

New!



UL RECOGNIZED

E CLASS HARD STARTS



Coupling state of the art electronic potential relay technology and a safety timing circuit, the Elite 'E' Class Hard Start series provide the most reliability of any Hard Start devices.

APPLICATIONS

For use on any single phase air conditioning and refrigeration unit. See specifications below for voltage ranges and recommended equipment sizes.

BENEFITS

- Electronic Potential Relay Technology
- Backup electronic timing circuit to protect the compressor
- Voltage sensing
- Instant re-start
- Easy 2-wire connection

SPECIFICATIONS

	Operating Voltage	Equipment Range	Recommended Range	Capacitor
SPP4E	90V – 130V	1/12 hp to 1 hp	1/8 hp to 1 hp	88 – 106 μ F
SPP5E	90V – 277V	1/12 hp to 10 hp	1/3 hp to 2 hp	43 – 52 μ F
SPP6E	90V – 277V	1/12 hp to 10 hp	1/2 hp to 3 hp	88 – 106 μ F
SPP7E	90V – 277V	1/12 hp to 10 hp	1 hp to 4 hp	130 – 156 μ F
SPP8E*	90V – 277V	1/12 hp to 10 hp	1 hp to 5 hp	189 – 227 μ F

* Same as SPP8



SPP5 STARTER POW-R-PAK

INCREASES STARTING TORQUE UP TO 300%!



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APPLICATIONS

- Room A/C units
- Residential and commercial PSC A/C units and heat pumps
- For all PSC A/C units from 4,000 thru 120,000 BTU's (1/2 thru 10 H.P.)
- Can be used on 120 thru 288 VAC units
- For low voltage and hard starting compressors

FEATURES

- Installs in seconds across run capacitor terminals
- Contains relay and start capacitor for extra starting torque

PART NO.	VOLTAGE	INCREASED TORQUE
SPP5	115-230	270 OUNCE INCHES



SPP6 SUPER BOOST

INCREASES STARTING TORQUE UP TO 500%!



UL RECOGNIZED

APPLICATIONS

- Room A/C units
- Residential and commercial PSC A/C units and heat pumps
- For all PSC A/C units from 4,000 thru 120,000 BTU's (1/2 thru 10 H.P.)
- Can be used on 120 thru 288 VAC units
- For severe low voltage or hard starting compressors

FEATURES

- Installs in seconds across run capacitor terminals
- Contains specially designed relay and large start capacitor for severe hard start problems

PART NO.	VOLTAGE	INCREASED TORQUE
SPP6	115-230	390 OUNCE INCHES



SPP7S SUPER BOOST STARTER

INCREASES STARTING TORQUE UP TO 600%!



UL RECOGNIZED

SPP7S ...a new, more powerful start assist for compressors that require a powerful boost to overcome very severe hard starting problems. It is easily installed across the unit's run capacitor terminals. The SPP7S does not alter the system's original electrical specifications. The fail safe features of the SPP7S allow all of the unit's overload devices to operate freely.

APPLICATIONS

- Room A/C units
- Residential and commercial PSC A/C units and heat pumps
- For all PSC A/C units from 18,000 thru 120,000 BTU's (1 1/2 thru 10 H.P.)
- Can be used on 120 thru 288 VAC units
- For severe low voltage or hard starting compressors

FEATURES

- Installs in seconds across run capacitor terminals
- Contains specially designed relay and large start capacitor for severe hard start problems

PART NO.	VOLTAGE	INCREASED TORQUE
SPP7S	115-230	450 OUNCE INCHES



SPP STARTER POW-R-PAK

INCREASES STARTING TORQUE UP TO 250%!



UL RECOGNIZED

APPLICATIONS

- Room A/C Units
- Residential and commercial PSC A/C units and heat pumps
- For all PSC A/C units from 4,000 thru 120,000 BTU's (1/2 thru 10 H.P.)
- Can be used on 120 thru 288 VAC units
- For ordinary low voltage start problems

FEATURES

- Installs in seconds across run capacitor terminals
- Compact size (1 1/4" dia. by 1/2" wide) fits into smallest areas
- No need to remove A/C from window on most models

PART NO.	VOLTAGE	INCREASED TORQUE
SPP	115-230	210 OUNCE INCHES

FOR REFRIGERATION SYSTEMS WITH OUT RUN CAPACITORS



ICG SERIES RELAYS



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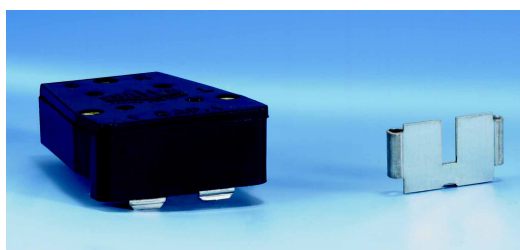
APPLICATION

- One size for all compressors from 1/12 H.P. thru 1/2 H.P.
- These two solid state relays will replace ALL current type relays

FEATURES

- Easy to install – Can be mounted on the fence of the compressor with quick “snap-on-bracket” or installed in any convenient location by using screws through the mounting holes.
- Can be used with or without a start capacitor

SUPCO PART NO.	HORSEPOWER	VOLTAGE
ICG1	1/12 THRU 1/2	115
ICG -220	1/12 THRU 1/2	230



PO SERIES RELAYS



UL RECOGNIZED

APPLICATIONS

- One size for all compressors from 1/12 H.P. thru 1/2 H.P.
- 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

FEATURES

- Lowest resistance solid state relay available
- FASTEST COOL DOWN TIME of ALL solid state relays
- Quick and easy to install

SUPCO PART NO.	HORSEPOWER	VOLTAGE
PO115	1/12 thru 1/2	115
PO230	1/12 thru 1/2	230



RO Series

RO SERIES RELAY & PRO SERIES RELAY WITH OVERLOAD COMBINATION



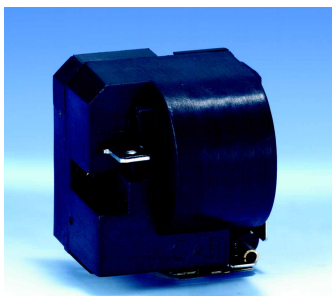
UL RECOGNIZED

APPLICATIONS

- Replaces ALL Hermetic refrigerator compressor relay and overload units from 1/12 H.P. thru 1/3 H.P., 115-220 VAC
- Can be used in conjunction with a start capacitor

FEATURES

- Relay & Overload is NOW in ONE Combination Unit
- Prewired for FAST, SIMPLE installation
- Attached mounting clip makes installation easy with the RO Series
- Push-on to compressor pin terminals with the Pro Series
- Superior locked rotor protection eliminates start winding overheating



PRO Series

SUPCO PART NO	HORSEPOWER	VOLTAGE		
RO81	PRO81	1/12 thru 1/5	115	
RO41	PRO41	1/4 and 1/3	115	
RO82	PRO82	1/12, 1/10 and 1/8	230	
RO62	PRO62	1/6 and 1/5	230	
RO42	PRO42	1/4 and 1/3	230	
RO22	PRO22	1/2-2/3	230	
	PROD10	EXACT DANFOSS	1/12-1/2	115
	PROD20	EXACT DANFOSS	1/12-1/2	230

FOR REFRIGERATION SYSTEMS WITH OUT RUN CAPACITORS



RSC SERIES THE BIG RELAY

APPLICATION

One size for all compressors from 1/12 H.P. thru 1/2 H.P. for both domestic and commercial refrigerators and freezers.

FEATURES

- A combined solid state starting relay and capacitor
- Completely prewired for a fast, simple hookup
- Installs quickly and easily by just pushing the female pin terminals onto the compressor terminals
- Replaces current type relays
- Provides added boost for hard start and unbalanced systems
- Prevents low voltage starting problems
- NO ADDITIONAL WIRES REQUIRED

PART NO.	HORSEPOWER	VOLTAGE
RSC10	1/12 thru 1/2	115
RSC20	1/12 thru 1/2	230



UL RECOGNIZED



RCO SERIES 3 n' 1 START RELAY

The 3 n'1 Start Relay adds new life to old refrigerators and freezers by providing an additional boost to the compressor.

APPLICATION

This ALL-IN-ONE unit replaces ALL 3 electrical components – relay, overload and start capacitor, on ALL capillary systems.

FEATURES

- Completely prewired.
- Installs quickly and easily by simply pushing on 3 female pin terminals

PART NO.	HORSEPOWER	VOLTAGE
RCO810	1/12 thru 1/5	115
RCO410	1/4 and 1/3	115
RCO820	1/12, 1/10 and 1/8	230
RCO620	1/6 and 1/5	230
RCO420	1/4 and 1/3	230
RCO210	1/2	115
RCO220	1/2	230

NEW!



UL RECOGNIZED



SS410 SUPER START RELAY OVERLOAD COMBINATION

The only combination relay, capacitor and overload that is GUARANTEED to start the compressor against virtually ALL unbalanced pressures when used on high starting motors.

APPLICATIONS

For all motors including high starting torque motors 1/4 & 1/3 H.P.

FEATURES

- The SS410 is equipped with the latest electromechanical relay, locked rotor protector and 255 MFD start capacitor: all internally wired for fast installation.
- For motors that aren't equipped with a capacitor, (RSIR) the SS410 will increase its torque to its maximum capacity.

PART NO.	HORSEPOWER	VOLTAGE
SS410	1/4 and 1/3	115

NEW!

FOR REFRIGERATION SYSTEMS WITH RUN CAPACITORS

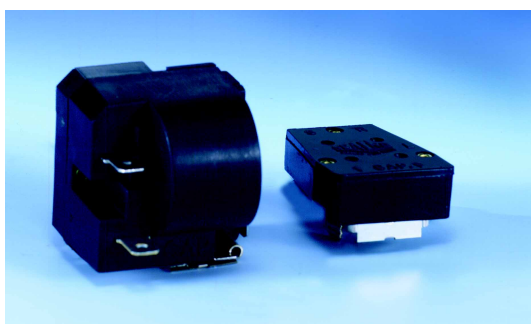


PON SERIES PUSH-ON RELAY

FEATURES

- Can restart the unit within 1 minute
- Solid State relay for silent nonarcing starts
- Can also be used on compressors that do not use a run capacitor

PART NO.	HORSEPOWER	VOLTAGE
PON1A	1/12 to 1/2 H.P.	115 VAC 50/60Hz.
PON2A	1/12 to 1/2 H.P.	230 VAC 50/60Hz.



URO

UR

UNIVERSAL UR & URO SERIES

UR PUSH-ON RELAY &

URO PUSH-ON RELAY WITH COMBINATION OVERLOAD

APPLICATIONS

These two series replace all defective push on relays on every type compressor including those with Running Capacitors from 1/12 through 1/2 HP 115-230 VAC for compressors with:

- Resistance start motors (no capacitors)
- Start capacitor motors
- Run capacitor motors
- Start and run capacitor motors

FEATURES

- Safe, reliable, long lasting PTC relay
- Prevents start winding overheating during locked rotor situations
- Fast, easy installation
- No rewiring for all types of motors

UR SERIES

PART NO.	HORSEPOWER	VOLTAGE
UR115	1/12 to 1/2 H.P.	115 VAC
UR230	1/12 to 1/2 H.P.	230 VAC

URO SERIES

PART NO.	HORSEPOWER	VOLTAGE
URO81	1/12 to 1/5 H.P.	115 VAC
URO41	1/4 to 1/3 H.P.	115 VAC
URO82	1/12 to 1/8 H.P.	230 VAC
URO62	1/6 to 1/4 H.P.	230 VAC
URO42	1/4 to 1/3 H.P.	230 VAC
URO22	1/2 H.P.	230 VAC



URSC SERIES POWER START RELAY

The URSC Series replaces the relay in refrigeration systems with run capacitors and provides an added boost for start-up. It includes:

- Relay
- Hard Start Capacitor

PART NO.	HORSEPOWER	VOLTAGE
URSC10	1/12 TO 1/2 HP	115
URSC20	1/12 TO 1/2 HP	230



URCO SERIES - 3 N'1 START

For refrigeration systems with run capacitor, the URCO Series replaces the starting relay, the overload and provides added boost for start-up by adding start capacitor. Completely pre-wired, it includes:

- Relay
- Overload
- Start Capacitor

PART NO.	EQUIPMENT RANGE	VOLTAGE
URCO81	1/12hp-1/5hp	115V
URCO41	1/4hp-1/3hp	115V
URCO21	1/2hp	115V
URCO82	1/12hp-1/5hp	230V
URCO62	1/6hp-1/5hp	230V
URCO42	1/4hp-1/3hp	230V
URCO22	1/2hp	230V

UNIVERSAL POTENTIAL RELAYS

Replacing all potential relays, these WIRE TO WIRE Universal Potential Relays offer the ultimate in convenience. One potential relay to fit any application. Choose to “drop in” the SUPR Universal Potential Relay or “dial in” the exact pick up voltage for the APR5 Adjustable Potential Relay. State of the Art electronic circuitry provides Wire to Wire replacement of any potential relay with added motor protection.

APPLICATIONS

- Replaces all OEM potential relays
- Used on any single phase motor or air conditioning and refrigeration compressor up to 5 hp.

BENEFITS

- Reduces Inventory
- Wire to Wire Replacement for virtually ALL potential relays.
- Recycles instantly
- Replaces both 3 and 5 terminal potential relays
- Accommodates screw on or push on connections.
- Dimensions identical to industry standard potential relays.
- Easy replacement mounting with universal mounting bracket.
- Start winding protection if motor does not start.
- Prevents start capacitor venting, when motor doesn't start.



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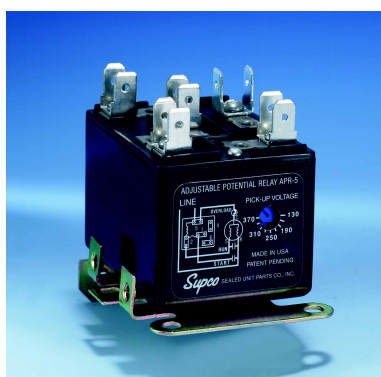


SUPR UNIVERSAL POTENTIAL RELAYS

The SUPR Universal Potential Relay is a time function potential relay designed to be a Wire to Wire replacement for virtually any potential relay on the market. The SUPR is a replacement for potential, hard start, current and centrifugal start relays. It can be used on any single phase motor or air conditioning and refrigeration compressor up to 5 hp.

SPECIFICATIONS

Operating Voltage	110 – 270 VAC, Single Phase
Motor Power Rating	up to 5 hp
Start Time	0.5 +/- 0.1 seconds
Operating Position	Non-positional mounting.
Universal Mounting Bracket	Allows for easy installation. Unused portions of the bracket simply snap-off with pliers.
Terminals	Screw or push-on. Adapters to convert screw-on to push-on are provided.



APR5 UNIVERSAL POTENTIAL RELAYS

The APR5 Adjustable Potential Relay is an adjustable voltage sensitive, wire to wire universal replacement for virtually all potential relays on the market. Simply set the pick up voltage of the APR5 to that of the defective relay, or for unknown values, consult the APR5's installation instructions. It can be used on any single phase motor or air conditioning and refrigeration hermetic compressor up to 5 hp.

SPECIFICATIONS

Operating Voltage	110 – 270 VAC, Single Phase
Motor Power Rating	up to 5 hp
Safety Time Out	1.0 – 1.5 seconds
Operating Position	Non-positional mounting.
Universal Mounting Bracket	Allows for easy installation. Unused portions of the bracket simply snap-off with pliers.
Terminals	Screw or push-on. Adapters to convert screw-on to push-on are provided.



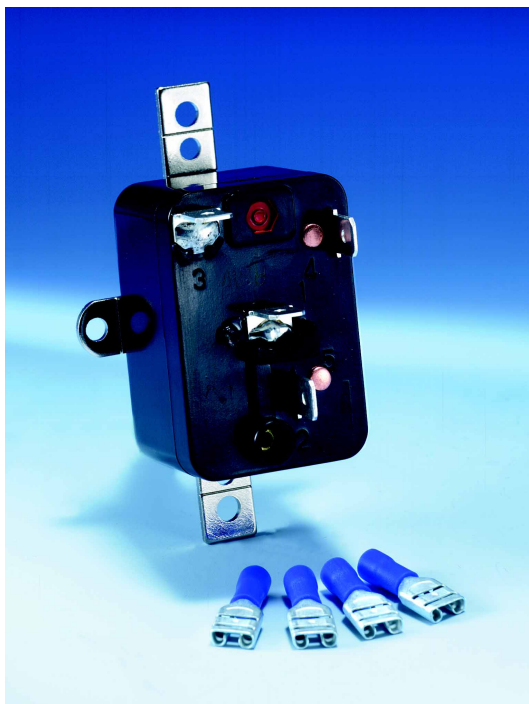
TDP269 SHORT CYCLE PROTECTOR TIME DELAY RELAY AND CONTACTOR

An ideal package for Split Systems, Commercial Refrigeration or other applications up to 3HP capacity. The TDP269 will prevent short cycling caused by power failures or thermostat abuse and most important, the contactor will take the compressor load off the thermostat circuit.

FEATURES

- Max. contactor load 30 amps. 240VAC, 3 HP 240 VAC
- 1/4" male terminal connections
- Encapsulated circuitry
- Size 4 5/16 " x 2 3/4" x 2 3/8"

PART NO.	DELAY TYPE	DELAY RANGE	VOLTAGE
TDP269	On break	6 sec. to 5 min.	220V



8400 SERIES GENERAL PURPOSE FAN RELAYS

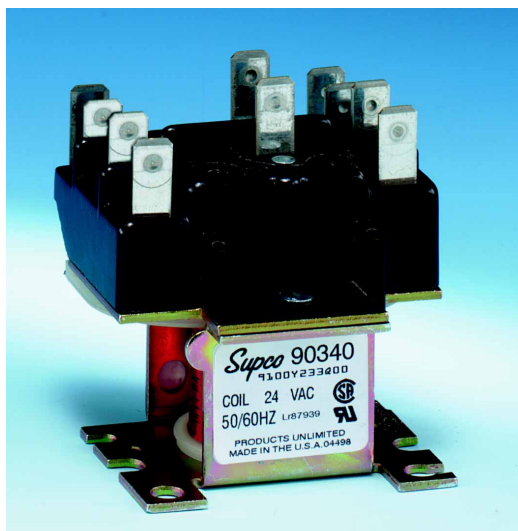
SUPCO NO.	DESCRIPTION	AMPS	COIL VOLTAGE
90290	SPST	4	24V
90291	SPST	4	120V
90292	SPST	4	240V
90293	SPDT	1	24V
90294	SPDT	1	120V
90295	SPDT	1	240V

9400 SERIES GENERAL PURPOSE FAN RELAYS

SUPCO NO.	DESCRIPTION	AMPS	COIL VOLTAGE
90370	SPDT	12	24V
90372	SPDT	12	120V
90374	SPDT	12	240V
90380	INO/INC	13	24V
90382	INO/INC	13	120V
90384	INO/INC	13	240V

ENGINEERING DATA - 8400 & 9400 SERIES

- **CONTACTS:** SPST-NO, SPST-NC, SPDT, 1 NO/1 NC, Material/Power - Silver Alloy, Material 1/2 Pilot - Fine Silver
- **POWER RATINGS (All Forms):** 125 VAC; 18A Resistive, 12 FLA, 60 LRA, 240/277 VAC; 18A Resistive, 8 FLA, 48 LRA
- **SPECIAL POWER RATINGS (Form 1 & 2):** 125 VAC:14 FLA, 84 LRA, 277 VAC, 25A Resistive
- **PILOT RATINGS (All Forms):** 3A, 277 VAC Gen. Purpose, 250 VA @ 250 VAC, 277 VA @ 277 VAC, 125 VA @ 125 VAC
- **COILS :** Voltage Ratings - 24, 120, 208/240, 77 VAC, 12, 24 VDC Frequency - 50/60 Hz Pick-up Voltage - AC 85% of nominal, DC 75% of nominal, Power Ratings -AC DC, Inrush 5 VA 3VA, Sealed 3 VA 3 VA



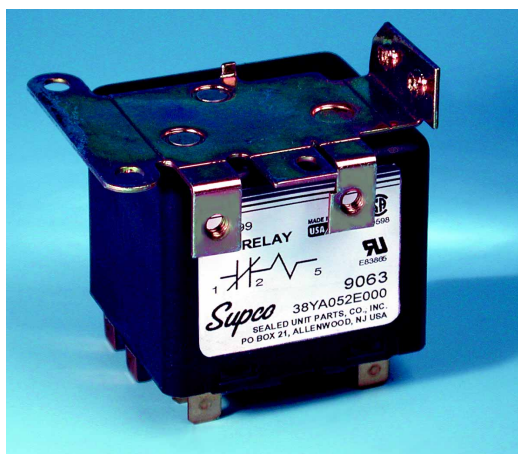
GENERAL PURPOSE SWITCHING RELAYS

Supco series 903 relays are double pole, double throw (DPDT) devices primarily used for various applications in heating, air conditioning and refrigeration. They are also suitable for general purpose switching applications in appliance vending machines, fan controls and business machines provided the device being controlled is within the electrical limits of the relay.

Contact Rating	Power		Pilot	
	208/240V 120V 277V	208/240V 120V 277V		
Full Load Amps	12	6	-	-
Resistive Amps*	15	15	3	3
Locked Rotor Amps	60	35	-	-
Horsepower	3/4	3/4	1/10	1/10

*0.75 power factor

Supco No.	Coil Voltage	Terminal Terminals		Cross Reference	
		1-2-3	4-5-6	Essex/RBM	Honeywell
90340	24	power	power	90-340	R8222D1014
90341	110/120	power	power	90-341	R4222D1013
90342	208/240	power	power	90-342	R4222N1021



UNIVERSAL REPLACEMENT RELAYS

The Supco series relays are manufactured for the HVAC industry. These relays meet all requirements for original equipment relays. They feature a universal break-off bracket to fit your specific application.

FEATURES

- 50/60 cycle
- UL and CSA approved
- Contact rating 35 amp, 480 VAC
- Non-positional
- Instructions and wiring diagram included in each relay
- Universal break-off bracket on each relay, simply snap-off parts not needed

SUPCO MODEL NO.	CONTINUOUS COIL VOLTAGE	PICK-UP		DROP OUT MAX.	REPLACES GE 3ARR3 RELAY GROUPS*
		MIN.	MAX.		
9063	170	139	153	55	2J; 2K; 2L; 2M; 5N; 7J; 7K; 7L; 7M; 7N; 8L; 8M; 8N
9064	395	260	275	120	3A; 3B; 3AV; 3AU; 4A; 4B; 6A; 6B; 6AV; 10A; 10B; 10AU; 10AV; 14A; 14B; 16A
9065	332	168	182	90	3P; 3R; 3AP; 5P; 5R; 5S; 5T; 13P; 19N; 22S
9066	395	215	225	120	3U; 3V; 3AT; 6U; 6V; 6W; 16U
9067	420	295	315	125	3C; 3D; 3AA; 4C; 4D; 4BK; 6C; 6D; 6AA; 10C; 10D; 26A; 26B; 26C; 26D
9068	502	325	345	135	3E; 3F; 3AB; 3AC; 4E; 4F; 4G; 6E; 6F; 6G; 10H; 10AB; 10AC; 26E; 26F; 26G; 26H; 27E; 27F; 27G
9069	336	180	195	105	3S; 3T; 10S; 10T; 10AS; 13S; 13T; 20S; 25S; 25T
9070	253	285	305	77	5B; 5C; 5D; 5AA; 8B; 8C; 8D; 27A; 27B; 27C
9071	420	212	232	121	6TV; 6TW; 10V; 16TV; 20V

*Determine group from GE part number.



SPP5TD & SPP6TD

COMPRESSOR PROTECTION PACKAGE COMBINATION

This combination package provides the maximum compressor protection available. It combines a powerful starter Power Pak (to provide increased starting torque), and an adjustable “Delay on Break” Time Delay (to prevent compressor short cycling).

FEATURES

- Can be installed in pilot circuits for 24 to 288 VAC
- Adjustable time delay from 6 seconds to 5 minutes
- Operates with or without cooling thermostat anticipator
- Only two terminal connection on Time Delay
- Can be mounted as an assembly or snapped apart for separate mounting
- Two models available to suit specific requirements

APPLICATIONS

- Residential and commercial PSC A/C units and heat pumps
- For all PSC A/C units from 1 H.P. to 10 H.P
- Can be used on 115 thru 288 VAC units
- For severe low voltage or hard starting compressors

PART NO.	POWER PAK INCREASED TORQUE	ADJUSTABLE TIME DELAY RANGE
SPP5TD	270 ounce inches (300%)	6 sec. to 5 minutes
SPP6TD	390 ounce inches (500%)	6 sec. to 5 minutes



TDC22 SHORT CYCLE PROTECTOR TIME DELAY RELAY AND CONTACTOR

For 220 VAC Systems ... An Ideal package for split systems that are not equipped with a contactor or time delay relay. The TDC22 is a perfect addition to large room units. The time delay prevents short cycling caused by thermostat abuse, and most important, the contactor takes the compressor load off the thermostat circuit.

FEATURES

- Adjustable delay on break
- Relay coil... same voltage as load
- Contactor ... points rated at 30 Amps, 230 VAC
- 1/4 " male quick connect terminals
- Encapsulated circuitry

SUPCO NO.	DELAY TYPE	DELAY RANGE	ADJ. TYPE	INPUT VOLT.	MAX AMPS
TDC22	On break	1 to 350 Sec.	Dial	208-220	30

NOTE: Rated to 50/60 HZ.