

LIQUID FLOW SWITCH

F261 SERIES

The F261 Series Flow Switches respond to fluid flow in lines carrying water, ethylene glycol, or other nonhazardous fluids. These models also work in applications with swimming pool water and lubricating oils.

- SPDT switches
- Type 3R (NEMA) or Type 4 (NEMA) polycarbonate enclosure provides dust protection in indoor and outdoor applications.
- Viton® diaphragm allows use in fluid lines carrying chlorinated water, treated water, or other nonhazardous fluids.
- Maximum fluid pressure: 290 psig
- Maximum fluid temperature: 250°F
- Minimum fluid temperature: -20°F



F261KAHV01C

STANDARD FLOW RATE, PADDLE

F261 Series Standard Flow Switches use a variety of paddle sizes to respond to fluid flow rates in applications with 1 inch trade size (or greater) pipe.

- Each model includes: 1 in., 2 in., 3 in., and 6 in. stainless steel

paddles, lock-tooth washer, and stainless steel paddle screw (supplied uninstalled)

- F261MALV01C is a low-energy model with gold-plated contacts that provides improved electrical performance in low-voltage, low-current circuits (dry circuits)



Part No.	Enclosure	Dimensions (In.)		FLA (@ 240 V)
		H	W	
F261KAHV01C*1	NEMA 3R	5.55	7.15	10
F261MAHV01C*1	NEMA 4	5.55	7.15	10
F261MALV01C*2	NEMA 4	5.55	7.15	-

1 Dimension with 3" paddle 2 Dimension with 3" paddle. Low-energy flow switch firh gold-plated electrical contacts



F261KEHV01C

LOW FLOW RATE

F261 Series Low Flow Switches respond to low fluid flow rates in applications with 1 inch trade size (or less) pipe.

- Low-flow operation on low-flow models actuates switch with less than 2.0 GPM flow

for water applications or 11.0 GPM flow for steam applications



Part No.	FPT (In.)	Enclosure	Contact Rating (Amps)	Adjustment Range, Flow Increase		Adjustment Range, Flow Decrease	
				(R to Y Closes) Min	(R to Y Closes) Max	(R to B Closes) Min	(R to B Closes) Max
F261KEHV01C*	1/2	NEMA 3R	10	1.3	2.6	0.6	1.25
F261KFHV01C*	3/4	NEMA 3R	10	2.0	3.6	0.6	1.3



FS251

PADDLE

- For starting or stopping electrically operated equipment such as signal lights, alarms, motors, automatic burners, metering devices, and others
- 1" NPT
- Sensitivity adjusting screw

makes flow adjustment easy

- Single pole, double throw snap switch; 3.7 FLA 240V
- Four stainless steel paddles included: 1", 2", 3", and 6"
- Maximum pressure: 160 psi



McDonnell & Miller

Part No.	Dimensions (In.)		Description
	H	W	
FS251	3.60	4.10	Flow Switch, NEMA-1 Case
FS254	4.30	4.20	Flow Switch, NEMA-4 Case

LIQUID FLOW SWITCH



HIGH SENSITIVITY

- For general purpose applications where high sensitivity is required and moderate or low flow rates are encountered such as air conditioning, heating and hydronic systems, water, fuel oil, some viscous liquids and oils in process

work

- In-line configuration eliminates need for a pipe tee
- High flow capacity
- 1/2" NPT
- SPDT snap switch
- Switch compartment is completely sealed to protect it from the liquid
- Sensitivity adjusting screw makes flow adjustment easy
- Minimum temperature: 32°F
- Maximum temperature: 225°F
- Maximum operating pressure: 100 psi



McDonnell & Miller

Part No.	Description
FS1W	High Sensitivity Flow Switch, NEMA 4X Enclosure

AIR FLOW SWITCH



PADDLE

The F262 Series Airflow Switches detect airflow or the absence of airflow by responding only to the velocity of air movement within a duct. The SPDT switch can be wired to open one circuit and close a second circuit for

either signaling or interlock purposes.

- Type 3R (NEMA) polycarbonate enclosure allows use in indoor applications and provides dust protection; approved for use in a plenum according to NEC
- Dependable dust-protected SPDT snap-acting PENNswitch detects the presence or absence of airflow
- Large wiring space makes wiring convenient and easily accessible
- Easily accessible range adjustment screw allows easy field adjustment



Part No.	Switch	Paddle Size (In.)	Dimensions (In.)		
			H	W	D
F262KDH01C*	SPDT	3 1/8 x 6 7/8 (supplied)	0.00	0.00	2 3/4



AF1M

enclosure

Part No.	Switch	Description
AF1M	SPDT	Medium, High Air Flow Switch

SAIL SWITCH

- Velocity range: 480-2230 FPM
- Maximum allowable velocity: 2500 FPM
- Temperature range: 32-300°F
- Switch: SPDT
- General purpose



McDonnell & Miller

FLOAT SWITCH



F263MACV01C

Designed to maintain a liquid level in indoor or outdoor closed tanks that hold water or other nonhazardous liquids. When the liquid level in the tank rises above or falls below the required level, the single-pole, double-throw (SPDT) switch closes one circuit

and opens a second circuit.

- Vitor® diaphragm allows use in fluid lines carrying chlorinated water, treated water, or other nonhazardous liquids.
- Sturdy Type 4 (NEMA) enclosure allows for use in indoor or outdoor applications; inhibits the formation of moisture in low temperature applications
- Liquid temperatures: -20 to 250°F
- Maximum liquid pressure: 100 psig



Part No.	Switch	Enclosure	FLA (@ 240 V)
F263MACV01C*	SPDT	NEMA 4	10

DIFFERENTIAL PRESSURE SWITCH, AIR



P32AC1

AIR FLOW SENSOR

The P32 differential pressure switch is used to sense air flow in ducts.

- Ambient temperature range: -40 to 167°F
- Adjustable setpoint
- Connection: 1/8" FPT
- Contact rating: 4.9 F.L. Amps 240V
- P32AC2 is supplied with 1/4" compression fitting, 4" extension tube, 2 mounting screws and O gasket



Part No.	Setpoint Range	Switch	Sensitivity at Min. Setpoint (In. WC)	Includes
P32AC1*	.15 to 12 "WC	SPDT	0.07	Mounting Bracket BKT1821R
P32AC2*	.05 to 5 "WC	SPDT	0.04	Mounting Bracket BKT2291R

Continued on next page



*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

Part No.	Setpoint Range	Switch	Sensitivity at Min. Setpoint (In. WC)	Includes
P32AF1*	.05 to 5"WC	SPDT	0.025	Mounting Bracket BKT1821R
P32AF2C*	.05 to 5"WC	SPDT	0.025	Mounting Bracket BKT2291R



2374499

AIR FLOW SENSOR

- Responds to positive, negative, or differential air pressure
- Eliminates fluttering or malfunction due to shock or vibration normally encountered with sail switches

- Contact rating: 15 resistive amps 277 Vac

Robertshaw

Part No.	Setpoint Range	Switch
2374499	0.05 to 12.0"WC	SPDT



2374495

AIR FLOW SENSOR

Designed to replace a wide variety of air-sensing switches found in residential and light commercial applications including furnaces, electronic air cleaners and humidifiers. Both models are provided with an SPDT switch that

can be activated by positive or negative pressure, or by pressure differential.

- Operates diaphragm vertical
- Connection: 1/8", 1/4", 3/8" barbed
- Contact rating: 5A noninductive to 277 Vac

Robertshaw

Part No.	Setpoint Range
2374495	.25 to 1.0"WC
2374498	1.0 to 4.0"WC



1910-0

DIFFERENTIAL PRESSURE SWITCH

Low differential pressure switch for air proving or filter service applications

Dwyer

Part No.	Range (H2O)
1910-0	.15 to .55
1910-1	.40 to 1.6
1910-5	1.40 to 5.5



2374510

UNIVERSAL AIR PRESSURE SENSING SWITCH AND PROBE

With a wide array of applications, the 2374510 kit replaces hundreds of other manufacturers' air pressure switch models.

- High impact polycarbonate housing
- Works in a variety of harsh conditions
- Snap-acting switch with three male 90° quick connect terminals
- Field adjustable set points ranging from 0.10" to 10" W.C.
- Switch is NEMA rated and is practically insensitive to temperature change with an operating range of -40 to +190°F
- Installer can use 10650 sensing probe kit for hard to reach air streams

Robertshaw

Part No.	Includes	Description
2374510	Air Pressure Sensing Switch, Calibration Springs (5 options), Orifice Flow (4 options), Mounting Brackets (2 options), Hex Wrench	Universal Air Pressure Sensing Switch Kit, SPDT



P74BA1

LIQUID

Series P74 measures the pressure difference between two sources.

Johnson Controls

				Connection			
Part No.	Switch	Pressure Differential	Switch Differential (psi)	Size (In.)	Type	Capillary Length	Contact Rating (Amps)
P74BA1*	SPST, Opens Decrease ?P	8 to 70 psig	8 to 30	1/4	FFL	3'	20
P74EA8*	SPDT (Snap Acting)	2 to 26 psig	3.5, Fixed	1/4	FFL	3'	16
P74FA1*	SPDT (Snap Acting)	8 to 60 psig	1.5, Fixed	1/4	MFL	None	6
P74FA5*	SPDT (Snap Acting)	8 to 60 psig	1.5, Fixed	1/4	FPT	None	6
P74FA10*	SPDT (Snap Acting)	2 to 26 psig	1.5, Fixed	1/4	FFL	3'	6

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DIFFERENTIAL PRESSURE SWITCH, LIQUID



NEMA 4

Used typically to sense differential pressure across devices such as oil or water filters, pumps, heat exchangers, chillers, coils, etc. Normally provides an alarm or shutdown function in applications where there is insufficient flow in a

system or when excessive pressure differential indicates a problem. It may also be used to indicate pump status.

- SPDT switch with screw terminals
- Gasketed zinc-plated steel cover
- Strong, corrosion-resistant polyester enclosure
- External, multiturn adjusting screw for excellent resolution
- 7/8" hole for 1/2" NPT conduit connection
- Corrosion-resistant brass port
- Clearance holes for surface mounting
- NEMA 4 enclosure



Part No.	Switch	Pressure Differential	Connection		Capillary Length	Contact Rating (Amps)
			Size (In.)	Type		
24-013	SPDT	1 to 10 psid	1/4	FPT	None	5



TRANSDUCER, 3-WIRE

The PW Series wet/wet pressure transducers incorporate a highly accurate, stable sensor, which is microprocessor profiled for exceptional accuracy and reliability. Designed for ease of use and to provide exceptional

installation savings, the PW Series is ideal for measuring pressure across pumps, filters, heat exchangers, compressors and other non-corrosive wet media applications.

Applications

- Monitor and control pump differential pressure
- Chiller/boiler differential pressure drop
- CW/HW system differential pressure

Features

- Rugged, die-cast enclosure provides NEMA 4 sealing
- Field-selectable output . 0-5V/0-10VDC, or 4-20mA provides excellent systems compatibility
- LCD display



Part No.	Pressure Differential	Connection		Capillary Length
		Size (In.)	Type	
PWLX04S	0 to 100 psi	1/4	FPT	None

PRESSURETROL®



SPST - PA 404 SERIES

Provides control for steam pressure.

- Sensitive pressure-actuated diaphragm expands or contracts with pressure variations, moving a lever mechanism that operates the snap-switch.

- Use PA404A as high limit safety controller for steam boilers; use PA404B as fan controller for suspension-type unit heaters.
- Contact rating: 5.1 F.L. Amp 240 Vac

resideo

Part No.	Operating Range (psi)	Switch
PA404A1025	3 - 15	SPST, Opens on Rise
PA404A1033	0.5 - 9.0	SPST, Close on Fall
PA404B1023	0.5 - 9.0	SPST, Opens on Fall



L404 SERIES

Provides operating control, automatic reset limit protection

- Use with steam, air, noncombustible gases, or other fluids noncorrosive to pressure sensing element.
- Contact rating: 5.1 F.L. Amps 240

Vac

- SPDT controls include siphon loop (except L404F1102)
- SPST controls include ground screw

Honeywell

Part No.	Operating Range (psi)	Switch	Differential Midscale (psi)
L404F1409	2 - 15	SPST, close on rise	2 to 6
L404F1078	5 - 50	SPDT	6 to 14
L404F1375	5 - 50	SPST, close on rise	6 to 14
L404F1102	10 - 150	SPDT	10 to 22
L404F1383	10 - 150	SPST, close on rise	10 to 22
L404F1094	20 - 300	SPDT	20 to 50
L404F1391	20 - 300	SPST, close on rise	20 to 50



L404V1095

L404 SERIES OIL

Oil pressure sensing devices for use on oil burner systems using any type of fuel oil including heavy, pretreated oils

- Clear plastic cover allows observation of the pressure settings and switch action

- Siphon loop provides thermal buffer to diaphragm
- Switching: L404T-SPST open on rise; L404V close on rise 5.1 FLA 240 Vac

Honeywell

Part No.	Operating Range (psi)	Switch	Differential Midscale (psi)
L404V1095	5 - 50	SPST, close on rise	6 to 14
L404T1063	10 - 150	SPST, open on rise	10 to 22
L404V1087	10 - 150	SPST, close on rise	10 to 22



L4079B1033

MANUAL RESET

- High pressure limit switches
- Stainless steel diaphragm for use with steam, air, noncombustible gases and fluids noncorrosive to stainless steel.
- Snap-acting switches open automatically on pressure rise;

must be manually reset.

- Breaks 1 circuit
- Siphon loop included
- L4079W for oil applications, above 85 psi intermittent only

Honeywell

Part No.	Operating Range (psi)
L4079B1033	2 - 15
L4079B1058	5 - 50
L4079B1041	10 - 150
L4079B1066	20 - 300
L4079W1000	10 - 150, oil



L91A1037

PROPORTIONAL

Modulating pressure operating control for regulation of liquid or air and other non-corrosive gases.

- Use with steam, air, noncombustible gases, or other fluids noncorrosive to the brass or phos-bronze (300 psi models)

bellows. Do NOT use with combustible mediums or any medium chemically harmful to phos-bronze bellows (10-300 psi models) or brass bellows.

- L91A: Fixed differential
- L91B: Adjustable differential

Honeywell

Part No.	Operating Range (psi)	Differential Midscale (psi)
L91A1037	0 - 15	7 Oz./Sq. In.

Continued on next page

Part No.	Operating Range (psi)	Differential Midscale (psi)
L91A1052	5 - 150	5
L91A1078	10 - 300	12
L91B1035	0 - 15	1 to 12
L91B1050	5 - 150	5 to 23
L91B1068	10 - 300	28 to 110
L91B1241	10 - 300	12 to 48



J10809W

HUMIDISTAT

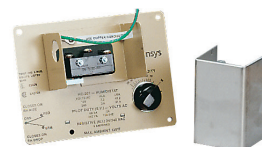
Ranco humidity controls are designed to regulate the relative humidity of confined air spaces by cycling humidifying or dehumidifying equipment. J10 controls may be wall mounted and used to control exhaust fans or a

furnace humidifier. The J10-808 control may also be duct mounted. The J10-809 Series can be wired in series or parallel with any 24 volt non-electric thermostat for humidity control in conditioned spaces.

RANCO

Part No.	Humidity (% RH)	Function	Voltage
J10809W ¹	20-80	Dehumidistat, SPST	24

¹ White cover



HC201

2 POSITION HUMIDITY

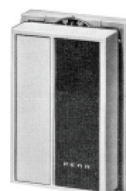
These controllers provide low or line voltage on-off single stage control of humidifiers, dehumidifiers, valves, solenoid valves, compressors, relays, etc.

- Scale range: 15 to 95% RH, 5% switch differential

- SPDT switch

Schneider Electric **tac**

Part No.	Description
HC201	Duct Mount Humidity Controller



W42AA1

HUMIDISTAT, LINE VOLTAGE

- Field-adjustable high and low stops. Stops can be set for locked setting.
- Designed for use in Building Automation Systems, BAS, and HVAC applications
- Horizontal or

- Vertical Mounting
- 4% RH differential

Johnson Controls

Part No.	Description
W42AA1*	Humidistat 10 to 90% RH, SPDT
W43A14*	Humidistat 0 to 70% RH, SPDT

*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

HUMIDITY SENSOR

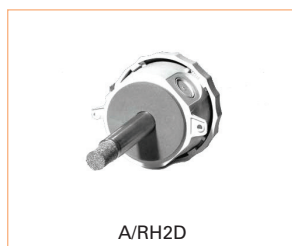
DUCT TRANSMITTER



HE69130NP



Part No.	Description
HE69130NP*	Duct Probe Humidity and Temperature Sensor, 1K ohm Nickel sensor, ±3% sensor accuracy



A/RH2D

2% ACCURACY RH TRANSMITTER

The A/RH Series relative humidity transmitters utilize a capacitive sensing element to deliver a proportional analog output. This Series features on board DIP switches which allow the user to select the desired output signal. In

addition, field calibration can be performed by using the on-board increment and decrement DIP switches. These enhancements provide increased flexibility and outstanding long-term performance. Duct and Outside Air configurations feature conformally coated circuit boards for moisture resistance. Several RTD and thermistor temperature sensing elements are available in this Series.



Part No.	Accuracy	Configuration
A/RH2D	±2%	Duct/Euro
A/RH20	±2%	Outside Air/Euro
A/RH2R	±2%	Room



C7600B2008

SOLID STATE

Solid state humidity sensor sense relative humidity in air

- Operating humidity: 10-90% RH

Honeywell

Part No.	Mounting Code	Operating Temp. (°F)	Control Signal	Use with
C7600B2008	Junction Box Wall	32 to 125	2 - 10 Vdc Directly Proportional	T775U
C7600C2001	Any position where it is exposed to freely circulating air	-40 to 150	4 - 20 mA	W7600 or controller requiring 4-20 mA reverse acting input

ENTHALPY SENSOR



C7400A2001

- A solid state enthalpy sensor designed to sense temperature and humidity with 5% accuracy
- C7400A mounts in any position up to 200 ft away from Economizer Logic Module. It uses two sensors for differential control, maximizing

energy savings

- C7400S Sylk Bus sensor is powered by and communicates on the Sylk Bus.

Honeywell

Part No.	Control Signal	Description	Use with
C7400A2001	4 - 20 mA output	Enthalpy Sensor	W72XX, W7459, W7460
C7400S1000	4 - 20 mA output	Sylk Bus Enthalpy Sensor	W7220



H7735C2015

The H7735 is a highly accurate, stable humidity sensor designed for use with HVAC controllers. H7735 include a humidity sensor with 3% accuracy and a 20 kOhm NTC temperature sensor. Duct and wall and outdoor models are

Honeywell

available.

Part No.	Mounting Code	Operating Temp. (°F)	Accuracy	Control Signal	Use with
H7735C2015	Outdoor Air	-40 to 158	±3% over 0 to 100% RH Range	0-5 Vdc, 0-10 Vdc	T7350, XL10, XL15



H7655A1001

HUMIDITY TRANSDUCERS

Highly accurate, stable humidity transducers designed for use with HVAC controllers such as the T7350 thermostat, H775 remote humidity controller, and W7760 DDC control. The ceramic

technology humidity sensor is not affected by condensation and other limitations that sensors that use water soluble polymer coatings exhibit and provides excellent long-term stability.

Honeywell

Part No.	Mounting Code	Accuracy	Control Signal	Use with
H7655A1001	Wall	5% from 30 to 70% RH	0-10Vdc	T7350, XL10, XL15

TEMPERATURE SENSOR



084N2003

PROBE SENSOR

- Designed for use with Adap-Kool® control systems
- PT 1000 ? sensor
- Temperature range (°F): -70 to +180

ENGINEERING
TOMORROW

Part No.	Description	Type	Temperature (°F)	Resistance (Ohm)	Lead Length
084N2003	Multipurpose Sensor	AKS 21M	-70 to 180	1000	8.2'
084N2008	Surface Sensor with Clip	AKS 21A	-70 to 180	1000	16.4'



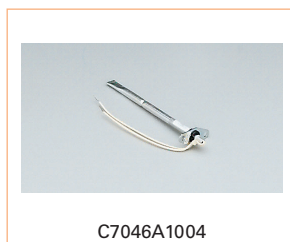
TE6000100

PROBE

The TE-6000 sensing elements are typically used with TE-6001 hardware assemblies in a wide variety of temperature sensing applications. All models are nickel wire-wound elements.



Part No.	Type	Resistance (Ohm)	Tolerance
TE6000100*	Ultra-precision, Standard	1000	±0.1%



C7046A1004

DISCHARGE AIR, C7046 SERIES

Honeywell

Part No.	Description	Resistance (Ohm)	Length (In.)	Element Length
C7046A1004	No Setpoint	3000 77°F NTC	10.00	8"
C7046A1038	No Setpoint	3000 77°F NTC	13.00	12"
C7046B1010	Zone Discharge, Hot Deck, Cold Deck, Remote Return Air	22.8K 77°F NTC	7.00	6"
C7046D1008	Discharge Temp.	1097 77°F PTC	9.00	8"



C7100A1015

DISCHARGE AIR, C7100 SERIES

- Element insertion: 13 1/4"
- Electronic

Honeywell

Part No.	Type	Temperature (°F)	Use with	Length (In.)	Element Length
C7100A1015	3484O 77°F	40-220	W7100	13.60	13 1/4"
C7100B1013	Thermistor	40-150	W7080	13.75	13 1/4"
C7100D1001	PT1000	40-100	XL500, XL600	9.00	13 1/4"



C7100C1003

AVERAGING

Intended for use with T775 electronic remote temperature controller.

Honeywell

Part No.	Temperature (°F)	Element Length
C7100C1003	40 to 220	13"



TR40

ZIO™ LITE WALL MODULE

The TR40 and TR42 are 2-wire, non-polarity sensitive, Sylk bus communicating wall modules, which communicate with Spyder® and some ComfortPoint™ programmable controllers. The TR40 and TR42 are simple LDC

temperature wall modules with basic setpoint, override, and fan options, and are designed for a broad range of applications. Models available with display (TR42) or without display (TR40). TR42 models have configurable interface: temperature setpoint adjustment, override, fan (with FCU app)

Honeywell

Part No.	Description
TR40	Wall Module, Temp Only, Sylk
TR40-CO2	Wall Module, Temp and CO2, Sylk
TR40-H	Wall Module, Temp and Humidity, Sylk

*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

TEMPERATURE SENSOR



WALL MODULE, ELECTRONIC

A family of direct wired wall modules for use with Honeywell Excel 800, 600, 500, 100, 80, 20 (all fully programmable) and W7750, W7751, W7752, W7753, W7761 controllers. All models have a space temperature sensor; some

models have setpoint adjustment, override with LED and fan switch.

- Non linear sensor
- TR21A used for averaging in T7350 application

Honeywell

Part No.	Comments	Operating Range (°F)	Resistance (Ohm)	Length (In.)
TR21	-	45 to 99	20K	5.00
TR21H	Humidity, Network jack	45 to 99	20K	5.00
TR21A	For averaging	45 to 99	10K	4.90
TR21J	Network jack	45 to 99	20K	0.88
TR22	Selectable setpoint, network jack	45 to 99	20K	12.00
TR23H	Humidity, selectable setpoint knob, network jack, override/LED	45 to 99	20K	1.00
TR23	Selectable setpoint, network jack, override/LED	45 to 99	20K	1.00
TR24	Network jack, override/LED	45 to 99	20K	0.88



WIRELESS WALL SENSOR

All models report space temperature; TR23 models come with setpoint adjustment and override.

- Wall module to Receiver (point to point) wireless kits can replace any standard wired sensor

- Wireless Kits (wall module and receiver) are pre bound at the factory for quick installation
- Signal Strength LED built into the wall module
- Low battery indication
- Optional dip switches available to bind any wall module to any receiver
- Approximate 5 year battery life with AA Alkaline (included), 7.5 year with Lithium
- Locking screw discourages tampering and battery theft

Honeywell

Part No.	Description	Operating Range (°F)	Use with
TR21-WS	Wireless Temperature Sensor	45 to 99	Spyder, Excel 10 W7750, W7751, W7752, W7753, T7350, T7351, TB8575, WEBs-AX™ I/O Module

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Part No.	Description	Operating Range (°F)	Use with
TR23-WS	Wireless Temperature Sensor with Setpoint (F/C/Relative) and Override Button	45 to 99	Spyder, Excel 10 W7750, W7751, W7752, W7753, T7350, T7351, TB8575, WEBs-AX™ I/O Module
TR21-WK	Wireless Temperature Sensor Kit: includes TR21-WS Sensor and WRECVR Receiver (Bound at Factory)	-	Spyder, Excel 10 W7750, W7751, W7752, W7753, T7350, T7351, TB8575, WEBs-AX™ I/O Module
TR23-WK	Wireless Temperature Sensor Kit: includes TR23-WS Sensor and WRECVR Receiver (Bound at Factory)	-	Spyder, Excel 10 W7750, W7751, W7752, W7753, T7350, T7351, TB8575, WEBs-AX™ I/O Module
WRECVR	Receiver Used with Wireless Wall Sensors TR21-WS and TR23-WS	-40 to 150	TR21-WS and TR23-WS



DUCT

Direct-wired temperature sensor used to sense discharge or return air temperature in a duct controlled by an Excel 10 Series 2000 controller.

- Primary and/or secondary sensor for use with electronic control

systems

- Integral 20K ? non-linear NTC thermistor
- Only available in Long Island NY, West Chester County NY, New York City and Phoenix, AZ. For New York call 914-592-5555. For Phoenix call 877-672-6875.

Honeywell

Part No.	Temperature (°F)	Length (In.)
C7770A1006	45-99	12.80



AIR, ELECTRONIC

Electronic 20K temperature sensor intended for sensing mixed or discharge air in roof top packaged air conditioning equipment. Thermistor on board with duct mount kit available for use as a probe

Honeywell

Part No.	Use with
C7250A1001	W7220



C7031B2005

DDC

Electronic temperature sensors used with DDC systems.

- Solid state thermistor element provides accurate sensing of temperature changes.

Honeywell

Part No.	Application	Resistance (Ohm)	Use with	Sensor Type	Element Range (°F)	Length (In.)
C7031B2005	Duct Discharge Air	1097 at 77°F	-	PT1000, PTC	-40 to 250	6.00
C7031D2003	Hot or Chilled Water, Includes well	1097 at 77°F	Excel 500	PT1000, PTC	40 to 350	5.00
C7031G2006	Outdoor Air Sensor	1715 at 90°F	W7100 outdoor reset	NTC	-40 to 120	2.75
C7031J2009	Duct Averaging Sensor	1097 at 77°F	Excel 500	PT1000, PTC	40 to 180	144.00



C7023B2005

SENSOR

C7023, C7041D are for immersion mounting sense water temperature.

C7041F sense outdoor air temperature and are weatherproof for outdoor use (knockouts allow for

1/2 in. conduit connection).

20 K? NTC 77°F sensors designed to be used with Honeywell DDC systems (Excel 500, 100, 80, 50, 10)

Honeywell

Part No.	Application	Element Range (°F)	Length (In.)
C7023B2005	Duct Mount	-40 to 250	6.00
C7023B2013	Duct Mount	-40 to 250	12.00
C7023D2001	Hot or Chilled Water	-40 to 250	5.00
C7023F2009	Outdoor	-40 to 158	2.25
C7023J2007	Duct Mount, Averaging	-40 to 250	144.00
C7023K2005	Water/Strap On	-40 to 250	1.69
C7023R2000	Duct Mount, Averaging	-40 to 250	144.00
C7041B2005	Duct Mount	-40 to 250	6.00
C7041B2013	Duct Mount	-40 to 250	12.00
C7041C2003	Duct Mount	-40 to 250	18.00
C7041D2001	Use Well 50001774-001	-40 to 250	5.00
C7041K2005	Water/Strap On	-40 to 250	7.40
C7041F2006	Outdoor	-40 to 250	9.00
C7041J2007	Duct Mount, Averaging	-40 to 250	144.00
C7041R2000 ¹	Duct Mount, Averaging	-40 to 250	144.00
C7772A1004	Wall Mount/Flush Type	45 to 99	4.90
C7041P2004	Button, Surface Mount	-40 to 250	1 3/16

¹ Flexible Copper Averaging Sensor



C7660A1000

DUCT

C7660 selectable temperature sensor is used with the W7459, W7460 and W72XX economizer controls which are mounted on an M7415/M7215 Actuator. They permit the use of outdoor air as the first stage of HVAC systems. The

C7660 Selectable Temperature Sensor is only to be used with single temperature change over with the sensor located in the outdoor air.

- Senses temperature of outdoor air and provides a signal to economizer control with OK or not OK to economize.
- Selectable dip switch provides 8 change over temperature options.
- When temperature of outdoor air is below change over temperature, the outdoor air damper is opened to reduce the cooling load in the building.

Honeywell

Part No.	Length (In.)	Control Signal
C7660A1000	5.00	4 or 20 mA output



ACI10KAND4

THERMISTOR

Thermistor sensors for OEM/ Industrial/DDC applications. High accuracy and interchangeability over a wide temperature range. Non polarity sensitive. CE approval (except for averaging sensors, LCDs and units with leads longer

than 3 meters)

- Accuracy: $\pm 0.2^{\circ}\text{C}$ (from 0 to 70°C)
- Stability: $\pm 0.13^{\circ}\text{C}$
- Operating Temperature Range: 32 to 122°F
- Operating Humidity: 0 to 90% RH non condensing
- Interchangeability: $\pm 0.2^{\circ}\text{C}$
- Power Dissipation Constant: 3 mW/ $^{\circ}\text{C}$



Part No.	Description	Resistance (Ohm)
ACI10KAND4	Thermistor sensor, 10KO (Type III), duct, 4"	10K (type III)
ACI10KANR2	Thermistor sensor, 10KO (Type III), wall mount room	10K (type III)
ACI10KCPD4	Thermistor sensor, 10KO (Type II), duct, 4"	10K (type II)
ACI10KCPR2	Thermistor sensor, 10KO (Type II), wall mount room	10K (type II)
ACI10KCPR20	Thermistor sensor, 10KO (Type II), wall mount room-override	10K (type II)
ACI10KCPA12	Thermistor sensor, 10KO (Type II), copper averaging, 12ft	10K (type II)
ACI10KCP14	Thermistor sensor, 10KO (Type II), immersion, 4"	10K (type II)

CO2 SENSOR



SMOKE/CO/CO2 MONITOR

AC/DC powered smoke and carbon monoxide (CO) alarm with 10 year battery backup that features supervised wire-free interconnect capability and provides enhanced intelligibility for

users. The voice warning feature accompanies the 85dB tone during an alarm event, and helps reduce confusion with verbal announcements such as "Replace alarm" at end of alarm life, and "Hush mode activated" when a nuisance alarm is silenced. The three color LED ring helps users quickly determine standby, alarm, or error mode of the alarm.

- 10-Year Sealed Lithium Battery - eliminates late night battery chirp!
- Voice Notifications
- Bug Screen: Protects alarm from insect ingress
- Flashing LED Status Ring allows easy identification of current state of alarm



Part No.	Description
21025761	Carbon Monoxide Alarm AC Powered, Plug-In with Battery Backup
21025788	Battery Operated Carbon Monoxide Alarm
900-0235	AC Plug-in Operated Carbon Monoxide Alarm
21030843	Smoke + Carbon Monoxide Alarm with Indoor Air Quality Monitor
21031042	Wire-Free Interconnected AC Hardwired Combination Smoke & Carbon Monoxide Alarm
21025772	Carbon Monoxide Alarm AC Powered, Plug-In with Battery Backup
21010407A	Worry-Free Hardwired Interconnect Smoke Alarm Sealed Lithium Battery Backup
21010071	Worry-Free Kitchen Sealed Lithium Battery Power Smoke & CO Alarm



DUCT MOUNT CO2 SENSOR

The C7232 Sensor and Controller is a stand-alone carbon dioxide (CO2) sensor for use in determining ventilation necessity with HVAC controllers. The C7232 measures the CO2 concentration in the ventilated space or duct. The

C7232 is used in ventilation and air conditioning systems to control the amount of fresh outdoor air supplied to maintain acceptable levels of CO2 in the space.

Features & Benefits:

- Used for CO2 based ventilation control.
- Models available with LCD that provides sensor readings and status information.
- Non-Dispersion-Infrared (NDIR) technology used to measure carbon dioxide gas.
- Device provides voltage or current output based on CO2 levels.
- Models available with SPST relay output.
- Automatic Background Calibration (ABC) algorithm based on long-term evaluation reduces required typical zero-drift check maintenance.

Honeywell

Part No.	Output	Display	Mounting Code
C7232B1006	0/2 - 10 Vdc or 0/4 - 20 mA selectable, w/ one relay output	Yes	Duct
C7232B1014	0-10vdc or 4-20mA	No	Duct



CO2 SENSOR

The CO sensors offer a fixed 0-2000ppm and fixed 0-10Vdc output. No adjustments are necessary. Like the C7232 sensors, these are for use in determining ventilation necessity with HVAC controllers. The sensor measures

the CO concentration in the ventilated space or duct. The sensors are used in ventilation and air conditioning systems to control the amount of fresh outdoor air supplied to maintain acceptable levels of CO in the space.

- Non-Dispersion-Infrared (NDIR) technology used to measure carbon dioxide gas.
- Gold-plated sensor provides long-term calibration stability.
- Used for CO based ventilation control
- Automatic Background Calibration algorithm based on long-term evaluation reduces required typical zero-drift check maintenance.

Honeywell

Part No.	Output	Display	Mounting Code	Carbon Dioxide Range
C7632B1002	0-10Vdc Fixed	No	Duct	0 to 2000 ppm, Fixed

ENVIRONMENTAL SYSTEMS CONTROL



W7220A1000

JADE™ ECONOMIZER MODULE

The W7220 Economizer Module is the core of the JADE™ system and provides the basic inputs and outputs to provide simple economizer control. When used with the optional Sylk Bus sensors, the Economizer Module provides

more advanced economizer functionality.

- W7220 can be used as a standalone economizer module wired directly to a commercial set back space thermostat and sensors to provide Outdoor Air dry-bulb economizer control.
 - W7220 automatically detects sensors by polling the Sylk Bus to determine which sensors are present. If a sensor loses communications after it has been detected, the W7220 Economizer indicates a device fail error on its LCD.
 - The module is designed for use with any Honeywell 2 to 10 Vdc or Honeywell Sylkbus communicating actuator.
 - Use with sensors: dry bulb temperature and mixed air, C7250A; temperature and humidity, C7400S1000 (optional); DCV (CO) sensor (C7232); humidity, C7600 (optional)
- Y7220A7215 includes the W7220A1000 logic module, (2) C7250A1001 sensors for outside and mixed air dry bulb applications, and M7215A1008 25 lb-in, foot mount, spring return actuator motor

Honeywell

Part No.	Control Type	Description
W7220A1000	-	Economizer Logic with DCV and Commissioning
YL7220SJ3105	Enthalpy w/ Communicating 44 lb-in DCA	Jade™ Y-Pack Economizer System, includes W7220A1000, OAT sensor (C7400S1000), MAT Sensor (C7250A1001), and DCA OA (MS3105J3030)

DUCT SMOKE DETECTOR, PHOTOELECTRIC



DUCTSD

The System Sensor DUCTSD Series duct smoke detectors with a cover integrated smoke test port and flexible configurations provides efficient installation and maintenance.

- 4-Wire Photoelectric, integrated low-flow technology
- Air velocity rating from 100 ft/min to 4,000 ft/min (0.5 m/s to 20.32 m/sec)
- Versatile mounting options: square or rectangular configuration
- Cover integrated smoke test port
- Plug-in sensor offers the latest sensor technology
- Broad ranges for operating temperature (-4°F to 158°F) and humidity (0% to 95% non-condensing)
- Patented sampling tube installs from front or back of the detector with no tools required
- Increased wiring space with an added 3/4-inch conduit knockout
- One easy-access Test/Reset button
- Patented interconnect feature for multi-fan shutdown
- High contrast terminal designations and wiring diagram label make wiring easy
- Built-in short circuit protection from operator wiring errors
- Two DPDT Form-C relay contacts
- 24 VAC/DC or 120 VAC
- Compatible with existing System Sensor duct smoke products, including remote accessories RTS151 and RTS151KEY



Part No.	Nb. of Wires
DUCTSD	4

THERMOSTAT



TC1101

2 POSITION DUPLEX

Provides on/off control of heating/cooling systems, lower line voltage, fan coils, motor starters and contactors.



Part No.	Differential	Description
TC1101	2°F	Thermostat, 2-position duplex, 2°F differential
TC1102	2°F	Thermostat, 2-position duplex, 2°F differential
TC1151 ¹	1.5°F	Thermostat, 2-position duplex, 1.5°F differential, dual case size, matches TC1161

¹ Dual case size — matches TC1161

DUCT SMOKE DETECTOR



LOW-FLOW, PHOTOELECTRIC

The InnovairFlex D4120 4-wire photoelectric duct smoke detector features a pivoting housing that fits both square and rectangular footprints and mounts to round or rectangular ductwork. A plug-in sensor head offers improved false

alarm immunity and simple installation, testing, and maintenance. The InnovairFlex housing provides ample wiring space, a 3/4 inch conduit knockout, and built-in short circuit protection to prevent damage to sensitive components during installation. As many as 50 InnovairFlex detectors can be interconnected. When one unit senses smoke, all interconnected detectors will switch their relays; only the detector sensing smoke will go into alarm, thus pinpointing the fire source.

- 24 Vac/Vdc or 120 Vac operation
- Built-in reset button
- Remote test station option
- Remote sounder option
- Air velocity rating from 100-4000 fpm
- Two DPDT form-C relay contacts
- Temperature range: -4 to 158°F
- Patented sampling tube installs from front or back of the detector with no tools required
- Listed UL268A



Part No.	Description
D4120	Low-Flow, Photoelectric
D4120W	Low-Flow, NEMA 4, Waterproof



MULTI-SIGNALING ACCESSORY

Designed to work with InnovairFlex 4-wire conventional duct smoke detectors. These accessories include a key switch that can be used to select one of two connected sensors to be tested, reset, or both by a push button

switch.

The AOS is an optional accessory included with the RTS2-AOS model.



Part No.	Description	Voltage
RTS2	Multi Signaling Accessory	20-29 VDC
RTS2-AOS	Multi Signaling Accessory with Add-On-Strobe (RTS2 & AOS)	20-29 VDC
AOS	Add-On-Strobe for use with RTS2	



WEATHERPROOF ENCLOSURE

The DH4000E-1 all-weather outdoor enclosure is specifically designed to protect the system sensor high-temperature model DH400, D4120 duct smoke detector from harsh elements. This enclosure provides the protection

needed to meet agency requirements in outdoor installations against rain, sleet and snow or indoors against dripping water.

- Special sampling tube gaskets are included as required by U.L. 268A Listing



Part No.	Use With
DH4000E1	DH400, D4120



SAMPLING TUBES

Used to sample duct airflow for models D4120, D4120W



Part No.	Use for Duct Width (Ft.)	Use With
DST1	to 1	D4120
DST1.5	1 to 2	D4120
DST3	2 to 4	D4120
DST5	4 to 8	D4120
DST-10	8 to 12	D4120



APA151

ANNUNCIATOR

Remote annunciator for InnovairFlex™ duct smoke detectors. Designed for both conventional and intelligent applications. Their red LED provides visual



indication of an alarm condition.

Part No.	Description	Use With
APA151	Remote Annunciator w/ Piezo Horn	DH100, DH400, D4120
RA100Z	Remote Annunciator	InnovairFlex™ duct smoke detectors



P2WK-P

HORN/STROBE

- Operates on either 12V or 24V
- Tamper resistance capability
- Field selectable candela settings on wall and ceiling units
- Automatic selection of 12 or 24 volt operation at 15 and 15/75 candela

- Minimal intrusion into the back box
- Horn rated at 88+ dbA at 16 volts
- Rotary switch for tone selection
- 3 horn volume settings
- Electrically compatible with existing SpectrAlert products
- Meets UL1971, NFPA72, and ADA signaling requirements



Part No.	Description
P2WK-P	Outdoor Horn/Strobe



LENS-A

COLORED LENSES

Lens attachment for all SpectrAlert Advance plain (non-FIRE marked) indoor or outdoor, ceiling- or wall-mounted strobes



Part No.	Description
LENS-A	Horn/Strobe, Yellow
LENS-B	Horn/Strobe, Blue



RTS151

REMOTE TEST STATION

Remote test stations are automatic fire detector accessories designed to test duct smoke detectors from a convenient location. For 4-wire detectors, the RTS151KEY test station features a multi-colored LED that alternates between

steady green and red. For 2-wire detectors, the LED illuminates red for alarm.



Part No.	Description
RTS151	Test Station
RTS151KEY	Test Station with Key Switch

COMBUSTIBLE GAS DETECTOR

THERMOSTAT



METHANE AND PROPANE GAS DETECTION

Low voltage electronic detector of combustible, heating type gases. Designed for connection to UL Listed Fire Alarm/Burglary Control Panels. Alarm control panels that work on 12 or 24 VDC can provide battery backup to the GD-2A

detectors. For use in ordinary indoor locations of family living units and office workspaces. Intended for installation in buildings in non-hazardous locations such as residences, retail stores, office buildings, and institutional buildings. This combustible gas detector has been evaluated by UL for methane (natural gas) and propane (LP) gas. It is NOT designed to detect smoke, fire or carbon monoxide.

Features

- Supervised Sensor
- SPDT Alarm and N.C. Trouble Relay
- Can be self-restoring or latching
- Solid State Electronic sensors: no maintenance or recalibration
- Voltage: 12 to 24 VAC or VDC



Part No.	Description
GD2A	Combustible Gas Detector For Use With Alarm Control Panels



METHANE, PROPANE OR HYDROGEN GAS DETECTION

Combustible gas detectors will respond to a wide range of hydrocarbons, including aerosol sprays, cleaning solvents, paint thinner and other common volatile organic compounds. This low voltage detector provides

automatic feedback and fan or valve control that can help reduce combustible gas concentrations in parking garages, battery rooms, maintenance facilities, and other locations that require combustible gas detection.



Part No.	Description
GD6	Combustible Gas Detector Controller and Transducer



DETECTOR, CONTROLLER AND TRANSDUCER

Electronic detection system used to measure the concentration of CO and provide feedback and automatic exhaust fan or valve control to help reduce CO concentrations in parking garages, maintenance facilities or other

commercial applications.

- Fan relay actuation: selectable at 15, 25, 35 (default), 50 or 100 ppm CO
- Output: Fan relay, Alarm relay and 4-20mA current loop
- Controls: Digital display (0-200 ppm), buzzer, fan delay, fan minimum runtime
- Mounts on a standard 4" x 4" electrical box
- 5 A SPDT fan relay controls valves, louvers or exhaust fans
- 0.5 A N.O. or N.C alarm relay connects to warning devices or control panels
- Factory calibrated
- Supervised system design: detector problem will cause the fan and alarm relay to activate
- Power: 3 W (max) from 12 to 24 VAC or 12 to 32 VDC



Part No.	Description
CM6	Carbon Monoxide Detector, Controller and Transducer

THERMOSTAT



T3610-1001

LOW VOLUME

The T-3610 pneumatic thermostat is a low volume proportional controller providing temperature control for a wide variety of applications including return air, mixed air, and unit ventilator control.



Part No.	Includes
T3610-1001*	8' Averaging Element, 5 Holders
T36101003*	18" Rigid Stem Element with Duct Mounting Bracket



T4002201

HIGH VOLUME, SINGLE TEMPERATURE

The T4002 is a high volume output, single temperature thermostat. Note: Requires mounting bracket and cover to complete installation



Part No.	Action	Mounting Code
T4002201* ¹	DA	Horizontal
T4002203* ¹	DA	Vertical
T4002204* ¹	RA	Vertical

¹ Requires mounting bracket and cover to complete installation



T4054-1

2 PIPE, HIGH VOLUME, ENERGY MANAGER

The T-4054 heating-cooling, energy manager thermostat is a high volume output, with an adjustable deadband of 0 to 30°F between heating and cooling set points. Note: Requires mounting bracket



and cover to complete installation

Part No.	Action
T4054-1* ¹	DA
T4054-2* ¹	RA

¹ Requires mounting bracket and cover to complete installation



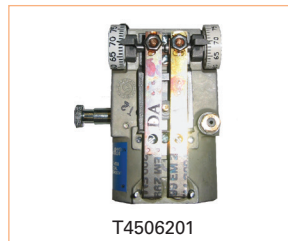
T41001

2 PIPE, LOW VOLUME, SINGLE TEMPERATURE

The T4100 is a low volume output, single temperature thermostat.



Part No.	Action
T41001*	DA
T41002*	RA



T4506201

2 PIPE, HIGH VOLUME, DAY/ NIGHT

The 4506 is a high volume output, dual temperature, dual dial thermostat. The T4506 provides individual day and night, or two setpoint temperature control. Note: Requires mounting bracket and cover



to complete installation

Part No.	Description
T4506201*	Direct Acting, Horiz. Mounting, w/Indexing Switch, Switchover 17 psi
T4506202*	Direct Acting, Vert. Mounting, w/Indexing Switch, Switchover 17 psi
T4506203*	Direct Acting, Horiz. Mounting, w/o Indexing Switch, Switchover 17 psi
T4506204*	Direct Acting, Vert. Mounting, w/o Indexing Switch, Switchover 17 psi
T4506217*	Reverse Acting, Horiz. Mounting, w/o Indexing Switch, Switchover 17 psi



T46001

2 PIPE, LOW VOLUME, ENERGY MANAGER

The T-4600 is a low volume output, energy managing, heating-cooling thermostat. The independent setpoints can result in a deadband to encourage energy conservation by eliminating heating and cooling

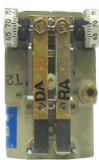


overlap.

Part No.	Action
T46001*	DA

*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

THERMOSTAT



T4756205

2 PIPE, HIGH VOLUME, DUAL TEMPERATURE

The T-4756 is a high volume output, dual-temperature, dual-dial, heating-cooling thermostat. The T-4756 provides automatic changeover between direct and reverse actions when supply pressure changes from 15 to 20

psig.

Note: Requires mounting bracket and cover to complete installation



Part No.	Action	Mounting Code
T4756205* ¹	15 psig Reverse/20 psig Direct	Horizontal

¹ Requires mounting bracket and cover to complete installation



T31002

SINGLE TEMPERATURE, SINGLE PRESSURE

- External set point adjustment
- Includes protective snap-on cover
- Includes pointer tabs to restrict the temperature adjustment range to as little as $\pm 2.5^{\circ}\text{F}$
- Factory calibrated for a nominal

adjustment of $\pm 7.5^{\circ}\text{F}$, from a set point of 75°F

- Includes attached mounting bracket



Part No.	Action
T31002*	DA



T4752201

2 PIPE, HIGH VOLUME, ENERGY MANAGER

A high volume output, heating-cooling thermostat. Provides automatic changeover between Direct Acting (DIR) and Reverse Acting (REV) when supply pressure changes from 15 to 20 psig (105 to 40 kPa). Includes

fahrenheit dial Order cover and mounting bracket separately



Part No.	Action	Pressure Range (psig)
T4752201*	DA/RA	15-DA/20-RA
T4752205*	RA/DA	20-DA/15-RA



T40002138

COVERS

Covers for T4000 Series thermostats.



Part No.	Material	Thermometer	Mounting Code	Window
T40002138*	Beige Plastic	No	Horiz. or Vert	No
T40002139*	Beige Plastic	No	Horiz.	No
T40002140*	Beige Plastic	Yes	Horiz.	No
T40002141*	Beige Plastic	No	Horiz.	1
T40002142*	Beige Plastic	Yes	Horiz.	1
T40002145*	Beige Plastic	No	Vert.	1
T40002146*	Beige Plastic	Yes	Vert.	1
T40003139*	White Plastic	No	Horiz.	No
T40003141*	White Plastic	No	Horiz.	1



T4002124

ACCESSORIES

See Thermostat Conversion Kit section for additional mounting brackets.



Part No.	Description
T4002124*	T4000 Thermostat Mounting Bracket



T4516201

3 PIPE, HIGH VOLUME, DAY NIGHT

A high volume output, dual temperature, dual dial thermostat. The T-4516 provides individual day and night control, or weekend setback.

- Available in direct acting with

- auto switchover at 17 psig
- Additional output air terminal which can be used as an on-off switchline pressure
- Includes Fahrenheit dial
- Provided with an optional manual indexing switch that permits you to restore the day temperature of the individual thermostat without affecting the other system thermostats.
- Indexing switch can be unlatched manually or will automatically reset with the day cycle.



Part No.	Action
T4516201*	Dual DA



*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

THERMOSTAT KIT



T4002301

2 PIPE, HIGH VOLUME CONVERSION KIT

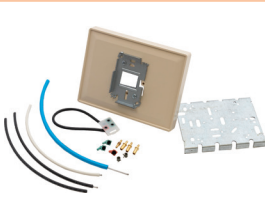
The T4002-30X thermostat with cover and two-pipe conversion kits feature a T4002201 (DA) or a T4002202 (RA) thermostat. The kits also contain a white or beige cover and cover plate, a selection of faceplates, and all other necessary

parts and mounting hardware required to convert a wide array of two-pipe competitors' thermostats.



Part No.	Action	Color
T4002301*	DA	White
T4002302*	RA	White
T4002303*	DA	Beige
T4002304*	RA	Beige

THERMOSTAT REMODEL KIT



T4000605

CONVERSION KIT

The T-4000-605 (beige) universal conversion kits provide all the parts necessary to remodel existing room installations of both Johnson Controls and non-Johnson Controls thermostats.

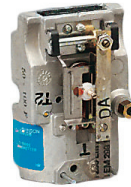
These kits can be applied to

existing instrument installations with exposed or concealed tubing. Includes terminal connector and tubing, T-400 air fittings, adjustable pipehead, tube couplings and clamps, and mounting hardware. Convert T400 models to T4000. Note: Requires T4002 thermostat and cover



Part No.	Description
T4000605*	Universal Conversion Kit
T4000611*	Bakelite Back Adaptor Style for Dual Temperature Vertical or Horizontal Instruments with Two Pipehead Adaptors

TEMPERATURE TRANSMITTER



T5002201

ROOM TEMPERATURE

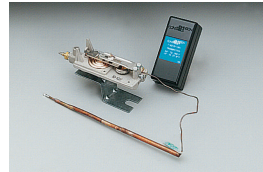
The T-5002 Series room transmitters measure space or mass temperature and transmit a proportional 3 to 15 psig pneumatic output signal to an indicator, receiver-controller, or building automation system (BAS) for

automatic temperature control.

Note: Requires T4002 mounting bracket and cover to complete installation



Part No.	Action	Temperature (°F)
T5002201*	DA	50 to 100
T5002202*	DA	60 to 85



T52101001

COPPER BULB

The T-5210 pneumatic temperature transmitter measures temperature and converts this measurement to an air pressure signal that is transmitted to a pneumatic receiver, controller, or receiver-



indicator.

Part No.	Operating Temperature (°F)	Capillary Length
T52101001*	50 to 100	5 1/2"
T52101002*	0 to 100	5 1/2"
T52101004*	40 to 240	5 1/2"
T52101008*	50 to 150	5 1/2"
T52101113*	-40 to 160	48"
T52101114*	0 to 100	48"



T52101007

COPPER AVERAGING

The T-5210 pneumatic temperature transmitter measures temperature and converts this measurement to an air pressure signal that is transmitted to a pneumatic receiver, controller, or receiver-



indicator.

Part No.	Element Length	Operating Temperature (°F)
T52101007*	8'	50 to 150
T52101009*	8'	0 to 100

CONTROLLER



RECEIVER CONTROLLER, T5312 SERIES

The T-5312 receiver-controller directly controls dampers, valves, and other devices in a pneumatic transmission system. The T-5312 produces a proportional 3 to 15 psig pressure signal from a remotely

located transmitter.



Part No.	Action
T53121*	Proportional



REMOTE BULB, TEMPERATURE

The T-8000 bulb element thermostat provides proportional, two-position, direct action, or reverse action temperature control. The T-8000 is designed for applications which require the sensing element to be located

where extreme conditions do not permit controller mounting or where operational adjustments to the controller would be inconvenient. This relay-type instrument is ideally suited for installations requiring the controller to be mounted on a local control panel. Proportional action, non-compensated capillary, includes two-sided dial: -10 to 124°F or 110 to 244°F.



Part No.	Element	Capillary Length
T80001*	Bulb	4'
T80003*	Bulb	15'



RECEIVER CONTROLLER, T5800 SERIES

The T-5800 pneumatic receiver-controller is designed for use with remote temperature, humidity, or pressure transmitters that are connected to a control variable (CV) input. The controller provides precise control of pneumatic

devices. The T-5800 is capable of providing restricted supply air to low volume remote transmitters, reducing the number of air line connections needed between instruments to only one line. The CV input accepts the transmitted output of any pneumatic device with a calibrated output of 3 to 15 psig.



Part No.	Action	Input
T58001*	Proportional	Single
T58003*	Proportional	Dual



RESET VOLUME, VAV

The P-3800 reset volume controller regulates the flow of air in variable air volume boxes. The P-3800 controls the output volume, between adjustable minimum and maximum limits, in response to a reset signal from a

thermostat or some other master controller.



Part No.	Thermostat Type	Configuration
P38001*	DA, RA	(DADR), (RARR)
P38002*	RA, DA	(DARR), (RADR)

ACTUATOR, DAMPER



3" STROKE

The D-3153 pneumatic actuator is a multipurpose positioning device used primarily for operating ventilating dampers in response to the output signals of a pneumatic controller or electro-pneumatic transducer. The D-3153 can be

used with dampers up to a maximum area of 16 square feet for proportional volume control, and 25 square feet for two-position actuation, provided that the torque requirements are compatible with the specific application.



Part No.	Nominal Spring Range (psig)	Includes
D31531*	8 to 13	Pilot Positioner, Universal Mounting Bracket
D31532*	8 to 13	Universal Mounting Bracket
D31533*	5 to 10	Universal Mounting Bracket
D31535*	8 to 13	Auxiliary Mounting Bracket
D31537*	3 to 7	Auxiliary Mounting Bracket



4", 6" STROKE, SWIVEL MOUNT

The D-3240 Series pneumatic piston actuators are multipurpose positioning devices designed for operating inlet vanes on centrifugal fans and compressors in direct response to the output signal of a pneumatic controller. These

actuators can also be used on other applications that require a large amount of positioning power from a single actuator, such as large damper applications, provided that the damper is designed to withstand the high torque capabilities of the actuator.



Part No.	Nominal Spring Range (psig)	Stroke Distance (In.)	Includes
D32444*	8 to 13	4	Swivel Mount Bracket, Clevis, and Crank Arm
D32461*	8 to 13	6	Swivel Mount Bracket, Clevis, and Crank Arm



D40731

3" STROKE

The D-4073 pneumatic actuator is a multipurpose positioning device used to accurately position small dampers primarily on unit ventilator, variable air volume terminal units, and small ventilating dampers in response to output

signals of a pneumatic controller or electro-pneumatic transducer. The actuator is also recommended for use on other air flow control dampers in interior locations up to a maximum area of 6.75 square feet for proportional volume control, and 11.7 square feet for two-position actuation, provided that the torque requirements are compatible with the specific application. Where precision sequential operation is desired, or additional positioning power is necessary, use a D-9502 pilot positioner. Up to four more D-4073 actuators may be slaved from one pilot positioner for coupled dampers.



Part No.	Nominal Spring Range (psig)	Includes
D40731*	8 to 13	D9502, Universal Mounting Bracket



D95025

ACTUATOR POSITIONER

The D-9502 pneumatic damper actuator positioners are precision relay devices used to adjust and maintain damper actuators in exact positions on those applications requiring precise or otherwise special damper

positioning.

- Provides dynamic stabilization and/or sequential control of pneumatic damper actuators
- For D3246 also order spring D9502612, and pilot spring bracket D9502100



Part No.	Use with
D95025*	D3244/D3246 Actuator
D95028*	D3153 Actuator
D950212*	D4073 Actuator

VALVE ACTUATOR



V30001

PNEUMATIC ACTUATOR

Pneumatic valve actuators are designed to accurately position steam or water valve modulating plugs in response to a pneumatic signal from a controller. The actuators have a molded synthetic rubber diaphragm design.

- Universal valve mounting design is compatible for use on all Johnson Controls valves with V-3000 mounting configurations



Part No.	Description
V30001*	Valve Actuator, Replaceable Diaphragm

VALVE ACTUATOR ASSEMBLY



VG7241CT+3008B

TWO-WAY, NORMALLY OPEN, PDT, BRONZE VALVE

- NPT end connections



Part No.	Connection		Flow (Cv)	Nominal Spring Range (psig)
	Size (In.)	Type		
VG7241CT+3008B*	1/2	NPT	0.73	3 to 6
VG7241ET+3008B*	1/2	NPT	1.8	3 to 6
VG7241ET+3008D*	1/2	NPT	1.8	4 to 8
VG7241ET+3008E*	1/2	NPT	1.8	9 to 13
VG7241GT+3008B*	1/2	NPT	4.6	3 to 6
VG7241GT+3008D*	1/2	NPT	4.6	4 to 8
VG7241GT+3008E*	1/2	NPT	4.6	9 to 13
VG7241LT+3008B*	3/4	NPT	7.3	3 to 6
VG7241LT+3008D*	3/4	NPT	7.3	4 to 8
VG7241LT+3008E*	3/4	NPT	7.3	9 to 13
VG7241NT+3008B*	1	NPT	11.6	3 to 6
VG7241NT+3008E*	1	NPT	11.6	9 to 13
VG7241PT+3008B*	1 1/4	NPT	18.5	3 to 6
VG7241PT+3008D*	1 1/4	NPT	18.5	4 to 8
VG7241RT+3008B*	1 1/2	NPT	28.9	3 to 6
VG7241RT+3008E*	1 1/2	NPT	28.9	9 to 13
VG7241RT+823C00*	1 1/2	NPT	28.9	3 to 6
VG7241ST+823C00*	2	NPT	46.2	3 to 6
VG7251CT+3008B*	1/2	Union Globe	0.73	3 to 6
VG7251ET+3008B*	1/2	Union Globe	1.8	3 to 6
VG7251LT+3008B*	3/4	Union Globe	7.3	3 to 6
VG7251NT+3008B*	1	Union Globe	11.6	3 to 6

*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

VALVE ACTUATOR ASSEMBLY



VG7441CT+3008E

TWO-WAY, NORMALLY CLOSED, PDT O, BRONZE VALVE

- NPT end connections



Part No.	Connection Size (In.)	Flow (Cv)	Nominal Spring Range (psig)
VG7441CT+3008E*	1/2	0.73	9 to 13
VG7441ET+3008B*	1/2	1.8	3 to 6
VG7441ET+3008D*	1/2	1.8	4 to 8
VG7441ET+3008E*	1/2	1.8	9 to 13
VG7441GT+3008D*	1/2	4.6	4 to 8
VG7441GT+3008E*	1/2	4.6	9 to 13
VG7441LT+3008E*	3/4	7.3	9 to 13
VG7441NT+3008E*	1	11.6	9 to 13
VG7441PT+3008E*	1 1/4	18.5	9 to 13
VG7441RT+3008E*	1 1/2	28.9	9 to 13
VG7441RT+823E00*	1 1/2	28.9	9 to 13
VG7441ST+823E00*	2	46.2	9 to 13



VG7842ET+3008B

THREE-WAY, BRONZE

- NPT end connections



Part No.	Connection Size (In.)	Flow (Cv)	Nominal Spring Range (psig)
VG7842ET+3008B*	1/2	1.8	3 to 6
VG7842ET+3008D*	1/2	1.8	4 to 8
VG7842ET+3008E*	1/2	1.8	9 to 13
VG7842GT+3008D*	1/2	4.6	4 to 8
VG7842GT+3008E*	1/2	4.6	9 to 13
VG7842LT+3008B*	3/4	7.3	3 to 6
VG7842LT+3008D*	3/4	7.3	4 to 8
VG7842LT+3008E*	3/4	7.3	9 to 13
VG7842NT+3008B*	1	11.6	3 to 6
VG7842NT+3008D*	1	11.6	4 to 8
VG7842NT+3008E*	1	11.6	9 to 13
VG7842PT+3008B*	1 1/4	18.5	3 to 6
VG7842PT+3008E*	1 1/4	18.5	9 to 13
VG7842RT+3008D*	1 1/2	28.9	4 to 8
VG7842RT+3008E*	1 1/2	28.9	9 to 13
VG7842RT+823D00*	1 1/2	28.9	4 to 8
VG7842RT+823E00*	1 1/2	28.9	9 to 13
VG7842ST+823D00*	2	46.2	4 to 8
VG7842ST+823E00*	2	46.2	9 to 13



V37661002

FLARE VALVE

These 1/2" two-way and three-way flare valves accurately regulate the flow of hot and cold water in small HVAC terminal units, including fan coils, perimeter radiation, and reheat coils.



Part No.	Type	Size (In.)	Flow (Cv)	Nominal Spring Range (psig)
V37661002*	Two-Way, NO	1/2	1.7	3 to 6
V37661003*	Two-Way, NO	1/2	3.2	3 to 6
V43321009*	Three-Way	1/2	1.7 NO, 2.3 NC	4 to 8

SWITCH



P10BC7

PRESSURE ELECTRIC, AIR

These pressure controls open or close electrical circuits from a change in operating air pressure.

- For pneumatic systems, pumps, or small air compressors
- Pressure to electric switch



Part No.	Stages	Switch	Pressure Differential	Switch Differential (psi)	Connection Size (In.)	FLA (@ 240 V)
P10BC7*	1	SPDT	3 to 20 psi	2, Fixed	Barbed	8

VALVE AIR SOLENOID



V24102

3-WAY

Used in applications where an electrical circuit operates a pneumatic control device. This valve diverts the air signal to the pneumatic device when the coil is energized or de-energized, depending on the choice of air

connection.

- Air connections: NO or NC/Common
- compact size with durable, solid brass construction
- positive air seal
- Can be used in smoke control applications



Part No.	Voltage
V24102*	120



V11HAA100

3-WAY

The V11 three-way solenoid valve is used in applications where an electrical circuit operates a pneumatic control device.

- 50/60 Hz



Part No.	Voltage
V11HAA100*	110-120
V11HGA100*	24



V61351

3-WAY

Switches the flow of air from one air line to another. For day night switching, heating/cooling, enthalpy switchover

- V6135: no exhaust function
- V6137: after switchover, the non active line exhausts to atmosphere

Features

- Fast acting two-position switching mechanism
- Factory supplied with an integral mounting bracket for surface mounting



Part No.	Pressure Range (psig)
V61351*	2 to 4
V61352*	11 to 15
V61353*	15 to 19

TRANSDUCER, ELECTRO PNEUMATIC



EP80001

The EP-8000 electro-pneumatic transducer converts a 0 to 10 Vdc or 4 to 20 mA signal from an electric controller into a proportional pneumatic output pressure signal.

- Proportional: direct acting



Part No.	Input Range	Input Type	Output Type	Output Range
EP80001*	.5 to 9 Vdc	Voltage	Low Volume	1 to 18 psi
EP80002*	.25 to 9.5 Vdc	Voltage	High Volume	5 to 19 psi
EP80003*	4 to 20 mA DC	Current	Low Volume	3 to 15 psi
EP80004*	4 to 20 mA DC	Current	High Volume	3 to 15 psi

RELAY



C52302

SIGNAL LIMITER

The C-5230 pneumatic signal limiter imposes high and/or low limits on any pneumatic signal.



Part No.	Description
C52302*	High or Low Limit
C52303*	High and Low Limit



C52263

SIGNAL TRANSMITTER

The C-5226 pneumatic signal transmitter repeats pneumatic transmission signals or selects the higher or lower of two pneumatic signal levels directly from the output of a controller. The C-5226 may also be used as

a high or low signal limiter or a differential switchover device.



Part No.	Description
C52263*	Signal Repeater



C95061

SWITCHING CUMULATOR

The C-9506 air switching cumulator switches output pressure from zero to full supply pressure when the pilot pressure reaches the switch point.

- Switch point: 2-12 psig

- Differential: 1 psig



Part No.	Differential	Description
C95061*	1 psig	2 Position, DA

RELAY



BOOSTER

The R-2080 booster relay operates as a pneumatic repeater and volume amplifier. The pilot signal is repeated at its output at a 1:1 ratio. Amplifies a pilot signal from a non-relay, low volume controller to

a large volume output signal

Part No.	Description
R20801*	Booster Relay



PRESSURE REDUCING STATION

The remote mounted pressure reducing station regulates the output pressure in a pneumatic system to within 0.02 psi with a 20 psi variation in input pressure.

- Input maximum: 300 psig
- Output: 0-50 psig

- Flow capacity: 25 scfm
- Safety relief valve: 25 psi

Part No.	Description
A4000138*	Pressure Reducing Station



MINIATURE PRESSURE REGULATOR

The R-4000 miniature pressure regulator provides a method to readjust the setpoint of pneumatic controllers in low volume applications. The output pressure varies in proportion to the rotation of the

adjusting knob.

Part No.	Output Range
R40003*	12 psig



PRESSURE REDUCING VALVE

The R130 air pressure reducing valve reduces the primary air supply pressure to a selected pressure in a compressed air system. The reducing valve can also be used as a minimum set point regulator. When used as

minimum setpoint regulator, an R3710 Series .005 restrictor must be used in output line



Part No.	Fitting Size (In.)	Flow (SCFM)
R1301*	1/8	1
R13015*	3/8	20



FILTER, OIL REMOVAL

Combining coalescing and activated carbon filters in series provides clean, oil free air by removing both oil aerosols and vapors in pneumatic control systems.



Part No.	Flow (SCFM)	Connection Size (In)	Type
A40001037*	1.50 Max	1/4	Barb
A40001048*	17 Max	3/8	FPT
A40001049*	30 Max	3/8	FPT
A40006001*	50 Max	3/8	FPT



FILTER, REPLACEMENT CARTRIDGES



Part No.	Type
A4000604*	Coalescing
A4000605*	Coalescing
A4000632*	Carbon
A4000633*	Carbon
A4110604*	Coalescing



G20105

AIR PRESSURE GAUGE

The G2010 air pressure gauge provides continuous indication of air pressure in pneumatic control systems.



Part No.	Gauge Size (In.)	Pressure Range (psi)	Stem Mount (In.)	Mounting
G20105*	1 1/2	0 to 30	1/8 NPT Center Back	Stem
G201011*	2	0 to 30	1/8 NPT Center Back	Stem
G201023*	2	0 to 100	1/8 NPT Center Back	Stem



T55001052

3 1/2" DIAL



Part No.	Temperature (°F)
T55001052*	0 to 100
T55001055*	40 to 240

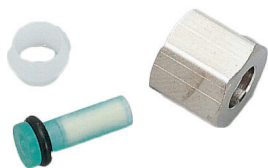


T55021002

2 1/2" DIAL



Part No.	Temperature (°F)
T55021002*	0 to 100
T55021003*	50 to 150

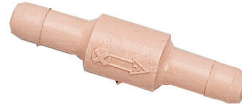


R37101005

RESTRICTOR, IN-LINE, COMPRESSION



Part No.	Description
R37101005*	For Inserting 1/4" Tubing, Compression Connection .005", Red
R37101007*	For Inserting 1/4" Tubing, Compression Connection .007", Aqua



R37102005

RESTRICTOR, IN-LINE, BARBED



Part No.	Description
R37102005*	1/4" Barbed Fitting, .005 In.
R37102007*	1/4" Barbed Fitting, .007 In.



R37103007

RESTRICTOR, IN-LINE, BARBED



Part No.	Description
R37103007*	1/4" Barbed Connection, .007 In.

RESTRICTOR, DIODE TEE

The R-3712 diode restrictor tee allows air flow through the bottom of the tee, in one direction only. The R-3712 is designed for inline installation using 1/4" O.D. flexible tubing.



Part No.	Description
R37123007*	1/4" Barbed Connection, .007 In.

THERMOSTAT



TP970A2004

2 PIPE, SINGLE SETPOINT

Two pipe, single setpoint, pneumatic thermostat used to provide proportional control of pneumatic valves and damper actuators in heating and air conditioning systems.

- Throttling range: 2-10°F

Honeywell

Part No.	Action	Scale Range	Includes
TP970A2004	DA	60 to 90°F	Cover not Included
TP970A2012	DA	40 to 70°F	Cover not Included
TP970A2038	DA	60 to 90°F	Modernization Kit
TP970A2145 ¹	DA	60 to 90°F	Convertastat™ Kit
TP970B2002	RA	60 to 90°F	Cover not Included
TP970B2077 ¹	RA	60 to 90°F	Convertastat™ Kit

¹ Includes universal adapter wall plate, universal cover



TP971A2003

2 PIPE, SETBACK

Pneumatic thermostat with night setback used to provide proportional control of pneumatic valves and damper actuators in heating and air conditioning systems.

Honeywell

Part No.	Includes
TP971A2003	Order Cover Separately
TP971A2102	Convertastat™ Kit Includes Adapter Plate, Wall Plate & Satin Chrome Cover



TP972A2036

2 PIPE, HEATING/COOLING

Two-pipe, one- or two-temperature, pneumatic thermostat used to provide proportional control of pneumatic valves and damper actuators in heating and air conditioning systems.

- Throttling range: 2-10°F

Honeywell

Part No.	Description	Scale Range	Comments
TP972A2036	2 Pipe, 2 Temp.	55 - 75°F Heating, 60 - 90°F Cooling	Two Concealed Setpoint Knobs 78°F Min. Cooling, 72°F Max. Heating, Order Cover Separately
TP972A2002	2 Pipe, 1 Temp.	60 to 90°F	Sensor only

- DA heating 18 psi
- RA cooling 13 psi



TP973A2076

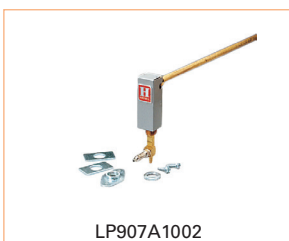
1 OR 2 PIPE, SINGLE TEMPERATURE

One-pipe or two-pipe, single temperature, low capacity, pneumatic thermostat used to provide proportional control of pneumatic valves and damper actuators in heating and air conditioning systems.

- Scale range: 60-90°F
- Throttling range: 2-10°F
- Requires .005 in. restrictor for one-pipe installation

Honeywell

Part No.	Description	Scale Range	Features
TP973A2076	1 or 2 Pipe, DA1 Temp., Low Capacity	60 to 90°F	Order Cover Separately
TP973B2066	1 or 2 Pipe, RA1 Temp., Low Capacity	60 to 90°F	Order Cover Separately



LP907A1002

1 PIPE, AIRSTREAM

One-pipe, single setpoint, pneumatic thermostat used to provide proportional control of pneumatic valves and damper actuators in heating and air conditioning systems. Commonly used as discharge controllers for

unit ventilators.

- Pressure ratings:
- Operating: 25 psi
- Supply: 3 to 15 psi
- Throttling range: 10-70°F

Honeywell

Part No.	Scale Range	Throttling Range	Type
LP907A1002	40 to 140°F	10 to 70	1-Pipe, DA



LP916A1019

2 PIPE, REMOTE BULB

Two-pipe, single temperature, unit mounted, remote bulb pneumatic thermostat used to provide proportional control of pneumatic valves and damper actuators in heating and air conditioning systems.

Honeywell

Part No.	Scale Range	Throttling Range	Description	Comments
LP916A1019	65 to 85°F	3.5	2-Pipe, DA, Single Temp., .007 in Restriction	For Unit Ventilators, 1/2" x 5 7/8" Bulb
LP916A1134	65 to 85°F	3.5	2-Pipe, DA, Single Temp., .005 in Restriction	For Induction, Fan Coil Systems, 3/8" x 7" Bulb
LP916B1082	65 to 85°F	3.5	2-Pipe, 18 psi Heating DA, 13 psi Cooling RA, Single Temp., .005 in Restriction	For Induction, Fan Coil Systems, 3/8" x 9" Bulb

TRANSMITTER



LP914A1003

TEMPERATURE, INSERTION

One-pipe, direct-acting temperature sensor used with RP908/RP920 controllers to provide proportional control of pneumatic valve or damper actuators. Rod and tube insertion element for duct, well, or through-the-wall

mounting.

- Controls are one-pipe direct acting

Honeywell

Part No.	Sensing Range (°F)	Element Length	Mounting Code
LP914A1003	-40 to 160	15"	Duct
LP914A1011	-40 to 160	15"	Well
LP914A1052	40 to 240	7"	Well
LP914A1060	-40 to 160	7"	Well
LP914A1144	25 to 125	15"	Duct



TP974A2000

TEMPERATURE, WALL MOUNT

One-pipe or two-pipe direct-acting temperature sensor used with RP908/RP920 controllers to provide proportional control of pneumatic valve and damper actuators.

- 1 or 2 pipe, DA

Honeywell

Part No.	Sensing Range (°F)	Type
TP974A2000	50-100	1 or 2 Pipe, DA Less Cover



LP915A1044

TEMPERATURE, AVERAGING

One-pipe, direct-acting temperature sensor, used with RP908 or RP920 controllers to provide proportional control of pneumatic valve or damper actuators. Averaging, liquid-filled element

for duct mounting.

Honeywell

Part No.	Sensing Range (°F)	Element Length	Mounting Code
LP915A1044	0-200	18 1/2"	Duct



HP971A1008

HUMIDITY

One- or two-pipe, direct-acting humidity sensor used with RP908/RP920 controllers to provide proportional control of pneumatic valve or damper actuators in systems requiring humidification or dehumidification control.

- Pressure ratings: Operating: 25 psi; Supply: 3 to 15 psi

Honeywell

Part No.	Type	Scale Range
HP971A1008	1-, 2-Pipe, DA	15 to 75%

HUMIDISTAT



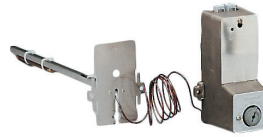
HP970A1009

Two-pipe, single setpoint, pneumatic humidistat used to provide proportional control of pneumatic valves on humidification or dehumidification systems.

- Direct Acting (DA) and Reverse Acting (RA) models are available.

Honeywell

Part No.	Type	Scale Range	Throttling Range	Comments
HP970A1009	2-Pipe, DA	15 to 75%	3 to 15	Order Cover Separately
HP970B1007	2-Pipe, RA	15 to 75%	3 to 15	Order Cover Separately



LP920A1005

REMOTE BULB TEMPERATURE

Two-pipe, single temperature, pneumatic temperature controller used to provide proportional control of pneumatic valves and damper actuators in heating and air conditioning systems.

- Control is direct-acting, single

temperature

- Scale range: 30-150°F
- Throttling range: 5-25°F

Honeywell

Part No.	Element	Capillary Length	Scale Range	Throttling Range
LP920A1005	Averaging, Length	96"	30 to 150°F	5 - 25°F
LP920A1021	3/8 x 5 1/4" Bulb	10'	30 to 150°F	5 - 25°F
LP920A1039	3/8 x 5 1/4" Bulb	60"	30 to 150°F	5 - 25°F

CONTROLLER

RECEIVER CONTROLLER



RP920A1025

Proportional, high capacity, single or dual input pneumatic controller used in conjunction with remote sensors to provide proportional (P) or proportional plus (P+I) control of temperature, humidity, pressure, or dewpoint for heating and air

conditioning systems.

- Input signal: 3-15 psi
- Output signal: 3-13 psi

Honeywell

Part No.	Action	Input	Type	Remote Adjustment
RP920A1025	DA	Single	Proportional	With
RP920A1033	DA	Single	Proportional	Without
RP920B1031	DA	Dual	Proportional	Without
RP920B1056	RA	Dual	Proportional	Without

ACTUATOR, DAMPER

MP909D SERIES



MP909D1227

Used for pneumatic proportional control of variable volume terminal units and small dampers.

- Damper load area: 3 sq. in.
- 2 3/8" stroke

Honeywell

Part No.	Stroke Distance (In.)	Spring Range
MP909D1227	2 3/8	5 to 10

MP909E SERIES



MP909E1018

Used for pneumatic proportional control of dampers and high velocity air valves. The MP909E has an optional adjustable stroke feature.

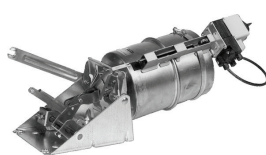
- Damper load area: 6.6 sq. in.

Honeywell

Part No.	Stroke Distance (In.)	Spring Range	Includes
MP909E1018	4.0	3 to 13	Mounting Bracket, Ball Joint
MP909E1026	4.0	3 to 13	
MP909E1034	4.0	5 to 10	Mounting Bracket, Ball Joint, Linkage Kit
MP909E1174	3.1	9 to 13	Mounting Bracket, Ball Joint
MP909E1349	4.0	3 to 13	Internal N.C. Trunnion Bracket
MP909E1364	4.0	5 to 10	External Trunnion Bracket

ACTUATOR

HEAVY DUTY ACTUATOR



MP918B1006

Used for proportional control of medium to large-size dampers in HVAC systems. The MP918 is a rolling diaphragm, piston-type actuator.

- Damper load area: 23.8 sq. in.
- 3 1/2" stroke, 6" stroke (MP920)

Honeywell

Part No.	Stroke Distance (In.)	Spring Range	Includes
MP918B1006	3 1/2	3 to 13	External Mounting Bracket, Crank Arm
MP918B1030	3 1/2	3 to 13	Actuator Only
MP920B1002	6	7 to 13	Actuator Only

COIL VALVE ACTUATOR



MP953C1000

Pneumatic actuators provide proportional control of steam or hot or cold liquids in HVAC systems by operating V33XX, V34XX, V5011 and V5013 valve assemblies.

- 3/4" valve travel
- DA Actuator + DA Valve Body =

Normally Open

- RA Actuator + DA Valve Body = Normally Closed

Honeywell

Part No.	Diameter (In.)	Action	Spring Range	Includes
MP953C1000	5	DA	2-7	Standard
MP953C1018	5	DA	8-12	Standard
MP953C1026	5	DA	4-11	Standard
MP953C1067	8	DA	2-7	Standard
MP953C1075	8	DA	8-12	Standard
MP953D1107	7 1/8	RA	8-13	EPDM Diaphragm
MP953D1172	7 1/8	RA	3-7	EPDM Diaphragm
MP953E1319	5	DA	4-11	Positive Positioner 5 psi span
MP953E1376	8	DA	4-11	Positive Positioner 5 psi span
MP953F1101	7 1/8	RA	8-13	Positive Positioner 5 psi span, EPDM Diaphragm

BRAUKMAN ACTUATOR



MP958A1017

The MP958 pneumatic valve actuator is direct-acting and used only with Honeywell-Braukman V5852A2xx, V5862A2xx, V5853A2xx, and V5863A2xx terminal unit valves to control hot and/or chilled water.

Honeywell

Part No.	Pressure Range (psi)
MP958A1017	3 to 10
MP958A1025	8 to 11

SWITCH



P658A1013

PNEUMATIC/ELECTRIC, P658 SERIES

Pneumatic-electric switches (P658A, B) used to convert a pneumatic signal from a controller to an electrical switching action (spdt) to provide start and stop control of equipment such as fans and pumps.

- Setpoint range: 2-24 psi, adjustable differential: 2 psi, fixed
- Switch: SPDT

Honeywell

Part No.	Mounting Code	Factory Set Defaults	Comments	Switch	Setpoint Range (psig)	Differential (psig)
P658A1013	Surface	10 psi	Includes Case	SPDT	2 - 24 psi, adjustable	2 psi, fixed
P658B1012	Panel	10 psi	No Case	SPDT	2 - 24 psi, adjustable	2 psi, fixed



SP470A1000

DIVERTING

Pneumatic diverting switch used to manually divert, block, or bleed air in pneumatic air lines to revise control sequence with a change in conditions. Commonly applied on day/night, summer-winter, on/off/ auto, or

Honeywell

start/stop functions.

Part No.	Mount	Nb. of Positions	Comments
SP470A1000	Panel	2	Includes Knob, Scale Plate
SP470A1018	Panel	3	Includes Knob, Scale Plate



SP970A1005

MANUAL/MINIMUM POSITION

Used to manually position a remote damper actuator or to reset the setpoint of a pneumatic controller. They can also provide minimum damper position by setting a minimum pressure limit in the branchline to the damper actuator.

- Includes knob, scaleplate, and locknuts

Honeywell

Part No.	Span (psi)	Description
SP970A1005	10	3 Port Manual/Minimum w/ Bleed
SP970C1043	5	4 Port Manual/Isolated Pilot Chamber

RELAY



RP470A1003

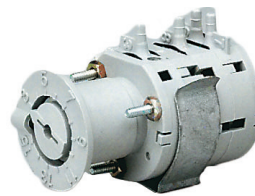
SELECTOR

Three-port relays used in HVAC systems to perform a variety of relay functions; transmit the higher of two input signals, lock out one pressure signal when a second signal is higher, or transmit the lower of two pressure signals.

- Operating range: 0-18 psi

Honeywell

Part No.	Description
RP470A1003	High/Low/Lockout Selector



RP471A1002

SNAP ACTING

The four port, snap acting relay converts a proportional air pressure change a controller to a positive (two-position) pressure change. It can also divert a supply line to one of two branches.

- Setpoint range: 3-15 psi
- Differential: 1 psi, fixed

Honeywell

Part No.	Setpoint Range	Differential
RP471A1002	3 - 15 psi	1 psi, fixed



RP7517A1017

PROPORTIONAL E/P TRANSDUCER

Electronic-pneumatic transducers are used in electronic pneumatic control systems to convert a proportional electric output signal from a controller into a direct-acting, proportional pneumatic signal.

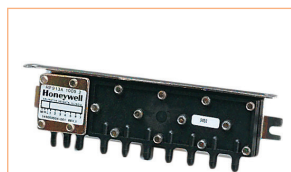
- Nominal range: 3-15 psi at 2-10 Vdc
- Only available in Long Island NY, West Chester County NY, New York City and Phoenix, AZ. For New York call 914-592-5555. For Phoenix call 877-672-6875.

Honeywell

Part No.	Includes
RP7517A1017	2-Wire, No Cover without Internal Power Supply
RP7517B1016	3-Wire, Cover with Internal Power Supply

RELAY

LOAD ANALYZER



RP913A1008

A diaphragm logic pressure selector selects the highest and/or lowest branch pressure input from zone thermostats to operate final control elements in pneumatic control applications.

- Seven input manifold containing logic diaphragm, air filter, and restrictions

- Two analyzers can be connected together to increase inputs to twelve.

Honeywell

Part No.	Description
RP913A1008	7 Input Relay

CAPACITY



RP970A1008

Direct acting, modulating relay provides increased capacity of the branchline pressure to the final control device.

Honeywell

Part No.	Description
RP970A1008	Capacity Relay

REVERSING



RP972A1006

A modulating relay suitable for all types of heating and air conditioning control systems to reverse and increase the capacity of the branchline pressure to the final control element. The output varies inversely to the input with

an adjustable offset.

Honeywell

Part No.	Comments
RP972A1006	Standard with Mounting Clip Only

AVERAGING



RP973A1005

A three-port relay used in HVAC systems averages the signals from two thermostats to control a single device such as a heating coil valve for a multizone unit. The pneumatic averaging relay provides an output pressure equal to the average of

two input pressures.

Honeywell

Part No.	Comments
RP973A1005	Standard with Mounting Clip Only

VALVE

3-PIPE SEQUENCING



VP522A1039

Three-pipe, sequencing, pneumatically operated water valve for controlling both hot and cold water flow in fan-coil and induction units.

Honeywell

Part No.	Tube Size (In.)	Flow (Cv)	
		Port A	Port B
VP522A1039	5/8	2.5	1.6
VP522A1047	7/8	4.0	2.5

3-WAY MIXING



VP526A1076

Three-way pneumatic mixing valve provides proportional control of hot and/or cold water in unit air conditioners and fan coil systems.

- M flare connection
- Lower port normally open
- Spring range: 3 to 10 psi

- Flow: 1.6 Cv

Honeywell

Part No.	Tube Size (In.)	Flow (Cv)
VP526A1076	1/2	1.6

ACCESSORIES

PRESSURE REDUCING VALVE



PP901A1004

Used to control the pressure of the air delivered to pneumatic control systems. Models available for single-pressure systems or two-pressure systems (day/night or summer/winter) requiring two independently regulated pressure

settings. Dual pressure units switch from the lower setting to a higher setting when main air is applied to the pilot port. Models also available including a sub-micron filter assembly and pressure gauges.

- Built-in adjustable safety relief valve for limiting downstream pressure
- Inlet pressure: 45-150 psi
- Outlet pressure: 0-25 psi, factory 18 psi

Honeywell

Part No.	Description
PP901A1004	Single Pressure
PP901B1002	Two Pressure
PP902D1007	Two Pressure

THERMOSTAT

1 PIPE, ROOM TEMPERATURE

These pneumatic room thermostats are designed for proportional temperature control of pneumatic valves and damper actuators to maintain room air temperatures in heating, ventilating and air conditioning systems.

- Small size, approximately 2" x 2"
- Factory calibrated. S.S. ball-in-seat provides pneumatic feedback for linear, stable operation.
- Easy-to-use throttling range adjustment and recalibration
- Includes tubing reducers, tubing, wall plate, mounting plate, 2 mounting screws
- R2211512, R2211513, R2212418, R2212419, R2212518, R2212519 are kits that include cover



R2211012

Part No.	Dial Range (°F)	Dial Limit Stops
R2211012	55 to 85	No
R2211013	55 to 85	No

Robertshaw

1 PIPE, ROOM TEMPERATURE



R2212118

Part No.	Dial Range (°F)	Dial Limit Stops
R2212118	55 to 85	No
R2212119	55 to 85	No

Robertshaw

2 PIPE, ROOM TEMPERATURE

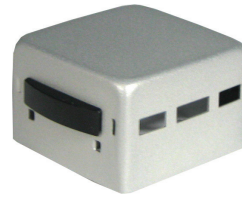


R2214121

Part No.	Dial Range (°F)	Dial Limit Stops
R2214121	55 to 85 Day, 50 to 80 Night	No

Robertshaw

2 PIPE, DAY/NIGHT



R21928

COVER

These thermostat covers are designed for use with 2" x 2" pneumatic controls only.

Robertshaw

Part No.	Type	Dial Markings	Color	Material	Exterior Thermometer	Adjustment Type
R21928	Blank	None	Satin Chrome	Metal	No	Concealed
R21933	Full	55 to 85	Satin Chrome	Metal	Yes	Exposed

TRANSMITTER

ROOM TEMPERATURE

The temperature transmitter measures room temperature and transmits a proportional pneumatic signal to a calibrated receiver gauge and/or receiver controller. The device is factory set to transmit a 3 to 15 psig signal over a 50 to 90°F range.

- Permits remote readout and control of room temperature
- Highly sensitive bimetal sensing element
- Linear response to room temperature changes
- Field adjustable zero adjustment
- Temperature range: 50 to 90°F, non adjustable

Robertshaw

Part No.	Action	Temperature (°F)
R2220053	DA, Proportional	50 to 90



R2252110

TEMPERATURE

Designed to measure air or fluid temperatures in pneumatic control systems and transmit a fixed span, 3 to 15 psig signal to controlling and indicating devices such as receiver controllers, receiver gauges, sensitive pressure

switches, or snap-acting R503-1 diverting relays. These transmitters are available with several types of sensing elements. These transmitters are one-pipe devices requiring an externally restricted source of constant pressure control air. Their design features pneumatic feedback to assure accuracy and stability over their temperature span.

Robertshaw

Part No.	Mounting Code	Element	Temperature (°F)
R2252110	Duct or Immersion	Rigid, 1/4" x 7 1/16	-40 to 160
R2252151 ¹	Duct or Outdoor Air	Bulb, 1/4" x 4", 3' Cap.	-25 to 125
R2252250	Duct or Immersion	Rigid, 1/4" x 9 3/8"	0 to 100
R2252502	Duct	Rigid Coiled, 10"	40 to 140
R2252610	Duct or Immersion	Rigid, 1/4" x 7 1/16	40 to 240

¹ 3' capillary length

RELAY



PRESSURE SELECTOR

These pressure selector relays are designed for use in pneumatic control systems where the application requires the comparison, selection, and transmission of the higher or lower of two proportional signals.

R2372351 can also be used as a booster relay.

- Proportional output

Part No.	Action
R2372352	Selects Highest of 2 Inputs

Robertshaw

PNEUMODULAR® CONTROL



REVERSING RELAY

A proportioning device designed for use in pneumatic control systems where the application requires the reversing of a proportional signal from a controlling device. The branch line pressure decreases in direct

proportion to an increase in input signal pressure and also amplifies the volume of air available for the final control device, thereby minimizing system lag. The unit is factory calibrated to decrease the branch line pressure from 16 psig to 0 psig as the signal pressure increases from 0 psig to 16 psig.

Robertshaw

Part No.	Action
R2360501	Reverses Input Signal, Proportional



ELECTRIC PNEUMATIC RELAY

The electric pneumatic relays are three-way two-position, electrically activated air valves for use in pneumatic control systems where the application requires a variety of switching, diverting, or interlocking

functions, actuated by an electrical circuit.

Robertshaw

Part No.	Coil Voltage
R2368501	24 Vac
R2368502	110



RECEIVER CONTROLLER

The receiver controllers are used with remote pneumatic transmitters to provide proportional control in pneumatic control systems. They are designed primarily for use with pneumatic transmitters; however, they may be

used with any pneumatic device having an output of 3 to 15 psig, such as thermostats or humidistats. Both direct and reverse acting models are available and each device is of the dual input type, with remote setpoint capability. These devices may be used as single input devices by using only the desired input.

- Nozzle and flapper relay-type receiver-controller; linear, stable and responsive. Three inputs for primary, reset and remote control point adjustment (may be used with one or two inputs).
- Slide-type throttling range and authority adjustments

Robertshaw

Part No.	Action
R2341521	DA
R2341522	RA
R2341501	DA
R2341502	RA



R2353502

DIVERTING RELAY, R2353 SERIES

Snap-acting devices with adjustable setpoints designed for a variety of switching and interlocking functions in pneumatic control systems where the application requires one or more of the following functions: feeding

and exhausting branch lines, diverting a supply line to either one of two branch lines, or diverting one of two supply lines to one branch line. The primary function of these devices is to convert a proportional pneumatic signal, at a predetermined setting, into a positive pneumatic switching action.

R2353503 is a nonadjustable, snap-acting, signal-comparing diverting relay designed for use in pneumatic control systems where the application requires a pneumatic switching function based on the comparison of two proportional pneumatic input signals.

- Positive two-position snap-action, SPDT pneumatic switching

Robertshaw

Part No.	Setpoint Range	Differential	Application
R2353502	4.5 to 20	2 to 4	Controller Pilot



R2372502

PRESSURE RELAY

The volume booster relay is a proportioning device designed for use in pneumatic control systems where the application requires amplifying the volume of control air to final control devices. System transmission lag is minimized by

using this relay in conjunction with a proportional controller operating several diaphragm valves or damper actuators. This device may also be used as a low pressure selector when the application requires the comparison, selection and transmission of the lower of two proportional input signals. The high pressure selector relay is a device designed for use in pneumatic control systems where the application requires the comparison, selection, and transmission of the higher of two proportional input signals.

Robertshaw

Part No.	Application
R2372502	High Pressure Selector



R2373501

HI/LOW SELECTOR RELAY

A device designed for use in pneumatic control systems where the application requires the comparison, selection, and transmission of the highest and/or the lowest of up to six pneumatic input signals. All

input ports are dead-ended and no signal air passes through the relay to the output ports.

Robertshaw

Part No.	Description
R2373501	6 Input Selector Relay

ACCESSORIES



R2420001

PRESSURE GAUGE

Pressure gauges for continuous indication of air pressure in pneumatic control systems.

Robertshaw

Part No.	Dial Size (In.)	Pressure Range (psig)	Mounting Code	Air Connection (In.)
R2420001	1 1/2	0 to 30	Stem	1/8" MPT, Back



R2422001

RECEIVER GAUGE

Receiver gauges for continuous indication of temperature, differential static pressure, differential pressure, pressure, enthalpy, or humidity in conjunction with a transmitter-receiver system.

- Adjustable pointer: dial face overlay required (supplied in kit)

Robertshaw

Part No.	Dial Size (In.)	Mounting Code	Air Connection (In.)
R2422001	2 1/2	Flush, U-Clamp	3/16" Barb
R2422002	3 1/2	Flush, U-Clamp	3/16" Barb
R2422003	2	Stem	1/8" MPT, Center Back

CONTROLLER



RECEIVER CONTROLLER

For use in conjunction with remote proportional transmitters for proportional control of pneumatic actuated dampers, valves, etc., in air conditioning systems. The transmitter-receiver-controller system may be used to control

temperature, humidity, or pressure.

- Nozzle and flapper relay type receiver controllers
- Direct acting. Field changeable to reverse acting
- Two pipe
- Proportional band: 2 1/2% to 40% of primary span
- Note: RKS4002 input 2 has a reverse acting reset only. For direct acting the output pressure increases as input 2 increases. For reverse acting the output pressure increases as input 2 decreases



Part No.	Description	Authority
RKS4000	Replacement, Single or Dual Input	10% to 200% of Primary Span

ACTUATOR



PROPORTIONAL VALVE TO 6"

Proportional pneumatic actuator with 50 sq. in. effective diaphragm area used to control 1 1/2" to 4" VB-9X13 Series and 1 1/2" to 6" VB-9323 Series valves.

- Requires AV430 Linkage for

VB7000 Series valves

- Requires AV495 Linkage for VB9000 Series valves
- Spring range: 8 to 13 psig
- Nominal stroke: 1"



Part No.	Nominal Stroke (In.)	Spring Range
MK6821	1	8 to 13 psig



MK2690

PROPORTIONAL VALVE TO 1 1/4"

For proportional pneumatic control of 1/2" to 1 1/4" VB-111 and VB-7000, VB9000 Series valves. Requires AV400 linkage for all applications.



Part No.	Nominal Stroke (In.)
MK2690	1/2" Nominal

RELAY



AK42309500

POSITIVE POSITIONING

Positive positioner pneumatic relay is used to accurately position an actuator stroke with respect to signal pressure from the controller. It can also be used to change the effective spring range of an actuator and increase the capacity

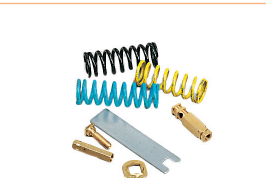
of a controller.

- All necessary linkage provided to assemble AK-42309-500 to MK-2690-0-0-1, 3000, 4600-0-0-2, 4700, 4800, 6800, 6900, 7000, 8800 and 8900 actuators



Part No.	Action
AK42309500	DA

ACTUATOR ACCESSORIES



AV400

VALVE LINKAGE

AV400 includes parts for VB-7xxx valves and discontinued 1/2 to 1 1/4" VB-9xxx valves. AV7400 is for VB-7xxx valves only



Part No.	Use with	Valve Size (In.)
AV400	MK2690	1/2 to 1 1/4
AV7400	MK2690	1/2 to 1 1/4
AV401	MK46	1/2 to 1 1/4



AV430

VALVE LINKAGE KIT

For assembling MS-80000 and MSR-80000 Series hydraulic actuators to 1 1/2" to 2" VB-92XX and VB-9313, 1 1/2" to 3" VB-9323 valve bodies. For assembling MK-6800 Series 50 sq. in. pneumatic actuators to 1 1/2" to 2"

VB-9XXX and 1 1/2" to 6" VB-9323 valve bodies.



Part No.	Description
AV430	MK6800 Series with VB7000 Series Valve



AV495

VALVE LINKAGE KIT

For assembling MS-80000 and MSR-80000 Series hydraulic actuators to 2 1/2" to 4" VB-92XX and VB-931X valve bodies. For assembling MK-68X1 pneumatic actuators to 2 1/2" to 4" VB-92XX and

VB-931X valve bodies.



Part No.	Description
AV495	MK6800 Series with VB9000 Series Valve



AV601

LINKAGE EXTENSION

The AV-601 valve extension kit is used to increase the allowable ambient temperature ratings of MA, MF, MP-5X1X-XXX, MPR-5X1X and MP- 541X Series actuators on applications with hot water or steam. The MF-5X1X, MP-541X,

and MPR-5X1X Series of actuators require the A-601 extension.



Part No.	Description
AV601	MA Extension

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THERMOSTAT

1 PIPE, ROOM TEMPERATURE

Designed for proportional control of pneumatic valve and damper actuators used in HVAC systems. A highly sensitive bimetal element with feedback is used for accuracy and stability. The throttling range is factory set at 3°F and is field adjustable.

- Setpoint range: 55 to 85°F
- Throttling range: 3 to 12°F
- HFO0010—restrictor tee (14.4 scim) required for CTC16 series
Requires cover and/or scaleplate for complete installation



CTC1611

1 PIPE, ROOM TEMPERATURE



Part No.	Type	Action
CTC1611	1 Pipe	DA
CTC1612	1 Pipe	RA

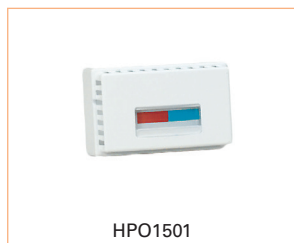


CTC1621

2 PIPE, ROOM TEMPERATURE



Part No.	Type	Action
CTC1621	2 Pipe	DA
CTC1622	2 Pipe	RA



HPO1501

COVER

Covers for CTC16 Series thermostats



Part No.	Type	Color	Construction
HPO1501	Blank	Almond	ABS
HPO1511	Window	Almond	ABS

CONTROLLER

RESET VOLUME, VAV



CSC2003

- Designed for use on VAV terminal units in HVAC systems
- Submaster air velocity controllers whose velocity setpoint is reset between adjustable minimum and maximum limits by a master controller, typically a room

thermostat

- For DA cooling or RA heating applications, no dampers
- Set point range: Minimum—0 to 1" wg;
Maximum—min. + 1" wg



Part No.	Description
CSC2003	Reset Volume Control

RESET VOLUME, UNIVERSAL



CSC301110

Designed for use on variable air volume terminal units in HVAC systems. It is a submaster air velocity controller whose velocity setpoint is reset between an adjustable minimum and maximum limit by a master controller,

typically a room thermostat. Used for either direct or reverse acting reset for normally open or normally closed VAV terminal units. It has a factory set reset start point and reset span which can be field adjusted. The reset span is always constant no matter what minimum and maximum limits have been set.

- For cooling or heating, DA or RA applications



Part No.	Description
CSC301110	0 to 1" Range; 8 Psig Start
CSC302110	0 to 1" Range; 3 Psig Start
CSC302510	0 to 2" Range; 8 Psig Start (High Flow, for Trane® Units)

RELAY



CCE1001

PNEUMATIC-ELECTRIC

- Designed for use in control circuits of HVAC systems
- Ideal for applications such as starting fan coil unit fans, exhaust fans, and direct control of electric duct heaters
- With case and

cover



Part No.	Switch
CCE1001	SPDT



AVERAGING

Designed for applications that do not require large amounts of output air volume. Suitable for room or zone applications such as VAV terminals. Use where desired output signal to the controlled device is to be the

average of two source signals.

- With bracket



Part No.	Description
RCC1102	Averaging Relay



REVERSING

Designed for reversing a proportional signal from a controlling device. Factory adjusted to decrease branch line pressure as the input pressure increases.

- With bracket



Part No.	Type
RCC1101	Pilot, 9 psi Calibration
RCC1501	Main, 8 psi Calibration



DIVERTING

Adjustable diverting relays are SPDT devices that divert one signal to either of two branch circuits or select one of two inputs and transmit it to another control device. They also can be used to

feed or exhaust a circuit.



Part No.	Description
RCC1109	Diverting Relay

DIFFERENTIAL PRESSURE FLOW SENSOR



Designed to sense differential pressure in the inlet section of variable air volume terminal units and fan terminal units. They can also be used to sense differential pressure at other locations in the main or branch duct systems. Normally used in conjunction with

the CSC-1000, 2000, and 3000 series of VAV terminal controllers for individual zone control in HVAC systems.



Part No.	Sensing length (In.)
SSS1003	5 13/32
SSS1005	9 29/32

ACTUATOR



HYDRAULIC, 1 11/16" STROKE

Designed to control small dampers such as air terminal units. Furnished with a right-angle mounting bracket for mounting to the side of a VAV terminal. The bronze bushing actuator may be rotated in the bracket so the air

connection can be placed where desired. The end of the shaft has a slot and clevis pin to allow direct connection to the damper linkage of a VAV terminal. The metal body allows them to be used in ceiling plenums where concern for local safety codes is a factor.

- Effective area: 8 sq. in.



Part No.	Spring Range	Description
MCP80312101	3 to 12	Bronze Bushing with Clevis and Cotter Pins
MCP80313101	5 to 10	Bronze Bushing with Clevis and Cotter Pins
MCP80313102	5 to 10	Delrin Bushing without Clevis and Cotter Pins
MCP80315101	8 to 13	Bronze Bushing with Clevis and Cotter Pins



HYDRAULIC, 3" STROKE



Part No.	Spring Range
MCP10302111	3 to 12
MCP10303111	5 to 10
MCP10305111	8 to 13



HYDRAULIC, 4" STROKE



Part No.	Spring Range
MCP10402211	3 to 12
MCP10403211	5 to 10
MCP10405211	8 to 13

THERMOSTAT



192202

2 PIPE, HIGH VOLUME

Provides proportional single output, single setpoint, 2-pipe pneumatic room temperature control.

- Requires cover to complete installation

SIEMENS

Part No.	Action
192202	DA
192203	RA



192840

2 PIPE, CONVERSION KIT

Pneumatic room thermostat kit converts most existing pneumatic room thermostats to a Powerstar 192, 2-pipe, single setpoint unit.

- Includes cover and back plate

SIEMENS

Part No.	Action
192840	DA
192841	RA

ACTUATOR DAMPER



3312904

4" STROKE

Designed with a 4-inch stroke, the No. 4 pneumatic actuator is a rugged, metal-fabricated device that provides gradual or positive actuation of HVAC and fire/smoke dampers.

- UL recognized
- Replacement purposes, integral pivot mounting (no bracket)

SIEMENS

Part No.	Spring Range
3312904	3 to 7 psi
3312906	5 to 10 psi
3312961	8 to 13 psi



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TUBING

PLEXCO flame retardant polyethylene tubing is produced for pneumatic control applications where high quality plastic tubing with flame retardant and superior stress-crack resistance properties are required for long term, reliable performance. Its light weight and flexibility provide for ease of handling and installation. Tubing systems are marked with a white ink numbering system over the full length of the tubing. Flame Retardant indicates that the tubing materials have the ability to retard and extinguish the flame once its source is removed. Standard test results on actual extruded tubing meet or exceed the requirements of ASTM D-635.



PT532BLK

5/32" OD

- Nominal I.D.: .096"
- Nominal wall thickness: .030"
- Coil length: 500'
- Burst pressure: > 500 psi 75°F
- P532TT are twin connected tubes



Part No.	Color	ID Stripe	Length (Ft.)
PT532BLK	Black	None	500.0
PT532TT ¹	Black	None	500.0

¹ Twin connected tubes.



PT14BLK

1/4" OD

- Nominal I.D.: .170"
- Nominal wall thickness: .040"
- Coil length: 250'
- Burst pressure: > 500 psi 75°F
- PT14TT are twin connected tubes



Part No.	Color	ID Stripe	Length (Ft.)
PT14BLK	Black	None	250.0
PT14TT ¹	Black	None	250.0
PT14BLU	Black	Blue	250.0
PT14GRN	Black	Green	250.0
PT14ORG	Black	Orange	250.0
PT14RED	Black	Red	250.0
PT14VIO	Black	Violet	250.0
PT14WHT	Black	White	250.0
PT14YEL	Black	Yellow	250.0

¹ Twin connected tubes.



PT38BLK

3/8" OD

- Nominal I.D.: .250"
- Nominal wall thickness: .062"
- Coil length: 250'
- Burst pressure: > 500 psi 75°F



Part No.	Color	ID Stripe	Length (Ft.)
PT38BLK	Black	None	250.0
PT38BLU	Black	Blue	250.0
PT38GRN	Black	Green	250.0
PT38ORG	Black	Orange	250.0
PT38RED	Black	Red	250.0
PT38VIO	Black	Violet	250.0
PT38WHT	Black	White	250.0
PT38YEL	Black	Yellow	250.0



PT12BLK

1/2" OD

- Nominal I.D.: .375"
- Nominal wall thickness: .062"
- Coil length: 250'
- Burst pressure: > 300 psi 75°F



Part No.	Color	ID Stripe	Length (Ft.)
PT12BLK	Black	None	250.0



SNAT3165

NEOPRENE

- Pressure Range -20 to 20" W.C.
- Temperature Range 0°F to 160°F
- Black neoprene
- Use with air pressure switches (i.e.: Robertshaw 2374499)



Part No.	Size (In.)	Length (Ft.)
SNAT3165	3/16 ID	5.0

TUBING



SILICONE

- Temperature Range -100°F to 500°F
- NSF 51, Soft, Red
- 5 Foot Rolls

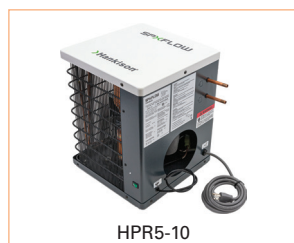


Part No.	Size (In.)	Color	Length (Ft.)	Working Pressure
SSRT185	1/8 ID x 5/16 OD	Red	5.0	25 psi
SSRT145	1/4 ID x 3/8 OD	Red	5.0	5 psi

ACCESSORIES

AIR DRYER

PLEXCO flame retardant polyethylene tubing is produced for pneumatic control applications where high quality plastic tubing with flame retardant and superior stress-crack resistance properties are required for long term, reliable performance. Its light weight and flexibility provide for ease of handling and installation. Tubing systems are marked with a white ink numbering system over the full length of the tubing. Flame Retardant indicates that the tubing materials have the ability to retard and extinguish the flame once its source is removed. Standard test results on actual extruded tubing meet or exceed the requirements of ASTM D-635.



AIR DRYER

- Eliminate water from your compressed air lines
- Improve the efficiency of your compressed air system
- Reduce operating costs
- Designed to cool your air supply to the specified dew point with

minimum pressure drop

- Two stage separator efficiently removes condensed moisture
- Automatic condensate drain
- Cooling temperatures are automatically and accurately controlled over a wide range of load and ambient conditions
- Voltage: 115/1/60



Part No.	Flow (SCFM)	Connection		Dimensions (In.)			Ship Wgt (Lbs.)
		Size (In.)	Type	H	W	D	
HPR5-10	5 to 10	3/8	OD	15.00	13.00	13.00	35.67
HPRJ15	15	3/8	OD	14.00	11.00	16.00	41.80
HPR25	25	3/4	MPT	22.00	15.00	15.00	95.00
HPR35	35	3/4	MPT	22.00	15.00	15.00	105.00



AIR COMPRESSOR, TANK DRAIN, ELECTRIC

Electrically operated automatic condensate drain for pneumatic control systems and all other compressed air services. Voltage: 110V/60Hz

DRAINVIEW PRODUCTS

Part No.	FPT (In.)	Max. Operating Pressure (psi)
DP150	1/2	150.0
DP3800	3/8	300.0

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VOLTAGE MONITOR



ICM450C

3-PHASE, DISPLAY

- Input: Voltage: 190-630 Vac; Voltage unbalance: Adjustable 2-25%; Control: 18-240 Vac
- Output: Relay, SPDT—Normally open: 10 amps; Normally closed: 6 amps
- Monitors front and back side of

system

- Programmable: 25-fault memory storage
- Independent high/low voltage settings for dual voltage compressor applications
- High temperature LCD to 167°F
- Simultaneous voltage display: No scrolling
- Line voltage programmable
- Reset: Auto or manual
- Monitors: Voltage unbalance, high/low voltage, phase loss, reversal, incorrect sequencing, rapid short cycling
- Does not require control voltage for operation



Part No.	Description
ICM450C	3-Phase Voltage Monitor w/Display



ICM402

3-PHASE, SINGLE SIDE ECONOMY

- Low cost, single side 3-phase protection
- Monitors for phase reversal, phase loss, phase unbalance % as a function of input voltage
- Less than 1 second phase loss response

- Automatic reset from a fault condition
- Input: Line voltage: 190-600 Vac; Control voltage: 115-230 Vac; 50/60 Hz
- Output: Relay, SPST normally open: 30 amps



Part No.	Description
ICM402	3-Phase Monitor



ICM493

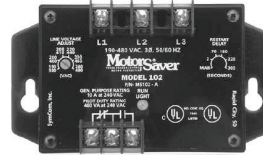
1-PHASE WITH SURGE PROTECTION

The ICM493 is an advanced, single-phase line voltage monitor with a bank of surge arresters for added protection against lightning strikes. Includes a built-in 40A contactor. Ideal for Mini-Splits or other single phase equipment.

- Voltage Setpoint: 200-240 VAC
- Anti-Short Cycle Delay: 0.5-10 Minutes
- Number of Surge Arresters Required for Operation: 0-5
- Number of Retries: 1-5, Auto
- Input Line Voltage: 180-264 VAC, 50-60 Hz
- Accuracy: +/- 2%, User Calibration
- Type: Contactor; 2-Pole
- Contactor Ratings: 40A FLA, 240A LRA
- NEMA Rated 3R Outdoor Enclosure



Part No.	Description
ICM493	Single Phase Monitor With Surge Protection



102A

3-PHASE

Auto-ranging, dual-range voltage monitor that protects 190-480 VAC, 50/60Hz motors regardless of size. The product provides a user selectable nominal voltage setpoint and the voltage monitor automatically selects between the

200V and 400V range. Includes advanced single LED diagnostics. Five different light patterns distinguish between faults and normal conditions. This unique microcontroller-based voltage and phase-sensing device constantly monitors the 3-phase voltages to detect harmful power line conditions. When a harmful condition is detected, the MotorSaver's output relay is deactivated after a specified trip delay. The output relay reactivates after power line conditions return to acceptable levels.

- Low voltage trip, single-phase trip, reverse-phase trip
- High voltage trip for 250A (optional for 102A, 201A)
- Fixed 6% voltage unbalance trip
- 10A 240VAC General Purpose
- Adjustable or manual restart delay (102A and 250A only)



Part No.	Description	Switch
102A	3-Phase Voltage Monitor, Panel Mount	SPDT
201A	3-Phase Voltage Monitor, 8-Pin Socket mount	SPDT
250A	3-Phase Voltage Monitor, Panel Mount	DPDT

ELECTRICAL DEVICES AND ACCESSORIES

POWER MONITORING



R310AD1

- Switches upon activation of current in sensed line



Part No.	Input Range	Output Voltage
R310AD1*	0.5 to 200 Amps	24
R310AE2*	0.75 to 200 Amps	120/240



RIBXGTA

ENCLOSED SPLIT CORE SENSOR

- Operating Temperature: -30 to 140°F
- Max Sense Voltage: 600 Vac
- Adjustable threshold
- Mounting/Installation: removable mounting tab provided. The wire clamp

locks against the load wire, securing the unit in place.



Part No.	Input Range	Output	Switch
RIBXGTA	0.75 to 150 A	30 Vac/dc; 0.4 Amps Max (Terminal Strip, Accepts 14-22 AWG Wire)	Solid State Switch SPST



H608

SENSOR

Application:

- Detect belt loss, coupling shear and motor failure; ideal for fan and pump status
- Replace pressure switches-mechanical devices
- Verify lighting circuit loads and

run times

- Monitor critical motors
- Monitor industrial process equipment status

Features:

- Output status LEDs for easy setup and local indication
- 100% solid state; no mechanical parts
- Adjustable setpoint
- Output amps rated at 30 Vac/Vdc



Part No.	Input Range
H608	1.25 to 50 Amps
908H	2.5 to 135 Amps



RP50

SENSOR

Senses air handler motor amperage to initiate humidifier or electronic air cleaner operation

- Requires minimum 4 amps to activate relay



Part No.	Voltage
RP50	24
RP51	120



H735

SENSOR RELAY

The Hawkeye 735 Series is the ideal solution for the automation installer. It combines a current switch and relay into a single package, reducing the space required for total control of fans and pumps. The integral current

switch and relay operate independently of one another. H735 facilitates the functions of start/stop and status with one device instead of two.

Applications

- Starting/stopping and monitoring positive status of fan and pump motors
- Replaces pressure switches and other electromechanical devices

Features

- Reduces number of components installed; fits better in small starter enclosures
- Commands relay and status in a single unit
- Replaces pressure switches and other electromechanical devices
- Detects belt loss and motor failure... ideal for fan and pump status



Part No.	Input Range
H735	1 to 135 Amps



RIBXKF

SENSOR ASSEMBLY

The X Series contains current sensors with or without a 10 or 20 amp relay. An internal 10 amp relay can be used to activate an external contactor, and currents up to 150 amps are sensed externally with a solid or split current sensing ring.

Other units control and sense up to 20 amp loads, without the use of an external current ring, greatly reducing installation time. Externally visible LEDs indicate the status of the relay coil and current sensor trigger. Sensor-relay X Series models have been packaged to save the installer the time, trouble and expense of buying separate components (current sensor, relay, LED indicator, socket, mounting rail and housing) and assembling them on the job or at the shop.

- Adjustable threshold for sensor/relay combinations, fixed threshold for solid core sensor RIBXKF

Functional Devices, Inc. **RIB®**

Part No.	Description	Input Range	Switch	Inductive Load (VA)	Override Switch
RIBXKF	Sensor	0.25 to 150 A	SPNO	-	-
RIBX24SBA	Internal Sensor/Relay	0.50 to 20 A	SPST	1110	Yes
RIBXLSRA	External Sensor/Relay	1.25 to 150 A	SPST	480	Yes

TRANSFORMER

Y65G130

MULTI-MOUNT

- Y65 Series transformers have energy limiting overload protection ONLY; all others have integral circuit breakers
- Y65G130 is a low voltage isolation transformer for sensitive digital

circuitry

Johnson Controls

Part No.	Power (Va)	Voltage		Mount	Comments
		Primary	Secondary		
Y65G130*	40	24	24	Foot	Energy limiting overload, 8" primary, 30" secondary leads
Y65T420*	40	120/208-240	24	Plate	Conduit hub, energy limiting overload, 8" primary, 8" secondary leads
Y65F420*	40	277/480	24	Plate	Conduit hub, energy limiting overload, 8" primary, 8" secondary leads

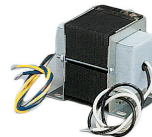


AT87A1106

FOOT MOUNT NEMA STANDARD

Part No.	Power (Va)	Voltage		Mount	Comments
		Primary	Secondary		
AT87A1106	50	120/208/240	24	Foot, Plate	Screw Terminal Secondary
AT87A1189	48	277	24	Foot	12" Lead Secondary
AT87A1155	48	480	24	Foot	12" Lead Secondary

resideo



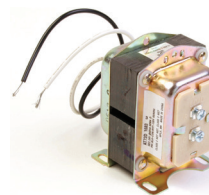
AT88A1005

FOOT MOUNT

- Foot mount
- Connection: 12" lead wires

Honeywell Home

Part No.	Power (Va)	Voltage		Mount
		Primary	Secondary	
AT88A1005	75	120	24	Foot
AT88A1047	75	480	24	Foot



AT72D1683

MULTI-MOUNT NEMA STANDARD

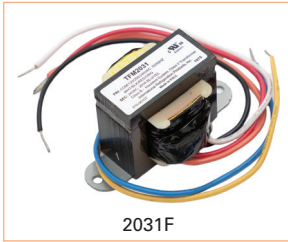
- Foot mounted
- Screw terminal secondary

resideo

Part No.	Power (Va)	Voltage		Mount	Comments
		Primary	Secondary		
AT72D1683	40	120	24	Foot, Plate, Clamp	Screw Terminal Secondary
AT72D1691	40	208/240	24	Foot, Plate, Clamp	Screw Terminal Secondary

⚠ *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

TRANSFORMER



2031F

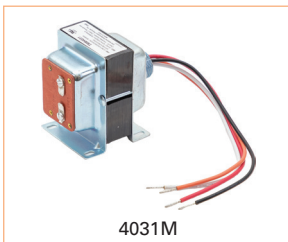
FOOT MOUNTED

Open construction, wire leads.

- Safety agency approved
- Inherently limited design provides protection from short circuiting



Part No.	Power (Va)	Voltage	
		Primary	Secondary
2031F	20	120/208/240	24
4031F	40	120/208/240	24
40271F	40	277	24
5031F	50	120/208/240	24
5032F	50	120/208/240	24/12/2.5
10048PC	100	208-240	120/24



4031M

MULTI-MOUNT

Closed construction, 4" x 4" plate.

- Optional 3-way mounting for maximum flexibility: foot, plate or conduit
- Safety agency approved
- Welded



laminations for quiet operation

Part No.	Power (Va)	Voltage	
		Primary	Secondary
4031M	40	120/208/240	24
5031M	50	120/208/240	24
7541M ¹	75	120/208/240/480	24
TMM15052	150	240/480	120/240

¹ In-Line Fuse



AT140A1000

MULTI-MOUNT

- 9" lead wire primary connection
- Screw terminal secondary connection
- Foot, plate (2" x 4" or 4" x 4" outlet box) clamp or panel mounting

60 Hz

only

resideo

Part No.	Power (Va)	Voltage	
		Primary	Secondary
AT140A1000	40	120	24
AT140A1018	40	120/208/240	24
AT150A1007	50	120/208/240	24
AT175A1008	75	120/208/240	24



5041C

CIRCUIT BREAKER

- All models feature a UL recognized manual reset circuit breaker
- Safety agency approved
- Foot mounted



Part No.	Power (Va)	Voltage		Mount
		Primary	Secondary	
5041C	50	120/208/240/480	24	Foot
7541C	75	120/208/240/480	24	Foot
10041C	100	120/208/240/480	24	Foot



AT150F1022

CIRCUIT BREAKER

Intended for use in systems with predictable, uniform loads. Includes button for manually resetting the circuit breaker.

- Foot mounted

resideo

Part No.	Power (Va)	Voltage		Mount
		Primary	Secondary	
AT150F1022	50	120/208/240	24	Foot
AT150F1030	50	208/277/480	24	Foot
AT175F1023	75	120/208/240	24	Foot
AT175F1031	75	208/277/480	24	Foot



POP3

Li'L POPPER CONTROL CIRCUIT BREAKER

Saves the technician dozens of blown fuses while he diagnoses control circuit failures. Simply plug the leads in the ATC fuse receptacle on the board, and manually reset the Li'L Popper each time the breaker blows. Has a

quick setting thermal cut out. Self adhering backing allows the contractor to leave the unit on the job site overnight if he is out of fuses. For residential or commercial amp applications.



Part No.	Description
POP3	3 Amp, 24-250 Vac
POP5	5 Amp, 24-250 Vac

JOHNSON CONTROL



Y63T220



Part No.	Power (Va)	Voltage		Mount
		Primary	Secondary	
Y63T220*1	50	120/208-240	24	Plate
Y63F220*	50	277/480	24	Plate
Y66T120*	75	120/208-240	24	Foot
Y66F120*	75	277/480	24	Foot

1 Circuit breaker

FAN CONTROL CENTER



R8239A1052

ENCLOSED RELAY

Provides low voltage control of line voltage fan motors and auxiliary circuits in heating, cooling or heating-cooling circuits.

- Enclosed relay
- Power contact

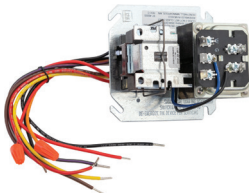
rating: 6.9 full load amps 240 Vac

resideo

Part No.	Switch	Voltage		Power (Va)
		Primary	Secondary	
R8239A1052	SPDT	120	26.5	40
R8239B1076	DPDT	120/208/240	26.5	50

OPEN RELAY

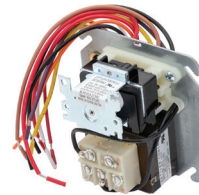
Contact rating: 6 full load amps 240 Vac.



R8285B1053

Honeywell Home

Part No.	Switch	Voltage		Power (Va)
		Primary	Secondary	
R8285B1053	DPDT	120/208/240	26.5	40
R8285D5001	DPST	120	26.5	50



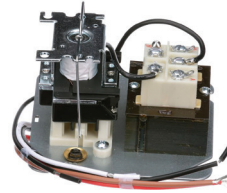
24010

OPEN RELAY

- 40 VA transformer
- 6.9 full load amp relay contacts 240V



Part No.	Switch	Voltage	
		Primary	Secondary
24010*	DPDT	120/240	24



90113

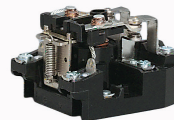
OPEN RELAY

- 40 VA transformer
- 6.9 full load amp relay contacts 240V



Part No.	Switch	Voltage		Mars Equivalent
		Primary	Secondary	
90113	SPDT	120	24	24013

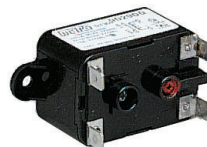
RELAY, SWITCHING



43016

COVER

Part No.	Description
43016*	Metal Dust Cover



90290Q

SPNO

- Quick connect terminals
- 50/60 Hz



Part No.	Contact Rating (Amps)	Coil Voltage
90290Q	8	24 Vac
90291Q	8	120
90292Q	8	208/240

*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

ELECTRICAL DEVICES AND ACCESSORIES

RELAY, SWITCHING



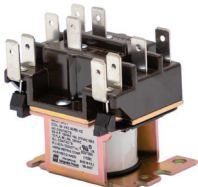
90293Q

SPDT

- Quick connect terminals
- 50/60 Hz

IRP International
Refrigeration Products

Part No.	Contact Rating (Amps)	Coil Voltage
90293Q	8	24 Vac
90294Q	8	120
90295Q	8	208/240



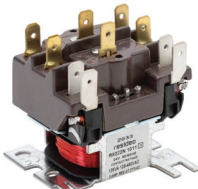
90340

DPDT

- General purpose switching
- 50/60 Hz

IRP International
Refrigeration Products

Part No.	Pole Usage	Coil Voltage
90340	Power-Power	24 Vac
90341	Power-Power	120
90342	Power-Power	208/240
90343	Power-Pilot	24 Vac
90345*	Power-Pilot	208/240



R8222B1067

GENERAL PURPOSE

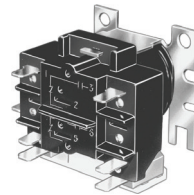
Provides general purpose and heavy duty switching for refrigeration and air conditioning equipment, appliances, vending machines and similar applications.

- Power poles: 6 full load amps 277 Vac

- Pilot poles: 125 VA 480 Vac
- R4228: 12 full load amps 277 Vac

resideo

Part No.	Switch	Pole A	Pole B	Coil Voltage
R8222B1067	SPDT	Power	None	24 Vac
R8222D1014	DPDT	Power	Power	24 Vac
R8222N1011	DPDT	Pilot	Pilot	24 Vac
R8222V1003	DPDT	Pilot	Power	24 Vac
R4222B1082	SPDT	Power	None	120
R4222D1013	DPDT	Power	Power	120
R4222D1021	DPDT	Power	Power	240
R4222N1002	DPDT	Pilot	Pilot	120
R8228B1012	SPDT	Power	Power	24 Vac



R8229A1005

ELECTRIC HEAT

Provides conventional on-off control of heating elements and fan in an electric furnace.

- Maximum temperature rating: 165°F
- Coil voltage: 24 Vac

Honeywell Home

Part No.	1st Pole Resistive Amps (at 277 Vac)	Number 5 kW Elements	Coil Voltage	Includes
R8229A1005	25	2	24 Vac	
R8229A1021	25	2	24 Vac	Mounting Plate, Hardware
R8246A1038	48	4	24 Vac	Mounting Plate, Hardware



90370

HEAVY DUTY

- Switches 18 amp resistive loads
- 50/60 Hz

IRP International
Refrigeration Products

Part No.	Contact Rating (Amps)	Switch	Coil Voltage
90370	8	SPDT	24 Vac
90380	8	SPNO-SPNC	24 Vac



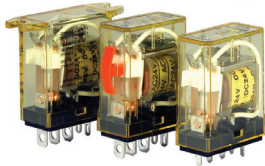
43053

ENCLOSED

- 50/60 Hz
- 3/16" blade terminals

MARS

Part No.	Switch	Contact Rating (Amps)	Coil Voltage
43053*	DPDT	12	24 Vac
43056*	3PDT	11	24 Vac
43057*	3PDT	11	120
43058*	3PDT	11	240
43063*	DPDT	12	24 Vac
43066*	3PDT	11	24 Vac
43067*	3PDT	11	120
43068*	3PDT	11	240



RH1BUAC24V

ENCLOSED

RH series uses silver cadmium oxide contacts to help reduce voltage arcing. Available in 1 to 4 poles, with either .187" blade plug-in (stock) or PCB terminals (special order). Options include manual check buttons, LED

indicators, and top flange covers for direct surface mounting. All models carry worldwide approvals including UL, CSA, TUV and CE. Using a standard terminal arrangement, the RH series will plug into many competitors' sockets.

- Compact midget size saves space
- High switching capacity
- LAC, ULAC models feature indicator light, RH3BULCAC24V has indicator light and momentary check button



Part No.	Switch	Contact Rating (Amps)	Coil Voltage
RH1BUAC24V	SPDT	10	24 Vac
RH1BULAC24V	SPDT	10	24 Vac
RH1BUAC120V	SPDT	10	120
RH1BULAC120V	SPDT	10	120
RH2BUAC24V	DPDT	10	24 Vac
RH2BULAC24V	DPDT	10	24 Vac
RH2BUAC120V	DPDT	10	120
RH2BULAC120V	DPDT	10	120
RH2BULAC240V	DPDT	10	240
RH3BULAC24V	3PDT	7.5	24 Vac
RH3BULCAC24V	3PDT	7.5	24 Vac
RH3BULAC120V	3PDT	7.5	120
RH3BULAC240V	3PDT	7.5	240
RH4BULAC24V	4PDT	7.5	24 Vac
RH4BUAC120V	4PDT	7.5	120
RH4BULAC120V	4PDT	7.5	120



SH1B05

SOCKET

- Worldwide Approvals: UL, CSA, TUV, CE
- UL94-V0 flame resistant material
- Unbreakable nylon construction
- Hold-down springs and clips available for most models
- Receptacles

with four contact points per blade



Part No.	Description
SH1B05	Socket, DIN/Surface mount, RH1B
SH3B05	Socket, DIN/Surface mount, RH3B, RH2LB
SH4B05	Socket, DIN/Surface mount, RH4B
SH2B05	Relay Socket, 8 Pin, 2 Pole, 10 A, 300V, DIN Rail



17015

TOTALLY ENCLOSED

- Replaces WR/Essex 90-12 relays



Part No.	Contact Rating (Amps)	Switch	Coil Voltage
17015*	18	SPST	24 Vac
17018*	18	SPDT	24 Vac



R8225A1017

ADD-A-RELAY

Provides control of line voltage fan motors and auxiliary circuits in heating, cooling or heating-cooling systems.

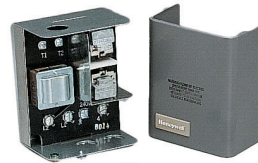
- Contact rating: 7.0 full load amps 240 Vac
- Auxiliary rating: 2.0 full load amps

240 Vac

- Coil voltage: 24 Vac

Honeywell Home

Part No.	Coil Voltage	Switch
R8225A1017	24 Vac	SPDT
R8225D1003	24 Vac	DPST, Normally Open, 1-Main, 1-Auxiliary



R847A1085

HEAVY DUTY

Provides switching for high-current loads such as cooling compressors.

- Contact rating: 10 full load amps 240 Vac
- Integral transformer for control circuit

- Coil voltage: 24V

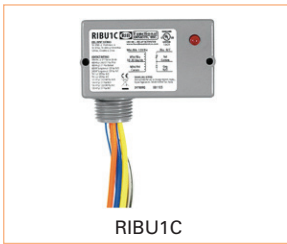
Honeywell Home

Part No.	Input Voltage	Switch
R847A1085	120	DPST



*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

RELAY, SWITCHING



RELAY IN A BOX, ENCLOSED

- In enclosed plastic box
- All wires exiting from nipple
- Selected models have override switch which allows manual control of switching action
- Pilot duty rated at 277 Vac
- RIBU1SM is set up to send a

switch monitoring signal to a controller

Functional Devices, Inc. **RIB®**

Part No.	Coil Voltage	Switch	Resistive Amps	Inductive Load (VA)
RIBU1C	10 - 30 ac/dc, 120 ac	SPDT	10	480
RIBU2C	10 - 30 ac/dc, 120 ac	2-SPDT	10	480
RIBU1S ¹	10 - 30 ac/dc, 120 ac	SPNO	10	480
RIBU1S-NC ¹	10 - 30 ac/dc, 120 ac	SPNC	10	480
RIBH1S ¹	10 - 30 ac/dc, 208/240/277 ac	SPNO	10	480
RIBH1C	10 - 30 ac/dc, 208/240/277 ac	SPDT	10	480
RIB2401D	24 ac/dc, 120 ac	DPDT	10	180
RIB2401B	24 ac/dc, 120 ac	SPDT	20	1110
RIB24P	24 ac/dc	DPDT	20	1110
RIB243P	24 ac/dc	3PNO	20	1110
RIB01P	120 ac	DPDT	20	1110
RIB02P	208/240/277 ac	DPDT	20	1110

¹ Override switch



RELAY IN A BOX, PANEL STYLE

Panel style relays are exposed track mount suitable for wiring enclosures.

- Selected models have override switch which allows manual control of

switching action

Functional Devices, Inc. **RIB®**

Part No.	Coil Voltage	Switch	Resistive Amps	Inductive Load (VA)
RIBMU1C	10 - 30 ac/dc, 120 ac	SPDT	15	480
RIBMU2C	10 - 30 ac/dc, 120 ac	2-SPDT	15	480
RIBM24C	24 ac/dc	SPDT	15	470
RIBM24S ¹	24 ac/dc	SPST	15	470

¹ Must cut appropriate jumper to select N.O. or N.C.. Override switch.



RELAY IN A BOX, T STYLE

T style relays have a class 2 wiring compartment with terminal strips for high/low voltage separation.

- Wires exit from nipple

Functional Devices, Inc. **RIB®**

Part No.	Coil Voltage	Switch	Resistive Amps	Inductive Load (VA)
RIBH1CW	10 - 30 ac/dc, 208/240/277 ac	SPDT	15	480



ELECTRIC HEAT

Use with 2-wire, 24 Vac thermostat to control electric heating equipment such as baseboards, ceiling cables and duct heaters.

Honeywell Home

Part No.	Switch	Voltage Primary	Application
R841C1227	SPST	240	Controls 1 Load, Integral Transformer
R841E1068	DPST	240	Controls 2 Loads, Integral Transformer



SWITCHING RELAY

Provides intermediate switching of a line voltage device from a low voltage controller.

- Integral transformer provides low voltage power for control circuit

Honeywell Home

Part No.	Voltage	Switch	Application	FLA
RA889A1001	120	SPDT + PowerPile® rated low voltage SPST relay	1-Line Voltage Load, 1-Low/Millivolt Load, 2- or 3-Wire Control	15 120 Vac
RA89A1074	120	SPST	1-Line Voltage Load, 2-Wire Control	5.1 240 Vac
RA832A1066	120	DPST	1-Line Voltage Load, 1-Low/Millivolt Load, 2-Wire Control	3.7 240 Vac
R845A1030	120	DPST	1-Line Voltage Load, 1 Low Voltage Load	-

CONTACTOR, IEC



CA7910120

IEC CONTACTOR, NON-REVERSING, 3 POLE, SERIES CA7

The CA7 power control contactors control motors up to 75HP, in frame sizes ranging from 1-3/4" to a maximum of 2-3/4" wide. Because of its modular design, CA7 is flexible and easy to use. All CA7

contactors use the same accessories, reducing the need to stock additional inventory. They are also mechanically and electrically compatible with Sprecher + Schuh's CEP7 electronic overload relay and KT7 motor circuit controller. This provides easy, clean installation for a variety of motor starter applications.

- CA7 contactors meet IEC, UL and CSA standard requirements
- Non-reversing, 3 poles, opn type only, with AC Coil
- CA7-30 through 97 contactors are designed with two power terminals for all three poles. This simplifies power wiring of interconnected contactors in reversing, reduced voltage and two-speed applications.



Part No.	HP	Voltage	Resistive Amps	Auxiliary Switch	Includes
CA7910120	2 @ 230 V, 5 @ 460 V	230/460/3/60	9	1 NO	120 V Coil
CA7910220W	2 @ 230 V, 5 @ 460 V	230/460/3/60	9	1 NO	208-240 V Coil
CA7910480	2 @ 230 V, 5 @ 460 V	230/460/3/60	9	1 NO	480 V Coil
CA71210220W	3 @ 230 V, 7-1/2 @ 460 V	230/460/3/60	12	1 NO	208-240 V Coil
CA71210120	3 @ 230 V, 7-1/2 @ 460 V	230/460/3/60	12	1 NO	120 V Coil
CA71210480	3 @ 230 V, 7-1/2 @ 460 V	230/460/3/60	12	1 NO	480 V Coil
CA71610120	5 @ 230 V, 10 @ 460 V	230/460/3/60	16	1 NO	120 V Coil
CA71610220W	5 @ 230 V, 10 @ 460 V	230/460/3/60	16	1 NO	208-240 V Coil
CA71610480	5 @ 230 V, 10 @ 460 V	230/460/3/60	16	1 NO	480 V Coil
CA72310220W	7-1/2 @ 230 V, 15 @ 460 V	230/460/3/60	23	1 NO	208-240 V Coil
CA72310480	7-1/2 @ 230 V, 15 @ 460 V	230/460/3/60	23	1 NO	480 V Coil
CA73000220W	10 @ 230 V, 20 @ 460 V	230/460/3/60	30	None	208-240 V Coil
CA73000480	10 @ 230 V, 20 @ 460 V	230/460/3/60	30	None	480 V Coil
CA74300220W	15 @ 230 V, 30 @ 460 V	230/460/3/60	43	None	208-240 V Coil
CA75500220W	20 @ 230 V, 40 @ 460 V	230/460/3/60	55	None	208-240 V Coil



CEP7EEDB

CEP7 SOLID STATE OVERLOAD RELAYS

CEP7-EE is a full-featured, selectable trip class (10, 15, 20 & 30) 3-phase application overload relay with provision for field-mountable modules to handle remote reset, ground fault and other

functions previously available only in higher priced electronic overload relays. Manual reset or automatic reset can be selected with dip switches on the CEP7-EE models.

CEP7-1EF has an Adaptive-mount Expansion Port that provides for Ground fault/Jam and Remote Reset. It also allows for Intelli-button options.



Part No.	Amps
CEP7EEDB	1.0-5.0
CEP71EFDB	3.2-16.0
CEP71EFCB	1.0-5.0
CEP71EFEB	5.4-27.0



CA7PA11

CS7 CONTROL RELAYS

Compact and designed for heavy-duty industrial control applications where reliability and versatility are essential. Interchangeable coils on the CS7 and CA7 lines mean less inventory. The CS7 is the standard relay with a general purpose UL

rating of 25 amps. Snap-on design.

(CS7)

- Electronic compatible standard contacts down to 17V, 5mA, bifurcated version 5V, 3mA
- Mechanically linked between N.O. and N.C. poles and to the control relay poles (excluding L types).
- Several terminal numbering choices even for models with equal function

(CA7)

- Two way numbering for right or left mounting on the contactor
- Electronic compatible contacts 17V, 10mA
- Mirror contact performance to control relay poles



Part No.	Auxiliary Switch	Description
CA7PA11	1 NO / 1 NC	Side Mount
CS7PV22	2 NO / 2 NC	Front Mount

ELECTRICAL DEVICES AND ACCESSORIES

CONTACTOR, IEC



CEP7EPB

IEC CONTACTOR ACCESSORIES



Part No.	Description
CEP7EPB	Separate Mounting Base for CEP7ED1*B
CEP7EPD	Separate Mounting Base for CEP7EE*D

CONTACTOR, DEFINITE PURPOSE

COMPACT 1 POLE W/SHUNT

- Non-reversing contactor
- Open with metal mounting plate
- B: Binding Head Screw and Quick Connect Terminals (Side by Side)
- D: Screw/Pressure Plate and Quick Connect Terminals (Side by Side)
- E: Box Lugs (Posidrive Setscrew)
- F: Box Lugs (Posidrive Setscrew) and Quick Connect Terminals (Side by Side)
- J: Box Lugs (Posidrive Setscrew) and Quick Connect Terminals (Vertical In-Line)
-



C25CNB125T

COMPACT 1 POLE W/SHUNT



Part No.	FLA	Coil Voltage
C25CNB125T	25	24 Vac
C25CNB125A	25	110/120
C25CNB130T	30	24 Vac
C25CNB130A	30	110/120
C25CNB130B	30	208/240
C25CNB140T	40	24 Vac



C25BNB220T

COMPACT 2 POLE



Part No.	FLA	Coil Voltage
C25BNB220T	20	24 Vac
C25BNB220A	20	110/120
C25BNB220B	20	208/240
C25BNB225T	25	24 Vac
C25BNB225A	25	110/120
C25BNB230T	30	24 Vac
C25BNB230A	30	110/120
C25BNB230B	30	208/240
C25BNB230H	30	277
C25BNB230C	30	480
C25BNB240T	40	24 Vac
C25BNB240A	40	24 Vac
C25BNB240A	40	110/120
C25BNB240B	40	208/240



C25DND230B

2 POLE



Part No.	FLA	Coil Voltage
C25DND230B	30	220
C25DNF240T	40	24 Vac



C25DND325T

3 POLE

- 100% increase in electrical and mechanical life - 200,000 and 500,000 operations
- RoHS compliance
- cULus certification
- Panel space savings due to shallower depth

- Load-side coil quick connection for easy installation



Part No.	FLA	Coil Voltage
C25DND325T	25	24 Vac
C25DND325A	25	110/120
C25DND325B	25	208/240
C25DND330T	30	24 Vac
C25DND330A	30	110/120
C25DND330B	30	208/240
C25DNF330T	30	24 Vac
C25DNF330A	30	110/120
C25DNF330B	30	208/240
C25DNF340T	40	24 Vac
C25DNF340A	40	110/120
C25DNF340H	40	277
C25DNF340B	40	208/240
C25DNF340C	40	440/480
C25DNJ350T	50	24 Vac
C25DNJ350A	50	110/120
C25DNJ350B	50	208/240
C25FNF360T	60	24 Vac
C25FNF360A	60	110/120
C25FNF360B	60	208/240
C25FNF375T	75	24 Vac
C25FNF375A	75	110/120
C25FNF375B	75	208/240
C25GNF390T	90	24 Vac
C25GNF390A	90	110/120
C25GNF390B	90	208/240
C25HNE3120A	120	110/120
C25HNE3120B	120	208/240



C25END430A

4 POLE

Powering Business Worldwide

Part No.	FLA	Coil Voltage
C25END430T	30	24 Vac
C25END430A	30	110/120
C25END430B	30	208/240
C25ENF440T	40	24 Vac
C25ENF440A	40	110/120
C25ENF440B	40	208/240



C320KG1

SIDE MOUNTED AUXILIARY CONTACT

- 100% increase in electrical and mechanical life - 200,000 and 500,000 operations
- RoHS compliance
- cULus certification
- Panel space savings due to shallower depth

- Load-side coil quick connection for easy installation



Powering Business Worldwide

Part No.	Circuit	Type	Use with
C320KG1	With Standard Pressure Plate Terminals	1-NO	15-75 Amps Contactor
C320KG3	With Standard Pressure Plate Terminals	1-NO 1-NC	15-75 Amps Contactor
F1C320DPG01	With Pressure Plate and Quick Connect Terminals	1-NC	90 Amps Contactor
F1C320DPG10	With Pressure Plate and Quick Connect Terminals	1-NO	90 Amps Contactor
F1C320DPG11	With Pressure Plate and Quick Connect Terminals	1-NO 1-NC	90 Amps Contactor
C320KGS20	With Standard Pressure Plate Terminals	1-NO	120-360 Amps Contactor
C320KGS21	With Standard Pressure Plate Terminals	1-NC	120-360 Amps Contactor
C320KGS22	With Standard Pressure Plate Terminals	1-NO 1-NC	120-360 Amps Contactor
C320KGS31	N/A	1-NO	120 Amps Contactor
C320KGS32	N/A	1-NO 1-NC	120 Amps Contactor

ELECTRICAL DEVICES AND ACCESSORIES

CONTACTOR, DEFINITE PURPOSE



SIDE MOUNTED SNAP SWITCH



Powering Business Worldwide

Part No.	Circuit	Amps	Type
C320SNP11	With Quick Connect Terminals	15-75	1-NO 1-NC
C320SNP22	With Quick Connect Terminals	15-75	2-NO 2-NC



REPLACEMENT COIL



Powering Business Worldwide

Part No.	Class	Coil Voltage
927562	90A, 2 and 3 Pole	208/240
9-3079-3	25-40A, 4 Pole	104/120
9-3185-1	15-40A, 2 and 3 Pole (Series D1)	110/120
9-3186-1	50A, 2 and 3 Pole (Series D1)	110/120
931852	15-40A, 2 and 3 Pole (Series D1)	208/240
931856	15-40A, 2 and 3 Pole (Series D1)	24 Vac
9-3256-1	25-40A, 4 Pole	104/120
932562	25-40A, 4 Pole	208/240
932566	25-40A, 4 Pole	24 Vac
932563	25-40A, 4 Pole	440/480



2 POLE

COPELAND

Part No.	FLA	Coil Voltage
912202500*	25	24 Vac
912203000*	30	24 Vac
912203001*	30	120
912203002*	30	208/240
912204000*	40	24 Vac



3 POLE

COPELAND

Part No.	FLA	Coil Voltage
912302500*	25	24 Vac
912302501*	25	120
912302502*	25	208/240
912303000*	30	24 Vac
912303001*	30	120
912303002*	30	208/240
912304000*	40	24 Vac
912304001*	40	120
912304002*	40	208/240
912305000*	50	24 Vac
912305001*	50	120
912305002*	50	208/240
912306001*	60	120
912306002*	60	208/240
912307501*	75	120
912307502*	75	208/240
912312001*	120	120
912312002*	120	208/240
912320001*	200	120
912320002*	200	208/240



AUXILIARY SWITCH

COPELAND

Part No.	Application	Switch
912000112*	15 to 75 Amp	1 NO/1 NC
912000113*	15 to 75 Amp	2 NO
912000120*	120 to 360 Amp	1 NC
912000121*	120 to 360 Amp	1 NO/1 NC



1 POLE WITH SHUNT

Features for F Series

- Furnas style definite purpose
- UL recognized
- Heavy duty silver contacts

IRP International
Refrigeration Products

Part No.	FLA	Coil Voltage
DP13024F	30	24 Vac

Continued on next page

Part No.	FLA	Coil Voltage
DP130120F	30	120
DP130240F	30	240
DP14024F	40	24 Vac



DP22024F

2 POLE

Features for F Series

- Furnas style definite purpose
- UL recognized
- Heavy duty silver contacts



Part No.	FLA	Coil Voltage
DP22024F	20	24 Vac
DP220120F	20	120
DP220240F	20	240
DP23024F	30	24 Vac
DP23024LF ¹	30	24 Vac
DP230120F	30	120
DP230240F	30	240
DP230277F	30	277
DP230480F	30	480
DP24024F	40	24 Vac
DP240120F	40	120
DP240240F	40	240

¹ With Lugs

DP33024F

3 POLE

Features for F Series

- Furnas style definite purpose
- UL recognized
- Heavy duty silver contacts



Part No.	FLA	Coil Voltage
DP33024F	30	24 Vac
DP330120F	30	120
DP330240	30	240
DP330240F	30	240
DP330277F	30	277
DP330480F	30	480
DP34024F	40	24 Vac
DP340120F	40	120
DP340240F	40	240
DP340480F	40	480
DP35024F	50	24 Vac
DP350120F	50	120
DP350240F	50	240
DP36024F	60	24 Vac
DP360120F	60	120
DP360240F	60	240
DP37524F	75	24 Vac
DP375120F	75	120

Continued on next page

Part No.	FLA	Coil Voltage
DP375240F	75	240
DP39024F	90	24 Vac
DP390120F	90	120
DP390240F	90	240
DP312024	120	24 Vac
DP3120120	120	120
DP3120240	120	240



DP44024F

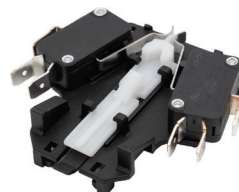
4 POLE

Features for F Series

- Furnas style definite purpose
- UL recognized
- Heavy duty silver contacts



Part No.	FLA	Coil Voltage
DP44024F	40	24 Vac
DP440120F	40	120
DP440240F	40	240



1950243

AUXILIARY CONTACT SWITCH

Use with NEW IRP contactors F Series



Part No.	Description
1950243	For All 3 and 4 Pole Contactors below 75 Amps
1950244	For All 3 Pole Contactors 75 to 120 Amps

*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

MOTOR STARTER



14CUB32AA

SOLID STATE ELEMENT

Class 14 industrial magnetic starters are designed for across the line starting of single phase and polyphase motors. Across the line or full voltage starting is used when motor starting torque can be applied safely and current inrush

does not produce an objectional voltage drop. All starters are supplied with a NO holding interlock that in conjunction with an appropriate pilot device will provide low voltage protection or release. ESP200™ starters (14*U models only; 14*S models provide ESP100 overloads) combine the rugged NEMA contactors with a state of the art solid state overload that provides phase loss, phase unbalance ground fault protection. It offers the user greater motor protection and extended life in heavy duty applications. The ESP200™ ultimately results in a cost savings to the user.

- True phase loss protection; trips within 3 seconds
- Phase unbalanced prevents motor running inefficiently
- Ground fault trip when selected
- Selectable trip class 5, 10, 20 or 30
- Reset trip can be selected
- Auto/Manual restart
- Easy to select and use, Dip Switch selectable
- Overload is self powered, no need for external power source

Furnas

Part No.	Enclosure	NEMA Rating	Size	Amps	Coil Voltage
14CUB32AA	Open	0	0	0.75 - 3.4A	120/240
14CUB32BA	NEMA 1	0	0	0.75 - 3.4A	120/240
14CUC32AA	Open	0	0	3 - 12A	120/240
14CUC32BA	NEMA 1	0	0	3 - 12A	120/240
14CUC32BJ	NEMA 1	0	0	3 - 12A	24 Vac
14CUD32BA	NEMA 1	0	0	5.5 - 22A	120/240
14DUC32AA	Open	1	1	3 - 12A	120/240
14DUC32BA	NEMA 1	1	1	3 - 12A	120/240
14DUD32AA	Open	1	1	5.5 - 22A	120/240
14DUD32BA	NEMA 1	1	1	5.5 - 22A	110/240
14DUE32AC	Open	1	1	10-40A	220/440
14DUE32BA	NEMA 1	1	1	10-40A	120/240
14EUE32AA	Open	-	1 3/4	10-40A	110/240
14EUE32BA	NEMA 1	1	1 3/4	13 - 27A	110/240
14FUF32BA	NEMA 1	2	2	13 - 52A	110/240
14GUG32AA	Open	-	2 1/2	25 - 100A	120/240
14GUG32BA	NEMA 1	1	2 1/2	25 - 100A	120/240
14HUG32AA	Open	3	3	25 - 100A	120/240
14HUG32BA	NEMA 1	3	3	25 - 100A	120/240



75DF14

CONTACT KIT

Kit includes 1 pole stationary and movable contacts and contact springs. Use with Models P or S (4th position in part). Fits classes 14, 17, 18, 22, 25, 26, 30, 32, 40, 43, 83, 84, 87, 88

Furnas

Part No.	NEMA Rating
75DF14	1
75FP14	2
75HF14	3



75D73070J

AC COIL

Use with Models P or S (4th position in part). Fits classes 14, 17, 18, 22, 25, 26, 30, 32, 40, 43

Furnas

Part No.	NEMA Rating	Voltage
75D73070J	00 - 2.5	24
75D73070A	00 - 2.5	110-120/220-240
75D73070C	00 - 2.5	220-240/440-480



49AB10

ACCESSORIES

Push buttons and selector switches for NEMA 1 enclosures only; Class 14, 40 and LEN. Auxiliary switches universally fit classes 14, 17, 18, 22, 25, 26, 30, 32, 36, 37, 40, 43, 83, 84, 87, 88

Furnas

Part No.	NEMA Rating
49AB10	00 to 4
49AB01	00 to 4

MOTOR ASSISTS/RELAYS



ICG1

CURRENT RELAY

- One size for all compressors from 1/12-1/2 horsepower
- These two solid state relays will replace all current type relays
- Can be used with or without a start capacitor



Part No.	Voltage
ICG1	120



P0115

PUSH-ON RELAY

- One size for all compressors from 1/12-1/2 horsepower
- Replaces all push-on current type relays
- For use on compressors with pin type terminals
- Can be used on all



capacitor and noncapacitor start motors

Part No.	Voltage
P0115	115/1
P0230	208-240/1



R041

RELAY OVERLOAD

- Relay & overload in one combination unit
- Prewired for fast, simple installation
- Superior locked rotor protection eliminates start winding overheating



Part No.	HP	Voltage
R041	1/4, 1/3	115/1
R081	1/12 to 1/5	115/1
R042	1/4, 1/3	208-240/1
R082	1/12 to 1/5	208-240/1



UPRO81

RELAY OVERLOAD/PUSH-ON, ULTIMATE SERIES

- Push-on relay overload
- Quick connect push-on terminals for run and/or start capacitor



Part No.	HP	Voltage
UPRO81	1/12 to 1/5	115/1
UPRO41	1/4 to 1/3	115/1



PR041

RELAY OVERLOAD/PUSH-ON

Same as RO Series but pushes onto compressor pin terminals.



Part No.	HP	Voltage
PR041	1/4, 1/3	115/1



HS206

RELAY, CAP, OVERLOAD

Designed to be the most reliable and efficient starting capacitor in its class

- Protection timing circuit
- Instantaneous starting
- Voltage monitoring
- Compressor leads with flag

- terminals
- Solid state design
- UL recognized



Part No.	HP	Voltage
HS206*	1/4-1/3	115/1
HS207*	1/12 to 1/5	115/1
HS210*	1/2	115/1



RCO810

RELAY, CAP, OVERLOAD

This all-in-one unit replaces all 3 electrical components—relay, overload and start capacitor, on all capillary systems.

- For units without run capacitor



Part No.	HP	Voltage
RCO810	1/12 to 1/5	115/1
RCO410	1/4, 1/3	115/1
RCO210*	1/2	115/1
RCO220	1/2	208-240/1

ELECTRICAL DEVICES AND ACCESSORIES

MOTOR ASSISTS/RELAYS



4 N' 1 ULTIMATE SERIES RELAY, CAPACITOR, OVERLOAD AND RUN CAPACITOR

- Push-on compressor terminals, and 1/4" capacitor terminals
- Designed for modern high efficiency compressors
- Helps older compressors to start and run cooler

- Easy mount clip for quick installation
- Prevents low voltage starting problems
- Adds a closely matched system run capacitor



Part No.	HP	Run Cap. (µf x Volt)	Voltage
URCO810RC	1/12 to 1/5	12.5	115/1
URCO410RC	1/4 to 1/3	15	115/1
URCO210RC	1/3 to 1/2	20	115/1



RELAY, CAPACITOR

- A combined solid state starting relay and capacitor
- Replaces current type relays
- Provides added boost for hard start and unbalanced systems



Part No.	HP	Voltage
RSC10	1/12 to 1/2	115/1



START RELAY

Voltage: 115/230 Vac.



Part No.	Increased Torque (Oz In)
SPP	210



RELAY, CAPACITOR

- For low voltage and hard starting compressors
- Room air conditioning units
- Residential and commercial PSC air conditioning units and heat pumps
- For all PSC air conditioning units

from 4,000 through 120,000 BTU's (1/2-10 horsepower)

- Can be used on 120-288 Vac units



Part No.	Increased Torque (Oz In)
SPP5	270
SPP6	390



RELAY, CAPACITOR

Hard Start Kit



Part No.	Use with
HS195*	120-288V, 1/2 to 5 HP
HS196*	120-288V, 1/2 to 10 HP



RELAY, CAPACITOR

For single phase 208/265V A/C, refrigeration, heat pump compressors. 2 wire preassembled start assist device utilizing a potential relay and start capacitor.

- Restarts instantly™
- UL, CSA recognized

- Senses motor starting

Kickstart®

Part No.	Use with
T05	1 to 3 HP
KS1	3.5 to 5 HP



SPP4E

ELECTRONIC RELAY, CAP

The SUPCO E-Class Series comprise the most advanced developments in start device technology:

- Electronic potential relay technology
- Backup electronic timing circuit

to protect the compressor

- Voltage sensing
- Instant re-start
- Easy 2-wire connection



Part No.	Use with
SPP4E	90-130V, 1/8 to 1 HP
SPP5E	90-277V, 1/3 to 2 HP
SPP6E	90-277V, 1/2 to 3 HP
SPP7E	90-277V, 1 to 4 HP
SPP8E	90-277V, 1 HP and up
SPP10E	90-277V, 3 HP and up



3W1

3-WIRE MECHANICAL POTENTIAL RELAY, CAPACITOR

The 3 Series Hard Starts provide the service professional with an OEM option when the application calls for a hard start.

- Voltage sensing
- Instant re-start

- 35 amp relay contacts
- 208/ 240 volts
- Includes EZ snap bracket for quick installation
- For use on all 208/ 240 V single phase compressors, scroll, reciprocating compressors and single or dual run capacitors



Part No.	HP	Capacitor
3W1	1 to 3	88 - 108 μ F, 330V
3W2	3.5 to 4.5	189 - 227 μ F, 330V
3W3	4 to 5	270 - 324 μ F, 330V



SPR1

ULTRASTART

Part No.	HP	Capacitor
SPR1*	3.5 to 5	270-324 μ F, 330V
SPR5*	1 to 3	189-227 μ F, 330V



APR5

POTENTIAL RELAY, ADJUSTABLE

APR5 allows the exact wire by wire replacement of virtually all potential relays on the market. The patented state-of-the-art electronic circuitry also provides additional motor protection. The contacts of the APR5 will open

after 1-1 1/2 seconds if the motor does not start for any reason. This important safety feature prevents the start winding from overloading during a locked rotor condition by removing it from the circuit. You can preset the pick-up voltage of the APR5 to the voltage of the defective relay.



Part No.	Pick-Up Voltage (Vac)
APR5	130 - 370



SUPR

UNIVERSAL POTENTIAL RELAY

SUPR is a time function potential relay designed to be a wire-to-wire replacement for virtually any potential relay on the market. It can be used on any single phase motor or air conditioning and refrigeration compressor up to 5

hp.

- Operating voltage: 110-270 vac, single phase
- Start time: 0.5 $\pm$ 0.1 seconds
- Terminals: screw on; push-on adapters provided



Part No.	Description
SUPR	Universal Potential Relay



19003

POTENTIAL RELAY SCREW-ON TERMINAL

- Conversion kit included for quick connect fitting



Part No.	Mars No.	Continuous Coil Voltage	Min. Pick-Up	Max. Pick-Up	Max. Drop-Out
19003*	64	395	260	275.0	120
19004*	65	332	168	182.0	90
19005*	66	395	215	225.0	120
19007*	68	502	325	345.0	135
19009*	70	253	285	305.0	77
19010*	71	420	212	232.0	121

ELECTRICAL DEVICES AND ACCESSORIES

MOTOR ASSISTS/RELAYS



19163

POTENTIAL RELAY QUICK CONNECT

- Economy model



Part No.	Mars No.	Continuous Coil Voltage	Min. Pick-Up	Max. Pick-Up	Max. Drop-Out	Description
19163*	63	170	139	153.0	55	M&A II 163 RELAY
19164*	64	395	260	275.0	120	M&A II 164 RELAY
19165*	65	332	168	182.0	90	M&A II 165 RELAY
19167*	67	420	295	315.0	125	M&A II 167 RELAY
19169*	69	336	180	195.0	105	M&A II 169 RELAY
19170*	70	253	285	305.0	77	M&A II 170 RELAY
19171*	71	420	212	232.0	121	M&A II 171 RELAY



OV34

OVERLOAD



Part No.	Locked Rotor Amps	Normal Usage Type Condenser	HP
OV34	14.0 - 15.5	Fan	1/8
OV36	16.0 - 18.0	Fan, Static	1/6, 1/8
OV38	18.5 - 22.0	Fan, Static	1/5, 1/8
OV40	22.5 - 26.5	Static	1/5
OV42	27.0 - 31.0	Fan	1/4
OV44	31.5 - 35.5	Static	1/4
OV46	36.0 - 40.0	Fan	1/3
OV48	40.5 - 44.5	Static	1/3
OV50	45.0 - 49.0	Fan	1/2



CR4X370

RUN, 370 VOLT

- Physical interrupter design for safety



OVERLOAD

UNIVERSAL, LIGHT DUTY

Used in refrigeration, room air conditioners, heating, appliances and electric motors. Typical applications are noted below.

- 3/4" diameter



35001

Part No.	Most Commonly Used HP	
	at 115V	at 230V
35001*	1/20	1/12, 1/8, 1/6
35003*	1/20, 1/12	1/6, 1/5, 1/4
35006*	1/12, 1/8	1/4, 1/3
35010*	1/8, 1/6, 1/5, 1/4	1/3, 1/2
35011*	1/6, 1/5, 1/4	1/3, 1/2
35012*	1/6, 1/5, 1/4	1/3, 1/2
35014*	1/5, 1/4	1/2
35015*	1/5, 1/4, 1/3	1/2
35016*	1/5, 1/4, 1/3	1/2
35018*	1/4, 1/3, 1/2	1
35019*	1/3, 1/2	-

Part No.	Microfarad
	Value 1
CR4X370	4.0
CR7.5X370	7.5
CR10X370	10.0
CR12.5X370	12.5
CR15X370	15.0
CR17.5X370	17.5
CR20X370	20.0
CR25X370	25.0
CR30X370	30.0
CR35X370	35.0
CR40X370	40.0
CR45X370	45.0
CR50X370	50.0
CR70X370	70.0
CR80X370	80.0





CR2X440

RUN, 440 VOLT

IRP International
Refrigeration Products



CR5X440R

RUN, 440 VOLT, ROUND

IRP International
Refrigeration Products

Part No.	Microfarad Value 1
CR2X440	2.0
CR3X440	3.0
CR4X440	4.0
CR5X440	5.0
CR6X440	6.0
CR7.5X440	7.5
CR10X440	10.0
CR12.5X440	12.5
CR15X440	15.0
CR17.5X440	17.5
CR20X440	20.0
CR25X440	25.0
CR30X440	30.0
CR35X440	35.0
CR40X440	40.0
CR45X440	45.0
CR50X440	50.0
CR55X440	55.0
CR60X440	60.0
CR70X440	70.0

Part No.	Microfarad Value 1
CR5X440R	5.0
CR7.5X440R	7.5
CR10X440R	10.0
CR15X440R	15.0
CR20X440R	20.0
CR25X440R	25.0
CR30X440R	30.0
CR35X440R	35.0
CR40X440R	40.0
CR45X440R	45.0
CR50X440R	50.0
CR55X440R	55.0
CR60X440R	60.0
CR80X440R	80.0



CR5X370R

RUN, 370 VOLT, ROUND

IRP International
Refrigeration Products

Part No.	Microfarad Value 1
CR10X370R	10.0
CR5X370R	5.0
CR15X370R	15.0
CR7.5X370R	7.5
CR30X370R	30.0
CR35X370R	35.0
CR45X370R	45.0
CR50X370R	50.0
CR60X370R	60.0



USA-CR5X440

TITAN HD™, RUN, 440/370 VOLT

Packard

Part No.	Microfarad Value 1
USA-CR5X440	5.0
USA-CR7.5X440	7.5
USA-CR10X440	10.0
USA-CR12.5X440	12.5
USA-CR15X440	15.0

*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

ELECTRICAL DEVICES AND ACCESSORIES

CAPACITOR



USA-CR5X440R

TITAN HD™, RUN, 440/370 VOLT, ROUND



Part No.	Microfarad	
	Value 1	Value 2
USA-CR5X440R	5.0	
USA-CR7.5X440R	7.5	
USA-CR10X440R	10.0	
USA-CR15X440R	15.0	
USA-CR20X440R	20.0	
USA-CR25X440R	25.0	
USA-CR30X440R	30.0	
USA-CR35X440R	35.0	
USA-CR40X440R	40.0	
USA-CR45X440R	45.0	
USA-CR50X440R	50.0	
USA-CR55X440R	55.0	
USA-CR60X440R	60.0	
USA-CR70X440R	70.0	
USA-CR80X440R	80.0	



USA-CD20/5X440

TITAN HD™, DUAL, 440/370 VOLT



Part No.	Microfarad	
	Value 1	Value 2
USA-CD20/5X440	20.0	5.0
USA-CD50/5X440	50.0	5.0



USA-CD25/5X440R

TITAN HD™, DUAL, 440/370 VOLT, ROUND



Part No.	Microfarad	
	Value 1	Value 2
USA-CD25/5X440R	25.0	5.0
USA-CD30/3X440R	30.0	3.0
USA-CD30/5X440R	30.0	5.0
USA-CD30/7.5X440R	30.0	7.5
USA-CD35/3X440R	35.0	3.0
USA-CD35/5X440R	35.0	5.0
USA-CD35/7.5X440R	35.0	7.5
USA-CD40/3X440R	40.0	3.0
USA-CD40/5X440R	40.0	5.0
USA-CD40/7.5X440R	40.0	7.5
USA-CD40/10X440R	40.0	10.0
USA-CD45/5X440R	45.0	5.0
USA-CD45/7.5X440R	45.0	7.5
USA-CD45/10X440R	45.0	10.0
USA-CD50/7.5X440R	50.0	7.5
USA-CD55/5X440R	55.0	5.0
USA-CD55/7.5X440R	55.0	7.5
USA-CD55/10X440R	55.0	10.0
USA-CD60/5X440R	60.0	5.0
USA-CD60/7.5X440R	60.0	7.5
USA-CD60/10X440R	60.0	10.0
USA-CD70/5X440R	70.0	5.0
USA-CD70/7.5X440R	70.0	7.5
USA-CD70/10X440R	70.0	10.0
USA-CD80/5X440R	80.0	5.0
USA-CD80/7.5X440R	80.0	7.5
USA-CD80/10X440R	80.0	10.0



CD15/3X370

DUAL, 370 VOLT



Part No.	Microfarad	
	Value 1	Value 2
CD15/3X370	15.0	3.0
CD15/4X370	15.0	4.0
CD15/5X370	15.0	5.0
CD15/10X370	15.0	10.0
CD20/4X370	20.0	4.0
CD25/3X370	25.0	3.0

Continued on next page

ELECTRICAL DEVICES AND ACCESSORIES

Part No.	Microfarad	
	Value 1	Value 2
CD25/4X370	25.0	4.0
CD25/5X370	25.0	5.0
CD25/10X370	25.0	10.0
CD30/3X370	30.0	3.0
CD30/5X370	30.0	5.0
CD35/3X370	35.0	3.0
CD35/4X370	35.0	4.0
CD35/5X370	35.0	5.0
CD40/5X370	40.0	5.0
CD45/5X370	45.0	5.0
CD55/5X370	55.0	5.0
CD55/10X370	55.0	10.0
CD60/5X370	60.0	5.0
CD60/10X370	60.0	10.0
CD60/7.5X370	60.0	7.5
CD70/7.5X370		

Part No.	Microfarad	
	Value 1	Value 2
CD30/3X370R	30.0	3.0
CD35/5X370R	35.0	5.0
CD40/7.5X370R	40.0	7.5
CD60/5X370R	60.0	5.0
CD70/5X370R	70.0	5.0
CD80/7.5X370R	80.0	7.5
CD80/10X370R	80.0	10.0



CD25/5X440R

DUAL, 440 VOLT, ROUND

IRP International
Refrigeration Products



CD30/3X440

DUAL, 440 VOLT

IRP International
Refrigeration Products

Part No.	Microfarad	
	Value 1	Value 2
CD30/3X440	30.0	3.0
CD20/5X440	20.0	5.0
CD15/5X440	15.0	5.0
CD20/15X440	20.0	15.0
CD25/5X440	25.0	5.0
CD30/5X440	30.0	5.0
CD35/3X440	35.0	3.0
CD35/5X440	35.0	5.0
CD40/5X440	40.0	5.0
CD45/5X440	45.0	5.0
CD50/5X440	50.0	5.0
CD55/5X440	55.0	5.0
CD60/5X440	60.0	5.0

Part No.	Microfarad	
	Value 1	Value 2
CD25/5X440R	25.0	5.0
CD30/3X440R	30.0	3.0
CD30/4X440R	30.0	4.0
CD30/5X440R	30.0	5.0
CD35/4X440R	35.0	4.0
CD35/5X440R	35.0	5.0
CD35/7.5X440R	35.0	7.5
CD40/3X440R	40.0	3.0
CD40/5X440R	40.0	5.0
CD40/7.5X440R	40.0	7.5
CD45/5X440R	45.0	5.0
CD45/7.5X440R	45.0	7.5
CD50/3X440R	50.0	3.0
CD50/5X440R	50.0	5.0
CD50/7.5X440R	50.0	7.5
CD50/10X440R	50.0	10.0
CD55/5X440R	55.0	5.0
CD55/7.5X440R	55.0	7.5
CD55/10X440R	55.0	10.0
CD60/5X440R	60.0	5.0
CD60/7.5X440R	60.0	7.5
CD70/5X440R	70.0	5.0
CD60/10X440R	60.0	10.0
CD75/10X440R	75.0	10.0
CD80/5X440R	80.0	5.0
CD80/10X440R	80.0	10.0
CD80/7.5X440R	80.0	7.5



CD20/5X370R

DUAL, 370 VOLT, ROUND

IRP International
Refrigeration Products

Part No.	Microfarad	
	Value 1	Value 2
CD20/5X370R	20.0	5.0
CD25/5X370R	25.0	5.0

Continued on next page

*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

ELECTRICAL DEVICES AND ACCESSORIES

CAPACITOR



CS25X110

START, 110 VOLT

- Round body

IRP International
Refrigeration Products

Part No.	Microfarad Range
CS25X110	25 - 30
CS36X110	36 - 43
CS43X110	43 - 56
CS56X110	56 - 72
CS72X110	72 - 88
CS88X110	88 - 108
CS108X110	108 - 130
CS124X110	124 - 156
CS130X110	130 - 156
CS145X110	145 - 175
CS161X110	161 - 193
CS189X110	189 - 227
CS189X165	189 - 227
CS200X110	200 - 240
CS216X110	216 - 259
CS233X110	233 - 292
CS270X110	270 - 324
CS300X110	300 - 360
CS324X110	324 - 388
CS340X110	340 - 408
CS378X110	378 - 440
CS400X110	400 - 480
CS430X110	430 - 520
CS460X110	460 - 552
CS540X110	540 - 648
CS590X110	590 - 708
CS708X110	708 - 850
CS1000X110	1000 - 1200



CS124X165

START, 165 VOLT

IRP International
Refrigeration Products

Part No.	Microfarad Range
CS124X165	124 - 156
CS145X165	145 - 175
CS161X165	161 - 193
CS233X165	233 - 292
CS270X165	270 - 324



CS21X220

START, 220 VOLT

IRP International
Refrigeration Products

Part No.	Microfarad Range
CS21X220	21 - 25
CS25X220	25 - 30
CS36X220	36 - 43
CS43X220	43 - 56
CS56X220	56 - 72
CS72X220	72 - 88
CS88X220	88 - 108
CS108X220	108 - 130
CS124X220	124 - 156
CS145X220	145 - 175
CS161X220	161 - 193
CS189X220	189 - 227
CS216X220	216 - 259
CS233X220	233 - 292
CS270X220	270 - 324



CS21X330

START, 330 VOLT

IRP International
Refrigeration Products

Part No.	Microfarad Range
CS21X330	21 - 25
CS25X330	25 - 30
CS30X330	30 - 36
CS36X330	36 - 43
CS43X330	43 - 56
CS53X330	53 - 70
CS56X330	56 - 72
CS72X330	72 - 88
CS88X330	88 - 108
CS108X330	108 - 130
CS130X330	130 - 156
CS145X330	145 - 175
CS161X330	161 - 193
CS189X330	189 - 227
CS216X330	216 - 259
CS270X330	270 - 324



12100

UNIVERSAL

The world's first multiple tapped, fluid-filled, metal can, motor-run capacitor, which eliminates the need to inventory more than 200 individual single or dual value capacitors. Universal HardStart Replacement. One 2-Wire Turbo®

Easy-Start 4 Hardstart can replace any one of four compressor hardstart kits on the market. The Turbo®200 is manufactured using AmRad Engineering's patented Ultramet™ capacitor technology, which allows a metallized film capacitor to be tapped with a built-in common or ground connection and eliminates the necessity of separate capacitors or of packaging two or more capacitors in one can.



Part No.	Description
12100*	Turbo®200 Mini Run Capacitor Replacement, 2.5 to 12.5 µf, 370V or 440V
TURBO200*	Turbo®200 Run Capacitor Replacement, 2.5 to 67.5 µf, 370V or 440V
12300*	Turbo®200X Run Capacitor Replacement, 5.0 to 97.5 µf, 370V or 440V
11200*	Turbolytic™ 50 Universal Motor Start Capacitor, 23 to 302 µf, 125V to 330V

THERMOSTAT

SL79002

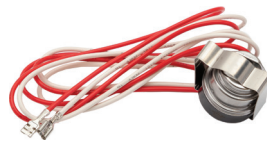
TUBE MOUNT

The SL series line of exact replacement heavy-duty sealed bimetal disc controls meets the higher electrical requirements of commercial applications. Can handle electrical loads up to 25 amps at 120/240VAC.

- 42" leads
- Metal case
- Rated 10A/120V, 5A/240V
- Sealed construction provides moisture resistance for moisture prone environments
- High-speed contact separation ensures long contact life
- UL® recognized
- CSA approved



Part No.	Temperature (°F)		Tube Size (In.)
	Close	Open	
SL79002*	30	55	5/8



33405

TUBE MOUNT

- L, F, D Primary: 10A 240V
- D Secondary: 3A 240V
- Type Code:
- D = SPDT, L = Open High, F = Open Low
- Includes listed size clip



Part No.	Temperature (°F)		Tube Size (In.)	Temperature Code
	Close	Open		
33405* ¹	20	70	5/8	D70-5
33415MA* ¹	20	65	5/8	D65-4.5
33420* ¹	55	35	3/8	F55-2
33430* ¹	35	50	1/2	D50-1.5
33435* ¹	5	20	3/4	L20-1.5
33455* ¹	60	20	5/8	F60-4
33460* ¹	5	35	5/8	L35-3
33470* ¹	30	50	5/8	L50-2
33475* ¹	20	40	5/8	L40-2
33480* ¹	50	80	5/8	L80-3
33490* ²	30	80	3/8	L80-5
33492* ²	30	80	1/2	L80-5

¹ Mounting designed for, but not limited to posted size. ² Mounting designed for, but not limited to posted size. Designed for heat pump usage.



33008

TUBE MOUNT OR SURFACE

- Maximum load: 2.9A 240 Vac



Part No.	Temperature Code	Temperature (°F)	
		Close	Open
33008*	L45-3	15	45
33010*	L55-3	25	55
33011*	L60-3	30	60
33020*	L80-3	50	80



SL5708

HEATCRAFT REPLACEMENTS

Replaces common flush mount defrost controls on Heatcraft evaporators



Part No.	Description
SL5708*	Defrost Termination, SPST, L75-35
SL5709*	Defrost Termination, SPDT, D55-20



*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

ELECTRICAL DEVICES AND ACCESSORIES

THERMOSTAT



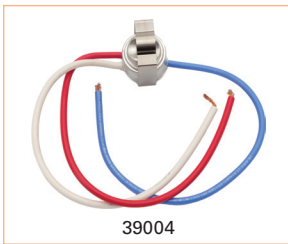
SFPC

FREEZE PROTECTION CONTROL

- Freeze Protection Control
- Protects air conditioning evaporator coil from freezing.
 - Opens 35°F/Close 50°F
 - Replaces: Trol A Temp FPC



Part No.	Description
SFPC*	Freeze Protection Control



39004

CHANGEOVER SWITCH

For summer-winter changeover in hydronic heat/cool fan coil units.

- SPDT switch
- Contact rating: Term 1 and 3, 25A 240V; Term 1 and 2, 5A 240V



Part No.	Temperature (°F)	
	Open	Close
39004*	88	73



7521

CHANGEOVER SWITCH

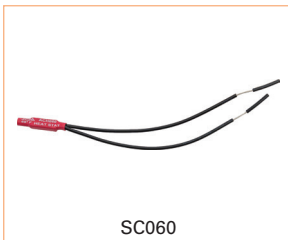
Provides automatic changeover of thermostat to permit proper operation of zone valve on combination hot and chilled water systems.

- Switch: SPDT
- Contact rating:

3.75 F.L. Amp 240 Vac



Part No.	Temperature Setting (°F)	Differential	Temperature Code
7521	85	15°F	D85-1.5



SC060

CONSTRUCTION

Low cost single set-point thermostats intended for use as a temporary device to provide heating to allow drywall to dry during construction.

- 2- wire, 24 volt, 2 amp maximum

- Accuracy: ±5°F



Part No.	Temperature Setting (°F)	Application
SC060	60	Heat
SC065	65	Heat
SC070	70	Heat
SC075	75	Cool

DISC FAN AND LIMIT



3F01110

FAN

Snap disc fan controls for regulation of fan or blower.

- Last three numbers indicate cut-in temperatures on fan controls
- Switch: SPST, close rise

- Contact rating: 5 F.L. Amp 240 Vac



Part No.	Cut-In (°F)	Cut-Out (°F)	Differential	Temperature Code
3F01110	110	90	20°F	F110-2
3F01120	120	110	10°F	F120-1
3F01130	130	115	15°F	F130-1.5
3F01140	140	120	20°F	F140-2
3F01150	150	130	20°F	F150-2
3F01160	160	140	20°F	F160-2
3F01180	180	160	20°F	F180-2
3F01200	200	180	20°F	F200-2
3F01350	350	320	30°F	F350-3



AT021

FAN, ADJUSTABLE

This adjustable snap disc thermostat allows you to vary the temperature set- point to match your specific needs.

- Adjustable snap disc controls
- Switch: SPST, close rise

- Contact rating: 10 F.L. Amp 240 Vac



Part No.	Temperature (°F)	Differential	Includes
AT021*	90 to 130	20°F	1/4" Q.C terminals
AT023*	90 to 130	20°F	1/4" Q.C terminals
39205* ¹	90 to 130	20°F	-
AT022*	140 to 180	20°F	1/4" Q.C terminals
39210* ¹	140 to 180	20°F	-

¹ Mars



AT012

LIMIT, ADJUSTABLE

This adjustable snap disc thermostat allows you to set the temperature set point to match your specific needs.

- Adjustable snap disc controls
- Switch: SPST, open rise

- Contact rating: 10 F.L. Amp 240 Vac



Part No.	Differential	Includes	Temperature (°F)
AT012*	40°F	1/4" Q.C terminals	135 to 175
3L0510	20°F	Tab to Screw Terminals	135 to 175
39220* ¹	40°F	-	135 to 175

Continued on next page

Part No.	Differential	Includes	Temperature (°F)
AT013*	40°F	1/4" Q.C terminals	175 to 215
39225*1	40°F	-	175 to 215
AT014*	40°F	1/4" Q.C terminals	210 to 250
39230*1	40°F	-	210 to 250
AT015	40°F	1/4" Q.C terminals	250 to 290
3L0513	40°F	Tab to Screw Terminals	250 to 290

1 Mars



3L01120

HIGH LIMIT

- Snap disc control for high limit safety
- Switch: SPST, open rise
- Contact rating: 5 F.L. Amp, 25 Resistive Amp 240 Vac



Part No.	Cut-Out (°F)	Cut-In (°F)	Differential	Temperature Code
3L01120	120	110	10°F	L120-1
3L01130	130	115	15°F	L130-1.5
3L01140	140	100	40°F	L140-4
3L01150	150	110	40°F	L150-4
3L01165	165	125	40°F	L165-4
3L01170	170	130	40°F	L170-4
3L01180	180	140	40°F	L180-4
3L01190	190	150	40°F	L190-4
3L01200	200	160	40°F	L200-4
3L01230	230	190	40°F	L230-4
3L01250	250	210	40°F	L250-4
3L01300	300	250	50°F	L300-5
3L01350	350	310	40°F	L350-4



SHL120

HIGH LIMIT

- Switch: SPST, open rise
- Contact rating: 10 F.L. Amp, 25 Resistive Amp 240 Vac
- Adapter flange plate included



Part No.	Cut-Out (°F)	Cut-In (°F)	Differential
SHL120	120	110	10°F
SHL140	140	100	40°F
SHL150	150	110	40°F
SHL160	160	120	40°F
SHL170	170	130	40°F



3L02160

LIMIT, MANUAL RESET

- Switch : SPST, open rise
- Contact rating : 5 FL Amp, 25 Resistive Amp 240 Vac



Part No.	Cut-Out (°F)
3L02160	160
3L02170	170
3L02180	180
3L02190	190
3L02200	200



SRL135

LIMIT, AUTOMATIC RESET

- Switch: SPST, open rise
- Contact rating: 1.5 F.L. Amp, 10 Resistive Amp 240 Vac
- Terminals: vertical 1/4"



Part No.	Cut-Out (°F)	Replaces
SRL135	135	Rheem 47-22453-02
SRL220	220	Nordyne 626354
SRL230	230	Nordyne 626353
SRL240	240	Nordyne 626355
SRL250	250	Nordyne 626352
SRL260	260	Nordyne 626350
SRL300	300	Rheem 47-22861-02
SRL350	350	Goodman B13701-54



3L03140

LIMIT, SPDT

- 20°F differential



Part No.	Cut-Out (°F)
3L03140	140
3L03190	190



*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

ELECTRICAL DEVICES AND ACCESSORIES

DISC FAN AND LIMIT



SLS140

LIMIT, AUTOMATIC RESET

- Switch: SPST, open rise
- Contact rating: 1.5 F.L. Amp, 10 Resistive Amp 240 Vac
- Terminals: 45° angle 1/4"



Part No.	Cut-Out (°F)	Cut-In (°F)	Differential
SLS140	140	100	40°F
SLS150	150	110	40°F
SLS160	160	120	40°F
SLS170	170	130	40°F
SLS180	180	140	40°F
SLS200	190	150	40°F



HL501

OEM REPLACEMENT

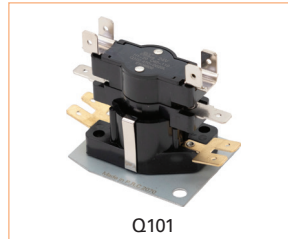
Direct replacement gas furnace limits



Part No.	Temperature (°F)		Replaces
	Open	Close	
HL501	170	130	BDP HH12ZA174A, HH12ZA176A, P331-2203
HL502	180	150	Carrier B1370001
HL503	190	150	BDP HH12ZA189, HH12ZB190, HH12ZA193A, P331-2205
HL504	240	200	BDP HH12ZA240, HH12ZA252A, P331-2217
HL507	140	110	York 025-29041-0055
HL508	190	170	York 025-29041-006
HL509	240	210	Carrier B1370903
HL512	170	150	Lennox 47-25350-06
HL513	170	130	Rheem SWT1258
HL515	200	160	York 025-29041-006
HL516	210	170	Carrier HH12ZB210

ELECTRIC HEAT STAGING

SEQUENCER, DISC



Q101



Part No.	Nb. of Timings	Nb. of Switches	Klixon Number	Switch
Q101*	1	1	60000A0M-98	SPNO
Q102*	1	1	60000A0M-97	SPNO
Q103*	1	2	60000E0M-84	DPST, N.O.
Q104*	1	2	60000E0M-86	DPST, N.O.
Q105*	2	3	51172-32	DPST, SPST, N.O.
Q106*	2	4	51172-33	(2) DPST, N.O.



33243

SEQUENCER

- Direct replacement for most fan/heat sequencing functions
- Solid-state reliability
- Ambient rated from -40 to +165°F
- Multi-poise mounting
- Single load rating 240 Vac, 30 resistive

- Delay times are random between range



Part No.	Klixon Number	Switch
33243*	6000A0M	SPST/NO
33246*	6000E0M	DPST/NO
33247*	6000COM-21	SPDT
33255* ¹	6000E4	DPST/NO

¹ Control voltage 120Vac



33222

SEQUENCER, 2 SWITCH

- Single load rating 240 Vac, 30A resistive, all contacts including auxiliary
- Supply voltage: 24 Vac



Part No.	Nb. of Timings	Klixon Number	Switch
33222*	2	51172-22	2 - SPST/NO





34604

ELEMENT, REPAIR KIT

Each kit contains one close wound, stretch to length, resistance coil with welded terminal bolts; two each male and female ceramic terminal insulators; two each .375 and .450 inch standard ceramic bushings; two each .375 and .450

inch extra long ceramic bushings; necessary nuts, washers, and installation instructions.



Part No.	Watts	Voltage	Length (In.)
34604*	5,000	480	5.50
34606*	5,000	277	4.80
34610*	3,500	480	5.00
34616*	2,500	240	5.90



34702

THERMAL CUTOFFS



Part No.	Temperature Limit (°F)	Length (In.)	Description
34702*	283	4.20	Fuse Link Only
34706*	300	1.00	Fuse Link Only
34708*	300	2.00	Round Ceramic Base
34710*	227	6.00	Oblong Ceramic Base
34712*	300		Oblong Ceramic Base



STC4257

THERMAL CUTOFFS

- Provides reliable back up protection for temperature controlling thermostats and other over temperature conditions
- One time operation
- Three configurations available to accommodate in line or face plate mounting

- Rated for continuous operating currents of up to: 15 amps 120 VAC (Series 1)
- 25 amps 120 VAC (Series 2)
- Used with the Supco DH series duct heaters.



Part No.	Temperature Limit (°F)	Length (In.)	Description
STC4257*	262	4.00	In Line
STC4283*	291	6.00	In Line
STC4333*	333	5.00	In Line
STC5257*	262	5.60	Face Plate Straight
STC5333*	333	1.40	Face Plate Straight
STC6257*	262	6.00	Face Plate Right Angle
STC6300* ¹	300	5.90	Fusible link

Continued on next page

Part No.	Temperature Limit (°F)	Length (In.)	Description
STC6333* ¹	333	5.90	Fusible link

¹ 15 Amps

CRANKCASE HEATER



32432

INSERTION, 1/2" DIAMETER, ELBOW

- Copeland replacement



Part No.	Voltage
32432*	208-230



32439

BAR, BOLT ON

- Copeland replacement



Part No.	Voltage
32439*	115



32416

BAR



Part No.	Voltage
32416*	208-230

DEFROST HEATER



SH201

BRAIDED HEATER

Flexible braided aluminum heaters are designed for use in heating drain troughs, drain tubes and drain pans.



Part No.	Length (In.)	Lead Length	Voltage	Watts
SH201	18.00	23"	115/1	15
SH202	29.00	23"	115/1	45

Continued on next page

*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

ELECTRICAL DEVICES AND ACCESSORIES

DEFROST HEATER

Part No.	Length (In.)	Lead Length	Voltage	Watts
SH203	44.00	23"	115/1	55
SH204	44.00	23"	115/1	75



SH281

DOOR AND MULLION

For commercial refrigeration applications to prevent moisture and eliminate frost build-up on door and cabinet fronts



Part No.	Watt/Foot	Voltage	Heating Length (In.)	Lead Length
SH281	3	120	36 1/2	6"
GH282	3	120	18	6"



SH250

UNIVERSAL DRAIN HEATER

Used with existing heater or where no heater exists
Designed for series wiring connection only.



Part No.	Lead Length	Voltage	Watts	Diameter (In.)
SH250	56"	115/1	3	0.91



SH500

DRAIN

Durable Metal Braid
 • Heater tip 7/16" diameter
 • Silicone construction
 • Designed for waterproof low wattage heat



Part No.	Length (In.)	Lead Length	Voltage	Watts
SH500	9.00	18"	115/1	11
SH502	13.00	18"	115/1	15
SH503	13.00	18"	208-240/1	15
SH504	21.00	18"	115/1	25
SH505	21.00	18"	208-240/1	25

CONDENSATE PAN



N070

EVAPORATOR PAN, SELF-REGULATING

- State-of-the-art, solid state, PTC control
- Self-regulating, conserves power, eliminates thermostat
- Removable cord set for ease of cleaning and installation



Part No.	Voltage	Watts	Capacity (Oz.)	Evaporation Rate (Oz/Hr)
N070	115/1	300	50	6.0



300S

EVAPORATOR PAN

Standard cast aluminum condensate drains complete with long life heating element and mounting legs.



Part No.	Voltage	Watts	Capacity (Oz.)	Evaporation Rate (Oz/Hr)
300S	120	160	38	8.0
N075	120	320	75	14.0
75220	240	320	75	14.0



CP801

EVAPORATOR PAN, SELF-REGULATING

For condensate applications where no drain is available

- Corrosion resistant stainless steel construction
- High limit safety and float switch operation



- UL, NSF approved

Part No.	Voltage	Watts	Capacity (Oz.)	Evaporation Rate (Oz/Hr)
CP801*	120	400	56	16.0
CP802*	120	800	80	32.0
CP804*	120	1000	144	53.3
CP804-240*	240	1000	144	32.0
CP816*	120	500	224	24.0
CP817*	208	1000	224	42.7
CP818*	208	1000	224	42.7
CP819*	120	1500	224	64.0
CP820*	208	1500	224	64.0
CP804HD*	120	1000	240	32.0
CP807*	120	1000	240	53.3
CP807-240*	240	1000	240	53.3
CP815-240*	240	1440	480	64.0
CP815*	120	1440	480	64.0
CP821*	208	1500	224	64.0



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REPAIR PARTS

Repair parts for CP800 series condensate evaporators



CPH801



Part No.	Description	Voltage	Use with
CPH801*	400W Heater	120	CP801
CPH802*	800W Heater	120	CP802
CPH8047*	1000W Heater	120	CP804
CPH804-240	1000W Heater	240	CP804-240
CPH804HD*	1000W Heater	120	CP804HD
CPH807-240*	1000W Heater	240	CP807-240
CPH815*	1500W Heater	120	CP815
CPH815-240*	1500W Heater	240	CP815-240
CPH816	500W Heater	120	CP816
CPH817	1000W Heater	208	CP817
CPH818*	1000W Heater	208	CP818
CPH819*	1500W Heater	120	CP819
CPH820*	1500W Heater	208	CP820
CPH821*	1500W Heater	208	CP821
CPFLOAT*	3" Float	-	CP801, CP802
CPFLOAT4*	4.5" Float	-	CP804, CP807, CP815
CPS800	Microswitch	-	All
CPT800*	Thermostat	-	All

FLEXIBLE CONDUIT



12SEALTITE

TUBING

- Nonmetallic seal tight
- Flexible conduit



Part No.	Description	Roll Length (Ft.)	Length (In.)
12SEALTITE	Flexible Conduit, 1/2"	100	19.90
34SEALTITE	Flexible Conduit, 3/4"	100	22.40



LT7500S

FITTING

- Nonmetallic liquid tight conduit fitting
- Sealtight connection x box fitting



Part No.	Description	Length (In.)
LT7500S	1/2" Straight Connection	1.00
LT7501S	3/4" Straight Connection	1.00

Continued on next page

Part No.	Description	Length (In.)
LT7504S	1/2" 90° Connection	1.00
LT7505S	3/4" 90° Connection	1.00

OUTSIDE DISCONNECT



83325

HEAT PUMP

Multiple disconnect devices are offered for heat pump applications that require individual disconnects for the heating and cooling cycles. Units require four fuses.



Part No.	Description
83325*	Outside disconnect, heat pump, 100 amps, fused



83336

CARTRIDGE FUSE, UL LISTED



Part No.	Description
83336*	Outside disconnect, cartridge fuse, 30 amps, 240 Volt, 3-pole exterior switch, NEMA 3R
7714*	Outside disconnect, cartridge fuse, 60 amps, 240 Volt, 3-pole exterior switch, NEMA 3R



HF361R

HEAVY DUTY, OUTDOOR

Type 3R NEMA case.



Part No.	Description
HF361R	Outside disconnect, heavy duty, 3R enclosure, fusible, 30 amps, 600 Volt, 3-pole
HF362R	Outside disconnect, heavy duty, 3R enclosure, fusible, 60 amps, 600 Volt, 3-pole

*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

ELECTRICAL DEVICES AND ACCESSORIES

OUTSIDE DISCONNECT



PULLOUT

Offers both fusible and non-fusible single phase air conditioner disconnects. These units provide a disconnecting means which should be located within sight to and readily accessible from air conditioning or

refrigerating equipment. UL Listed.



Part No.	Description
7711*	Outside disconnect, pullout, 60 amps, non fused, 1 phase
7712*	Outside disconnect, pullout, 60 amps, fused, 1 phase
7713*	Outside disconnect, pullout, 30 amps, fused, 1 phase



PULLOUT

- ON/OFF control provided by a pullout handle
- Pullout handle can be conveniently stored in the compartment in the OFF position, helping to prevent the handle from being misplaced

- Protective shield cannot be removed until the pullout handle is removed, disconnecting the power



Powering Business Worldwide

Part No.	Description
DPU222R*	Outside disconnect, pullout, 60 amps, non fused, #14-3 AWG Cu/Al
DPF221R*	Outside disconnect, pullout, 30 amps, fused, #14-3 AWG Cu/Al
DPF222R*	Outside disconnect, pullout, 60 amps, fused, #14-3 AWG Cu/Al



NONMETALLIC

These horse power rated units are constructed of Noryl® thermoplastic for extended and rugged durability. Units are corrosion resistant, weatherproof, and maintenance free. UL Listed

and CSA Certified.



Part No.	Description
83306*	Outside disconnect, non-metallic, 30 amps, fused, 1 phase
83307*	Outside disconnect, non-metallic, 60 amps, fused, 1 phase

SURGE PROTECTION



The ICM530, ICM531, ICM532 are a series of Type 1 and Type 2 three-phase surge protective devices for three-phase Delta and three-phase Wye configurations. When a surge occurs, the ICM three-phase surge protective device will absorb the surge up to

the specified limitations of the device. ICM incorporates superior thermally protected metal oxide varistor technology into the three-phase surge suppressors, which allows for safe disabling of the surge elements when a surge exceeds the thermal limits of the device. There is a single status light on the controls which identifies operational status when illuminated. The ICM 3-phase surge protective device can be installed as a Type 1 or Type 2 device for both indoor and outdoor applications.



Part No.	Description
ICM531*	3-Phase Delta 480V Or Wye 277V/480V, Type 1 & Type 2 Surge Protective Device. Max Surge Current 150,000 Amps, Nema 4X Rated Enclosure.
ICM530*	3-Phase Delta 240V & Wye 120V/208V, Type 1 & Type 2 Surge Protective Device. Max Surge Current 150,000 Amps, Nema 4X Rated Enclosure.
ICM532*	3-Phase Delta 600V Or Wye 346V/600V, Type 1 & Type 2 Surge Protective Device. Max Surge Current 150,000 Amps, Nema 4X Rated Enclosure.



Protects high-efficiency furnaces, hydronic heating systems, and ductless mini-splits from surges and spikes.

- Unmatched surge protection ratings
- 120/240 VAC single split phase SPD for use on a variety of HVAC

equipment

- Green LED protection indicator
- 18 in. 10 gauge leads
- Type 4x Enclosure



Part No.	Description
AG3000	Surge Protective Device, 3-Mode, 120/240 VAC 1Ph, Type 1 or Type 2, Outdoor, Connected Equipment



FRNR3-2/10

**DUAL ELEMENT, TIME DELAY,
250 VAC**

- Class RK5
- 250 Vac maximum, 125 Vdc
- Interrupting rating—200,000A RMS symmetrical
- 10 seconds delay (minimum) at 500% rated current

Bussmann
by **EATON**

- Blade connections 70 amps and larger

Part No.	Amps	Interrupt Rating Amps
FRNR3-2/10	3 2/10	200,000A RMS symmetrical
FRNR4	4.0	200,000A RMS symmetrical
FRNR5	5.0	200,000A RMS symmetrical
FRNR7	7.0	200,000A RMS symmetrical
FRNR8	8.0	200,000A RMS symmetrical
FRNR10	10	200,000A RMS symmetrical
FRNR12	12.0	200,000A RMS symmetrical
FRNR15	15.0	200,000A RMS symmetrical
FRNR20	20	200,000A RMS symmetrical
FRNR25	25.0	200,000A RMS symmetrical
FRNR30	30	200,000A RMS symmetrical
FRNR35	35.0	200,000A RMS symmetrical
FRNR40	40.0	200,000A RMS symmetrical
FRNR45	45.0	200,000A RMS symmetrical
FRNR50	50	200,000A RMS symmetrical
FRNR60	60	200,000A RMS symmetrical
FRNR70	70	200,000A RMS symmetrical
FRNR80	80	200,000A RMS symmetrical
FRNR90	90	200,000A RMS symmetrical
FRNR100	100	200,000A RMS symmetrical
FRNR110	110	200,000A RMS symmetrical
FRNR125	125	200,000A RMS symmetrical
FRNR150	150	200,000A RMS symmetrical
FRNR175	175	200,000A RMS symmetrical
FRNR200	200	200,000A RMS symmetrical
FRNR350	350	200,000A RMS symmetrical
FRNR600	600	200,000A RMS symmetrical
FRNR6	6.0	200,000A RMS symmetrical



FRSR1

**DUAL ELEMENT, TIME DELAY,
600 VAC**

- Class RK5
- 600 Vac maximum, 300 Vdc
- Interrupting rating—200,000A RMS symmetrical
- 10 seconds delay (minimum) at 500% rated current

Bussmann
by **EATON**

- Blade connections 70 amps and larger

Part No.	Amps	Interrupt Rating Amps
FRSR1	1	200,000A RMS symmetrical
FRSR2	2.0	200,000A RMS symmetrical

Continued on next page

Part No.	Amps	Interrupt Rating Amps
FRSR5	5.0	200,000A RMS symmetrical
FRSR10	10	200,000A RMS symmetrical
FRSR15	15.0	200,000A RMS symmetrical
FRSR20	20	200,000A RMS symmetrical
FRSR25	25.0	200,000A RMS symmetrical
FRSR30	30	200,000A RMS symmetrical
FRSR35	35.0	200,000A RMS symmetrical
FRSR40	40.0	200,000A RMS symmetrical
FRSR45	45.0	200,000A RMS symmetrical
FRSR50	50	200,000A RMS symmetrical
FRSR60	60	200,000A RMS symmetrical
FRSR70	70	200,000A RMS symmetrical
FRSR80	80	200,000A RMS symmetrical
FRSR90	90	200,000A RMS symmetrical
FRSR100	100	200,000A RMS symmetrical
FRSR110	110	200,000A RMS symmetrical
FRSR125	125	200,000A RMS symmetrical
FRSR150	150	200,000A RMS symmetrical
FRSR175	175	200,000A RMS symmetrical
FRSR200	200	200,000A RMS symmetrical
FRSR250	250	200,000A RMS symmetrical
FRSR8	8	200,000A RMS symmetrical



SC-1

MELAMINE, TIME DELAY

- Class G
- 480 Vac maximum, 300 Vdc (25 to 60A)
- Interrupting rating—100,000A RMS symmetrical

Bussmann
by **EATON**

- Diameter—.41"

Part No.	Amps	Interrupt Rating Amps
SC-1	1	100,000A RMS symmetrical
SC-2	2.0	100,000A RMS symmetrical
SC-4	4.0	100,000A RMS symmetrical
SC-5	5.0	100,000A RMS symmetrical
SC-6	6.0	100,000A RMS symmetrical
SC10	10	100,000A RMS symmetrical
SC15	15.0	100,000A RMS symmetrical
SC20	20	100,000A RMS symmetrical
SC25	25.0	100,000A RMS symmetrical
SC30	30	100,000A RMS symmetrical
SC35	35	100,000A RMS symmetrical
SC40	40.0	100,000A RMS symmetrical
SC45	45.0	100,000A RMS symmetrical
SC50	50	100,000A RMS symmetrical

FUSE, POWER



LPCC1/2

LOW-PEAK™ TIME DELAY

Ultimate protection Low-Peak Class CC current-limiting, time-delay fuses. Timedelay – 12 seconds (minimum) at 200% of rated current.

- Dimension—13/32" diameter x 1 1/2" length

- 600 Vac maximum
- Interrupting rating—200,000A

Bussmann
by **EAT-N**

Part No.	Amps	Interrupt Rating Amps
LPCC1/2	1/2	200,000A
LPCC1	1	200,000A
LPCC112	1 1/2	200,000A
LPCC2	2	200,000A
LPCC212	2 1/2	200,000A
LPCC3	3	200,000A
LPCC312	3 1/2	200,000A
LPCC4	4	200,000A
LPCC5	5	200,000A
LPCC6	6	200,000A
LPCC7	7	200,000A
LPCC712	7 1/2	200,000A
LPCC8	8	200,000A
LPCC10	10	200,000A
LPCC12	12	200,000A
LPCC15	15	200,000A
LPCC20	20	200,000A
LPCC25	25	200,000A
LPCC30	30	200,000A



KTK2

MELAMINE, FAST ACTING

- Supplementary fuse
- Dimension—13/32" diameter x 1 1/2" length
- 600 Vac maximum
- Interrupting rating—100,000A

Bussmann
RMS symmetrical by **EAT-N**

Part No.	Amps	Interrupt Rating Amps
KTK2	2.0	100,000A RMS symmetrical
KTK3	3.0	100,000A RMS symmetrical
KTK4	4.0	100,000A RMS symmetrical
KTK5	5.0	100,000A RMS symmetrical
KTK6	6.0	100,000A RMS symmetrical
KTK10	10	100,000A RMS symmetrical
KTK15	15.0	100,000A RMS symmetrical
KTK20	20	100,000A RMS symmetrical



KTKR3

MELAMINE, FAST ACTING, CLASS CC

- Class CC—Rejection type
- Dimension—13/32" diameter x 1 1/2" length
- 600 Vac maximum
- Interrupting rating—200,000A
- Branch circuit

Bussmann
by **EAT-N**

Part No.	Amps	Interrupt Rating Amps
KTKR3	3	200,000A
KTKR5	5	200,000A
KTKR10	10	200,000A
KTKR15	15.0	200,000A
KTKR20	20	200,000A
KTKR30	30	200,000A
KTKR2	2	200,000A
KTKR12	12	200,000A



JJS25

CLASS T, FAST ACTING

- Provides 10X better current limitation to help prevent equipment damage caused by shortcircuit events.
- Fast-acting fuse helps prevent equipment damage caused by short-circuit events.

- Small, space-saving fuses provide a high degree of current limitation on short-circuits for excellent component protection
- Ideal for critical industrial or commercial applications that have specific current limitation requirements.
- 600 Vac maximum
- Interrupting rating—200,000A

Bussmann
by **EAT-N**

Part No.	Amps	Interrupt Rating Amps
JJS25	25	200,000A
JJS30	30	200,000A
JJS40	40	200,000A
JJS50	50	200,000A
JJS60	60	200,000A



FNQR5

MELAMINE, TIME DELAY, 600 VAC

- Rejection-type fuse
- Dimension—13/32" diameter x 1 1/2" length
- 600 Vac maximum
- Interrupting rating—200,000A

Bussmann
RMS symmetrical by **EAT-N**

Part No.	Amps	Interrupt Rating Amps
FNQR1/2	1/2	200,000A
FNQR1-1/2	1 1/2	200,000A
FNQR2	2	200,000A

Continued on next page

Part No.	Amps	Interrupt Rating Amps
FNQR5	5.0	200,000A
FNQR7	7.0	200,000A
FNQR8	8	200,000A
FNQR10	10	200,000A
FNQR12	12	200,000A
FNQR15	15.0	200,000A
FNQR20	20	200,000A
FNQR25	25	200,000A
FNQR30	30	200,000A



FIBRE TUBE, TIME DELAY, 250 VAC

- Supplementary fuse
- Dimension—13/32" diameter x 1 1/2" length
- 250 Vac (1-10 amps) maximum
- 32 Vac (20-30 amps) maximum
- Interrupting rating—

10,000A 125 Vac

Part No.	Amps	Interrupt Rating Amps
FNM1	1	10,000A 125 Vac
FNM2	2.0	10,000A 125 Vac
FNM3	3	10,000A 125 Vac
FNM7	7.0	10,000A 125 Vac
FNM10	10	10,000A 125 Vac
FNM20	20	10,000A 125 Vac
FNM25	25.0	10,000A 125 Vac
FNM30	30	10,000A 125 Vac



FIBRE TUBE, TIME DELAY, 500 VAC

- Supplementary fuse
- Dimension—13/32" diameter x 1 1/2" length
- 500 Vac maximum
- Interrupting rating—

10,000A

Part No.	Amps	Interrupt Rating Amps
FNQ12	1/2	10,000A
FNQ3	3	10,000A
FNQ4	4	10,000A
FNQ5	5.0	10,000A
FNQ6	6	10,000A
FNQ10	10	10,000A
FNQ-12	12	10,000A
FNQ15	15.0	10,000A
FNQ20	20	10,000A
FNQ30	30	10,000A



PLUG, TIME DELAY

- 125 Vac maximum
- Dual element
- Edison base

T8

Bussmann
by **F.T.N**

Part No.	Amps
T8	8.0
T10	10
T15	15.0
T20	20
T25	25.0
T30	30



PLUG, TIME DELAY, REJECTING BASE

- 125 Vac maximum
- Dual element
- Rejection base

S3-2/10

Bussmann
by **F.T.N**

Part No.	Amps
S3-2/10	3 2/10
S-5	5.0
S-8	8.0
S10	10
S15	15.0
S20	20
S25	25.0
S30	30



GLASS TUBE, FAST ACTING

- Dimension—1/4" diameter x 1 1/4" length
- 250 Vac maximum to 10 amps
- 32 Vac maximum to 30 amps

AGC1/2

Bussmann
by **F.T.N**

Part No.	Amps	Interrupt Rating Amps
AGC1/2	1/2	35
AGC34	3/4	35
AGC1	1	35
AGC1-1/2	1 1/2	100
AGC2	2.0	100
AGC3	3.0	100
AGC4	4.0	200
AGC5	5.0	200
AGC6	6.0	200
AGC7R	7.0	200
AGC8	8.0	200

Continued on next page

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ELECTRICAL DEVICES AND ACCESSORIES

FUSE, POWER

Part No.	Amps	Interrupt Rating Amps
AGC10	10	200
AGC15	15.0	1,000
AGC20	20	1,000
AGC25	25.0	1,000
AGC30	30	1,000



ABC1

CERAMIC TUBE, FAST ACTING

- Dimension—1/4" diameter x 1 1/4" length
- 250 Vac maximum

Bussmann
by **F.T.N**

Part No.	Amps	Interrupt Rating Amps
ABC1	1	35
ABC2	2.0	100
ABC3	3.0	100
ABC4	4.0	200
ABC5	5.0	200
ABC6	6.0	200
ABC8	8.0	200
ABC10	10	200
ABC12	12.0	750
ABC15	15.0	750
ABC25	25.0	200



MDA5

CERAMIC TUBE, TIME DELAY

- 250 Vac maximum
- Dimension—1/4" diameter x 1 1/4" length

Bussmann
by **F.T.N**

Part No.	Amps	Interrupt Rating Amps
MDA5	5.0	200
MDA20	20	400



ATC2

BLADE TYPE, FAST ACTING

- 32 Vac maximum

Bussmann
by **F.T.N**

Part No.	Amps	Color
ATC2	2.0	Gray

Continued on next page

Part No.	Amps	Color
ATC3	3.0	Violet
ATC4	4.0	Pink
ATC5	5.0	Tan
ATC10	10	Red
ATC15	15.0	Blue
ATC20	20	Yellow
ATC30	30	Green



MDL8

GLASS TUBE, TIME DELAY

- Dimension—1/4" diameter x 1 1/4" length

Bussmann
by **F.T.N**

Part No.	Amps	Interrupt Rating Amps
MDL8	8.0	200
MDL15	15.0	1,000



GMQ3210

CERAMIC, TIME DELAY, GMQ

- Size rejecting
- 300 Vac maximum
- Interrupt rating—10,000A
- Use fuse holder HLQ3210

Bussmann
by **F.T.N**

Part No.	Amps	Interrupt Rating Amps
GMQ3210	3 2/10	10,000A

FUSE, ACCESSORIES



BRKPRO

FUSE TESTING SUPERKIT

Supco

Part No.	Includes
BRKPRO	(1) Standard Blade to 1/4" Fuse Adapter, (1) Supco Fuse Pro 3 AMP Tester with Light, (1) Standard Blade to 5mm Fuse Adapter, (1) Supco Fuse Pro 5 AMP Tester with Light, (1) Standard Blade to 4.5 mm Fuse Adapter Auxiliary Wire Harness



BRK3

FUSE TESTER WITH LIGHT

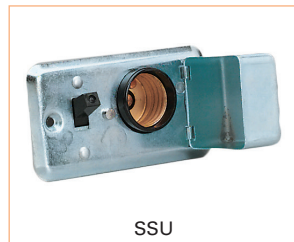
Plugs into PC board on furnaces, boilers, air handlers or any system with a fused PCB.

- Auxiliary wires for more applications
- Built-in light for dark, hard to reach areas.

- For low voltage circuit testing w/o wasting fast-blow fuses
- NOT for permanent use, does not replace a factory accepted fuse.



Part No.	Application	Fuse Amps
BRK3	Furnaces, Boilers, Air Handlers, Unit Heaters, Rooftop Units, Water Heaters	3



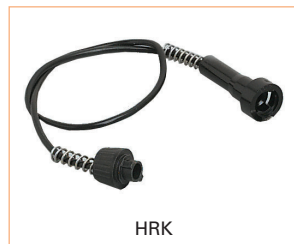
SSU

PLUG FUSE BOX COVER

- Single fuse
- Switch control
- Installs easily in standard electrical box
- 125 Vac, 15A

Bussmann
by **F.T.N**

Part No.	Type Box	Dimensions (In.)	
		L	W
SSU	2 1/4" Handy	2.26	2.60
SSY	4" Square	2.26	2.60



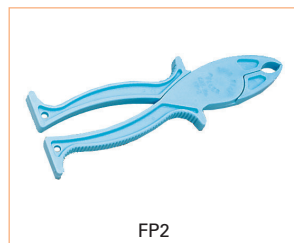
HRK

IN LINE FUSE HOLDER

- Furnished with 3 springs for different length fuses
- 8" leads
- 1/4" diameter, 7/8" to 1 1/4" length fuse

Bussmann
by **F.T.N**

Part No.	Description
HRK	Fuse Holder



FP2

FUSE PULLER

Bussmann
by **F.T.N**

Part No.	Application Diameter (In.)
FP2	13/32 to 13/16
FP3	1 to 1 3/4
FP6	0 to 60AT-Tron Fuse

CONDUIT FITTING



N1340

COMBINATION CABLE CONNECTOR



Part No.	Description	Length (In.)	Pkg Qty
N1340	Combination cable connector, Romex, BX, Greenfield, 1/2" knockouts, 3/8" trade, 8 pack	1.00	8



N2307

EMT STRAP



Part No.	Description	Length (In.)	Pkg Qty
N2307	2-Hole EMT Straps	1.00	12
N2304	2-Hole EMT Straps	1.00	8
N2308	2-Hole EMT Straps	1.00	4
N2309	2-Hole EMT Straps	1.00	4



N0028

BUSHING



Part No.	Description	Length (In.)	Pkg Qty
N0028	Bushing, Screw-On Washer	6.00	5



N0310

REDUCING WASHER



Part No.	Description	Length (In.)	Pkg Qty
N0310	Reducing Washer, 3/4" - 1/2"	5.00	28
N0305	Reducing Washer, 1" - 3/4"	1.00	25

ELECTRICAL DEVICES AND ACCESSORIES

CONDUIT FITTING



N1306

CONDUIT STRAP



Part No.	Length (In.)	Pkg Qty
N1306	4.50	20
N1307	6.30	12
N1304	4.60	8
N1305	3.60	6



N1315

CONNECTOR, 90



Part No.	Description	Length (In.)	Pkg Qty
N1315	90° Connector, Steel Cover, 1/2" Knockouts, 3/8" Trade	6.00	3



N1320

CONNECTOR, ROMEX



Part No.	Description	Length (In.)	Pkg Qty
N1320	Romex Connector, Clamp Type, 1/2" Knockouts, 3/8" Trade	7.10	25
N1319	Romex connector, clamp type, 3/4" knockouts, 3/4" trade	1.00	4



MCLTCA

LIQUID TIGHT CONNECTOR

Alloy steel MC connectors, liquid-tight, zinc plated.



Part No.	Description	Length (In.)	Diameter (In.)	Hex Size (In.)	Type
MCLTCA	3/4" 90° Connection	3.50	2.00	1 1/8	90 Degree
MCLTCS	3/4" 90° Connection	1 31/32	1 13/16	1 1/8	Straight

PLUG ADAPTER

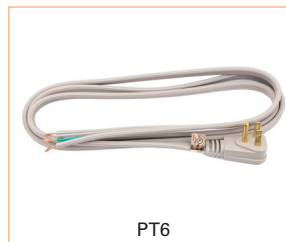


N2867

PLUG



Part No.	Description	Wgt (Lbs.)	Pkg Qty
N2867*	Armored Plug, Male, 2 Pole, 3 Wire 15A-125V	0.06	1
N2887*	Armored Connector, Female, 2 Pole, 3 Wire, 15A-125V	0.13	1
N5223	Triple Outlet, Heavy Duty Grounding Adapter, 15A-125V	0.14	1



PT6

PIGTAIL

- UL/CSA Listed
- 16/3 AWG (PT6), 14/3 AWG (PT9)
- PT6S is straight out, PT6/PT9 are top out



Part No.	Length (Ft.)	Wgt (Lbs.)
PT6	6.0	0.47
PT6S	6.0	0.15
PT9	9.0	1.00



PATCH CORD

- Female plug x (3) large alligator clips
- 12" long



Part No.	Description	Wgt (Lbs.)
69522*	15A Patch Cord	0.40



BOX, ELECTRICAL

- Steel



Part No.	Description	Dimensions (In.)		
		L	W	D
N0360	Utility, 1/2" Knockouts	3.90	2.10	1 7/8
N0361	Utility, 1/2" Knockouts, Deep	3.90	2.20	2 7/8
N0362	1900 Shallow, 21.0 cu. in., 1/2" and 3/4" Knockouts	4.00	3.90	1 1/2
N0363	1900 Deep, 30.3 cu. in., 1/2" and 3/4" Knockouts	4.00	4.00	2 1/8

BOX, SWITCH, COVER



RECEPTACLE



Part No.	Description	Pkg Qty
N0270*	Duplex Receptacle, 2 Pole, 3 Wire, 15A-125V	1



BOX COVER, UTILITY

- Covers 2 1/8" x 4" box
- Plated finish



Part No.	Description	Dimensions (In.)	
		L	W
N0365	Wall Switch Utility Cover, 2 1/8" x 4 1/8"	5.00	2.00
N0366	Duplex Receptacle Cover, 2 1/8" x 4 1/8"	6.00	3.00
N0367	Blank Utility Cover, 2 1/8" x 4 1/8"	4.40	2.10



WALL SWITCH



Part No.	Description	Pkg Qty
N0777*	On-Off, 15A, 120V	1
N1262	Silent, 2 Pole, 15A-120/277 Vac	1



BOX COVER, 1900 BOX

- Covers 4" x 4" box
- Plated finish



Part No.	Description	Dimensions (In.)	
		L	W
N0368	Wall Toggle Duplex Cover, 4" Square	4.00	4.00
N0371	Square Cover, Blank, 4" x 4"	3.90	3.70



TOGGLE SWITCH

- Bat handle
- All switches rated 15A, 125/250 Vac



Part No.	Description	Pkg Qty
N0447	SPST, On-Off	1
N0455	DPST, On-Off	1
N0494	DPDT, On-Off-On	1

*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

ELECTRICAL DEVICES AND ACCESSORIES

SOLDERLESS TERMINAL

QWIKLUG™ TERMINAL REPAIR KIT

Patented QwikLug® easily attaches to damaged or corroded spade connectors, quickly and easily solving the problem of a compressor with pitted or severely corroded spade terminals. Tightens quickly from the front with a Phillips head screwdriver. Has a durable brass interior shielded by nylon exterior to prevent shorting. 12 AWG / 4 ft. Leads with spade



Part No.	Description
QT2912*	QwikLug 3Terminal Repair Lugs/Bag 12 AWG - 4 ft Leads w/ Spades



BUTT CONNECTOR, INSULATED



Part No.	Wire Size (AWG)	Pkg Qty
N6217	16-14	24
N6217L	16-14	50
N6231	12-10	19
N6217HS ¹	16-14	10
N6232L	22-18	50
N6231HS ²	22-18	10

1 With heat shrink 2 With heat shrink



DEAD-END CONNECTOR, INSULATED



Part No.	Wire Size (AWG)	Pkg Qty
N6222L	22-14	50
N6223L	16-10	50
N6250N	18-8	25



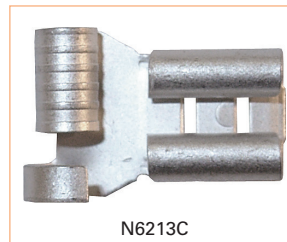
FEMALE FLAG SLIP ON

- Compressor applications



Part No.	Wire Size (AWG)	Tab Size (In.)	Pkg Qty
N6259	12-10	.250	14
N6259C	12-10	.250	100
N6270 ¹	12-8	.250	25
N6258C	16-14	.250	100

1 Shown



FEMALE FLAG SLIP ON



Part No.	Wire Size (AWG)	Tab Size (In.)	Insulated	Pkg Qty
N6213C	16-14	.250	No	100
N6224C	12-10	.250	No	100
N6277N	16-14	.250	Yes	25



FULLY INSULATED SLIP ON

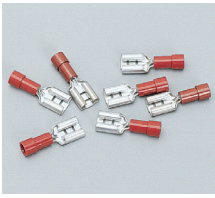


Part No.	Wire Size (AWG)	Tab Size (In.)	Gender	Pkg Qty
N6229L ¹	16-14	.250	F	50
N6233L	16-14	.250	F	50
N6234L	16-14	.250	M	50
N61234L ²	12-10	.250	F	50
N6240	16-14	.250	M/F	25 pairs
N61235L ²	12-10	.250	M	50
N6220	16-14	.250	M/F	11

1 With insulated grip 2 With Nylon insulation



*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



N6214C

FEMALE INSULATED SLIP ON



Part No.	Wire Size (AWG)	Tab Size (In.)	Insulated	Pkg Qty
N6214C	16-14	.250	No	100
N6218	16-14	.250	Yes	24
N6218L	16-14	.250	Yes	50
N6235L	22-18	.250	Yes	50
N6251	12-10	.250	Yes	19
N6251L	12-10	.250	Yes	50
N6281L	16-14	.187	Yes	50
N6282L	22-18	.187	Yes	50

Part No.	Wire Size (AWG)	Stud Size	Pkg Qty
N6252L	12-10	10.0	50
N6253L	12-10	0.25	50
N6257N	8	0.25	25
N6272L	16-14	8.0	50



N6227L

INSULATED SPADE



Part No.	Wire Size (AWG)	Stud Size	Pkg Qty
N6227L	16-14	8.0	50
N6228L	16-14	10.0	50
N6237L	22-18	8.0	50
N6255L	12-10	10.0	50
N6274L	16-14	6.0	50



N6219

MALE INSULATED SLIP ON



Part No.	Wire Size (AWG)	Tab Size (In.)	Pkg Qty
N6219	16-14	.250	24



N6238L

INSULATED SPRING SPADE



Part No.	Wire Size (AWG)	Stud Size	Pkg Qty
N6238L	22-18	8.0	50
N6239L	16-14	8.0	50
N6276L	16-14	8.0	50



N6285L

BULLET PLUG/RECEPTACLE

- Insulated



Part No.	Wire Size (AWG)	Tab Size (In.)	Pkg Qty
N6285L ¹	16-14	Plug/.157	50
N6286L	16-14	Receptacle/.157	50

¹ Pictured

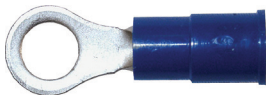


N6210

TAB ADAPTER



Part No.	Tab Size (In.)	Gender	Pkg Qty
N6210	.250	1 M/1 F	24
N6211C	.250	2 M/1 F	100
N6212	.250	2 M/1 F	24



N6216L

INSULATED RING



Part No.	Wire Size (AWG)	Stud Size	Pkg Qty
N6216L	16-14	10.0	50
N6236L	22-18	8.0	50

Continued on next page

ELECTRICAL DEVICES AND ACCESSORIES

SOLDERLESS TERMINAL

TERMINAL KIT



N6200A



Part No.	Description
N6200A	Includes N6211 (15), N6213 (20), N6217 (10), N6218 (15), N6227 (10)
N6200D	Includes N6211 (10), N6224 (10), N6231 (10), N6251 (10), N6252 (10), N6255 (15)
N6200E	Includes: - Butt connectors: (10) 12-10 AWG wire, (10) 16-14 AWG wire, (10) 22-18 AWG wire - Dead end connectors: (10) 16 AWG wire, (10) 22-14 AWG wire - Female slip-Ons: (10) 12-10 AWG wire, (15) 16-14 AWG wire, (15) 22-18 AWG wire (0.250 tab each) - Ring Terminals: (10) 12-10 AWG wire, (10) 16-14 AWG wire (#10 stud each) - Spage terminals: (15) 12-10 AWG wire #10 stud, (10) 16-14 AWG wire #8 stud
N6200G	Includes: (10) Fully insulated female slip-on, 16-14 AWG wire, 0.250 tab (10) Fully insulated flag female slip-on, 16-14 AWG wire, 0.250 tab (10) Fully insulated male slip-on, 16-14 AWG wire, 0.250 tab (10) Insulated butt connector, 12-10 AWG wire (15) Insulated butt connector, 16-14 AWG wire (15) Insulated butt connector, 22-18 AWG wire (10) Insulated female slip-on, 12-10 AWG wire, 0.250 tab (15) Insulated female slip-on, 16-14 AWG wire, 0.250 tab (15) Insulated female slip-on, 22-18 AWG wire, 0.250 tab (10) Insulated male slip-on, 16-14 AWG wire, 0.250 tab (10) Tab adapter, 2 male/1 female, 0.250 tab (15) Tab adapter, 3-way, 0.250 tab



N4200A

TERMINAL KIT - HIGH TEMPERATURE



Part No.	Description
N4200A	Includes: (8) 16-14 high temp (900°) female and flag female slip-ons (4 pieces of each item), (4) 16-14 high temp butt connector, (4) 16-14 high temp ring for #10 stud



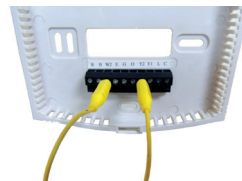
TLC310

TERMINAL REPAIR

- Includes 3 color coded wires and hex wrench



Part No.	Description
TLC310	10 Gauge Compressor Stake Kit
TLC312	12 Gauge Compressor Stake Kit



MJ1

MAGJUMPER™

- Ideal for recessed terminals, and low voltage troubleshooting
- No more popping off terminals
- Stays flexible in cold weather
- Great for troubleshooting thermostats, control boards, sensors and



switches

Part No.	Description
MJ1	MagJumper 20" Leads, 1/4" Yellow Tip



QT2810

QWIKLUG™ TERMINAL REPAIR KIT

QwikLug™ easily attaches to damaged or corroded spade connectors. Simply push the connector on and tighten it from the front with a Phillips screwdriver. QwikLug™ comes with color coded leads for

connecting to existing wiring. The outer connector housing is a nylon insulator so the connectors can touch without shorting.



Part No.	Description
QT2810*	Terminal Lugs, 30 Amps, 10 AWG / 2 ft. Leads with Nut, Pkg of 3
QT2812*	Terminal Lugs, 20 Amps, 12 AWG / 2 ft. Leads with Spade, pkg of 3
QT2910*	Terminal lugs, 30 Amps, 10 AWG / 4 ft. Leads with Nut, pkg of 3

WIRE



UL1825

18 GAUGE

- UL Listed type CL2
- CUL Listed type CM or CHM/FT1
- NEC article 725

Part No.	Nb. of Conductors	Length Reel (Ft.)	Wgt (Lbs.)
UL1825	2	500	6.75
UL1825S ¹	2	500	4.80
UL1835	3	500	9.80
UL1835S ¹	3	500	10.65
UL184250	4	250	6.35
UL1842S ¹	4	250	6.25
UL1852	5	250	8.20
UL1852S	5	250	10.00
UL1862	6	250	9.75
UL1872	7	250	11.00
UL1882	8	250	12.50
UL1882S ¹	8	250	13.50
UL1892	9	250	13.75
UL18102	10	250	15.95
UL18122	12	250	18.00

¹ Shielded



PLN5502

18 GAUGE PLENUM CABLE

- UL Listed type CMP/MPP/CL2P
- CUL Listed type CMP/FT6
- NEC article 725 and 800

Part No.	Nb. of Conductors	Length Reel (Ft.)	Wgt (Lbs.)
PLN5502	2	500	8.00
PLN5503	3	500	10.25
PLN5504	4	250	11.40
PLN5505	5	250	8.20
PLN5506	6	250	10.50
PLN5508	8	250	13.75
PLN5510	10	250	15.25



32145012

18 GAUGE PLENUM CABLE

- Plenum rated: CMP, CL2P, C(UL), FT6 LISTED
- Overall shielded
- Stranded

Part No.	Nb. of Conductors	Length Reel (Ft.)	Wgt (Lbs.)
32145012	2	500	9.98
32141012	2	1000	20.00
32265012	3	500	13.12
32261012	3	1000	26.24
32155012	4	500	16.36
32151012	4	500	32.72
32165012	6	500	22.72
32161012	6	1000	45.45
32175012	8	500	29.20
32171012	8	1000	58.39



3320210X

ECHELON® LONWORKS® CONTROL CABLES

- Stranded Bare Copper Conductor Pairs
- Plenum rated: CMP, CL2P Listed
- Unshielded

Part No.	Description	Wire Size (In.)	Wgt (Lbs.)
3320210X	Bacnet Stranded Shielded, 2 pairs	22	50.01



N632B

HOOK-UP WIRE

- Stranded
- Capacity—600V
- 48' lengths
- UL Listed



Part No.	Wgt (Lbs.)	Gauge	Color
N632B	0.38	16.0	Black
N632R	0.38	16.0	Red
N632W	0.38	16.0	White
N633B	0.78	14.0	Black
N633G	0.50	14.0	Green
N633R	0.50	14.0	Red
N633W	0.50	14.0	White
N634B	1.19	12.0	Black
N634R	1.19	12.0	Red
N634W	1.19	12.0	White
N635B	2.06	10.0	Black
N635R	2.06	10.0	Red
N635W	2.06	10.0	White

Continued on next page

ELECTRICAL DEVICES AND ACCESSORIES

WIRE

Part No.	Wgt (Lbs.)	Gauge	Color
N631B	3.00	8.0	Black
N631R	3.00	8.0	Red



N6336

THERMOSTAT WIRE



Part No.	Wire Size (In.)	Nb. of Conductors	Wgt (Lbs.)	Pkg Length (Ft)
N6336	18	3	0.50	40
N6337	18	5	1.19	40
N6338	18	8	2.25	40



N6341

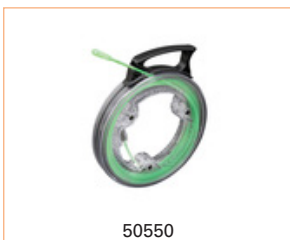
SJT SERVICE CORD

- 300V capacity
- UL listed



Part No.	Nb. of Conductors	Wgt (Lbs.)	Pkg Length (Ft)	Gauge
N6341	3	1.19	20	16.0
N6343	3	2.02	20	14.0

WIRE MANAGEMENT



50550

WIRE FISHING, GLOW IN THE DARK

- 20-Foot Fish Tape features unique glow-in-the-dark fiberglass tape and nylon tip
- Clear housing allows the glow material to charge in the case
- Fully removable from case for more versatile application such as

pass-through wire feeding



Part No.	Description
50550	Fish Tape, Glow in the Dark, 20 Ft



56250

WIRE MARKER BOOK

- Larger, easy-to-read print on 0.2" x 1.5" labels
- Each page is perforated so that a third, two-thirds or entire the page can be easily detached
- Strong tack for lasting adhesion on oily wires

- Markers are a vinyl coated white cloth, 8 mils thick



Part No.	Description
56250	1 to 48 (14 pages)
56253	A-Z, 0-15, plus (+), minus (-), and forward slash (/) (10 pages)



N63124

WHIP

- Nonmetallic sealite



Part No.	Length (Ft.)	Connection Size (In.)	Wire Size
N63124	4.0	1/2	10
N63126	6.0	1/2	10
N63344	4.0	3/4	8
N63346	6.0	3/4	8



N6291C

WIRE NUT

Color-coded connector shells are made from high dielectric, smooth polypropylene plastic to eliminate porosity and surface cracking. Resists practically all chemical action—unaffected by gasolines, oils, diluted acids and alkaline

solutions. Heat-resistant up to 105°C (221°F).

N6295 contents = 15 each Yellow, Orange, Grey, 10 each Red



Part No.	Color	Size	Style	Pkg Qty
N6291C	Grey	Mini	Non-Winged	100
N6292C	Blue	Mini	Non Winged	100
N6293C	Orange	Small	Non Winged	100
N6294C	Yellow	Medium	Winged	100
N6296C	Red	Large	Winged	100
N6295	G,O,Y,R	All	-	55



CABLE TIE, BLACK

- Ties rated to 50 lb. tensile strength



Part No.	Length (In.)	Diameter Max. (In.)	Pkg Qty
N6262BC	11.25	1.75	100
N6262BM	18.20	1.75	1,000
N6263BC	12.00	3.0	100
N6263BD	14.00	3.0	500
N6265BC	14.25	4.0	100



NYLON CABLE CLAMP



Part No.	Pipe OD (In.)	Pkg Qty
N5381	1/8	54
N5382	1/4	45
N5383	3/8	41
N5384	1/2	39
N5385	5/8	37



CABLE TIE, NYLON

- Ties rated to 50 lb. tensile strength



Part No.	Length (In.)	Diameter Max. (In.)	Pkg Qty
N6261L ¹	9.00	1.375	50
N6262L	9.20	1.75	50
N6262M	16.30	1.75	1,000
N6263D	13.90	3.0	500
N6263L	11.00	3.0	50

¹ 40 lb. tensile strength



HEAT SHRINK TUBE ASSORTMENT

- Assorted 6" lengths
- Includes 2 pieces each of: 1/8" Black; 1/8" White; 1/4" Black; 1/4" White; 1/2" Black; 1/2" White



Part No.	Description
N6370	Heat Shrink Tube Assortment

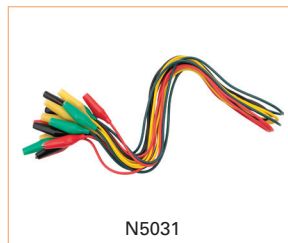
TEST LEAD



CABLE TIE, MOUNTING HOLE



Part No.	Length (In.)	Diameter Max. (In.)	Pkg Qty
N6264N	7.00	1.75	25
N6264C	1.00	1.75	100



TEST LEADS



Part No.	Description
N5031	Leads, Color Coded, Alligator Clip, Small
N5032	Leads, 18" Wire, Alligator Clip, Medium
N5035	Alligator Clip, 2", Medium
N5036	Test Clip, 2 1/2", Large
N6025	Compressor Lead Kit



CABLE TIE MOUNT



Part No.	Length (In.)	Pkg Qty	Description
N6269L	7.50	50	1", Adhesive Backing

CONTROLS & ELECTRICAL ACCESSORIES

NOTES

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***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