OLYMPIC CONTROLS
CORPORATION

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.

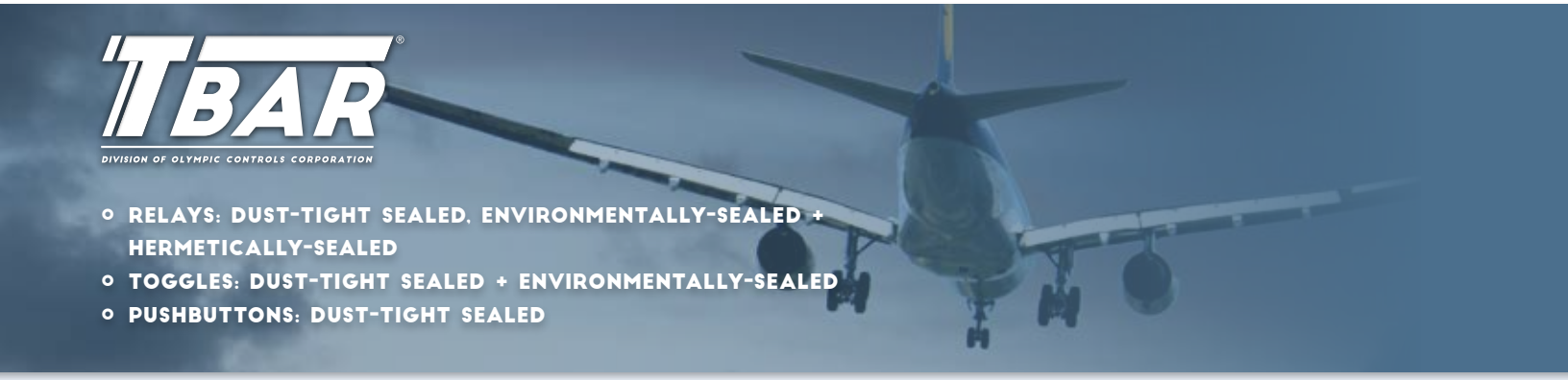
OUR ADVANTAGE:

- 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.



TBAR®
DIVISION OF OLYMPIC CONTROLS CORPORATION

- **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

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

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)

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**.

OCC-0421

TECHNICAL SPECIFICATIONS

50+ YEARS OF PRODUCTS + SERVICES

TBAR® DIVISION OF OLYMPIC CONTROLS CORPORATION

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):

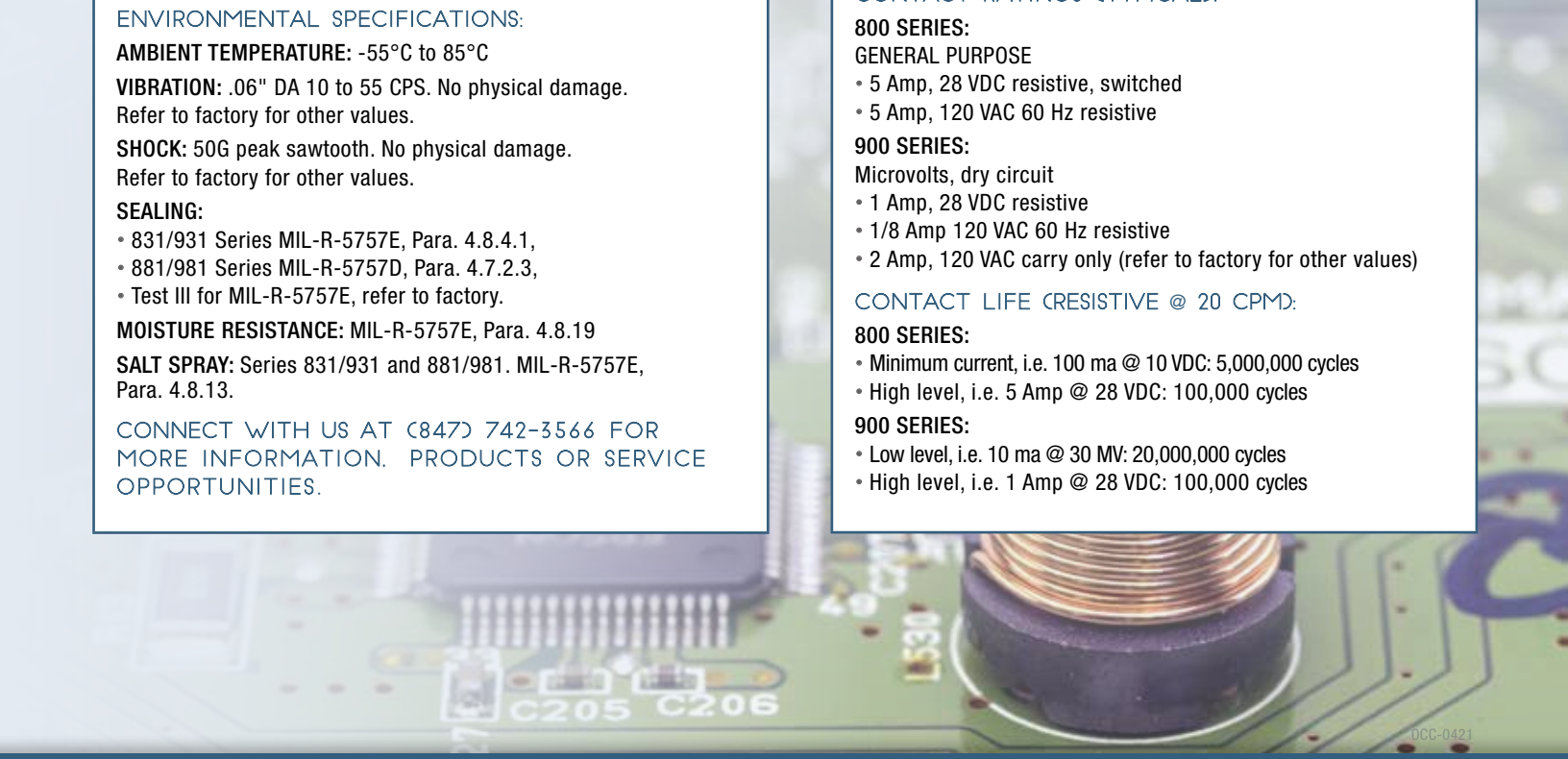
800 SERIES:
GENERAL PURPOSE
- 5 Amp, 28 VDC resistive, switched
- 5 Amp, 120 VAC 60 Hz resistive

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



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★ 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
VOLTAGE	8				24	D	48	B, C
							36	D
	3 WATTS		3.5 WATTS		5.25 WATTS		6.6 WATTS	
	Res. ± 10%	I (ma)	Res. ± 10%	I (ma)	Res. ± 10%	I (ma)	Res. ± 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. ± 10%	I (ma)	Res. ± 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 (– °F – 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.

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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 ★

		RELAY			TOGGLE		PUSHBUTTON
STANDARD	TYPE OF SEAL	DUST-TIGHT	HERMETICALLY-SEALED	ENVIRONMENTALLY-SEALED	DUST-TIGHT	ENVIRONMENTALLY-SEALED	DUST-TIGHT
	# OF POLES	Up to 52	Up to 52	Up to 52	Up to 144	Up to 144	Up to 36
	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 RESISTENCE	★	★	★	★	★	★
	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

- 907 – T-BAR RELAY SERIES
- 36 – NUMBER OF CONTACTS
- C – CONTACT FORM
- G – OPTIONAL GOLD TERMINAL PLATING
- 24 – COIL VOLTAGE
- F – OPTIONAL BIFILAR LATCH COILS
- S – ALL OTHER OPTIONS

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