with built-in tools to ease start-up
- Smart fan control
- Multiple control schemes, including true pressure temperature superheat control
- Built-in dual temperature case control capability

Part No.	Description	Price
961-651D	12.5" W x 4.56" H x 2.15" D	$1,309.22

⚠ *WARNING: This item may contain chemicals known to cause cancer and/or reproductive harm in the state of California. For more information go to www.P65Warnings.ca.gov

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

MICRO THERMO TECHNOLOGIES

962-500Q

REFRIGERATION CONTROLLER

Micro Thermo's Refrigeration controllers are designed to interface with any type of refrigeration system. MT controllers are engineered to enhance the operating efficiency of your refrigeration equipment ensuring accurate control of all temperature and pressure settings.

The hardware consists of intelligent boards, referred to as "nodes", that control and monitor all types of refrigeration equipment including compressors, condensers, refrigeration cases, suction groups, defrost refrigeration circuits, secondary coolant systems, subcoolers and anti-sweat and EEPR valves.

Each suction group, compressor, condenser and refrigeration circuit is easily configured using the MT Alliance™ Refrigeration software configuration tool. The tool creates a hierarchical view of each rack and simplifies installation, commissioning and operation. arious rack and store views display all critical operating data in a single screen. Data for all points is stored in a database for historical record

- Seamless integration and control of all functions of all types of multi-compressor refrigeration systems
- Monitoring of key parameters to ensure safe operating conditions at all times
- Provides compressor sequencing to avoid unnecessary cycling and stagger runtime for longer life
- Multiple strategies for hot gas, off-time and electric defrost
- Visual point and click defrost scheduling to balance defrost cycles across all circuits
- Provision to easily add additional intelligent nodes as your equipment needs grow, without compromising overall system performance
- Easy to install, operate and maintain with reduced wiring requirements

Part No.	Description	Price
962-500Q	MT500 r3 8 IN Sensors Node COM, On SnapTrack Panel	$858.38
962-504P	24 Vac Center-tap Transformer 12VA	$1,364.22
962-508P	24 Vac Center-tap Transformer 15VA	$1,511.72
962-512P	24 Vac Center-tap Transformer 20VA	$1,856.60
961-632F	Control for Reciprocating, Scroll and Screw Compressors. Support for up to 2 unloaders per compressor. 3 Digital Inputs, 2 Type C Relay Outputs (SPDT, 2A, 250 Vac).	$938.86
962-634B	10 Type C Relay Outputs: SPDT, 2A, 250 Vac	$1,105.54

DUAL TEMP ELECTRONIC EVAPORATOR PRESSURE REGULATOR CONTROLLER

962-636C

The temperature control is based on a direct reading of the air temperature in refrigerated cases. It automatically positions the DT-EEPR valve that throttles the suction on the evaporators. This throttling action increases the evaporating pressure and/or temperature with respect to the suction manifold pressure. DT-EEPR controlled valves are considerably more precise than mechanical Evaporator Pressure Regulator (EPR) valves, allowing regulation of the average temperature to within ±0.18°F or better. In addition, the setpoint can be modified through a simple softwar command using the MT Alliance® software configuration tool Using state of the art technology and algorithms, the DT-EEPR controller uses a predictive information model to optimize control and improve overall refrigeration performance . With the data collection abilities of Micro Thermo's MT Alliance front end, the DT -EEPR can help you achieve better results than other controllers in the industry . The DT-EEPR provides you with the ability to control dual temp case temperature without the need for mechanical adjustment. The controller automatically readapts itself based on the dual switch position and readjusts the valve opening accordingly using the new settings. In addition, the controller supports clean switch functionality.

Part No.	Description	Price
962-636C	Control up to 6 Electric Evaporator Pressure Regulator valves (Sporlan's CDS and SDR series valves)	$1,375.68

ALARM RELAY BOARD

962-336A

The MT336A Alarm Relay Board is used by the Micro Thermo system for hard-wired alarm notices. Four built-in relays can be independently configured, an used to activate buzzers, lights, or can be connected to a security panel for 3rd party alarm monitoring. Multiple Alarm Boards can be used together, if additional relays are required.

Part No.	Description	Price
962-336A	Alarm Relay Board, On SnapTrack Panel	$986.76

TEMPERATURE SENSOR

023-0072

Part No.	Description	Price
023-0072	Defrost Termination Pipe Temperature Sensor, 10K Type 2 (Orange Lead)	$56.40
023-0073	Discharge Temperature Sensor, Bullet Type, 10K Type 2 (Green Lead)	$52.52
023-0076	Pipe Temperature Sensor, 10K Type 2 (Blue Lead)	$56.40

PARKER - MICRO THERMO TECHNOLOGIES

CONTROLLER

WALL HUMIDITY TEMPERATURE SENSOR

023-0026

This probe is designed for relative humidity and temperature measure-ment of occupied spaces. The relative humidity transmitter uses a capaci-tive type humidity sensor and a micro processor temperature compensation for reliable, accurate readings.

Part No.	Description	Price
023-0026	Space Temperature 10k type 2, Space Humidity 0-5V or 4-20mA (0-100%)	$728.08

PRESSURE TRANSDUCER

952-0001

Part No.	Description	Price
952-0001	Pressure Transducer for Refrigerant 100 psig, 5m Cable (Silver)	$210.22
952-0004	Pressure Transducer for Refrigerant 200 psig, 5m Cable (Khaki)	$210.22
952-0002	Pressure Transducer for Refrigerant 500 psig, 5m Cable (Yellow)	$210.22
952-0008	Pressure Transducer for CO 652 psig, 5m Cable (Purple)	$210.22
952-0010	Pressure Transducer for Any Gas 2000 psig, 5m Cable (Red)	$210.22

UNIVERSAL XR REPLACEMENT CONTROLLER

943029100

The Universal-XR has been developed to allow a refrigeration technician to replace any refrigeration control easily with just three SKU's stocked on their service truck. The Dixell Universal Replacement Controller has three

Voltage options. With the press of a few buttons, the control can be set up to replace Dixell controls, such as: XR10C, XR10CX, XR110C, XR02CX, XR20C, and CX, XR120C, XR03CX, XR30CX, XR04CX, XR40CX, XR06CX, XR60CX, XR160C and other manufacturer's controls.

- Replaces the majority of controls for: Heating, Medium Temp, Low Temp, Defrost, and Fan.
- Quick installation
- Panel: Self-extinguishing ABS
- Front: IP65
- Fast configuration in three simple step
- Seven pre-programmed applications
- Includes -2 NTC Probes (5 ft)
- Can be extended to 300 ft.
- Temperature range: -40 to 230°F

Part No.	Voltage	Price
943029100	120	$293.70
943029200	230	$293.70
943029300	12/24	$293.70

XR75CX DIGITAL CONTROLLER

318-6030

XR75CX is a microprocessor based controller, suitable for applications on medium or low temperature venti-lated refrigeration units. It has 4 relay outputs to control compressor, fan, and defrost, which can be either electrical or reverse cycle (hot gas) and light (configurable). It can also have up to 4 NT probe inputs. The first probe is used for temperature control. Th second probe is used to control the defrost termination tempera-ture at the evaporator. One of the 2 digital inputs can operate as a third temperature probe. The fourth probe is used to control the condenser temperature (for condenser alarm management) or to display a temperature value. Set the PbC parameter to CtC to support standard CPC temperature sensors (factory default). The RS-485 serial output enables the unit to be connected to a network line that is MODBUS-RTU compatible, such as the monitoring units of XWEB family. The Hot Key receptacle allows the controller to be programmed by means of the Hot Key programming keyboard. The controller is fully configurable through specia parameters that can be easily programmed through the keyboard.

Part No.	Description	Price
318-6030	XR75CX Controller, 110V	$311.12
318-6031	XR75CX Controller, 230V	$313.32

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

EMERSON

XR75CX CASE DISPLAY I/O

318-6040

XR75CX-Case Display is a micro-processor based controller, suitable for applications on medium or low temperature ventilated refrigeration units. It has up 4 analog inputs: discharge air temperature, product temperature, defrost temperature and coil out temperature, 4 relay outputs, and up to 2 digital inputs. The Case Display displays these temperatures and values on an LED display. It may be networked with an E2 RX controller (software version 3.02 or higher) to share sensor data with a Standard Circuit application that controls the case refrigeration. Because the Case Display requires only a single network cable to communicate with an E2, cases equipped with XR75CX-CDs require significantly less wiring and installation labor than traditional installations (which typically require one cable per sensor run to a centrally located group of input boards). The XR75CX-CD may control 4 external loads directly from its 4 onboard dry-contact relay outputs. The RS-485 serial output enables the unit to be connected to a network line that is MODBUS-RTU compatible.

Two Modes of Operation

The XR75CX-CD can operate in Normal mode and Standalone (failsafe) mode. When the case display is communicating normally with the E2, it is operating in Normal mode. If the communication between the case display and the E2 is interrupted, the case display will go into Standalone (failsafe) mode.

Part No.	Description	Price
318-6040	XR75 Case Display, 110 VAC Red LED	$355.26
318-6041	XR75 Case Display, 230 VAC Red LED	$355.26
318-6050	XR75 Case Display, 110 VAC Blue LED	$381.72
318-6051	XR75 Case Display, 230 VAC Blue LED	$372.62

E2 RX-100 SUPERMARKET CONTROLLER

845-1100

The E2 RX-100 brings the power, speed, and performance of the RX-300 and RX-400 controllers to current RMCC users. With the state of the art technology of the E2 control line, the RX-100 provides a solid platform for future expansion. E2 boasts a diverse array of control applications and algorithms, on-board Ethernet communications, and a big boost in on-board memory.

- New Intuitive Interface Featuring:
  - Field Sensitive Online Help Screens
  - Hot and Designated Function Keys for Advanced Users
  - Full QWERTY Keyboard for Easy Data Entry
  - Simplified Input & Output Setup, Summary Screen
- Extended Data Logging
- Enhanced Network Integration with On-board Ethernet Capability (Available with Optional On-board Modem)
- Dramatically Improved Processing Speed
- Optional On-Board Inputs and Outputs
- Extended RS-485 Support

The RX-100 has a menu driven interface that allows users to navigate screens quickly and easily - even with limited or no training. The addition of an enhanced display screen allows users to quickly review critical system parameters. Single point navigation allows advanced users to navigate to key areas in the controller quickly and easily. Field sensitive on-line help screens keep you moving.

Compatibility

E2 RX-100 uses the same RS-485 network as CPC's REFLECS controller series. Upgrading an RMCC unit is as simple as mounting the controller, transferring the power connector, and reprogramming the RX-100. Upon power up, the RX-100 automatically assumes control of the connected I/O network.

Part No.	Description	Price
845-1100	RX-100 Controller with Display	$3,759.58
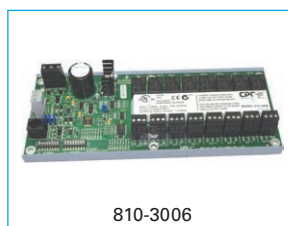
INPUT/OUTPUT BOARD

810-3006

Part No.	Description	Price
810-3006	8 Relay Outputs Board (2A/250V)	$959.78
810-3013	16 Analog/Digital Inputs Board	$944.32
810-3050	8 Digital Outputs Board, for Indoor Heater Control	$984.32
810-3062	Multiflex TU Board, 8 Inputs, 8 Relay Outputs, 2 Analog Outputs	$1,359.12
810-3063	Multiflex Board, 8 Analog/Digital Inputs, 8 Relay Outputs, 4 Analog Outputs (0-10 Vdc)	$1,288.52
810-3064	Multiflex Board, 8 Analog/Digital Inputs, 8 Relay Outputs	$1,195.82
810-3065	Multiflex Board, 6 Analog/Digital Inputs, 8 Relay Outputs, 4 Analog Outputs (0-10 Vdc)	$2,815.28
810-3066	Multiflex Board, 6 Analog/Digital Inputs, 8 Relay Outputs	$1,904.06
810-3199	ESR Board, Controls up to 8 ESR Valves	$1,809.18

EMERSON

HVAC TEMPERATURE SENSOR

201-1152

The Sensors have a 10KΩ Thermistor

Part No.	Description	Price
201-1152	Mounts in a standard 1/2" knock out. Includes 2 short 22 AWG black leads.	$114.20
201-2005	Push Button	$120.66
201-2007	Wall-Mounted Space Temperature Sensor w/out Slider	$88.28
809-6590	Wall-Mounted Space Temperature Sensor	$134.60

REFRIGERATION TEMPERATURE SENSOR

501-1160

The Sensors have a 10KΩ Thermistor

Part No.	Description	Price
501-1160	NSF Approved Temperature Sensor, 20' White Pigtail	$114.20
501-1161	NSF Approved Temperature Sensor, 20' Black Pigtail	$116.98
201-1191	Pipe Mount High Temperature Sensor, 15' White (up to 450°F)	$112.54
501-1121	Temperature Sensor, 10' Green Pigtail	$70.62
501-1122	Temperature Sensor, 20' Green Pigtail	$79.42
501-1125	Pipe Mount Coil Inlet Temperature Sensor with Connector, 20' Blue Pigtail	$79.42
501-1126	Pipe Mount Coil Outlet Temperature Sensor with Connector, 20' Red Pigtail	$79.42
501-1135	Pipe Mount Defrost Termination Temperature Sensor with Connector, 10' Orange Pigtail	$81.66
501-1127	Pipe Mount Defrost Termination Temperature Sensor with Connector, 20' Orange Pigtail	$79.42
501-1128	Return Air Temperature Sensor with Connector, 20' Purple Pigtail	$81.66
501-1129	Discharge Air Temperature Sensor with Connector, 20' Green Pigtail	$79.42
501-1134	Discharge Air Temperature Sensor with Connector, 10' Green Pigtail	$79.74
508-9100	Product Simulator Temperature Sensor, 20' White Pigtail	$185.34

CO, DEWPOINT AND HUMIDITY SENSOR

203-5751

Part No.	Description	Price
203-5751	Wall Mounted Relative Humidity Sensor (±2% 12 Vdc)	$706.02
203-5754	Outdoor Relative Humidity Sensor	$542.78
203-5771	Duct-Mounted Relative Humidity Sensor	$906.78
210-2000	Indoor CO Sensor (0-5,000 PPM), Display	$1,807.06
510-2001	Indoor CO Sensor (0-2,000 PPM), No Display	$1,493.72
210-2010	Outdoor Dewpoint Sensor, w/ Rain Shield	$2,583.62

LIGHT LEVEL SENSOR

206-0002

Part No.	Description	Price
206-0002	Outdoor Light Level Sensor	$394.18
206-0003	Indoor Light Level Sensor	$661.26
206-0009	Skylight Level Sensor	$394.18

TEMPERATURE PROBE

201-2004

Part No.	Description	Use with	Price
201-2004	4" Immersion Temperature Probe w/Box	Measures Temp. Inside Small Diameter Duct Work	$178.80
201-2009	8" Stainless Steel Insertion Temperature Sensor, 1/2" MNPT (8' Yellow Wire)	Generic (NOT for HVAC Duct or Walk-In Evap.)	$127.08
201-2008	8" Stainless Steel Insertion Temperature Sensor, 1/2" MNPT w/Box	HVAC Duct and Walk-In Evaporator	$183.14
201-2112	12" Stainless Steel Insertion Temperature Sensor, 1/2" MNPT w/Box	HVAC Duct and Walk-In Evaporator	$125.78
201-2018	18" Stainless Steel Insertion Temperature Sensor	Walk-In Evaporator	$96.94
501-1220	20 foot leads (pointed, 4" long, 1/8" diameter)	Banana Ripening Room	$157.26
501-6150	20" Duct/Walk-In Temp Probe w/ Box	Temperature Measurement for Walk-In Evaporator, Typically Used In Convenience Stores	$81.86

EMERSON

LEAK DETECTION SYSTEM ACCESSORIES

275-0145

Part No.	Description	Price
275-0145	4 Zone, End of Line Filter Kit (4 Filters and Brackets)	$374.02
275-0231	End of Line Filter Assembly w/out Brackets	$81.98
275-0232	Internal Water Stop Filter	$134.48
275-0233	End of Line Water Stop Filter	$67.26
275-0259	Universal Power Supply for IRLDS II or RLDS	$293.18
275-0275	Charcoal Filter Assembly with Fittings	$432.88
275-0315	End of Line Filter Only	$67.26
275-0345	In-Line Filter	$56.74
275-0600	Annual Maintenance Kit w/Filters	$394.92
272-0622	In-Line Filter	$50.42
275-0234	In-Line Water Trap	$292.08
275-0235	In-Line Water Trap Filter Element for 275-0234-PR	$54.66

MODULAR REFRIGERANT LEAK DETECTION SENSOR

809-1000

Continuously monitors for low levels of refrigerants most commonly used in commercial refrigeration systems. The MRLDS communicates with the E2 controller via a Gateway board connected to the RS485 I/O Network, or via the analog input on a MultiFlex board.

- Dimensions: 4.5" x 3.5" x 1.6"
- Range: 0 to 1000 ppm
- Operating Temp: 32 to 149°F (-22 to 149°F with de-icer)
- Power requirements: 24 VAC, ±20%, 50/60 Hz, Class 2

Part No.	Description	Price
809-1000	MRLDS Voltage Out Without De-Icer	$2,114.00
809-1001[1]	MRLDS Voltage Out With De-Icer	$2,464.80
809-1010	MRLDS Modbus Without De-Icer	$1,886.00
809-1011[1]	MRLDS Modbus With De-Icer	$2,138.00

[1]De-Icer for environments below 32°F to keep ice from forming on the surface of enclosure

PRESSURE TRANSDUCER

PRESSURE TRANSDUCER

800-2100

Constructed with a stainless steel housing and a 1/8" NPT fitting. Th rugged design makes it compatible with all HFC/HCFC refrigerants, CO and ammonia.

Part No.	Pressure Range (psi)	Price
800-2100	0 to 100	$280.22
800-2200	0 to 200	$280.22
800-2500	0 to 500	$280.22
800-2650	0 to 650	$434.68

TRANSFORMER

TRANSFORMER

640-0040

Part No.	Description	Use with	Price
640-0040	Transformer, 50VA, 120/208/240V w/Leads Class 2	E2 Power Supply	$97.08
640-0080	Transformer, 80VA, 120/208/240V Center Tap, Class 2	All Boards	$119.14
640-0045	Transformer, 100VA, 115/230V Center Tap, NOT Class 2	Misc. 24V AC Power (requires additional fuse for boards)	$163.28
640-0056	Transformer, 56VA, 115/230V Center Tap	—	$128.00

DANFOSS

ADAP-KOOL ®

SYSTEM MANAGER, AK-SM

080Z4009

This new system manager provides the best control and management solution with the following benefits

- Easy set-up and commissioning
- Remote access to system data
- Improved food safety

- Reduced energy consumption
- Improved system performance
- Embedded control device
- Built in Web server powering full web browser connectivity
- AK Service Tool tunnelling support
- XML commands for remote integration
- USB Flash drive
- Offline programming via web interfac
- Multi- graphic screens, allowing custom image with live data points

ENGINEERING TOMORROW *Danfoss*

Part No.	Description	Price
080Z4009	System Manager, AK-SM, w/ Display and Keyboard	$5,935.68

I/O MODULE

080Z0007

ENGINEERING TOMORROW *Danfoss*

Part No.	Description	Price
080Z0007	Extension Module, AK2-XM 101A, 8 Analog Inputs	$309.94
080Z0008	Extension Module, AK2-XM 102A, 8 Digital Inputs, Low Volt	$368.94
080Z0013	Extension Module, AK2-XM 102B, 8 Digital Inputs, High Volt	$368.96
080Z0011	Extension Module, AK2-XM 204A, 8 Digital Outputs	$398.50
080Z0018	Extension Module, AK2-XM 204B, 8 Digital Outputs, with Override	$491.46
080Z0010	Extension Module, AK2-XM 205A, 8 Analog Inputs, 8 Digital Outputs	$605.08
080Z0017	Extension Module, AK2-XM 205B, 8 Analog Inputs, 8 Digital Outputs, with Override	$693.64
080Z0020	Extension Module, AK2-XM 107A, 8 Pulse Inputs	$442.74
080Z0022	Extension Module, AK2-XM 208B, 4 Stepper Module	$507.68
080Z0032	Extension Module, AK-XM 103A, 4 Analog Inputs, 4 Analog Outputs	$779.22
080Z0023	Extension Module, AK-XM 208C, 8 Analog Inputs, 4 Stepper Outputs (for AKPC Controllers Only)	$869.34
080Z0061	Communications Module, AK2-CM 101A, Lonworks TP78	$247.60
080Z0063	Communications Module, AK2-CM 101C, Lonworks RS485	$250.92
080Z0290	Din Rail, AK2 Modules	$29.52
080Z0270	Light Ballast Dimmer Driver Board AK2 (Boosts the signal from a VO board to drive multipleballasts)	$461.46

I/O ENCLOSURE

AK2IO8

ENGINEERING TOMORROW *Danfoss*

Part No.	Description	Price
AK2IO8	AK2 Enclosure for 1 row of 4 full size Modules (w/ Power Supply and 1 AK2 Communication Modules 25"x30"x5")	$1,391.12
AK2IO16	AK2 Enclosure for 2 rows of 4 full size Modules (w/ Power Supply and 2 AK2 Communication Modules 25"x30"x5")	$1,669.36
AK2RTCB	AK2 Communication Module w/AK2 XM 205B In RTC Box Filtered Power Input (24VAC Only) 12"x12"	$1,204.26
AK2RTCB-2	AK2 Communication Module RTC Filtered Power V.2	$1,505.58
080Z2165	Enclosure, 12 x 24", Includes Power and Communication Module	$1,452.66

POWER SUPPLY

080Z0052

ENGINEERING TOMORROW *Danfoss*

Part No.	Description	Price
080Z0052	Power Supply 115/230 in 12/24 Out 56VA (Use for 12VAC or special application only)	$236.10
080Z0055	AK2 Din Rail Power Supply (AKPS 250) - 24V DC - 60VA	$236.12
080Z0053	AK2 Din Rail Power Supply (AKPS 75) - 24V DC - 18VA	$122.40

GATEWAYS, REPEATERS, SUB-COOLER CONTROLLERS

ENGINEERING TOMORROW *Danfoss*

Part No.	Description	Price
084B2251	Repeater for TP 78 (requires 12V AC)	$680.30
080Z0276	8-Port MOXA Ethernet Switch Kit (includes 24vdc power sply, DIN Rail, 8-port unmanaged switch)	$2,095.56

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

DANFOSS

DOOR MONITOR SWITCH ASSEMBLY

DRMON-1

Magnetic contact switch that provides a signal to your Danfoss environment control system to ensure that the doors on refrigerated walk-in boxes are properly closed when not in use. @ Typically set to alarm in the closed position, indicating that a door has been left open. Compatible with all Danfoss AK255 controllers as well as legacy controllers (AKC55, NC-25)

Part No.	Description	Price
DRMON-1	Magnetic Contact Switch: 120 VAC, N.O.	$138.18

TRANSDUCERS, TRANSFORMERS, RELAYS

WATTNODEP1.

Part No.	Description	Price
CTB0800	Transducer, Split Core Buss, 800A, Wattnode CT	$889.30
CTB1200	Transducer, Split Core Buss, 1200A, Wattnode CT	☎
CTB2000	Transducer, Split Core Buss, 2000A, Wattnode CT	☎
WATTNODEP1	Wattnode Plus Power Meter, 120/208-240V, requires 3 Wattnode CTs	$3,468.22
WATTNODEP3	Wattnode Plus Power Meter, 480V, requires 3 Wattnode CTs	☎
C20106600	Transducer, 100A, 3F, incl 3 CTs, Veris	☎
080Z2141	Transducer, 100A, 3F, incl 1 CT, Veris	☎
C20106601	Transducer, 300A, 3F, incl 3 CTs, Veris	☎
080Z2142	Transducer, 300A, 3F, incl 1 CT, Veris	☎
C20106603	Transducer, 800A, 3F, incl 3 CTs, Veris	$1,417.24
C20106605	Transducer, 1600A, 3F, incl 3 CTs, Veris	$1,626.34
55-168	Transformer, 150VA, Wall Mount, 24V	$287.52
49-100	Current Sensing Relay	$196.36
41-062	Relay, Form C, 2 Pole, 24V Coil	$107.56
080Z0271	Din Rail Isolation Amplifie	☎

PRESSURE TRANSDUCER

060G3990

- Used with Adap-Kool® control systems
- Compact design pressure transmitter
- Piezoresistive sensing element
- Resistant against vibrations, pressure pulsations, humidity and ice formation
- Maximum test pressure: 800 psi

Part No.	Pressure Range (psi)	Connection Size (In.)	Price
060G3990	0 to 200	1/8	$395.78
060G3991	0 to 500	1/8	$395.76

EKC/AK2 CONTROLLER

084B7252

Part No.	Description	Price
084B7252	EKC 326A Controller 24V AC, Regulates CO2 Gas Pressure	$1,409.22
084B8036	AK-CC 550A Case/Room Controller, FR inject, 115V	$820.74
084B8030	AK-CC 550A Case/Room Controller, FR inject, 230V	$820.74
084B8022	AK-CC 450 Case/Room Controller, LLSV, 230V	☎
084B8521	EKC Controller, EKC202A, 220V (Ref/Def or Alarm)	$141.20
084B8522	EKC Controller, EKC202B, 220V (Ref/Def/Fan)	$164.06
084B8534	AK-CC 210 Controller, 115V (10 output configs	$226.40
084B8520	AK-CC 210 Controller, 220V (10 output configs	$226.32
080Z0130	AK-CC 750 Multicase Controller, controls up to 4 EEV or LLSV	$1,033.08
084B8693	EKC 202D2 Stand Alone Display Unit 110V and LON 485 communication card	$277.12

EKC/AK2 CONTROLLER ACCESSORIES

080Z2161

Part No.	Description	Price
080Z2161	AK-CC 750 Custom I/O Panel (includes 24vdc power sply, 24vac transformer for EEV power)	$4,094.78
080Z2157	AK-CC 750 120V EEV Custom I/O Panel (includes 24vdc power supply)	☎
080Z2158	AK-CC 750 120V EEV Custom I/O Panel (Includes 24vdc power supply, 080Z0017 module)	☎
084B8565	Data Com Module For EKC 20X Series, EKA-179, LON to RS485	$129.58
084B8579	Data Com Module For AKCC 550/450 Series, EKA-175, LON to RS485	$102.96
084B7124	EKA 174, LON-card, RS485, used with EKC316	$748.12
084B8564	EKA 178 Modbus Module (only supported by AK-CC 210)	☎
084B8562	EKA 163 Display (For EKC 202C and Higher), Red Display	☎
084B8574	EKA 163B Display (for AK-CC 550 and AK-CC 750 controllers)	☎
084B8575	EKA 164B Display, Remote setting (for AK-CC 550 and AK-CC 750 controllers)	☎
080Z0251	Analog Output Board, 2 Analog outputs (used with AK-CC 750, AK-PC 781 and AK-PC 783 controllers)	☎
084B8584	EKA Mounting Flange Kit	$28.66
084B8566	EKA 181A, Backup Battery and Buzzer	☎
084B8567	EKA 182A Copy Key	$108.02
084B7298	2 Meter Cable (used with 084B8574 and 084B8575)	☎
084B7299	6 Meter Cable (used with 084B8574 and 084B8575)	☎
60-274	Bracket, Metal for EKC	$80.64

☎ Please contact your local United Refrigeration Branch or our Customer Service Center for pricing.

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

uri.com 1239

DANFOSS

ADAP-KOOL ®

HVAC CONTROLLER

ENGINEERING TOMORROW — *Danfoss*

Part No.	Description	Price
080Z2116	HVAC Shutdown Switch	☎
080Z2117	AK IO - Rooftop kit	$1,121.92

ALARM DEVICES

99-242

ENGINEERING TOMORROW — *Danfoss*

Part No.	Description	Price
AKAHS01	24V Horn/Strobe, Red, Indoor	$1,151.12
AKAHS02	24V Horn/Strobe, Blue, Outdoor	$1,734.10
AKAHS03	24V Horn/Strobe, Amber, Outdoor	☎
99-242	Strobe Alarm Light, Amber	$411.78
99-272	Strobe Alarm Light, Blue	☎
OAB-1	Office Alarm Box PC Board W/Audio, LED Signal and Reset	$516.84

LEAK DETECTOR

LEAK DETECTOR

080Z2089

Danfoss Gas Sensor type DGS is a state-of-the-art fixed gas detector which can detect a wide range of different gases. The sensors can be used on a stand-alone basis or integrated into Refrigeration Control System or Building Management Systems.

- Typical Measurement Range: 0 - 1,000 ppm
- Power Supply: 12/24V AC/DC ±20%

ENGINEERING TOMORROW — *Danfoss*

Part No.	Ref.	Enclosure	Temperature (°F)	Price
080Z2089	R134a	IP66	-40 to 122	☎
080Z2087	R410A	IP66	-40 to 122	☎
080Z2091	R22	IP66	-40 to 122	☎
080Z2097	CO2 (R744)	IP66	-40 to 122	☎

LEAK DETECTOR, INFRARED

080Z2154

ENGINEERING TOMORROW — *Danfoss*

Part No.	Description	Price
23-2500GL	250 OHM .05% Resistor 1/2 Watt (4-20 mA applications)	$8.78
080Z2151	Infrared Leak Detector, 8 Zone HGM-400 (Display and Detector) includes EOL and charcoal filters	$12,433.14
080Z2152	Infrared Leak Detector, 12 Zone HGM-400 (Display and Detector) includes EOL and charcoal filters	☎
080Z2153	Infrared Leak Detector, 16 Zone HGM-400 (Display and Detector) includes EOL and charcoal filters	$14,677.18
080Z2195	Air Sample Line Coupler	☎
080Z2196	2 Way Splitter Kit	☎
080Z2154	Connection kit to AK-255, includes manual, 4-20MA option board, and 2 resistors. For HGM-MZ only.	$939.92
C01680417	Leak Detector Charcoal Filter for HGM-300	$398.24
C01703200	Tubing - Polyethylene - Black / White (250 Ft Roll)	$151.18
C01680421	Bacharach Leak Detector End of Line Filter	$58.22

SENSOR

PRESSURE SENSOR

060G1889

ENGINEERING TOMORROW — *Danfoss*

Part No.	Description	Price
060G1889	Pressure Transmitter, AKS 32, 0-100 PSI, 8 Meter Cable - Use with ECI Systems 1/8 NPT	$395.78
060G1890	Pressure Transmitter, AKS 32, 0-500 PSI, 8 Meter Cable - Use with ECI Systems 1/8 NPT	$395.78
060G1034	Plug Connector with 5 Meter Cable for AKS 32R	$34.74
060G2101	Pressure Transmitter, AKS 33, (4-20ma Output - Use with EKC 316)	$395.78
060G1142	Pressure Transmitter, MBS 3000, (4-20ma Output)	$441.50
060G1037	Pressure Transmitter, AKS 32R, -14.5 to 174 PSI, 10-90% Ratiometric output, 1/4 NPT (used with case controllers, Requires 060G000812 Din Plug)	$247.36
060G5750	Sensor AKS 2050, -14.5 to 855 PSI, CO2, G3/8A, DIN	$926.64
060G5752	Sensor AKS 2050, -1 to 2,306 PSI, CO2, G3/8A, DIN	$926.64
060G000812	Din Plug for AKS 32R Transducer 1/2 NPT	$14.82

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

☎ Please contact your local United Refrigeration Branch or our Customer Service Center for pricing.

TEMPERATURE SENSOR

084N2032

Part No.	Description	Price
084N2032	Multi-purpose Sensor/Surface Sensor/Immersion Sensor, ASK 21, (fits well with 1/2 NPT)	$356.50
084N3016	Temperature Sensor, MBT 153, 18 Ft. Cable	$76.04
0C260011	ECI - TP-1 Style, 20 ft. Lead	☎
080Z2186	Air Supply Duct Probe Sensor	$132.04
080Z2185	Box Temperature Probe Assembly	$171.98
084N1007	Product Temperature Sensor (Calibration Certificate Included	$152.92
080Z2187	Zone Temperature Sensor, Indoor	$96.98
AKCOTC	Condenser Air probe	$493.68
CTPKIT	Com-Trol and CPC Temperature Sensor Resistor Kit (2/Pkg)	$45.44
TP1KIT	AK-2 Pullup Kit for ECI TP-1 Probe (4 Resistors/kit)	$30.68
0CP3	Refrigeration Case Probe, 22 Ft. Lead	$73.26

SURFACE AND DUCT SENSOR, AKS 11

- Temperature range: -58 to +212°F
- PT 1000 Ω sensor

084N0005

Part No.	Lead Length	Price
084N0005	5.50'	$113.78
084N0008	8.50'	$110.16
084N0027	11.50'	$69.18
084N0029	27.5'	$79.62

AIR FLOW, GAS SENSOR

LDC02

Part No.	Description	Price
CAFS-1	Air Flow Switch	$168.88
LDCO2	CO2 Gas Sensor	$1,886.08

HUMIDITY SENSOR AND LIGHT LEVEL SENSOR

080Z2167

Part No.	Description	Price
AKCOTHP	Outdoor Photo Cell / Humidity Sensor / Temperature Sensor (Mounted in outside enclosure)	$1,289.74
080Z2167	Outdoor Humidity Sensor (will mount in 1/2" conduit knock out)	$971.70
AKCTDP	Outdoor Dewpoint With PHOTO-OD-1	☎
TADPS	Telaire Dewpoint Sensor (included in the AKCTDP)	☎
TAENC	Outside enclosure (included in the AKCTDP)	☎
080Z2171	Humidity with Temperature Sensor, Indoor	$802.62
080Z2172	Photocell with Temperature Sensor, Outdoor	$399.22
080Z2177	Photocell, Indoor	☎
080Z2126	Mast Mount Outdoor Photocell	☎

ELECTRONIC EXPANSION VALVE

034G4209

ELECTRONIC EXPANSION VALVE TYPE ETS 12.5 - ETS 100

ETS is a series of electric expansion valves for precise liquid injection in evaporators for air conditioning and refrigeration applications.

- Balanced design (ETS 50 – ETS 400) providing bi-flow operation as well as solenoid tight shut-off function in both flow directions
- ETS 50 and ETS 100 feature improved process and productivity due to waterless brazing i.e soldering without wet cloth for cooling.
- ETS 50 – ETS 400 are all designed with built-in sight glass with moisture indicator.
- Wide range for all common refrigerants: R410A, R407C, R404A, R507, R134a, R22, R1234ze
- Refrigerant temperature range: -40 to 149°F
- Maximum working pressure: 660 psig
- ODF connection
- Cable and connector assemblies as accessories.

Part No.	Description	Inlet	Outlet	Price
034G4209	Type ETS 12.5, Straight	1/2	1/2	☎
034G4210*	Type ETS 12.5, Straight	5/8	5/8	$569.72
034G4211*	Type ETS 12.5, Straight	7/8	7/8	$569.70
034G4202	Type ETS 25, Straight	5/8	5/8	☎
034G4203	Type ETS 25, Straight	7/8	7/8	☎
034G1706*	Type ETS 50, w/ Sight Glass	1 1/8	1 1/8	$742.98
034G0508	Type ETS 100, w/ Sight Glass	1 3/8	1 3/8	☎

Part No.	Description	Price
034G2330	Cable, M12 Female 2 Meter Length	☎
034G2323	Cable, M12 Female 8 Meter Length	☎

☎ Please contact your local United Refrigeration Branch or our Customer Service Center for pricing.

⚠ *WARNING: This item may contain chemicals known to cause cancer and/or reproductive harm in the state of California. For more information go to www.P65Warnings.ca.gov

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

DANFOSS

ELECTRONIC EXPANSION VALVE

AKV/AKVH EXPANSION VALVE

The AKV(H) valves are normally controlled by a controller from Danfoss' range of ADAP- KOOL® controllers. The AKV valves are supplied as a component program, as follows:

- Separate valve
- Separate coil with terminal box or cable
- Spare parts in the form upper part, orifice and filt
  Valve capacity is indicated with a number forming part of the type designation.
  The number represents the size of the orifice of the valve in question. A valve with orifice 3 will for example be designated AKV 10-3. The orifice assembly is replaceable

068F5217

ELECTRONIC EXPANSION VALVE AKV

- Refrigerants: R744, R22/R407C, R404A/R507, R410A, R134a, R407A, R23
- Tolerance of coil voltage: +10 / -15%
- Regulation range (Capacity range): 10 - 100%
- Evaporating temperature: -76 to 140°F.
- ODF Connection
- Maximum working pressure: 610 psig

Part No.	Description	Connection (In.)			Price
		Inlet	Outlet	Type	
068F5211*	AKV 10-1 Valve, Angle	1/2	3/8	ODF	$529.38
068F5212*	AKV 10-2 Valve, Angle	1/2	3/8	ODF	$238.84
068F5213*	AKV 10-3 Valve, Angle	1/2	3/8	ODF	$238.84
068F5214*	AKV 10-4 Valve, Angle	1/2	3/8	ODF	$238.84
068F5215*	AKV 10-5 Valve, Angle	1/2	3/8	ODF	$238.84
068F5216*	AKV 10-6 Valve, Angle	1/2	3/8	ODF	$238.84
068F5217*	AKV 10-7 Valve, Angle	1/2	5/8	ODF	$238.84
068F5035*	AKV 15-1 Valve, Straight	3/4	3/4	ODF	$403.82
068F5036*	AKV 15-2 Valve, Straight	3/4	3/4	ODF	$377.40
068F5037*	AKV 15-3 Valve, Straight	7/8	7/8	ODF	$377.40

068F4079

ELECTRONIC EXPANSION VALVE AKVH

- Designed for refrigerating plants using R744 refrigerant
- Normally closed, solenoid tight expansionvalve
- Enables energy saving minimum stable superheat and adaptive defrost algorithms
- Provides excellent distribution and oil return due to turbulent flo
- The AKVH 10 valves cover a capacity range from 0.4 kW to 11 kW in refrigeration applications and 0.8 kW to 22 kW in freezing applications.
- ODF Connection
- Maximum working pressure: 1305 psig

Part No.	Description	Connection (In.)			Price
		Inlet	Outlet	Type	
068F4079	AKVH 10-1 Valve, Angle Way	3/8	1/2	ODF	☎
068F4080	AKVH 10-2 Valve, Angle Way	3/8	1/2	ODF	☎
068F4082	AKVH 10-4 Valve, Angle Way	3/8	1/2	ODF	☎
068F4083	AKVH 10-5 Valve, Angle Way	3/8	1/2	ODF	☎

068F5283

ORIFICE KIT, AKV/AKVH SERIES

Spare part kits for AKV/AKVH valves. Each kit contains items required for servicing of the valves, such as piston assemblies, springs, gaskets, orifice and filter

Part No.	Description	Use with	Price
068F5283	Use with AKV/AKVH 10 - 0/1/2/3	AKV/AKVH 10 - 0/1/2/3	$54.00
068F5284	Use with AKV/AKVH 10 - 4/5/6	AKV/AKVH 10 - 4/5/6	$54.00
068F5285	Use with AKV/AKVH 10 - 7/8	AKV/AKVH 10 - 7/8	$54.00

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

CONTROLLER

IR33 UNIVERSAL CONTROL

IR33V7LR20

The ir33 Universal controller lets you manage several values at the same time, including temperature, humidity, pressure, CO, VOC...
Suitable for temperature control in HVAC/R applications and/or generic applications that require the use of a thermostat in the range -58 to 302°F.

ir33 universal is an advanced controller that includes all the features already available in the ir32, adding some new sophisticated functions.

- 9 pre-set control modes
- Classic proportional and proportional + integral control (P, P+I), PID with autotuning or 2 independent control loops
- Two independent control loops
- Selectable NTC, PTC or PT1000 sensor input options

- 1, 2 or 4 outputs relay or SSR drive outputs
- Infrared remote control and external key programming options
- RS485 serial link for monitoring and programming
- IP65 water and dust protection
- Management of the clock
- Working cycles
- Programmable advanced control options
- ir33 universal is compatible with the new configuration tool for CAREL parametric controllers, for fast and practical setup of the application.
- The large display, complete with icons, makes it easy to set the parameters.
- Supplied with plug-in terminals. The units can be programmed on the keypad, via key, remote control and comtool.
- Available with 12 to 24 Vac/ 12 to 30 Vdc, 24 Vac/dc or 115 to 230 Vac power supply

Part No.	Description	Price
IR33V7LR20	1 Relay, 2 analog inputs, 2 digital inputs, 1 digital ouput, BUZ, IR sensor, 12-24Vac 12-30 Vdc	$181.32
IR33W7LR20	2 Relays, 2 analog inputs, 2 digital inputs, 2 digital ouputs, BUZ, IR sensor, 12-24Vac 12-30 Vdc	$209.70
IR33E7HR20	2 Relays, 2 analog inputs, 2 digital inputs, 2 digital ouputs, 2 analog outputs, BUZ, IR sensor, 115-230 Vac	$302.72

IR33 REFRIGERATION CONTROL

IR33C0LB00

Features

Infrared remote control, programming key, repeater display, high efficiency LED display, HACCP function, clock, RS485 serial port, defrost management on a second evaporator.
ir33 also manages smart defrosts, resulting in energy savings for the entire installation.
IP65 is guaranteed: the innovative technology used by CAREL to mould the plastic parts allows the protection gasket to be integrated directly into the front panel.

In models with an internal clock, HACCP management is standard: this guarantees the temperature control of the foodstuffs stored, in compliance with the requirements of the HACCP system. The parameters are set directly on the instrument: the time and temperature limits envisaged by the standards on food storage can be set.
The controller automatically manages the monitoring of the unit, highlighting any critical situations.
Additionally, it signals power failures in the event where the maintenance of the temperature could be compromised.

Part No.	Description	Price
IR33C0LB00	12/24 Vac/Vdc, ambient/defrost temp, 2 digital inputs, 4 relays: compressor (16 A), defrost (8 A), fan (8 A), aux/light (8 A), clock, IR sensor	$293.78

IR33+ REFRIGERATION CONTROL

IREVC0HC00

Inherits and extends all the features of ir33

- Touch keypad
- Completely flat surfac
- Larger display
- Intuitive user interface

- Modbus® and CAREL protocols
- Mechanical, electrical and functional compatibility with ir33

Part No.	Description	Price
IREVC0HC00	115 to 230 Vac power supply, panel mounting, 2 NTC, 2 digital inputs, remote display connector, buzzer, screw terminals, 4 relays: compressor (16 A), defrost (8 A), fan (8 A), aux/light (8 A), RTC, green LED's	$320.08
IREVY0AHA0	115 Vac power supply, panel mounting, 2 NTC, 1 digital inputs, remote display connector, buzzer, screw terminals, 2 relays: compressor (2 HP), defrost (8 A), green LED's	$220.74

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

CAREL

EASY SERIES REFRIGERATION CONTROL

PJEZS0G000

The Easy Series is designed specificall for refrigeration control in bar, catering, display cabinet and refrigerated show-case applications, designed directly based on requirements "from the field" with an elegant and modern design. Easy simplifies the initial configuratio phase of the unit and features new technology for creating special models with custom functions.

- Easy programming of the parameters, with 4 predefined sets of parameters available
- Easy installation using the front mounting system

- Easy wiring, thanks to the built-in transformer and the relays with power rating up to 2 HP
- Easy to identify the best solution, thanks to the vast range of models available
- Easy to clean, thanks to the perfectly flat keypa
- Easy to read, high efficiency display and digits that are 27% larger than traditional displays
- PJEZS, designed for the management of static refrigerating units, no fan on the evaporator, operating at temperatures above 32°F
- PJEZC, designed for the management of low temperature ventilated refrigerating units

CAREL

Part No.	Description	Price
PJEZS0G000	Easy Powerline: 230 Vac, 2 relays: compressor (2 HP), independent auxiliary (8 A), 2 NTC probes, 1 digital input, removable terminals, normal temperature, red display	$192.36
PZHXS0G100	Easy Powerline: 230 Vac, 2 relays: compressor (2 HP), independent auxiliary (8 A), 2 NTC probes, 1 digital input, removable terminals, normal temperature, red display (Hill Phoenix Version)	$199.80
PJEZS0G100	Easy Powerline: 115 Vac, 2 relays: compressor (3/4 HP), independent auxiliary (8 A), 2 temp. inputs, 1 digital input, removable terminals, normal temperature (3/4 Hp relay is a 2 Hp relay at 250 Vac)	$192.36
PJEZS0H100*	Easy Powerline: 115 Vac, 2HP, 2NTC	$176.68
PZHXS0G101	Easy Powerline: 115 Vac, 2 relays: compressor (3/4 HP), independent auxiliary (8 A), 2 temp. inputs, 1 digital input, removable terminals, normal temperature (3/4 Hp relay is a 2 Hp relay at 250 Vac) (Hill Phoenix Version)	$199.80
PJEZC0M100	Easy Powerline: 115 Vac, 3 relays: compressor (2 Hp), defrost (8 A), fan (8 A), 2 temp. inputs, RTC, 1 digital input, removable terminals, low temperature ventilated units	$286.96
PJEZC0M500	Easy Powerline: 115 Vac, 3 relays: compressor (2 Hp), defrost (8 A), fan (8 A), 2 temp. inputs, RTC, 1 digital input, removable terminals, low temperature ventilated units, blue display	$339.00
PJEZSNH100	Easy Compact: 115 Vac, 1 relay 2 Hp, 2 temp. inputs, removable terminals	$182.90

MPXPRO REFRIGERATION CONTROL

MX30M21HO0

The MPXPRO platform has been designed for the complete control of multiplexed showcases, with special focus not only on energy performance and flexibility but also on simplicity o use and installation. The device can independently control a refrigeration unit using a wide range of probes, digital or analogue inputs and outputs specially designed and sized for the specific functions. In addition, it is fitted with a clock (RTC) for th synchronisation of the events in the tLAN and features connection to the supervisor network (RS485).

CAREL

Part No.	Description	Price
MX30M21HO0	MPXPRO MS 8-16-8-8-2PWM, NTC/PT1000, Cover, Vertical Terminal Switching	$517.16
MX30M25HO0	MPXPRO MS+EEV STEP, +0 to 10VDC, +ULTRACAP, 8-16-8-8-2PWM, NTC/PT1000, Cover, Vertical Terminal Switching	$767.84

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

PRK10TY3C0

PRACK CONTROLLER, PR100T

pRack pR100T is the CAREL solution for control and management of CO2 condensing unit. pRack is the ideal solution to respond to a variety of market requirements, in regards to: high number of inputs and outputs for control needs; innovative manage-ment algorithms for energy savings; compatibility with main control market standards. The hardware is based on a PCO compact plat-form, a compact solution for managing systems such as condensing units.

pR100T is able to control:

- Compressors (time-rotation-inverter)
- Fans (on/off, EC)
- Control of the HPV valve (optimal algorithm for pressure calculation)

- Adjustment of flash valve (pressure of the receive -safety devices connected to the HPV)
- Restore procedures (fault synchronisation with case controller)
The advantage is the easiness in use, thanks to the Wizard the user is guided step by step to perform the first plant configuration. B simply responding to the questions made by automatically made by the tool, pRack can automatically set the main primary parameters necessary for a safe start of the machine.

The compact solution offers a single control provided with external driver and ultracap for direct management of the HPV and RPRV valves. The scalability of the pRack platform implies the use of the same user interface for this type of applications paying particular attention to the installation costs and the use facilities.

Part No.	Description	Price
PRK10TY3C0	pRack pR100T Compact, built-in pGD, 4+2 Analog Inputs, 2+2 Digital Inputs, 4 Analog Outputs, 6 Digital Outputs	$1,158.88

PSTCON05B0

CONTROLLER ACCESSORIES

Accessories for the ir33, Easy Series and MPXPRO controllers

Part No.	Description	Price
IROPZKEYA0	Parameter programming key (up to 6 parameters set) with external 230 Vac power supply, for ir33	$197.08
MXOPZKEYA0	Parameter programming key (up to 7 parameters set) with external 230 Vac power supply, for MPXPRO	$190.78
IROPZ48500	Serial Card used to connect CAREL compatible controllers to a supervisory network via a standard RS485 serial line	$99.32
PSTCON05B0	Connector for Remote Display, 15 Ft Long, for IR33, DN33, MD33	$26.00
IR00UGC300	Remote User Terminal with Green LED, Keypad, Buzzer, Commissioning port, IR, for MPXPRO	$100.90
IR00XG6300	Remote User Terminal with Green LED, no Options, Neutral, for MPXPRO	$94.60

LEAK DETECTOR

DPWL417000

INFRARED LEAK DETECTOR

- Infrared IP66 for CO2
- Outputs available
  Serial: RS485 Modbus
  Analogue: 0 to 5 V, 1 to 5 V, 0 to 10 V, 2 to 10 V, 4 to 20 mA
  Digital: relay 1 A, 24 Vac

- Local alarm:
  Light (red LED)
  Audible (buzzer): threshold

Part No.	Description	Price
DPWL417000	Infrared Leak Detector IP66 for CO2	$3,057.56

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

CAREL

NTC TEMPERATURE SENSOR

NTC060HF01

Part No.	Description	Temperature (°F)	Length (Ft.)	Price
NTC060HT0S	NTC HT Sensor High Temperature- single piece	32 to 302	20.0	**$47.16**
NTC060HF01	NTC HF Sensor - STRAP-ON	-58 to 194	20.0	**$39.42**
NTC030HP00	NTC HP Sensor - Single piece	-58 to 221 (122 in water)	10.0	**$20.50**
NTC060HP00	NTC HP Sensor - Single piece	-58 to 221 (122 in water)	20.0	**$31.54**
NTC015WH0S	NTC WH Sensor - Single piece	-58 to 221	4.5	**$29.72**
NTC030WH0S	NTC WH Sensor - Single piece	-58 to 221	9.0	**$35.38**
NTC060WH0S	NTC WH Sensor - Single piece	-58 to 221	18.0	**$48.82**
NTC060WF0S	NTC WF Sensor Fast Response - Single piece	-58 to 221	20.0	**$45.20**
NTC060WG0S	Glass temperature probe	-58 to 212	20.0	**$72.72**

4 TO 20 PRESSURE SENSOR

These pressure transducers are used above all in refrigeration and air -conditioning applications to measure the pressure in the refrigerant circuits, however their high performance also makes them ideal for many other applications. They can also be used in refrigerant circuits containing ammonia.
- Steel 1/4" SAE female fitting with deflect , 7/16" - 20 UNF, PACKARD connector
- 4 - 20 mA current range

SPKT0011C0

Part No.	Description	Pressure Range (psi)	Price
SPKT0021C0	Steel fitting with deflecto , 7/16" - 20 UNF, PACKARD connector	0 to 100	**$184.48**
SPKT0011C0	Steel fitting with deflecto , 7/16" - 20 UNF, PACKARD connector	0 to 145	**$184.48**
SPKT0031C0	Steel fitting with deflecto , 7/16" - 20 UNF, PACKARD connector	0 to 435	**$184.48**
SPKT00B1C0	Steel fitting with deflecto , 7/16" - 20 UNF, PACKARD connector	0 to 650	**$219.16**
SPKT00B1D0	Steel fitting with deflecto , 7/16" - 20 UNF, PACKARD connector	0 to 650	**$184.48**
SPKT00G1C0	Pressure Transducer	0 to 870	**$219.16**

0 TO 5 V RATIOMETRIC PRESSURE SENSOR

Electronics fully hermetically sealed against moisture
- All parts in contact with the fluid are made from AISI 316L stainless stee
- IP67 protection
- Protected against overvoltage up to 24 V and polarity reversal
- Female fittin

SPKT0011S0

Part No.	Description	Pressure Range (psi)	Price
SPKT0013RO	Pressure Transducer	-15 to 135	**$144.46**
SPKT0011S0	Pressure Transducer	15 to 135	**$293.28**
SPKT0031S0	Pressure Transducer	0 to 500	**$293.28**
SPKT00B1S0	Pressure Transducer	0 to 650	**$293.28**
SPKT00G1S0	Pressure Transducer	0 to 870	**$293.28**
SPKC002310	Packard Cable and Connector, 6.5 Ft Long	N/A	**$22.06**
SPKC005310	Packard Cable and Connector, 14.4 Ft Long	N/A	**$33.10**

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

CAREL

ELECTRONIC EXPANSION VALVE

E*V SERIES

E2V, E3V and E4V are proportional electronic expansion valves activated by a two-pole stepper motor. Control is performed using a calibrated stem that slides through on an opening, with 14 mm travel. The stem is positioned by a stepper motor with a range of around 500 steps. The correct mechanical balance guarantees significant stability of superheat control according to the set point and a rapid response to transient situations. The proportional control also ensures no pulsation in pressure on the refrigerant lines and greater control over the return of liquid to the compressor.

- External stator replaceable without dismantling the valve
- Gearless
- Movement on stainless steel ball bearings
- Tight when valve closed
- Control with flow in both direction
- Equipercentile variation of refrigerant flow-rate: ensures high precision control at low flow-rate
- ExV is available in different sizes, with cooling capacities of up to 250 kW, with different types of fittings (coppe , brass, stainless steel).

ELECTRONIC EXPANSION VALVE, E2V SMART

E2V

Part No.	Description	Connection Size (In.)	Price
E2V03BWA00	Size 3	3/8 - 1/2 ODF	$327.86
E2V05BWB00	Size 5	3/8 - 1/2 ODF	$318.50
E2V09BWB00	Size 9	3/8 - 1/2 ODF	$318.50
E2V11BWB00	Size 11	3/8 - 1/2 ODF	$318.50
E2V14BWB00	Size 14	3/8 - 1/2 ODF	$318.50
E2V18BWB00	Size 18	3/8 - 1/2 ODF	$318.50
E2V24BWB00	Size 24	3/8 - 1/2 ODF	$318.50
E2V05SWF00	With Sight Glass, Size 5	1/2 - 1/2 ODF	$391.16
E2V09SWF00	With Sight Glass, Size 9	1/2 - 1/2 ODF	$391.16
E2V11SWF00	With Sight Glass, Size 11	1/2 - 1/2 ODF	$391.16
E2V14SWF00	With Sight Glass, Size 14	1/2 - 1/2 ODF	$391.16
E2V18SWF00	With Sight Glass, Size 18	1/2 - 1/2 ODF	$391.16
E2V24SSM00	With Sight Glass, Size 24	5/8 - 5/8 ODF	$394.40
E2V30SSM00	With Sight Glass, Size 30	5/8 - 5/8 ODF	$394.40
E2V35SSM00	With Sight Glass, Size 35	5/8 - 5/8 ODF	$394.40
E2V05CS000	High Pressure, Size 5	10 - 10 mm Steel	$507.70
E2V09CS000	High Pressure, Size 9	10 - 10 mm Steel	$507.70
E2V11CS000	High Pressure, Size 11	10 - 10 mm Steel	$507.70
E2V14CS000	High Pressure, Size 14	10 - 10 mm Steel	$507.70
E2V18CS000	High Pressure, Size 18	10 - 10 mm Steel	$507.70
E2V24CS000	High Pressure, Size 24	10 - 10 mm Steel	$507.70

ELECTRONIC EXPANSION VALVE, HIGH PRESSURE, E3V

E3V

Part No.	Description	Connection Size (In.)	Price
E3V30CWM00	High Pressure, Size 30	5/8 - 5/8 Steel	$1,480.52
E3V35CWM00	High Pressure, Size 35	5/8 - 5/8 Steel	$1,480.52
E3V45CWM00	High Pressure, Size 45	5/8 - 5/8 Steel	$1,480.52
E3V55CWR00	High Pressure, Size 55	7/8 - 7/8 Steel	$1,672.88
E3V65CWR00	High Pressure, Size 65	7/8 - 7/8 Steel	$1,672.88

ELECTRONIC EXPANSION VALVE, E4V SMART

E4V

Part No.	Description	Connection Size (In.)	Price
E4V85BWT00	With Sight Glass, Size 85	1 1/8 - 1 3/8 Integral Screw	$1,108.42
E4V95BWT00	With Sight Glass, Size 95	1 1/8 - 1 3/8 Integral Screw	$1,226.66

E2V ACCESSORIES

E2VCABS300

Part No.	Description	Price
E2VCABS300	E2V EEV Connector and Shielded Cable, IP67, 9.8 Ft Long	$42.58
E2VCABS600	E2V EEV Connector and Shielded Cable, IP67, 19.6 Ft Long	$74.10
E2VORI0000	Teflon Gas et and Sight Glass O-Ring (20 Pieces)	$135.60
EEVMAG0000	Tool for Manual Driving of EEV Stepper Valve (E2V-E7V)	$193.92
E2VMAG0000	Tool for Manual Driving of E2V Stepper Valve	$64.64

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

EVD-EVO

DRIVER FOR ELECTRONIC EXPANSION VALVE, E2V

The new EVD evolution driver has been enhanced with advanced functions and a new user interface that makes it even easier to use and configure

- Superheat control with auxiliary high pressure, low pressure and low superheat protection
- Start-up with just 4 parameters: refrigerant used, model of valve, type of pressure sensor and application (chiller, showcase, etc.)
- New battery module
- Twin version to control two valves
- Self-adaptive algorithm
- Algorithm for Digital Scroll applications
- Connection diagram visible on the display
- Removable multi-language graphic display, with "help" on the parameters
- Multiple units of measure (metric or Imperial)
- User management with passwords for accessing different levels of configuratio
- Copy parameter values to other EVDs using the display
- LEDs for monitoring the main parameters
- Use of ratiometric or 4 to 20 mA transducers (the latter can be shared between multiple drivers)
- Second digital input for defrost management
- Possibility to use backup sensors
- Serial communication protocols: CARELmaster, pLAN Modbus® The new TWIN version can independently control two electronic expansion valves, and represents the ideal solution for two circuit units or different control functions (i.e. superheat and hot gas bypass). Connected to a pCO series controller, EVD Evolution can manage superheat on units fitted with Digital Scroll compressors, using a specific algorithm patented by CAREL and approved by Emerson Climate Tech.

Part No.	Description	Price
EVD0000E20	EVD EVO (RS485/ModBUS) - Universal	$525.04
EVD0000E50	EVD EVO (RS485/ModBUS) - Carel Valve Only	$381.56
EVD0000T20	EVD EVO TWIN (RS485/ModBUS) - Universal	$865.60
EVD0000T50	EVD EVO TWIN (RS485/ModBUS) - Carel Valve Only	$589.68
EVDIS00EN0	EVD EVO Display - English	$331.12

EVD0000UC0

ULTRACAP MODULE FOR EVD EVO

An optional external backup device for the EVDEvo used to close the valves in the event of mains power failures. The module guarantees temporary power to the EVDEvo (single or twin) in the event of power failures, for enough time to immediately close the connected electronic valves (one or two).

Part No.	Description	Price
EVD0000UC0	Optional external backup device for the EVDEVO	$408.36

EVDKC

E2V DRIVER KIT

Carel ExV kits include standard components typically ordered with a valve for convenience.
Kits Include a Carel Valve driver, Valve Cable, Display, Pressure Sensor, Connection Cable and NTC Sensor

- Universal Valve -15-135 psi

Part No.	Description	Price
EVDKCE332A	Single Valve Driver Kit	$1,519.12
EVDKJE332A	Twin Valve Driver Kit	$2,729.50

CONTROLLER

21660KE2

KE2 EDGE MANAGER

- Automatically provides a real-time dashboard of up to 35, 100 or 250 (depending on pn) KE2 Therm controllers or KE2 wireless sensors
- Prevents food loss

- Data logging - Improves accuracy and eliminates the time and expense of manual tracking
- Detailed graphs with time stamps
- Easy remote access via KE2 Smart Access or ke2.io portal using any Ethernet or wireless device (ex: laptop, desktop, tablet or mobile.)
- Serves as a KE2 Therm BACnet IP and Modbus Gateway
- Wireless tethering & bridging
- Provides a wireless access point
- Configurable location nam
- E-mail alarm notifications & realtime access to your dat
- Commercial/industrial enclosure
- Wireless range up to 300 ft.
- Hybrid cloud architecture
- Co-location data options

Applications:

- Walk-ins
- Reach-ins
- Under Counter
- Cold Rails
- Commercial Fridge

Part No.	Description	Price
21660KE2	The KE2 Edge Manager automatically finds and dashboards up to 35 KE2 Therm controllers and KE2 Wireless Sensors.	$1,360.90

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

K2 THERM SOLUTIONS

CONTROLLER

TEMPERATURE SENSOR

- 2K Ω NTC at 77°F
- Operating range -60°F to 150°F
- Quick response and precise thermal tracking
- IP68 moisture protection
- 10,000 freeze/thaw thermal cycles

KE2 thermsolutions

Part No.	Description	Price
21066	Temperature Sensor 3-pack, yellow, green, blue, NTC, 40ft lead	$234.80

KE2 CONTROLLED ENVIRONMENT

20894

The KE2 Controlled Environment manages the temperature and humidity of sensitive product inventory. By maintaining both temperature and humidity, the KE2 Controlled Environment preserves product integrity, reduces spoilage and prevents shrinkage. Temperature is maintained precisely, providing the ideal product environment for the application. In addition to food storage for vegetables, fruits, and meats, the KE2 Controlled Environment is ideal for conditioned spaces such as ripening rooms, clean rooms, document storage, meat curing rooms, tobacco storage, wine and more.

- Precise regulation of the conditioned space's humidity and temperature helps keep product at optimum for both texture and flavo , and can extend shelf life.
- Improved product integrity and reduced spoilage - elimination of unnecessary defrost cycles reduces freezer burn, and temperature spikes, which can degrade product quality
- Protect inventory with Alarm notification text/e-mai
- Remote monitoring & system control
- Typical 20% energy savings through reduction of defrosts
- Includes seven days of room and coil temperatures
- Data logging key provides 31 days of system operation history
- Energy savings through identification of system performance issues using graphing and data logging feature
- Energy savings through improved evaporator performance due to the elimination of ice on the evaporator
- Helps eliminate ice buildup on surfaces and product, keeping walk-in cooled evenly and efficientl
- Reduces liability by eliminating ice buildup, on floor
- For remote monitoring, control and alarming, controllers can connect to KE2 Smart Access portal when used with a KE2 LDA and connected to customer network.
- 366 days of temperature data logginwe when used with a KE2 LDA and KE2 Flashdrive
- For new equipment or upgrade of existing equipment
- Easily integrated with Building Energy Management Systems

KE2 thermsolutions

Part No.	Description	Price
20894	KE2 controlled environment temperature and humidity controller, includes air sensor wire mount (#20606)	$1,540.38

KE2 TEMP + VALVE CONTROL

21301

Like the KE2 Temp, the KE2 Temp + Valve Control replaces a thermostat and a defrost time clock in air defrost appli - cations, simplifying your installation. In addition, the KE2 Temp + Valve drives an electronic expansion valve, electronic evaporator pressure regulating valve or an electronic hot gas bypass valve.

- Controls an EEV, EEPRV, or EHGBPV providing much tighter system control than possible with mechanical controls.
- Simplifies wiring, saves installation tim
- When used with the KE2 EM35, displays a Dashboard showing controllers connected to the local KE2 EM35 network
- Alarm notifications via text or e-mail, (when used with the KE2 EM35), and Visual and Audible Alarming
- 366 days of temperature data logging when used with the KE2 Flash Drive
- Connects controllers to KE2 SmartAccess customer portal without requiring controller upgrades
- Custom defrost schedule; Off-time defrost on pre-defined schedule; Manual defrost
- Compressor protection – maximum starts per hour adjustable
- Keypad lock feature
- Defrost type: air (off time)
- Initiate and terminate defrost: time
- Alarm options: display or email with KE2 LDA

KE2 thermsolutions

Part No.	Description	Price
21301	KE2 Temperature + Valve Control	$720.74
21393	KE2 Temperature + Valve Control kit, includes 10' pressure transducer (pn 20201) and 45" temperature sensor (pn 20175)	$417.62
21744	Refrofit kit, with RSV-130 valve 3/8" x 1/2" ODF w/ 10' lead, temperature sensors, pressure transducer and cable	$906.90
21745	Refrofit kit, with RSV-220 valve 3/8" x 1/2" ODF w/ 10' lead, temperature sensors, pressure transducer and cable	$906.90
21821	Refrofit kit, with RSV-400 valve 5/8" x 7/8" ODF w/ 15' lead, temperature sensors, pressure transducer and cable	$1,024.32

K2 THERM SOLUTIONS

EVAPORATOR EFFICIENCY CONTROLLER

21096KE2

The KE2 Evap Supermarket Retrofit kit (21096KE2) is a complete package for upgrading walk-ins, and refrigerated rooms, to improve the operating environment. It is proven to reduce or eliminate icing issues, provides remote monitoring and control, and is third party verified as an energy saving controller.

The kit includes: Evap controller (20178), mounting box (20687), wire harness (20687), Ethernet adaptor kit (20938) and door switch (20543).

- Up to 20% energy savings over existing technology
- Up to 86% reduction in defrost cycles over conventional methods; demand vs time defrost
- Payback regularly 24 months or less
- Maximizes energy efficiency with less compressor run time resulting from fewer and shorter defrosts
- Re-humidification of conditioned space to increase product shelf life
- Controls evaporator fans, room temperature, EEV, compressor/ liquid line solenoid, defrost heaters, multiple alarms
- Communicates to PC, smart phone or tablet computer allowing control of the KE2 Evap remotely, wherever internet service is available; receive alarm alerts/text message right to your phone, computer, or tablet

Part No.	Description	Price
21096KE2	Evaporator Efficiency Controller Kit: w/ Evap Controller, Mounting Box, Wire Harness, Ethernet Adaptor Kit, Door Switch	$1,725.38
20178	Evaporator Efficiency Controlle , with 10' temp sensors (3) and Life Time Data Key	$1,291.38
20844	Evaporator Efficiency Controlle , with 40' temp sensors (3), Mounting Box and Life Time Data Key	$1,504.80
20687	Mounting Box, 40 mil Embossed Aluminum	$113.84
20736	Wire Harness, 9-Wire, 10 Ft., w/ Gauge Wires and Connections for Controller	$145.88
20938	Ethernet Adapter Kit	$145.04
20222	Evaporator Efficiency Controller (Beacon® Replacement)	$1,670.46
20185	Cat5e Shielded Ethernet Cable with connectors, 50ft	$84.54
20199	Temperature Sensor, NTC, 10ft lead	$45.22
20200	Temperature Sensor, NTC, 40ft lead	$77.38
20201KE2	Pressure Transducer, 0-150 psia, 10ft lead	$229.46
20204	Pressure Transducer, 0-150 psia, 40ft lead	$266.80

TEMPERATURE CONTROL + DEFROST

20611KE2

The KE2 Temp's robust design provides versatility to a wide range of medium and low temperature applications. When applied to medium temperature applications of 37°F and higher, the built-in defrost clock may be used to perform time-initiated and time-terminated defrost cycles. The controller's single-pole-double-throw relay controls the refrigeration and defrost cycles.

To eliminate unnecessary service calls, the KE2 Temp + Defrost alerts the user when it is coming out of a defrost cycle using the onboard display.

The space temperature sensor is supplied with a 10 ft. lead, and functions to control the space temperature of the room.

- Thermostat
- Off time defrost on schedule or custom defrost
- Compressor protection - maximum starts per hour
- Manual defrost
- 1st defrost 2 hours after start-up
- Visual alarming: high temp/low temp/Sensor
- Input voltage: 120 V / 208-240 V
- Includes: relay for solenoid / compressor, 3 digit 7-segment display, 4-button user interface, modbus terminals

Part No.	Description	Price
20611KE2	KE2 Temp + Defrost	$305.94

LOW TEMPERATURE CONTROL + DEFROST

20903

The controller is unique for its ability to control both temperature and defrost, providing your customers with precision setpoint and temperature measurement to a tenth of a degree. Able to incorporate advanced controls such as configurable digital inputs. This allows users to attach door switches and other accessories to the controller.

- Energy saving fan cycling - Title 24 compliant
- Regulates the amount of defrostheat to prevent steaming
- Optional Door Switch with all the necessary time delays
- Off time or electric defrost on pre-defined schedule or custom defrost interval
- Compressor protection - Maximum starts per hour
- Visual and Audible Alarming - High temp/Low temp/Sensors/Door/ Power Failure
- Service Call Saver - Post DefrostIndicator
- Manual defrost
- 1st defrost 2 hrs after start up
- Keyboard Lock Feature
- Includes: high voltage safety shield, (3) course thread screws. (5) Self-tapping screws, (6) 90° spade connectors, (2) straight spade connectors, (1) 1/2" plastic knockout plug, (2) temperature sensors

Part No.	Description	Price
20903	KE2 Low Temp + Defrost	$483.80

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

K2 THERM SOLUTIONS

CONTROLLER

21177

ADAPTIVE CONTROL WITH DEMAND DEFROST

- Combines functions of a thermostat and defrost timeclock
- Energy saving adaptive, demand defrost
- Energy saving fan cycling per Title 24

- Eliminates complexity - simplifying wiring and programming
- Digital thermostat displays to a 1/10th of a degree
- Regulates the amount of defrost heat to reduce steaming
- Service Call Saver - Post Defrost Indicator
- Optional Door Switch with all the necessary time delays
- Off time or electric defrost on pre-defined schedule or custom defrost interval
- Compressor protection - Maximum starts per hour
- Manual defrost
- 1st defrost 2 hours after start up (when scheduled defrost is selected)
- Visual and Audible Alarming - High temp/Low temp/Sensors/Door/Power Failure (PF)/Defrost Termination on Time/Excess Defrost
- Input Voltage: 120V / 208-240V
- Storage and Operating Temp: -40° to 120°F
- Inputs: 3 colored 15' temp sensors (KE2 21151), 2 dual purpose temperature or digital inputs

Part No.	Description	Price
21177	KE2 adaptive control with demand defrost. Combines the functions of a thermostat and defrost timeclock.	**$745.30**

20906KE2

WIFI SERVICE TOOL

KE2 WiFi Service Tool is the simplest, most cost effective, way to access the KE2 Evaporator Efficiency s or KE2 Controlled Environment's Graphical User Interface (GUI) web pages of the controller. When connected to the controller, the service tool creates nearly instant wireless access to the web pages on the controller . Includes: WiFi Service Tool, USB cable, 120/240V power switching transformer, user manual

Part No.	Description	Price
20906KE2	Wifi Service Tool	**$413.12**

21253KE2

LOCAL AREA DASHBOARD AND ALARMS

The KE2 LDA is multi-functional, communication device designed for smaller installations. Monitor, control and receive alarm notifications for up to ten KE2 Therm Ethernet or SerialModBus controllers, in a single view – with just one KE2 LDA.

Provides the ability to:

- Serve as a Permanent WiFi Service Tool
- Display a Local Area Dashboard showing the controllers connected to the customer's network
- Send email Alarm notifications for all connected controllers, to multiple email recipients
- Create a Wireless Bridge to the local network (wirelessly connect a controller to existing WiFi)
- View Serial devices in a webpage, make changes to setpoints, and receive alerts via email or text message
- Connect controllers to KE2 SmartAccess customer portal, to view through the Internet
- Connect Ethernet controllers, with older firmware, to KE2 SmartAccess without requiring controller upgrades
  While the KE2 LDA is a Local Area network device, it enables customers to access their controllers over the Internet, by functioning as a conduit to KE2 SmartAccess, a KE2 Therm hosted portal, available for a nominal monthly charge.

Part No.	Description	Price
21253KE2	Communication device for up to 10 KE2 Therm controllers, Serial-Modus or Ethernet	**$355.64**
21146	366 Days of Data Logging (Flash Drive) for 21253KE2	**$345.30**
21418	LDA Mounting Bracket for 21253KE2	**$26.94**

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

REFRIGERATION STEPPER VALVE

The KE2 Therm RSV electric expansion valve is a stepper motor actuated valve, designed for refrigeration applications. The RSV uses a unipolar stepper motor that provides high precision

21164

control. Upgrading a system with an RSV will increase system efficiency and provide the best, most consistent superheat control, and eliminate the headache of adjusting superheat.

- High precision bi-directional control
- 4-phase, 8-beat, 20 pole unipolar stepper motor
- Neodymium-iron-boron magnet rotor
- 500 steps for high resolution control
- 30 to 90 per second step rate
- External, replaceable coil
- 5 wire coil
- Insulation class E
- Low power consumption

Part No.	Description	Price
21665	Valve Body: RSV 100	$309.52
21161	Valve Body: RSV 130	$309.52
21162	Valve Body: RSV 130	$337.96
21163	Valve Body: RSV 220	$309.52
21164	Valve Body: RSV 220	$337.96
21165	Valve Body: RSV 320	$309.52
21529	Valve Body: RSV 400	$426.90
21594	Valve Body: RSV 550	$434.00
21595	Valve Body: RSV 550	$451.80
21779	Valve Body: RSV 650	$434.00
21149	RSV-C10 Stator replacement for RSV-100 to 320	$131.62
21525	RSV-LC15 Stator replacement for RSV-400 to 650	$160.10

HUSSMANN

0477653

MOTOR

Easily replace failing motors with Hussmann OEM motors that include:
- OEM harness compatible plugs to eliminate wiring headaches
- Bolt hole alignments matching OEM specifications to ensure product fi and trouble free installs

Part No.	Description	Price
0477653*	ECM Fan Motor, 4 Watt, 115V, CW, SSC2	$256.00
0477655*	ECM Fan Motor, 12 Watt, 115V, CW, SSC2	$246.00
0047000*	ECM Fan Motor, 13 Watt, 115V, CW	$128.00
0477657*	ECM Fan Motor, 16 Watt, 115V, CW, SSC2	$310.00
0477658*	ECM Fan Motor, 25 Watt, 115V, CW, SSC2	$310.00
11513*	1/4 HP, 1125 RPM, 115/230V, CW, 5/8" Shaft, w/ Base	$403.18

RELAY

0342598

Hussmann OEM components are carefully designed, engineered, manufactured and tested to perform to the precise operating requirements for each Hussmann model.

Part No.	Description	Price
0342598*	120 Volt Relay SPDT	$98.00
0342599*	220 Volt Relay SPST	$98.00

FAN BLADE

0315470

OEM blades are engineered and tested to provide optimal air flow for peak cas performance

Part No.	Description	Price
0315470*	8", CW, 34° Pitch, Plastic	$36.00
0461805*	8.25", CW, 25° Pitch, Galvanized	$36.00

FAN ASSEMBLY

0477668

Fan motor, blade and mounting support brackets (where applicable) assembled to save you time and headaches transferring from old motor.
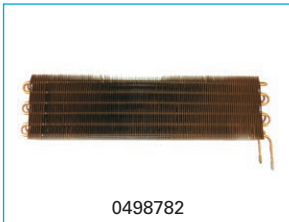
Part No.	Description	Price
0477668*	12 Watt, 115 Volt, 8.25", 25°, Blade w/ Bracket	$344.00
0501520*	25 Watt, 115 Volt, 10", 30°, Blade w/ Bracket	$390.00

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

⚠ *WARNING: This item may contain chemicals known to cause cancer and/or reproductive harm in the state of California. For more information go to www.P65Warnings.ca.gov

HUSSMANN

EVAPORATOR COIL

0498782

HUSSMANN

Part No.	Description	Price
0141632*	ASM	$5,320.00
0386951*	Heatcraft 30 Pass	$6,460.00
0404464*	ASM Rear Coated 12	$9,400.00
0404466*	ASM Rear Coated 12	$10,360.00
0498770*	36P 2C 3 fpi x 42.5"	$1,010.00
0498772*	44P 2C 3 fpi x 42.5"	$1,270.00
0498774*	52P 2C 3 fpi x 42.5"	$1,280.00
0498777*	60P 2C 3 fpi x 42.5"	$1,410.00
0498780*	60P 2C 4.5 fpi x 42.5"	$1,470.00
0498782*	24P 1C 3 fpi x 42.5", Coated	$1,260.00
0498784*	20P 1C 3 fpi x 42.5", Coated	$1,260.00
0527011*	24P 1C 3 fpi x 42.5", Copper Heresite	$1,650.00
225021381*	ASC 4' Heatcraft	$1,530.00
225020042S*	(B) COIL 11 x 4 x 135 SC 12' R3-D	$6,320.00
225021381S*	ASC 52 39" x 13' x 4"	$3,920.00

THERMOSTAT

Hussmann OEM components are carefully designed, engineered, manufactured and tested to perform to the precise operating requirements for each Hussmann model.

0461814

HUSSMANN

Part No.	Description	Price
0461814*	Disc Type Thermostat	$82.00
0338130*	Disc Type Thermostat	$60.00
0474033*	Defrost Termination Thermostat	$326.00
0344662*	Heater Limit Thermostat	$138.00

THERMOSTATIC EXPANSION VALVE

Hussmann valves are manufactured and tested to keep the equipment running like new.

0380057

HUSSMANN

Part No.	Description	Price
0378141*	TXV, BIVE 1/2C (50.5)	$310.00
0403867*	TXV, BFVE 1/2C (49)	$198.00
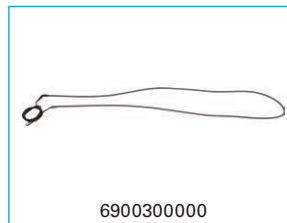
HEATER

Hussmann defrost and drain pan perform to precise OEM operating specifications for each Hussmann model. Each is designed to fit correctly wit color coded wires and correct length wires for straightforward uncompli-cated installation.

6900300000

HUSSMANN

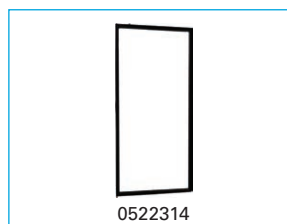| Part No.	Description	Price
6900300000*	Coil Heater, 265 Volt, 124", 1400W	$386.00
19S681*	Defrost Heater, 208 Volt, 149.625", 8.25 Amps, Gel Gem	$720.00
0387037*	Drain Pan Heater, 3 Door, 120 Volt, 72.5", 1500 Watt, RL3 RLN3	$172.00
0387038*	Drain Pan Heater, 4 Door, 120 Volt, 103", 240 Watt, RL4 RLN4	$192.00
0387039*	Drain Pan Heater, 5 Door, 120 Volt, 133.5", 300 Watt, RL5 RLN5	$214.00
0322013*	Condensate Pan Heater, 230 Volt, 200 Watt, 10" Diameter	$178.00
0486046*	Heater Drip, 208 Volt, 85", 300 Watt, LW, LWU	$212.00
0487482*	Coil Heater, 208 Volt, 39.5", 685 Watt	$148.00
1802355*	Frame Heater, 3 Door, 120 Volt, 140.9 Watt, RL3, RLN3	$416.00
1802356*	Frame Heater, 4 Door, 120 Volt, 188 Watt, RL4, RLN4	$522.00
0428604*	Frame Heater, 5 Door, 120 Volt, 235.5 Watt, RL5, RLN5	$522.00

BALLAST AND POWER SUPPLY

OEM ballast and power supplies fi cases correctly with color coded wiring and plugs (where applicable) for quicker installation and reduced labor costs.

0489698

HUSSMANN

Part No.	Description	Price
0489699*	T8 Ballast 3 Lamp 120V	$498.00
0539829*	T8 Ballast 3 Lamp 120-277V	$242.00
0539830*	T8 Ballast 4 Lamp 120-277V	$266.00

DOORS

0522314

HUSSMANN

Part No.	Description	Price
0522314*	Innovator, 1 LH, Black	$2,190.00
0522315*	Innovator, 1 RH, Black	$2,190.00
0522316*	Innovator, 1 LH, Grey	$2,190.00
FV750*	FV75 D5 H/D Door Retrofit	$4,120.00
0458383*	Innovator, II LH, Black, No Fog	$2,190.00
0416440*	Rear Service Door, Inside	$1,460.00

SUPERMARKET ELECTRONIC CONTROLS AND PARTS

DOOR PARTS

- Choose Hussmann parts for superior reliability, precise compatibility and durable design
- Durable powder-coated paint to reduce corrosion
- All components are guaranteed to fi

HUSSMANN

Part No.	Description	Price
0428586*	Bottom Hinge Socket, Black	$78.00
0428627*	Door Closer, LH	$168.00
0428562*	Magnetic Gasket, Black	$178.00

KRACK

MOTOR

Easily replace failing motors with Krack OEM motors that include:

- OEM harness compatible plugs to eliminate wiring headaches
- Bolt hole alignments matching OEM specifications to ensure product fi and trouble free installs

KRACK

Part No.	Description	Price
E206880*	1/2 HP, 575 RPM, 230/460/3, 56 Frame	$1,441.26
E205492*	1 1/2 HP, 1140 RPM, 230/460/3, 56 Frame	$1,317.46
E151976*	1 1/2 HP, 850 RPM, 230/460/3, 56 Frame	$869.84
E205109*	PSC Motor, 1/28 HP, 1550 RPM, 115 Volt	$374.00
E201949*	PSC Motor, 1/28 HP, 1550 RPM, 208-230 Volt	$352.00
E206448*	PSC Motor, 0.05 HP, 1550 RPM, 208-230 Volt	$374.00
E206447*	PSC Motor, 0.06 HP, 1550 RPM, 208-230 Volt	$374.00

MOTOR ACCESSORIES

KRACK

Part No.	Description	Price
E316578*	Motor Mount KR	$102.00
E102010*	Motor Mount SK	$324.00
800340*	Motor Ring 56 Frame	$122.00
E280793*	Motor Bracket	$146.00

FAN BLADE

OEM blades are engineered and tested to provide optimal air flow for peak cas performance

KRACK

Part No.	Description	Price
E410387001*	Fan Blade, 12″, 22°, KR Swept Wing	$104.00
E316580*	Fan Blade, 12″, 24°, KR Swept Wing	$108.00
E205493*	Fan Blade, 30″, 24°, CW, 5/8″ Shaft	$339.68
112730*	Fan Blade, 30″, 28°, CW, 5/8″ Shaft	$466.66
E208058*	Fan Blade, 30″, REVCOR ZS3003-34	$473.02
E103789*	Fan Guard	$196.00
E201818*	Fan Delay Thermostat	$214.00

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