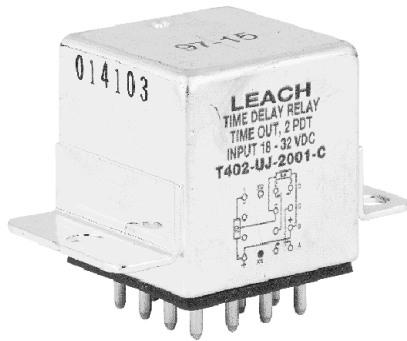


ENGINEERING DATA SHEET

T402

TIME DELAY RELAY
2 PDT, 2 AMP



APPLICABLE SOCKET:

- [S400](#)
- [SC40*](#)

Time delay relay on operate or on release

Fixed or adjustable timing delay

Contact arrangement **2 PDT**
Power supply **28 Vdc**

PRINCIPLE TECHNICAL CHARACTERISTICS

Contacts rated at **2 Amps / 28 Vdc**
Weight **< 60 grams**
Dimensions of case **44mm x 25.7mm x 26mm max**

Hermetically sealed, corrosion protected metal can.

CONTACT ELECTRICAL CHARACTERISTICS

Minimum operating cycles	Contact rating per pole and load type	Load Current in Amps	
		@28VdC	@115Vac/60-400Hz
100,000 cycles	resistive load	2	0.3
100,000 cycles	inductive load (L/R=5ms)	0.75	-
500,000 cycles	low level (30µA/30mV max)	-	-
100 cycles	Solid state output on C2 resistive overload	4	-

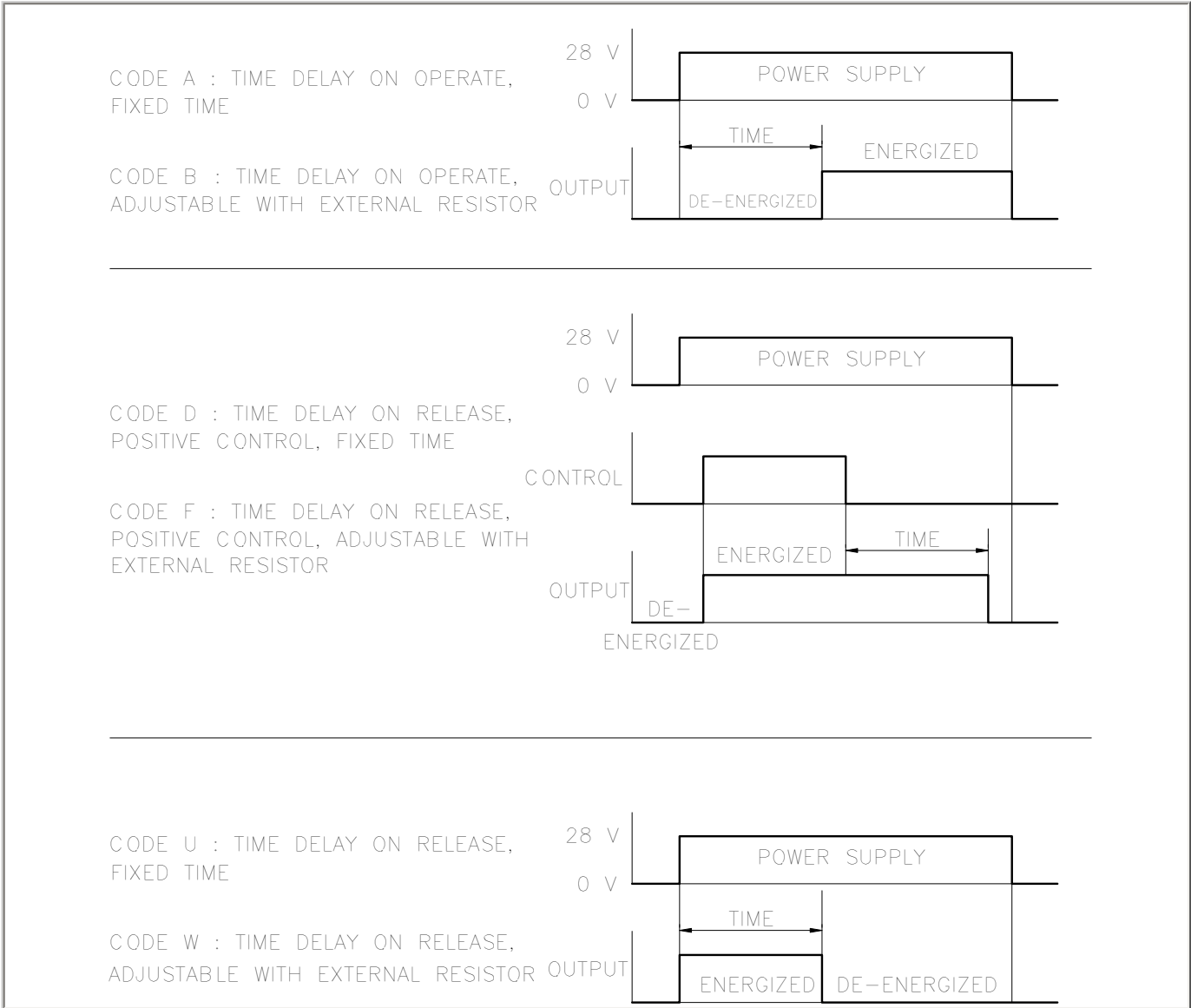
NUMBERING SYSTEM

	T402	-	A	E	-	1001	-	A
Basic series designation_____								
1-Types Of Operation (A,B,D,F,U,W)_____								
2-Temperature range and timing accuracy (E,L,J,K)_____								
3-Timing range (4 digits)_____								
4-Mounting style and terminal types (A,B,C,D)_____								

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	<p>Tel: (01) 714-736-7599 Fax: (01) 714-670-1145</p>	<p>Tel: (33) 3 87 97 31 01 Fax: (33) 3 87 97 96 86</p>	<p>Tel: (852) 2 191 3830 Fax: (852) 2 389 5803</p>

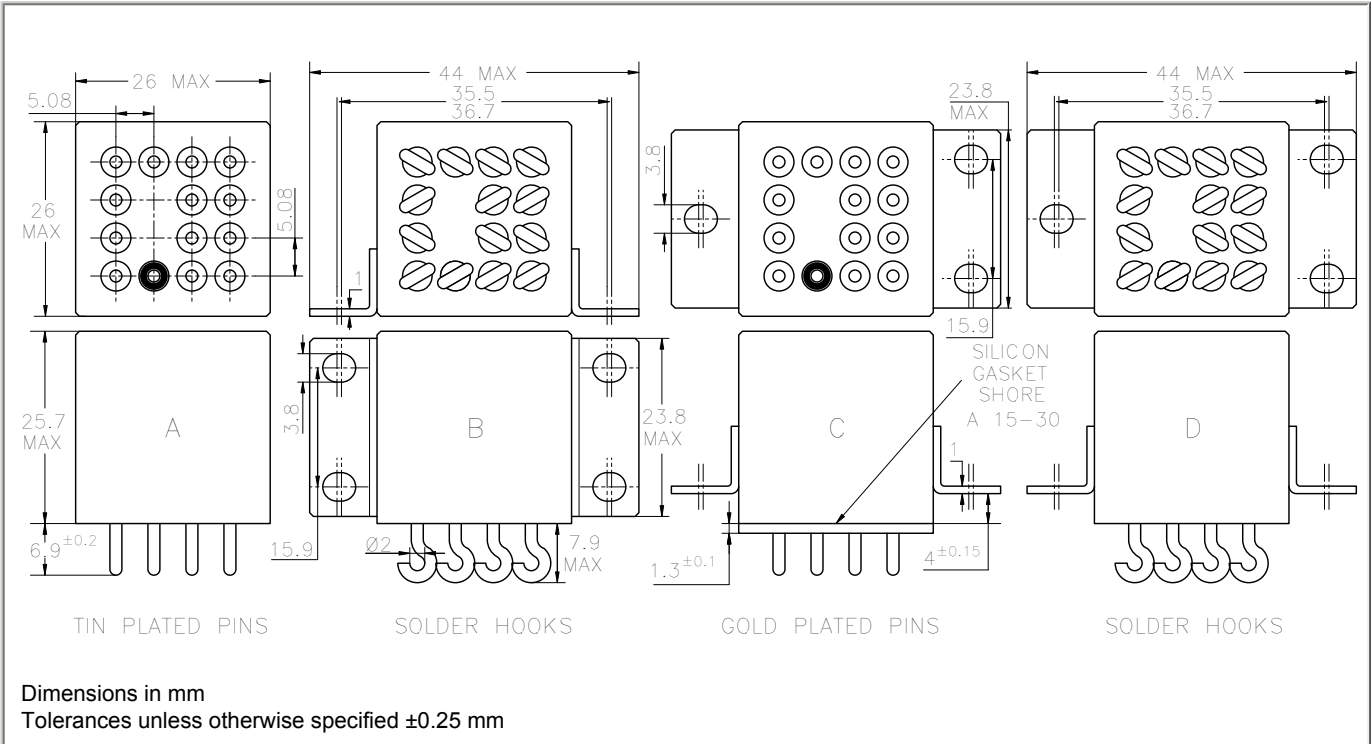
Data sheets are for initial product selection and comparison. Contact Esterline Power Systems prior to choosing a component.

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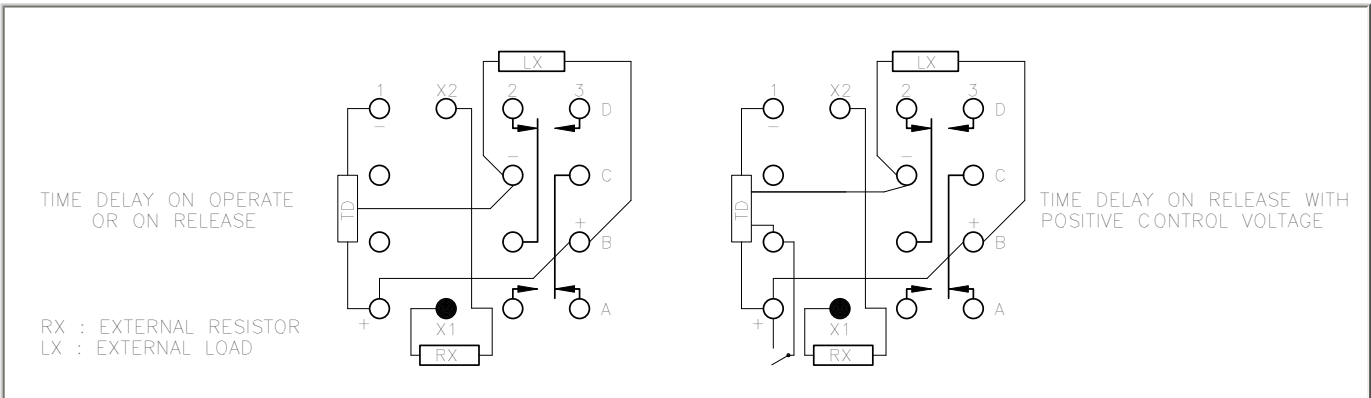


TEMPERATURE RANGE AND TIMING ACCURACY

Code	Temperature	Accuracy	Limitations
E	-55° C to +85° C	±10%	±10 ms below 200 ms
L [4]	-55° C to +85° C	±5%	not below 500 ms
J	-55° C to +125° C	±10%	±10 ms below 200ms
K [4]	-55° C to +100° C	±5%	not below 500 ms



SCHEMATIC DIAGRAM/TERMINAL LAYOUT



TIMING RANGE

ADJUSTABLE (For operation code B, F and W)
 Code 1001: 0.1 to 1 second $R_x = (T / t_o - 1) \times 100\text{kohm}$
 Code 1002: 1 to 10 seconds
 Code 1003: 10 to 100 seconds
 Code 1004: 100 to 1000 seconds where R_x in kohms T: desired time in seconds,
 t_o : time measured with $R_x = 0$.

Example to determine R_x value for a T time of 5 seconds: Choose code 1002; measure time with $R_x = 0$ (for example : $t_o = 1$ s); calculate $R_x = (5/1 - 1) \times 100000$
 Theoretical resistance: $R_x = 400$ kohms

FIXED
 The timing code consists of 4 digits. To determine this code, convert the value to milliseconds value. Use the first 3 digits of this value and add a fourth digit to indicate the number of zeros which must follow the three digits to show complete milliseconds value.

Examples: 250 ms --> Code 2500 300 s --> Code 3003

GENERAL CHARACTERISTICS**T402**

Operating Voltage	18 to 32 Vdc (AIR norm 2021 E)
Recycle Time	less than or equal to 50 ms
Dielectric strength at sea level	
- all pins connected together and can	1000 V / 50 Hz
- between open contacts	500 V / 50 Hz
Dielectric strength at altitude 25,000 m, all points	350 V / 50 Hz
Initial insulation resistance at 500 Vdc	greater than or equal to 1000 M Ω
Sinusoidal vibration	20G / 10 to 2000 Hz
Shock	100G / 6 ms
Power loss protection	0.5 ms max
Undamaged against positive transients	+ 80 Vdc
Spike susceptibility	\pm 600 Vdc
Self generated spikes	\pm 50 Vdc

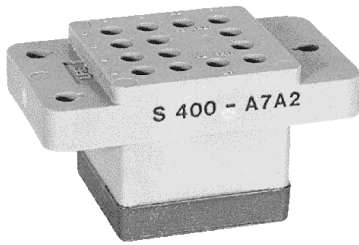
NOTES

1. Relays with C mounting are compatible with socket families S 400, SF 400 ..
2. Isolation spacer pads for PCB mounting available on request.
3. For other mounting styles or terminal types, please contact the factory.
4. Codes L and K not available for adjustable timing.

ENGINEERING DATA SHEET

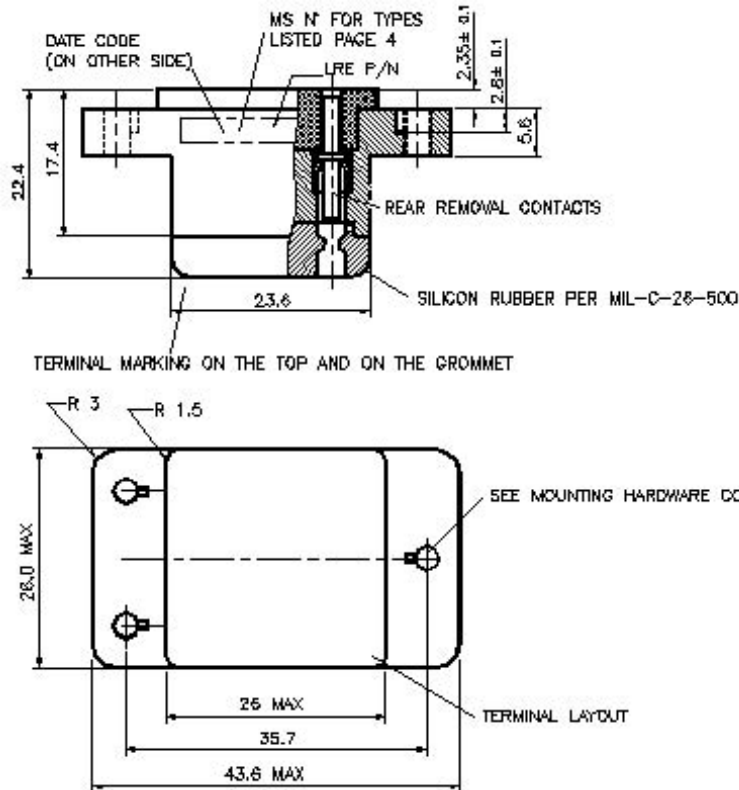
S400, S401, S402

SOCKET FOR RELAYS
10 AMP



BASIC SOCKET SERIES DESIGNATION FOR:

**Series M400 (DC Coil), M401 (AC Coil),
M402 (DC Coil), FLS402, T402, T412, T441, VS400, CS400**



GENERAL CHARACTERISTICS

Crimp tool contact	M 22520/1-01 with turret M 22520/1-02 or MS 3191-1.
Insertion and extraction tool	NAS 1664-16.
Weight	35g max.
Temperature range	-70° C to +125° C.

This connection is designed to the standards and requirements of MIL-S-12883
Contacts and hardware to be delivered disassembled in a plastic bag.
Tolerances, unless otherwise specified, ±0.25mm.



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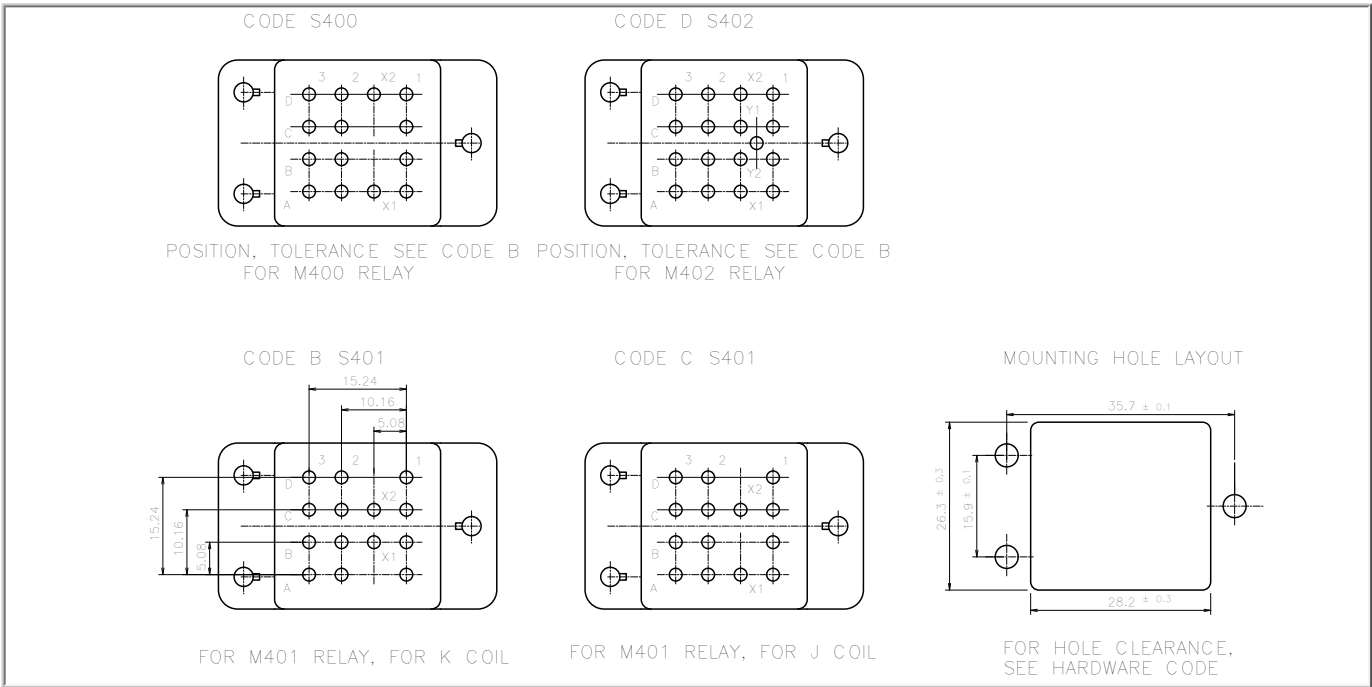
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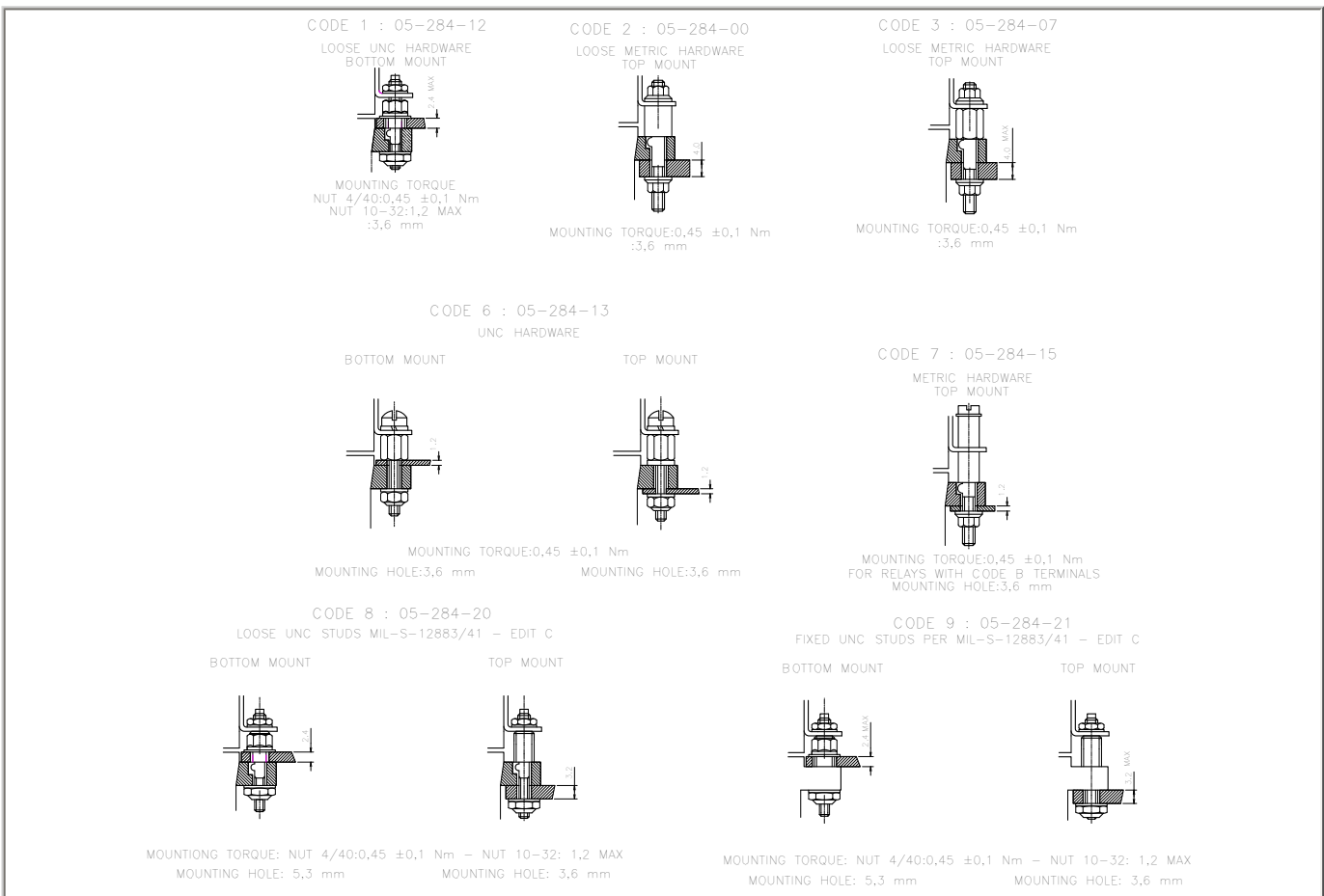
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MOUNTING HARDWARE



WIRE INSULATION DIAMETER FOR SEAL TO GROMMET

S400, S401, S402

<p>Code A</p> <p>Recommended for contact code 2 contact code 8 Diameter: 1.22.4mm</p>	<p>Code B</p> <p>Recommended for contact code 3 contact code 9 Diameter: 0.81.6mm</p>
---	---

CONTACT SIZE AND STYLE

	<p>Code 2 05 911 00</p> <p>Crimpend to accomodate AWG16-18-20</p> <p><u>Contact mating end #16</u></p>	<p>Code 3 05 911 10</p> <p>Crimpend to accomodate AWG20-22-24</p> <p><u>Contact mating end #16</u></p>
<p>Code 0 Without contacts</p>	<p>Code 8 Crimpend to accomodate 30 315 00 AWG16-18-20</p> <p>MIL-C-39029/92-533 Bin Code colour bands or Bin Code numbering on crimpside <u>Contact mating end #16</u></p>	<p>Code 9 Crimpend to accomodate 30 315 10 AWG20-22-24</p> <p>MIL-C-39029/92-534 Bin Code colour bands or Bin Code numbering on crimpside <u>Contact mating end #16</u></p>

SOCKET NUMBERING SYSTEM

	S400	A	1	A	2
1-Basic socket designation_____					
2-Terminal Layout_____					
3-Mounting Hardware_____					
4-Grommet to seal on wire insulation_____					
5-Contact size and style_____					

MS/LRE CROSS PART NO. AND MATING RELAYS

S400, S401, S402

	MS - Number	LEACH P/N	Contacts to accomodate wire #		Applicable for relays
MIL-S-12883/40	-01	S400-A6A2	16-18-20	Loose terminals Above/below panel mounting	M400-D4A /-L/-N/-B/-C
	-05	S400-A6B3	20-22-24		M 401-D4F/-K
	-02	S401-B6A2	16-18-20		N/A
	-03	N/A	N/A		M 401-D4E/-J
	-04	S401-C6A2	16-18-20		
	MS - Number	LEACH P/N	Contacts to accomodate wire #		Applicable for relays
MIL-S-12883/40B	-13	S400-A1A2	16-18-20	Loose terminals below panel mounting	M400-D4A /-L/-N/-B/-C
	-17	S400-A1B3	20-22-24		M 401-D4F/-K
	-14	S401-B1A2	16-18-20		M 401-D4E/-J
	-16	S401-C1A2	16-18-20		
	MS - Number	LEACH P/N	Contacts to accomodate wire #		Applicable for relays
MIL-S-12883/40C	-13S	S400-A8A8	16-18-20	Loose terminals Above/below panel mounting	M400-D4A /-L/-N/-B/-C
	-17S	S400-A8B9	20-22-24		M401-D4F/-K
	-14S	S401-B8A8	16-18-20		M401-D4E/-J
	to be determined	S401-C8A8	16-18-20		M402-D4A/ -L/-N/-B/-C
	-18S	S402-D8A8	16-18-20		
MIL-S-12883/40C	-19S	S400-A9A8	16-18-20	Fixed terminals Above/below panel mounting	M400-D4A /-L/-N/-B/-C
	-23S	S400-A9B9	20-22-24		M 401-D4F/-K
	-20S	S401-B9A8	16-18-20		M 401-D4E/-J
	to be determined	S401-C9A8	16-18-20		M 402-D4A/ -L/-N/-B/-C
	-24S	S402-D9A8	16-18-20		

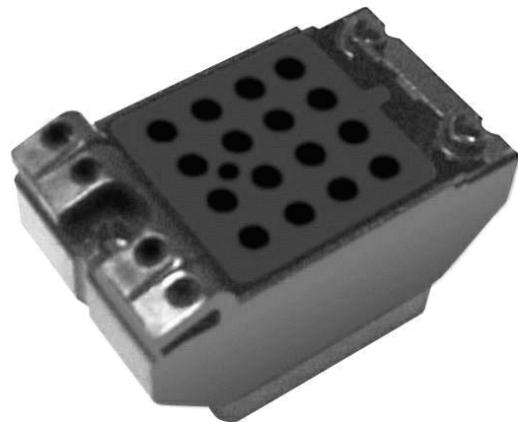
ENGINEERING DATA SHEET

SC30*, SC40*

SOCKET FOR 2 OR 4 POLE
10 AMP



2 POLE



4 POLE

SNAP AND LOCK SOCKET SERIES DESIGNATION FOR:

SERIES M300, M301, M302, M400, M401, M402, T402, T412

DESIGNED TO THE STANDARDS AND REQUIREMENTS OF:

2-pole, 10A relays	MIL-PRF-12883/41
Mates with	M83536, M83726 and MS27709
4-pole, 10A relays	MIL-PRF-12883/40
Mates with	M83536

FEATURES

Low profile
Bottom panel mount
Snaps into panel
Other models available

MATERIALS

Socket body	Polyetherimide per MIL-P-46184
Grommet	Silicone rubber per ZZ-R-765
Hardware	Stainless Steel
Contacts	Copper alloy, hard gold plated per MIL-G-45204
Contact retainers	Beryllium copper

GENERAL CHARACTERISTICS

Insulation resistance	1000 M Ω min.
Dielectric withstanding voltage	1500 VRMS sea level; 500 VRMS at 25,000 m
Weight	15.3g max.
Temperature range	-65°C to +125°C
Vibration	MIL-STD-202, Method 204, Test Condition G
Shock	MIL-STD-202, Method 213, Test Condition C

This socket is designed to snap and lock into a panel to reduce hardware requirement and mounting time. Contacts and hardware are provided disassembled in a plastic bag. Standard tolerances are \pm .025mm unless otherwise noted.



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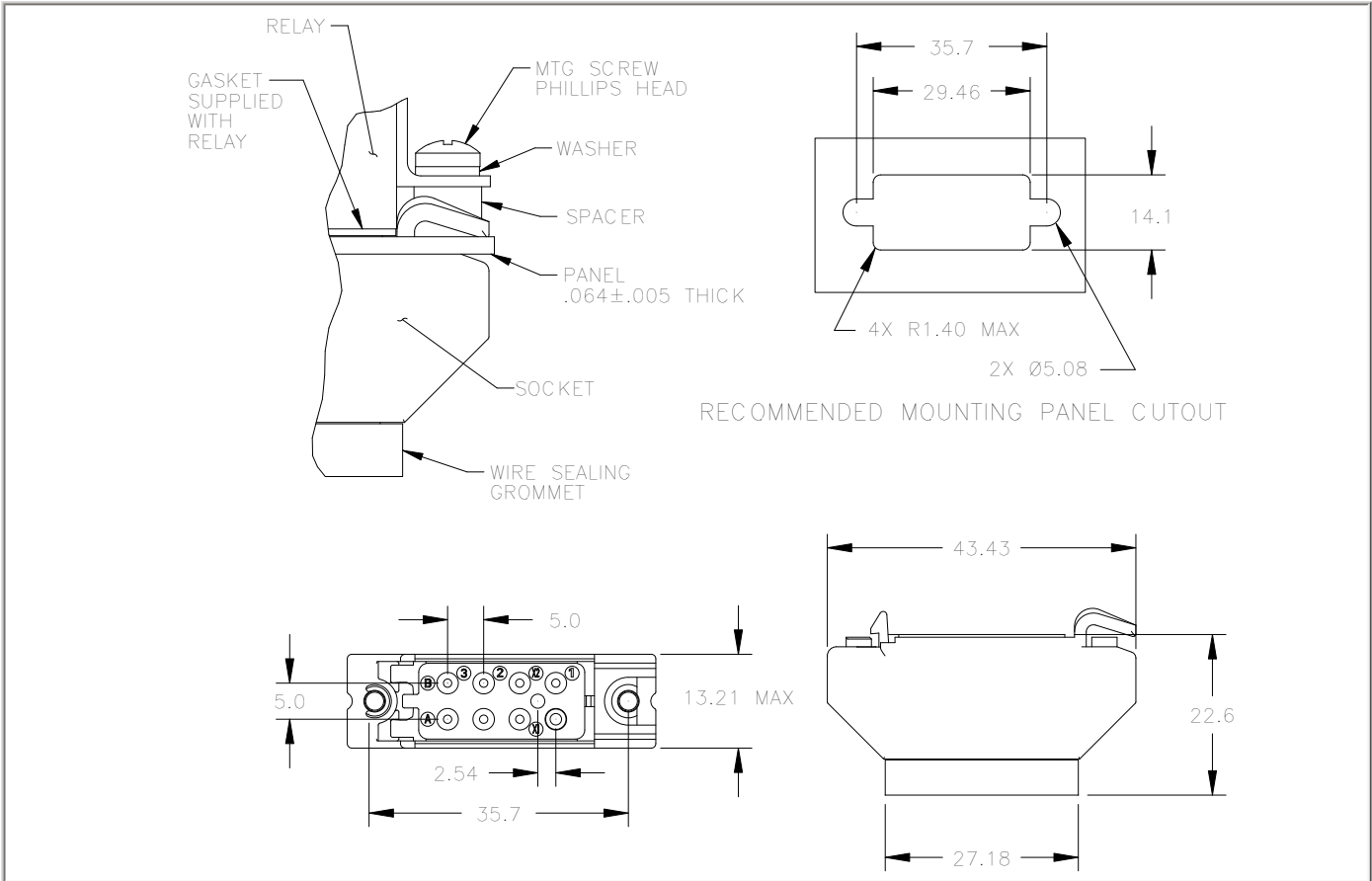
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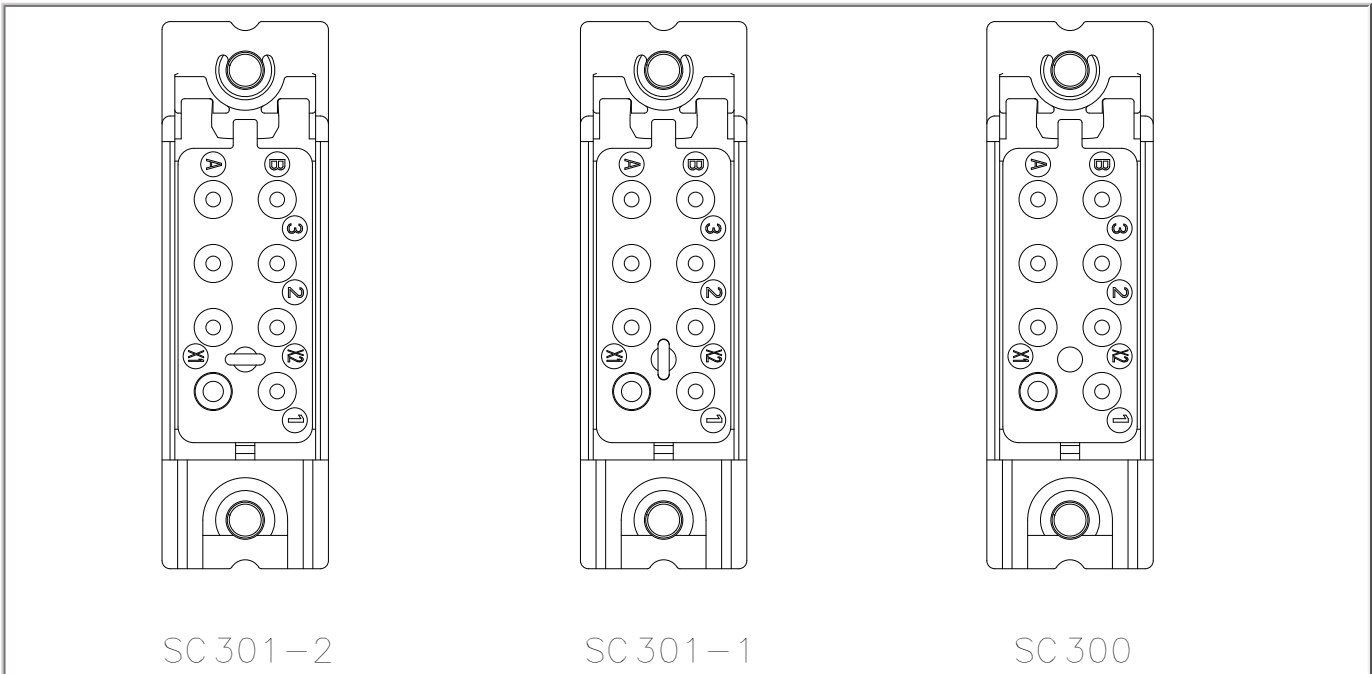
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SOCKET DIMENSIONS

SC30* (2 POLE)

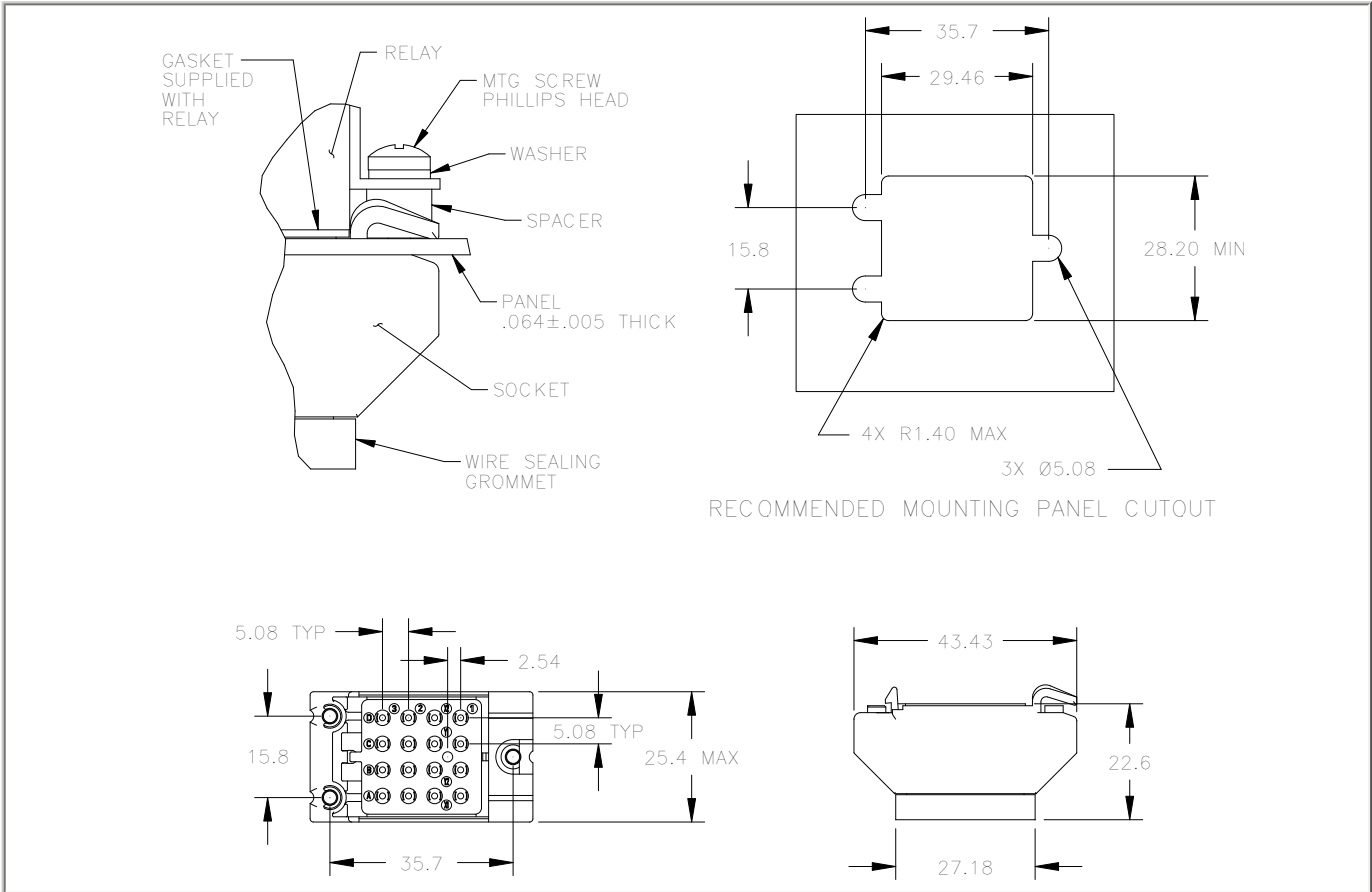


TERMINAL LAYOUT

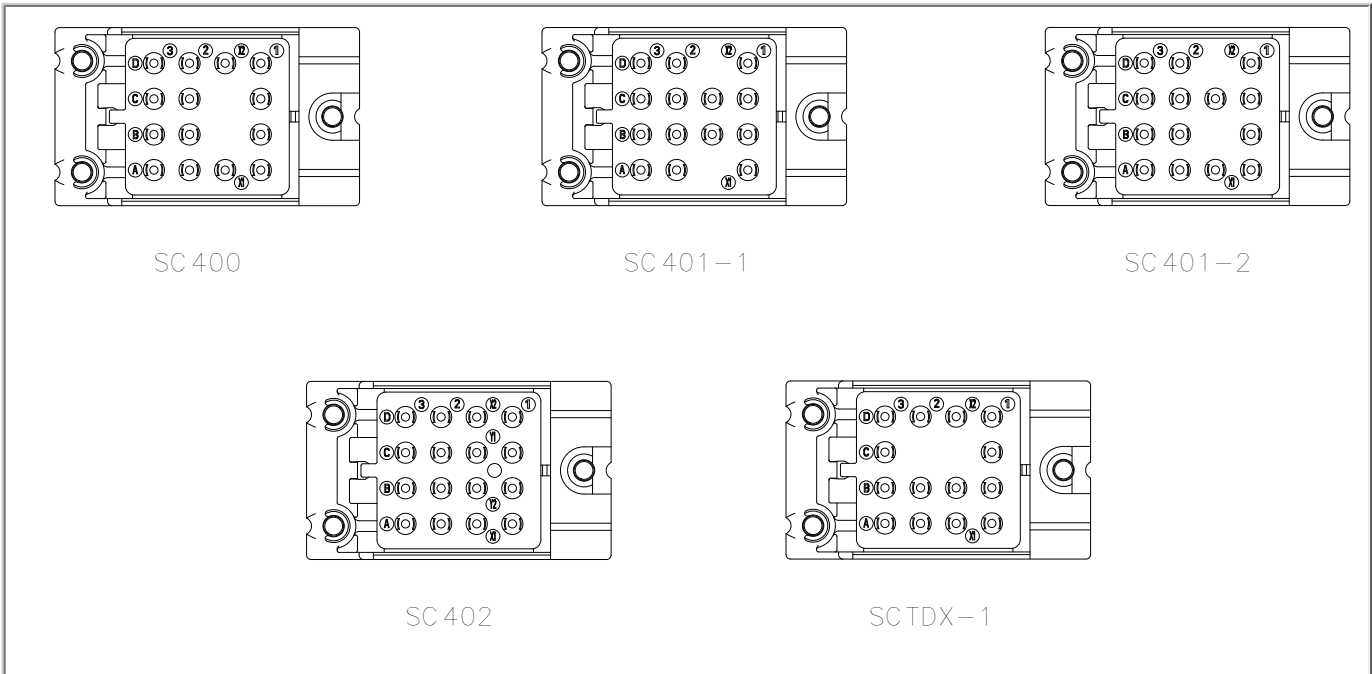


SOCKET DIMENSIONS

SC40* (4 POLE)



TERMINAL LAYOUT



	SC	300	01
1-Basic socket snap lock designation_____			
2-Mating relay (M300, M301, M302, M400, M401_____			
2-Hardware (0=less hardware, 1=with hardware)_____			
3-Contacts (0=less contacts, 1=with contacts)_____			