



DESIGN QUALITY.
CUSTOM DEVELOPMENT
SERVICES AND 50+ YEARS
OF MANUFACTURING
EXCELLENCE.

OUR OFFER:

Made in the U.S.A., custom components as well as assemblies for commercial, industrial and military applications developed to exceed all customer expectations—even the military's.

OUR ADVANTAGE:

- Extensive, full-service capabilities in our 20,000 sq. ft. facility from prototype to production through manufacturing.
- A cost competitive, legacy-leader with 50+ years of solid, generational leadership.
- The winning combination of an experienced team and hands-on management.
- CAD/CAM services to support the design stage.

OUR SPECIALTIES:

- 100% commitment to continuous improvement of our design, development and manufacturing quality system.
- On-time delivery.
- Sourcing hard to find needs.
- Product expertise with technical schematics.
- Customized, defect-free prototypes.
- Producing products to the precise requirements our customers need—and we demand.

We are family-owned and operated. Ready to stand in as your full-service legacy partner. You can have pride in saying you source your products in the U.S. when you align with Olympic Controls Corp.



- **RELAYS: DUST-TIGHT SEALED, ENVIRONMENTALLY-SEALED + HERMETICALLY-SEALED**
- **TOGGLES: DUST-TIGHT SEALED + ENVIRONMENTALLY-SEALED**
- **PUSHBUTTONS: DUST-TIGHT SEALED**

OVERVIEW:



**SWITCH MORE
CIRCUITS
IN LESS SPACE
WITH THE
T-BAR 12-POLE
SWITCHING
WAFER.**

GENERAL SPECIFICATIONS:

- **APPLICATIONS:** Naval vessels, jet aircraft, space launches, monitoring circuits and more.

RELAY SPECIFICATIONS:

- **ADVANTAGES:** Latching relays and magnetically bistable add the advantages of eliminating power waste during a power loss.
- **AMPERAGE:** 5 Amp Series (800 Series) and 1 Amp (900 Series) contact ratings.
- **CIRCUITS:** Relays switch from 12 to 52 circuits.
- **COIL CONFIGURATIONS:** Two coil configurations available. Polarity inversion control (6 Watts) is standard where the relay is driven into the set or reset (latch/unlatch) position by inverting the polarity of the control voltage. Bifilar operation (10 Watts) can be supplied to latch or unlatch using the same polarity DC control voltage.
- **MECHANICAL LIFE:** Million operations with a typical contact resistance of 20 milliohms.
- **POLE CONFIGURATIONS:** 12, 24, 36, 48 and 52 pole configurations with Form C (Double Throw, Transfer) switching, 60 poles with Form A switching.
- **POWER REQUIREMENTS:** 3 to 6.5 Watts (dependent on contact arrangement).
- **POWER SOURCE:** Relay coils operated from 12, 24, 48 or 110 Volts DC and 115 Volts AC.

SWITCHES SPECIFICATIONS:

- **MILLION LIFE OPERATIONS.**
- **ADVANTAGES:** Solves the problem of multi-circuit switching, such as gang switching, circuit selection and matrix switching.
- **POLE CONFIGURATIONS:** 12 to 144 pole configurations in Form C switching with maintained action.
- **PUSHBUTTON SWITCHES:** Available in 5 Amp Series only (800 Series).
- **RELIABILITY PROMISE:** 12 pole switching wafers (both 800/900 Series decks) as used on T-Bar Relays assuring the same high-level of reliability promise experienced throughout the T-Bar product line. Protection against all types of environment.

OCC-0421



DUST-TIGHT HYBRID SERIES



HYBRID T-BAR RELAYS ARE AVAILABLE FOR LOGIC CONTROL

THREE SCHEMATIC DIAGRAMS WITH THREE DIFFERENT DRIVERS are available:

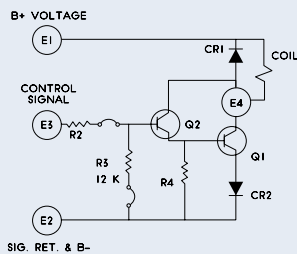
- 1) **D (DRIVER CURRENT SUPPLIED)** Designed to operate from a low current 24 Volt source and supplying +24 Volts will operate the relay.
- 2) **D (TTL OR SW)** Designed to operate from a TTL Drive or Switch. A "Logic 1" or a voltage between +2.4 Volts and + 5.5 Volts will operate the relay. A "Logic 0" or any voltage less than 0.8 Volts will deactivate the circuit. It can also be operated from a switch or contact closure. An open contact or switch activates the circuit. A closure deactivates the circuit.
- 3) **Z (INVERTED TTL)** Designed to operate from inverted TTL circuits. A "Logic 0" activates the circuit. A "Logic 1" or open circuit (open collector) deactivates the circuit.

SPECIFICATIONS:

- **SEAL TYPE:** Dust-Tight
- **# OF POLES:** 12, 24, 36, 48 and 52 pole configurations.
- **COIL VOLTAGE:** 24 and 28 Volts DC
- **TYPE OF CONTACTS:** 800 Series (5 Amp) or 900 Series (1 Amp)
- **CONTACT FORM:** C

DRIVER SCHEMATIC DIAGRAMS

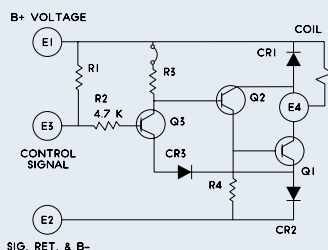
D (DRIVER CURRENT SUPPLIED)



SPECIFICATIONS

COIL SUPPLY VOLTAGES (B+):
24V \pm 2VDC, 28V \pm 2VDC, 48V \pm 2VDC
SUPPLY CURRENT (E1):
255mA @ 24V, 233mA @ 28V, or
137mA @ 48V (Relay ON)
1 microamp @ 24V, 28V or 48V (Relay OFF)
CONTROL SIGNAL INPUT (E3):
B+ @ 2.2mA (Relay ON)
Open circuit voltage 0V (Relay OFF)
OPERATING TEMPERATURE: 0°C to 55°C
CONTROL FUNCTION: Contact Closure (to B+)
ALL VALUES ARE NOMINAL*

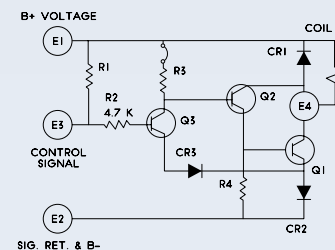
Q (TTL OR SW)



SPECIFICATIONS

COIL SUPPLY VOLTAGES (B+):
24V \pm 2VDC, 28V \pm 2VDC, 48V \pm 2VDC
SUPPLY CURRENT (E1):
255mA @ 24V, 233mA @ 28V, or
137mA @ 48V (Relay ON)
1.2mA @ 24V, 28V or 48V (Relay OFF)
CONTROL SIGNAL INPUT (E3):
2.4V to 5.5VDC (Relay ON)
0V to 0.8VDV @ - 1.2mA Sink (Relay OFF)
Open circuit voltage @ 4.5V (Relay ON)
OPERATING TEMPERATURE: 0°C to 55°C
CONTROL FUNCTION: TTL Compatible
ALL VALUES ARE NOMINAL*

Z (INVERTED TTL)



SPECIFICATIONS

COIL SUPPLY VOLTAGES (B+):
24V \pm 2VDC, 28V \pm 2VDC, 48V \pm 2VDC
SUPPLY CURRENT (E1):
255mA @ 24V, 233mA @ 28V, or
137mA @ 48V (Relay ON)
3.0 mA @ 24V, 28V or 48V (Relay OFF)
CONTROL SIGNAL INPUT (E3):
0V to 0.8VDV @ - 0.7mA Sink (Relay ON)
2.4 to 5.5VDC (Relay OFF)
Open circuit voltage @ 4.5V (Relay OFF)
OPERATING TEMPERATURE: 0°C to 55°C
CONTROL FUNCTION: TTL Compatible
ALL VALUES ARE NOMINAL*



ORDER INFORMATION

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*Based on coil rating of 6.6W.

PART NO.: 7801-12C-28
T-BAR SERIES: 7801
NO. OF CONTACTS: 12
CONTACT FORM: C
COIL VOLTAGE: 28

PART NO.: 7901-12C-28
T-BAR SERIES: 7901
NO. OF CONTACTS: 12
CONTACT FORM: C
COIL VOLTAGE: 28

MAGNETIC LATCHING RELAYS



T-BAR MULTI-CONTACT MAGNETIC LATCHING RELAYS

Pulse operated and magnetically bi-stable with the advantages of eliminating power waste during long periods in an operated position, and maintenance of circuit integrity during a power loss. These relays are the same physical size as T-Bar relays which require continuous power and are available in the same contact configurations. The switching and reliability specifications are identical with two control configurations available.

TWO CONTROL CONFIGURATIONS AVAILABLE:

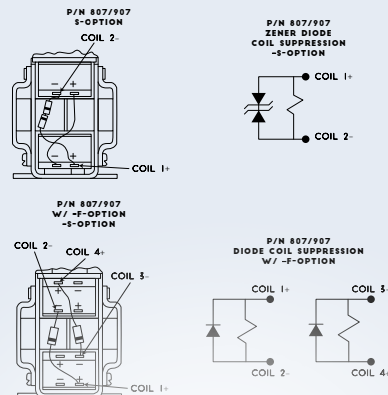
- 1) **POLARITY INVERSION** control is standard. The relay is driven into the set or rest (latch or unlatch) position by inverting the polarity of the control voltage.
- 2) **BIFILAR**, a two coil operation, can be supplied to latch or unlatch using the same polarity DC control voltage.

SPECIFICATIONS:

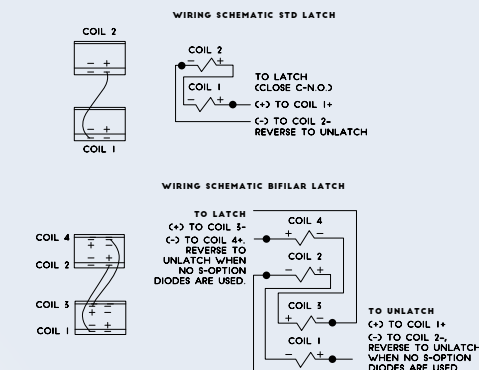
- **SEAL TYPE:** Dust-Tight
- **# OF POLES:** 12, 24, 36, 48 and 52 pole configurations.
- **COIL VOLTAGE:** 6, 12, 24, 28, 48 and 110 Volts DC + 115 Volts AC
- **TYPE OF CONTACTS:** 800 Series (5 Amp) or 900 Series (1 Amp)
- **CONTACT FORM:** A, B, C, D
- **CUSTOM OPTIONS:** Magnetically-Shielded Coil, Logic Control (hybrid), Bifilar Coils, Coil Terminal Placement, High-Insulation Resistance, Coil Suppression and High Dielectric

TECHNICAL DIAGRAMS

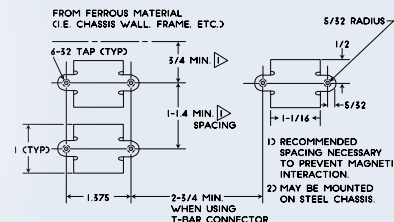
SUPPRESSION DIAGRAMS



CONTROL DIAGRAMS



MOUNTING INFORMATION



2 CONTROL CONFIGURATIONS AVAILABLE.

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PART NO.: 807-12C-28
T-BAR SERIES: 807
NO. OF CONTACTS: 12
CONTACT FORM: C
COIL VOLTAGE: 28

PART NO.: 907-12C-28
T-BAR SERIES: 907
NO. OF CONTACTS: 12
CONTACT FORM: C
COIL VOLTAGE: 28

ENVIRONMENTALLY-SEALED RELAYS



PROTECT AGAINST THE ELEMENTS WITH T-BAR CONFIDENCE

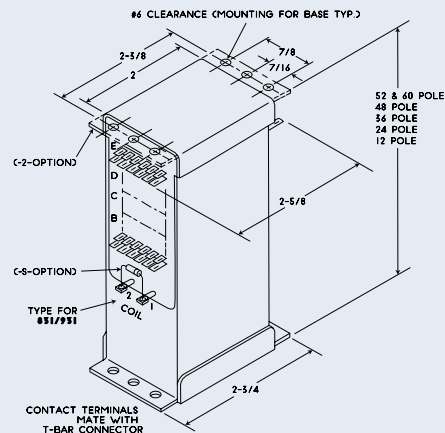
We offer contact protection against corrosive atmospheres, splashing water, sand, dust and salt spray. This T-Bar style has the identical switching, operations and reliability you will see in Standard T-Bar Switchers because the same quality wafers and actuators are used throughout. The metal enclosures and contacts are protected with a premium epoxy seal as well as backfilled with inert gas for ground support or shipboard applications and in other various hostile environments. 60 circuits are switches in a protected space as small as 2-3/4" x 1-5/8" x 4-1/2". Our products are developed with longevity and practicality in mind. **BONUS!!** Don't forget our terminals are also designed to accept T-Bar Connectors.

SPECIFICATIONS:

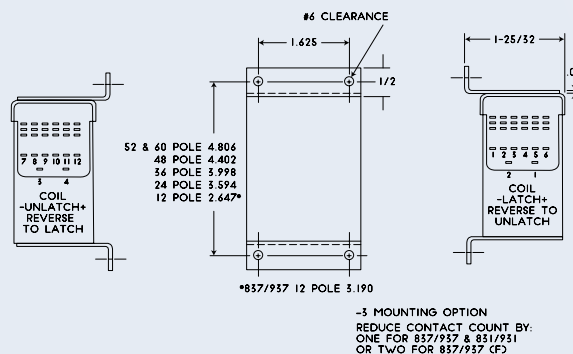
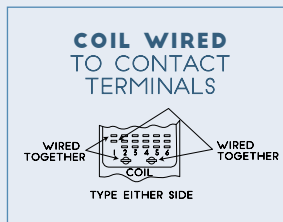
- **SEAL TYPE:** Environmental
- **# OF POLES:** 12, 24, 36, 48 and 60 pole configurations.
- **COIL VOLTAGE:** 6, 12, 24, 28, 48 and 110 Volts DC + 115 Volts AC
- **TYPE OF CONTACTS:** 800 Series (5 Amp) or 900 Series (1 Amp)
- **CONTACT FORM:** A, B, C, D
- **SIMPLE CRIMP SNAP-IN CONTACTS** fit into single block connectors for easy wiring.
- **EPOXY-SEALED** metal enclosure.

TECHNICAL DIAGRAMS

CONTACT TERMINAL (0.95 X 0.75 THK.)



**TYPE FOR
837/937
WITH (C)
OPTION
ONLY**



BONUS!!
TERMINALS DESIGNED
TO ACCEPT
T-BAR CONNECTORS!



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PART NO.: 831-12C-28-S
T-BAR SERIES: 831
NO. OF CONTACTS: 12
CONTACT FORM: C
COIL VOLTAGE: 28
ALL OTHER OPTIONS: S

PART NO.: 931-12C-28-S
T-BAR SERIES: 931
NO. OF CONTACTS: 12
CONTACT FORM: C
COIL VOLTAGE: 28
ALL OTHER OPTIONS: S

ENVIRONMENTALLY-SEALED MAGNETIC LATCHING SERIES



PROTECT AGAINST THE ELEMENTS WITH T-BAR CONFIDENCE

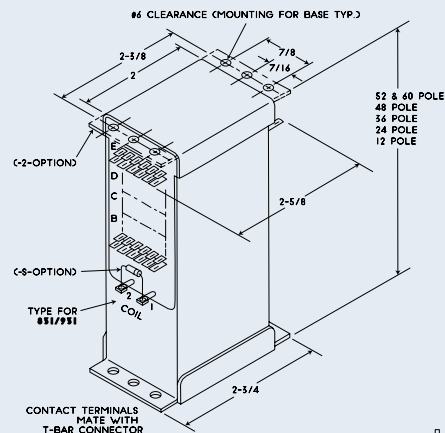
We offer contact protection against corrosive atmospheres, splashing water, sand, dust and salt spray. This T-Bar style has the identical switching, operations and reliability you will see in standard T-Bar Switchers because the same quality wafers and actuators are used throughout. This unit is installed in a metal enclosure and is protected with a premium epoxy seal. It is backfilled with inert gas for ground support and shipboard applications as well as in other various hostile environments. T-Bar Relays requiring continuous power and pulse operated magnetic latching relays can be environmentally-sealed.

SPECIFICATIONS:

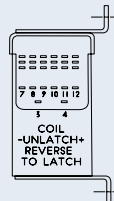
- **SEAL TYPE:** Environmental
- **# OF POLES:** 12, 24, 36, 48 and 52 pole configurations.
- **COIL VOLTAGE:** 6, 12, 24, 28, 48 and 110 Volts DC + 115 Volts AC
- **TYPE OF CONTACTS:** 800 Series (5 Amp) or 900 Series (1 Amp)
- **CONTACT FORM:** A, B, C, D
- **CUSTOM OPTIONS:** Magnetically-Shielded Coil, Logic Control (hybrid), Bifilar Coils, Coil Terminal Placement, High-Insulation Resistance, Coil Suppression and High Dielectric

TECHNICAL DIAGRAMS

CONTACT TERMINAL (0.95 X 0.75 THK.)



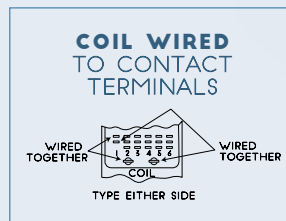
**TYPE FOR
837/937
WITH (CF)
OPTION
ONLY**



52 & 40 POLE 4.806
48 POLE 4.402
36 POLE 3.998
24 POLE 3.594
12 POLE 2.647*

*837/937 12 POLE 3.190

-S MOUNTING OPTION
REDUCE CONTACT COUNT BY:
ONE FOR 837/937 & 851/951
OR TWO FOR 837/937 (CF)



**METAL
ENCLOSURE
WITH PREMIUM
EPOXY SEAL.**



PART NO.: 837-12C-28-S
T-BAR SERIES: 837
NO. OF CONTACTS: 12
CONTACT FORM: C
COIL VOLTAGE: 28
ALL OTHER OPTIONS: S

PART NO.: 937-12C-28-S
T-BAR SERIES: 937
NO. OF CONTACTS: 12
CONTACT FORM: C
COIL VOLTAGE: 28
ALL OTHER OPTIONS: S

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HERMETICALLY-SEALED RELAYS



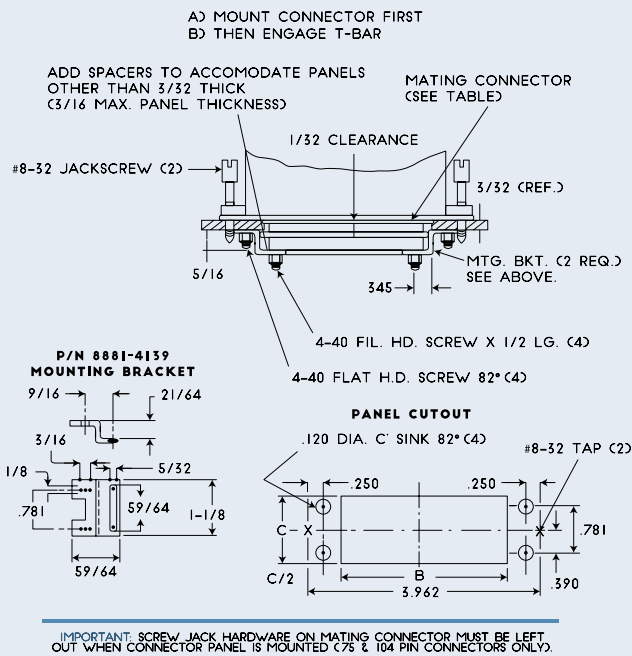
Offering the ultimate contact protection against corrosive atmospheres, splashing water, sand, dust and salt spray. This T-Bar style has the identical switching, operations and reliability you will see in all T-Bar Relays because the same quality wafers and actuators are used throughout. Standard T-Bar Relays are installed in hermetically sealed metal enclosures, using glass-to-metal sealed connectors. It is backfilled with inert gas to protect the relay for ground support, shipboard and selected airborne applications. The glass sealed termination mates with MS connectors. Pulse operated magnetic latching relays are available. Legacy strong product built with experience.

SPECIFICATIONS:

- **SEAL TYPE:** Hermetic
- **# OF POLES:** 4, 8, 12, 24, 36, 48 and 60 pole configurations.
- **COIL VOLTAGE:** 6, 12, 24, 28, 48 and 110 Volts DC + 115 Volts AC
- **TYPE OF CONTACTS:** 800 Series (5 Amp) or 900 Series (1 Amp)
- **CONTACT FORM:** A, C
- **SWITCH CONFIGURATIONS:** 24C, 36A, 48A, 34A and 51A
- **USES GLASS-TO-METAL** sealed connectors.

TECHNICAL DIAGRAMS

TYPE I CONNECTOR MOUNTING



PART NO.	NO. OF POLES + CONTACT FORM	DIMENSIONS		
		A	B	C
881/981	12C	2-45/64	2-5/8	25/32
887/987	12C	3-1/4	2-5/8	25/32
881/981 887/987	24A	3-21/32	2-5/8	25/32
	24C	3-21/32	2-5/8	1-5/32
	34C	4-1/16	2-25/32	1-5/32
	36A	4-1/16	2-5/8	1-5/32
	48A	4-15/31	2-25/32	1-5/32
	51A	4-7/8	2-25/32	1-5/32

MATING CONNECTOR CHART (CRIMP TYPE CONTACT EXCEPT AS NOTED)

TYPE OF CONN. MTG.	NO. OF PINS	NO. OF POLES & CONTACT CONFIGURATION	WINCHESTER	CONTINENTAL	
				CONNECTOR	CONTACTS
I	50	12C & 24A	MRAC50S-2020	25-50SW	2500-S420
I	75	24C & 36A	MRAC75S-2020	25-75SWG	2500-S4A20
I	104	34C, 48A & 51A		C104-20SWG-MME	(SOLDER)
II	50	12C & 24A	MRAC50SJT-2020	25-50SSK	2500-S4A20
II	75	24C & 26A	MRA75SJT-2020	25-75SSK	2500-S4A20
II	104	34C, 48A & 51A		C104-20SWS-MME	(SOLDER)

MATING CONNECTOR CHART (WIRE WRAP) .045 SQ. POST

TYPE OF CONN. MTG.	NO. OF PINS	NO. OF POLES & CONTACT CONFIGURATION	WINCHESTER	CONTINENTAL	
				CONNECTOR	CONTACTS
I	50	12C & 24A		W50SW-MME	
I	75	24C & 36A		W75SWG-MME	
I	104	34C, 48A & 51A		W104SWG-MME	
II	50	12C & 24A		W50SSK56-MME	
II	75	24C & 36A		W75SSK56-MME	
II	104	34C, 48A & 51A		W104SSK56-MME	

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PART NO.: 881-12C-28-S
T-BAR SERIES: 881
NO. OF CONTACTS: 12
CONTACT FORM: C
COIL VOLTAGE: 28
ALL OTHER OPTIONS: S

MAGNETIC LATCHING HERMETICALLY-SEALED SERIES



T-BAR HERMETICALLY-SEALED MULTI-POLE RELAYS

offer contact protection against corrosive atmospheres, splashing water, sand, dust and salt spray. This T-Bar style has the identical switching, operations and reliability you will see in all T-Bar Relays because the same quality wafers and actuators are used throughout.

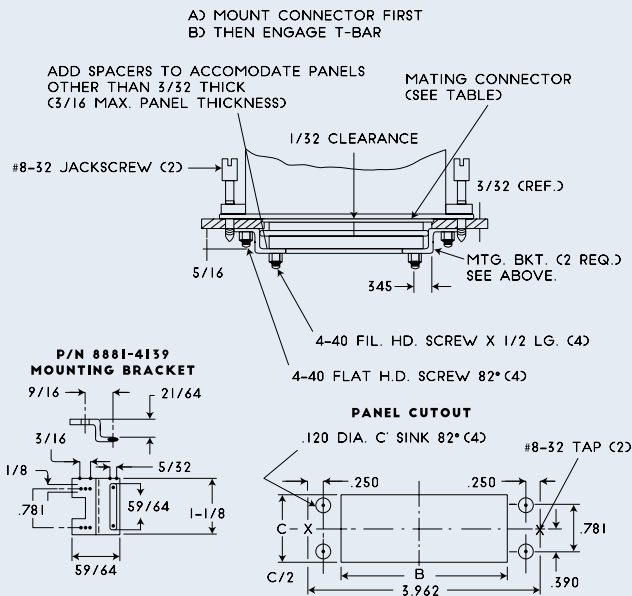
Standard T-Bar Relays are installed in hermetically sealed metal enclosures, using glass-to-metal sealed connectors. It is backfilled with inert gas to protect the relay for ground support, shipboard and selected airborne applications. The glass sealed termination mates with MS connectors. Magnetic latching relays are pulse operated. A legacy strong product built with quality.

SPECIFICATIONS:

- **SEAL TYPE:** Hermetic
- **# OF POLES:** 12, 24 and 34 pole configurations.
- **COIL VOLTAGE:** 6, 12, 24, 28, 48 and 110 Volts DC + 115 Volts AC
- **TYPE OF CONTACTS:** 800 Series (5 Amp) or 900 Series (1 Amp)
- **CONTACT FORM:** A, C
- **USES GLASS-TO-METAL** sealed connectors.

TECHNICAL DIAGRAMS

TYPE I CONNECTOR MOUNTING



IMPORTANT: SCREW JACK HARDWARE ON MATING CONNECTOR MUST BE LEFT OUT WHEN CONNECTOR PANEL IS MOUNTED (75 & 104 PIN CONNECTORS ONLY).



PART NO.	NO. OF POLES + CONTACT FORM	DIMENSIONS		
		A	B	C
881/981	12C	2-45/64	2-5/8	25/32
887/987	12C	3-1/4	2-5/8	25/32
881/981 887/987	24A	3-21/32	2-5/8	25/32
	24C	3-21/32	2-5/8	1-5/32
	34C	4-1/16	2-25/32	1-5/32
	36A	4-1/16	2-5/8	1-5/32
	48A	4-15/31	2-25/32	1-5/32
	51A	4-7/8	2-25/32	1-5/32

MATING CONNECTOR CHART (CRIMP TYPE CONTACT EXCEPT AS NOTED)

TYPE OF CONN. MTG.	NO. OF PINS	NO. OF POLES & CONTACT CONFIGURATION	WINCHESTER	CONTINENTAL	
				CONNECTOR	CONTACTS
I	50	12C & 24A	MRAC50S-2020	25-50SW	2500-S420
I	75	24C & 36A	MRAC75S-2020	25-75SWG	2500-S4A20
I	104	34C, 48A & 51A		C104-20SWG-MME	(SOLDER)
II	50	12C & 24A	MRAC50SJT-2020	25-50SSK	2500-S4A20
II	75	24C & 26A	MRA75SJT-2020	25-75SSK	2500-S4A20
II	104	34C, 48A & 51A		C104-20SWS-MME	(SOLDER)

MATING CONNECTOR CHART (WIRE WRAP) .045 SQ. POST

TYPE OF CONN. MTG.	NO. OF PINS	NO. OF POLES & CONTACT CONFIGURATION	WINCHESTER	CONTINENTAL	
				CONNECTOR	CONTACTS
I	50	12C & 24A		W50SW-MME	
I	75	24C & 36A		W75SWG-MME	
I	104	34C, 48A & 51A		W104SWG-MME	
II	50	12C & 24A		W50SSK56-MME	
II	75	24C & 36A		W75SSK56-MME	
II	104	34C, 48A & 51A		W104SSK56-MME	

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PART NO.: 887-12C-28-S
T-BAR SERIES: 887
NO. OF CONTACTS: 12
CONTACT FORM: C
COIL VOLTAGE: 28
ALL OTHER OPTIONS: S

DUST-TIGHT TOGGLE SWITCHES



T-BAR MULTI-CONTACT DUST-TIGHT SWITCHES are designed to protect against normal ambient dust conditions and developed for use in controlled environments such as test areas, computer control rooms, broadcast studios and network management centers. They are available in switching combinations of 4 to 144 pole Double Throw—and all with maintained action.

Don't forget to ask about our two types of contact's available! The 902 Series is designed to switch dry circuits for use in data to a maximum of 1 Amp. Developed with thermocouple and instrumentations circuits. Whereas, the 802 Series is used for control and indicator circuits. Terminals are designed to accept T-Bar Connectors.

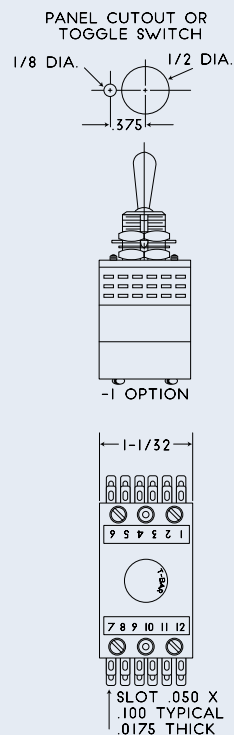
SPECIFICATIONS:

- **SEAL TYPE:** Dust-Tight
- **# OF POLES:** 1 to 144 pole configurations.
- **TYPE OF CONTACTS:** 800 Series (5 Amp) or 900 Series (1 Amp)
- **PROTECTED** against normal ambient dust conditions.
- **SWITCHES MORE CIRCUITS** in less space.

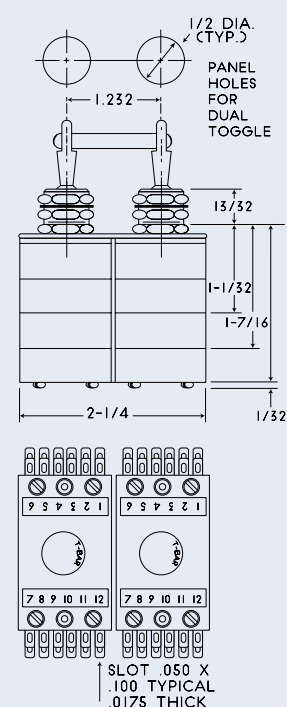


TECHNICAL DIAGRAMS

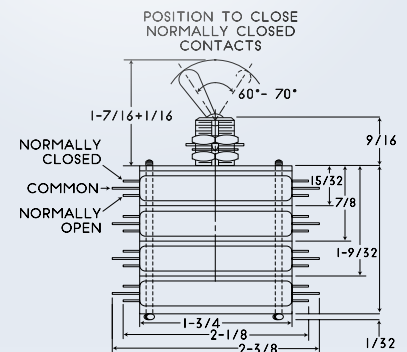
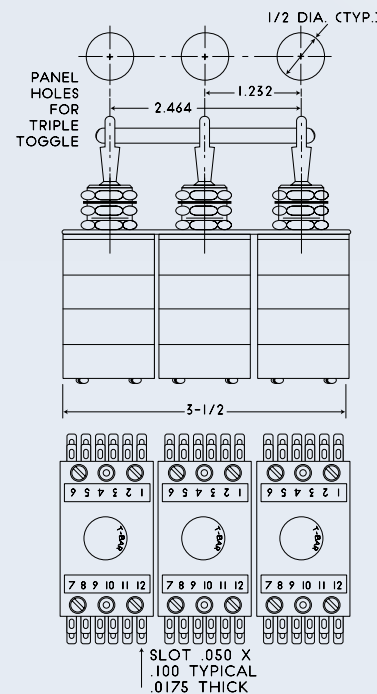
SINGLE TOGGLE



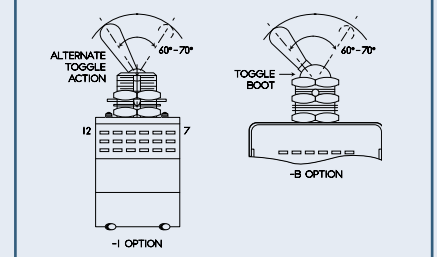
DOUBLE TOGGLE



TRIPLE TOGGLE



STANDARD OPTIONS



ORDER INFORMATION

We are a proven legacy-run product specialist partner ready to fulfill your sourcing requirements. Reach out to discuss how our professional team can be of service to you. Our full-service capabilities include design, development and manufacturing excellence for whatever your company procurement needs may be. Our customization options will put you ahead of the competition. Trust your company to 50+ years of providing quality, made in the U.S. products by our family-owned and operated business. Connect today at info@occorp.com or call (847) 742-3566.

PART NO.: 802-12C
T-BAR SERIES: 802/902
NO. OF CONTACTS: 12
CONTACT FORM: C

ENVIRONMENTALLY-SEALED TOGGLE SWITCHES



T-BAR ENVIRONMENTALLY-SEALED MULTI-POLE SWITCHES

offers contact protection against corrosive atmospheres, splashing water, sand, dust, and salt spray. This T-Bar style has the identical switching, operations and reliability you will see in standard T-Bar Switchers because the same quality wafers and actuators are used throughout. The metal enclosures and contacts are protected with a premium epoxy seal as well as backfilled with inert gas for ground support or shipboard applications and in other various hostile environments. T-Bar Switches requiring continuous power, and pulse operated magnetic latching switches, can be environmentally sealed. Imagine 96 circuits protected in a space as small as 2-5/8" x 3-29/32" x 1-3/16". Our products are developed with longevity and practicality in mind. Don't forget our terminals are also designed to accept T-Bar Connectors.

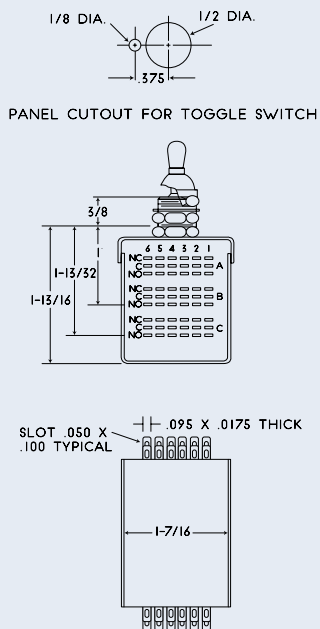
SPECIFICATIONS:

- **SEAL TYPE:** Environmental
- **# OF POLES:** 12, 24, 36, 48, 52 and 60 pole configurations.
- **TYPE OF CONTACTS:** 800 Series (5 Amp) or 900 Series (1 Amp)
- **PROTECTED** against normal ambient dust conditions.
- **96 CIRCUITS ARE SWITCHED IN A SPACE** as small as 2-5/8" x 3-29/32" x 1-3/16".
- **SIMPLE CRIMP SNAP-IN CONTACTS** fit into single block connectors for easy wiring.

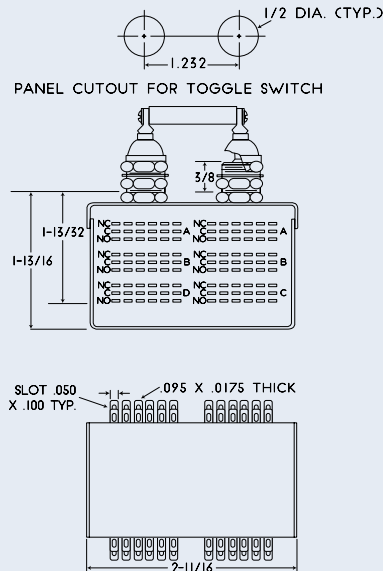


TECHNICAL DIAGRAMS

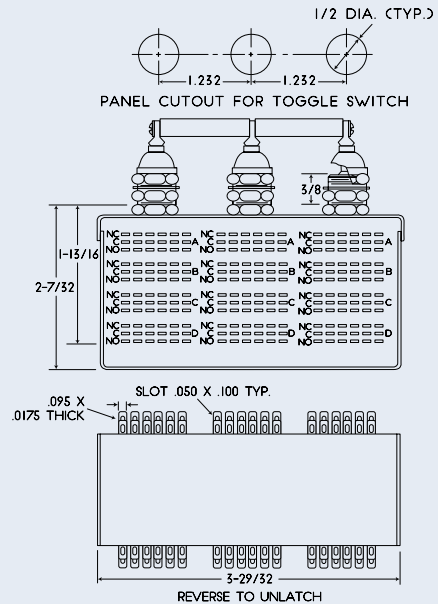
SINGLE TOGGLE



DOUBLE TOGGLE



TRIPLE TOGGLE



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PART NO.: 832-12C
T-BAR SERIES: 832/932
NO. OF CONTACTS: 12
CONTACT FORM: C

DUST-TIGHT PUSHBUTTON SWITCHES

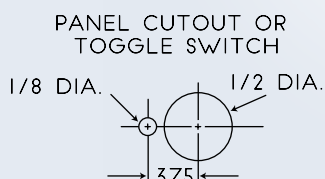
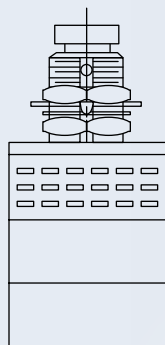
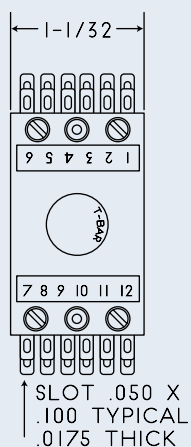
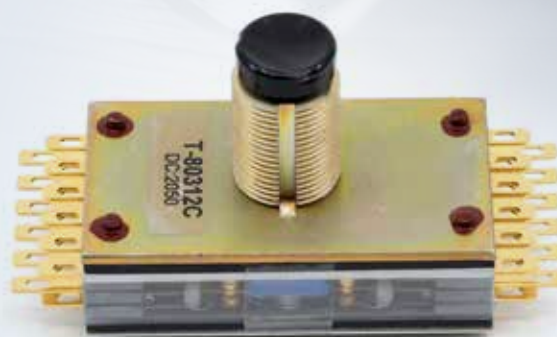
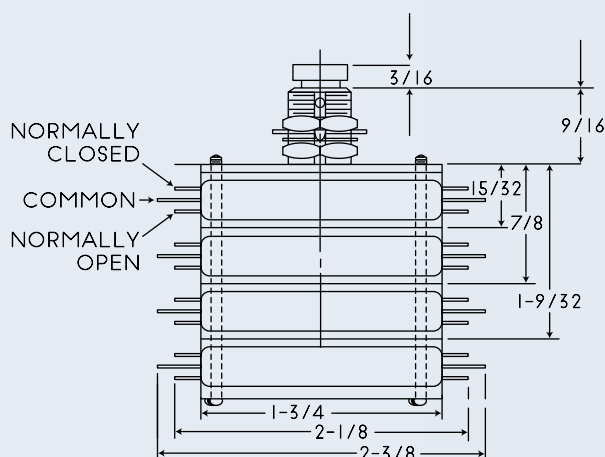


T-BAR PUSHBUTTON SWITCHES are momentary in operation and are available in general purpose contacts (800 Series) only. They are manufactured in contact arrangements from 12 to 36 poles for multi-circuit applications such as control panel lamp press-to-test, reset and all-call.

SPECIFICATIONS:

- **SEAL TYPE:** Dust-Tight
- **# OF POLES:** 12, 24, 36, 48, 52 and 60 pole configurations.
- **TYPE OF CONTACTS:** 800 Series (5 Amp)
- **PERFECTED** for test stations.
- **SWITCHES MORE CIRCUITS** in less space.

TECHNICAL DIAGRAMS



12 TO 36 POLES
FOR MULTI-CIRCUIT
APPLICATIONS..



ORDER INFORMATION

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PART NO.: 803-12C
T-BAR SERIES: 803
NO. OF CONTACTS: 12
CONTACT FORM: C

900/800 SERIES CONTACT



TWO T-BAR SERIES CONTACT OPTIONS:

- 1) THE 900 SERIES CONTACTS** for reliable low level switching. Experience low level dual contact with the reliability of a bifurcated contact plus the added feature of orthogonal wiping action. The unique EDGE-TO-DOME contact guarantees a clean surface which is critical for low level signals. This series is typically used in computer I/O signals: voice and data-grade communications thermocouple and strain gauge outputs, all low level switching, whenever reliability is a premium or whenever slight variations in contact resistance cannot be tolerated (microvolts to 1 Amp max).
- 2) THE 800 SERIES CONTACTS** for reliable general purpose switching with a highly reliable, gold-plated button contact. Manufactured with high contact pressure and positive wiping action that is used in control applications as well as in general purpose switching (relays, valves, lamps, etc.). 5 Amp resistive rating.

SPECIFICATIONS:

- **# OF POLES:** 4, 8, 12, 24, 36, 48 and 60 pole configurations.
- **COIL VOLTAGE:** 6, 12, 24, 28, 48 and 110 Volts DC + 115 Volts AC
- **TYPE OF CONTACTS:** 800 Series for reliable general purpose switching from 1 Amp to 5 Amp control. Or, the 900 Series for reliable low level switching to 1 Amp.
- **CONTACT FORM:** A, B, C, D

ORDER INFORMATION

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STANDARD OPTIONS ORDERING CHART:

STANDARD OPTION:	DESIGNATION:
MOUNTING OPTIONS FOR ENVIRONMENTALLY SEALED RELAYS:	
Top Mounting Flange	-2
Side Mounting Flange	-3
COIL TERMINALS: on 1-6 side of relay	-4
BIFILAR COIL for latching relays. Add "F" to coil voltage.	F
HIGH-INSULATION RESISTANCE 50,000 megohms.	-H
MAGNETICALLY-SHIELDED coil on solenoid operated relays. Add "M" suffix.	M
COIL SUPPRESSION. Add "S" suffix.	S
JACK SCREW hardware on hermetically sealed relays employing a 50-pin connector. Add "S" suffix to.	S
TOP-MOUNTING FLANGE for dust tight relays. Add "T" suffix.	T
HIGH-DIELECTRIC withstanding voltage to 1500 VAC. Add "W" suffix (<i>includes</i> "H" designation above).	H

EDGE-TO-DOME CONTACT

GUARANTEES A
CLEAN SURFACE
CRITICAL FOR
LOW LEVEL
SIGNALS.



PART NO.: 900-12C-28
T-BAR SERIES: 900
NO. OF CONTACTS: 12
CONTACT FORM: C
COIL VOLTAGE: 28

PART NO.: 800-12C-28
T-BAR SERIES: 800
NO. OF CONTACTS: 12
CONTACT FORM: C
COIL VOLTAGE: 28

ASK ABOUT OUR:

HYBRID RELAY CUSTOMIZABLE OPTIONS

OCC-0421

CONNECTOR SERIES + TOOLS



GENERAL INFORMATION: The T-Bar Series 8601 connectors have been specifically designed for use with our T-Bar Switches and Relays. The crimped, connector contacts snap into place with a Lexan plastic insulator block. After installation, a retaining clip holds the connectors in place against shock and vibration. Don't forget to add these important tools for use with your series.

MECHANICAL SPECIFICATIONS:

- WIRE ACCOMMODATED:
 - (1) AWG 18, 20, 22, 24, 26, OR PER MIL-W-16878D WITH MAX. DIAMETER OVER INSULATION OF .074
 - (2) AWG 22, 24, 26
- CONNECTOR MATERIAL: Lexan
- SNAP-IN CONTACT MATERIAL: Phosphor Bronze Grade A 2.4
- SNAP-IN CONTACT FINISH: Gold-Plated, snap-in contacts (MIL-G-45204 Class 4)
- RETAINING CLIP MATERIAL: Stainless-Steel type 303
- WEIGHT: 0.3 OZ.
- DURABILITY: 500 cycles of insertion & withdrawal minimum
- SNAP-IN CONTACT RETENTION: Each contact will withstand an axial pull of 10 lbs. after insertion into the connector block
- INSERTION AND WITHDRAWAL FORCE: After 10 cycles of insertion and withdrawal; 2 to 12 oz. for each contact
- LABELS: Permanent pressure sensitive

ELECTRICAL SPECIFICATIONS:

- INSULATION RESISTANCE: 100,000 megohms min. between any contact combination @ 30°C tested at 500 VDC
- DIELECTRIC WITHSTANDING VOLTAGE: 1000 VRMS min. contact to contact at sea level
- CURRENT CARRYING CAPACITY: 5 Amps
- CONTACT RESISTANCE: 5 milliohms maximum

ENVIRONMENTAL SPECIFICATIONS:

- TEMPERATURE: -55°C TO + 85°C.
- VIBRATION: .06 double amplitude 10 to 500 CPS
- SHOCK: 50 G

RECOMMENDED TOOLS:

- SNAP-IN CONTACT CRIMPING TOOLS: Hand Ratchet Tool: P/N 8601-51

ORDER INFORMATION

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PART NO.: 88601-18C



PART NO.: 8601-51



PART NO.: T-860161



PART NO.: T-860171



PART NO.: 88601 & 88631



CONNECTOR ORDERING INFORMATION		
COMPLETE CONNECTOR PACKAGE P/N:	MODEL NUMBERS:	PACKAGE CONTENTS:
88601 ADD - 2 FOR CARTON OF 100	ALL 801/901 RELAYS ALL 802/902/803 SWITCHES SWITCHES	1 CONNECTOR BLOCK (8601) 20 CONTACTS (8601-1) 1 LABEL, 1-6 (8601-006-001) 1 LABEL, 7-12 (8601-006-002) 1 RETAINING CLIP (8601-2)
88631 ADD - 2 FOR CARTON OF 100	ALL 831/931 RELAYS ALL 832 & 932 SWITCHES	1 CONNECTOR BLOCK (8601) 20 CONTACTS (8601-1) 1 LABEL, 1-6 (8601-006-001) 1 LABEL, 7-12 (8601-006-002) 1 RETAINING CLIP (8601-22-1)

TECHNICAL SPECIFICATIONS

WE STRIVE TO SET OUR CUSTOMERS UP FOR SUCCESS

with a complete breakdown of technical specifications for charting the proper use of our products. Contact our experienced team if you are seeking additional details.

CONTACT: INFO@OCCORP.COM



★ GENERAL ★

A multi-pole, solenoid actuated relay in Dust-Tight enclosure (Series 801/901, 807/907), Environmentally-Sealed enclosure (Series 831/931, 837/937), or Hermetically-Sealed enclosure (Series 881/981, 887/987).

MECHANICAL LIFE: @ 20 CPM million operations except latching relays which are 2,000,000 operations.

WEIGHT:

USES	801/901		831/931		881/981	
	oz.	gms	oz.	gms	oz.	gms
12	4.5	127	10	283	17	481
24	7.0	198	13	368	22	623
36	7.5	212	15	425	23	652
48	8.5	240	16	453	23	652
52,60	9.0	255	18	510	24	680

*Add 3 oz./84 gms for latching units.

INSULATION RESISTANCE: MIL-STD-202 Method 302, Condition B (500 VDC). 5,000 megohms between all insulated points. 50,000 megohms available on special order.

DIELECTRIC WITHSTANDING VOLTAGE: MIL-STD-202 Method 301: 1000 Volts RMS, 60 cycle AC, between all insulated points. 1500 Volt available on special order.

ENVIRONMENTAL SPECIFICATIONS:

AMBIENT TEMPERATURE: -55°C to 85°C

VIBRATION: .06" DA 10 to 55 CPS. No physical damage. Refer to factory for other values.

SHOCK: 50G peak sawtooth. No physical damage. Refer to factory for other values.

SEALING:

- 831/931 Series MIL-R-5757E, Para. 4.8.4.1,
- 881/981 Series MIL-R-5757D, Para. 4.7.2.3,
- Test III for MIL-R-5757E, refer to factory.

MOISTURE RESISTANCE: MIL-R-5757E, Para. 4.8.19

SALT SPRAY: Series 831/931 and 881/981. MIL-R-5757E, Para. 4.8.13.

CONNECT WITH US AT (847) 742-3566 FOR MORE INFORMATION. PRODUCTS OR SERVICE OPPORTUNITIES.

★ CONTACTS ★

CONFIGURATIONS AVAILABLE:

DUST-TIGHT, ENVIRONMENTAL & HERMETICALLY-SEALED

NO. OF POLES	FORM NO.
4, 8, 12, 24 & 36	A, B, C or D
48 & 52	A, B, or C
60	A
HERMETICALLY-SEALED	
24, 36, 48 or 51	A
24, 34	C
FORM DESCRIPTION	
A = Normally open	
B = Normally closed	
C = Double throw break before make	
D = Double throw make before break	

CONTACT MATERIAL:

800 SERIES:

- Fine silver, rhodium, gold-plated
- 50 millionths min. (bright finish)

900 SERIES:

- Moveable contact (common). Fine silver button with gold plated diffusion bond. Then 5 millionths rhodium plate, then gold, 80 millionths min. Bright finish. Fixed contact (N.C. and N.O.) bifurcated: gold plated 200 millionths min.

CONTACT RATINGS (TYPICAL):

800 SERIES:

GENERAL PURPOSE

- 5 Amp, 28 VDC resistive, switched
- 5 Amp, 120 VAC 60 Hz resistive

900 SERIES:

Microvolts, dry circuit

- 1 Amp, 28 VDC resistive
- 1/8 Amp 120 VAC 60 Hz resistive
- 2 Amp, 120 VAC carry only (refer to factory for other values)

CONTACT LIFE (RESISTIVE @ 20 CPM):

800 SERIES:

- Minimum current, i.e. 100 ma @ 10 VDC: 5,000,000 cycles
- High level, i.e. 5 Amp @ 28 VDC: 100,000 cycles

900 SERIES:

- Low level, i.e. 10 ma @ 30 MV: 20,000,000 cycles
- High level, i.e. 1 Amp @ 28 VDC: 100,000 cycles

★ COIL ★

RELAYS @ 25°C (801/901/831/931/881/981)

	POLES	FORM	POLES	FORM	POLES	FORM	POLES	FORM
COIL	12	A, B, C	24	A, B, C	48	A	60 & 72	A
	4		12	D	36	A, B, C	52	A, C
	8				24	D	48	B, C
VOLTAGE							36	D
	3 WATTS		3.5 WATTS		5.25 WATTS		6.6 WATTS	
	Res. \pm 10%	I (ma)	Res. \pm 10%	I (ma)	Res. \pm 10%	I (ma)	Res. \pm 10%	I (ma)
(DC)								
6	12	500	11	545	7	857	5.5	1090
12	49	245	45	267	28	429	22	545
24	193	125	174	138	111	216	94	255
28	258	109	229	123	150	187	120	233
48	778	62	674	71	438	110	350	137
110	3963	28	3450	32	2355	47	1930	57
(AC)	Impd.	rms.	Impd.	rms.	Impd.	rms.	Impd.	rms.
115 VAC	4107	28	3594	32	2500	46	2018	57

OPERATE: (pull-in) at less than 80% of nominal coil voltage.

RELEASE: (drop out) at greater than 10% of nominal coil voltage.

OPERATE CONTINUOUSLY at 120% of nominal coil voltage.

OPERATE TIME:

4, 8 or 12 poles 15 ms max.
 24 poles 25 ms max.
 36 poles 30 ms max.
 48 poles 35 ms max.
 52 or 60 poles 45 ms max.

NOTE: Coil suppression causes negligible change in operate time.

RELEASE TIME: 5 ms typical. Diode coil suppression can increase release time by a multiple of 7.

CONTACT BOUNCE:

- 2 ms typical for normally open contacts.
- 6 ms typical for normally closed contacts.

MAGNETIC LATCHING RELAYS (807/907/837/937/887/987)

STANDARD			POLES	
ALL CONFIGURATIONS			ALL CONFIGURATIONS	
6 WATTS			10 WATTS/COIL	
	Res. $\pm 10\%$	I (ma)	Res. $\pm 10\%$	I (ma)
6	6	1000	3.6	1667
12	24	500	14.4	833
24	96	250	58	414
28	132	212	78	359
48	390	123	230	209
110	2000	55	1210	91

LATCH OR UNLATCH: at less than 80% nominal coil voltage with 50 ms pulse.

ZENER OR VARISTOR SUPPRESSION of standard latching coils causes negligible change in latch or unlatch time.

DIODE SUPPRESSION of ($-^{\circ}\text{F} - \text{S}$) coils may increase latch or unlatch time.

CONTACT BOUNCE 4 ms typical during contact closure.

ALL COIL TERMINALS: Solder tab to accept two #22 AWG WIRES.

★ ORDERING KEY ★

907-36CG-24F-S

T-BAR RELAY SERIES

NUMBER OF CONTACTS

CONTACT FORM

OPTIONAL GOLD TERMINAL PLATING

COIL VOLTAGE

OPTIONAL BIFILAR LATCH COILS

ALL OTHER OPTIONS

PATENT RECOGNITION:

T-Bar Switches and Relays are manufactured under one or more of the following U.S. patents; 3206990, 3226508, 3689856 and various foreign patents. Specifications subject to change by engineering developments.

TBAR[®]
 DIVISION OF OLYMPIC CONTROLS CORPORATION

ORDERING OPTIONS: The T-Bar Relays, Toggles and Pushbuttons product line series are available in our standard stock set-up and in a multitude of customizable options that suit any application and environmental needs. E-mail or call now to learn more. Customization manufacturing is a part of our legacy expertise built over 50+ years of developing quality products.

★ T-BAR PRODUCT LINE CUSTOMIZATION OPTIONS ★

STANDARD	TYPE OF SEAL	RELAY			TOGGLE		PUSHBUTTON
	# OF POLES	DUST-TIGHT	HERMETICALLY-SEALED	ENVIRONMENTALLY-SEALED	DUST-TIGHT	ENVIRONMENTALLY-SEALED	DUST-TIGHT
	COIL VOLTAGE	6-, 12-, 24-, 28-, 48-, 110-VDC and 115-VAC	6-, 12-, 24-, 28-, 48-, 110-VDC and 115-VAC	6-, 12-, 24-, 28-, 48-, 110-VDC and 115-VAC	-----	-----	-----
	CONTACT SERIES	800 or 900	800 or 900	800 or 900	800 or 900	800 or 900	800
	CONTACT FORM	A, B, C or D	A, B, C or D	A, B, C or D	A, B, C or D	A, B, C or D	A, B, C or D

CUSTOMIZATION OPTIONS	MAG LATCH	★	★	★	-----	-----	-----
	LOGIC CONTROL (HYBRID)	★	-----	-----	-----	-----	-----
	BIFILAR COILS	★	★	★	-----	-----	-----
	COIL TERMINAL PLACEMENT	★	★	★	-----	-----	-----
	HIGH INSULATION RESISTANCE	★	★	★	★	★	★
	MAGNETICALLY SHIELDED COIL	★	★	★	-----	-----	-----
	COIL SUPPRESSION	★	★	★	-----	-----	-----
	JACKSCREW	-----	★	-----	-----	-----	-----
	DUST-TIGHT RELAY MOUNTING FLANGE	★	-----	-----	-----	-----	-----
	ENVIRONMENTALLY SEALED RELAY MOUNTING FLANGE	★	-----	★	-----	-----	-----
	HIGH DIELECTRIC	★	★	★	★	★	★

★ = T-BAR CUSTOMIZATION OPTION.

★ ORDERING KEY ★

907-36CG-24F-S

T-BAR RELAY SERIES ————
NUMBER OF CONTACTS ————
CONTACT FORM ————
OPTIONAL GOLD TERMINAL PLATING ————
COIL VOLTAGE ————
OPTIONAL BIFILAR LATCH COILS ————
ALL OTHER OPTIONS ————

PATENT RECOGNITION:

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OCC-0421