70S2 SERIES SOLID STATE RELAYS

SPST-N.O., 2.5 TO 25 AMPS

c UL us
UL Recognized
File No. E52197

168986

FEATURES

- SMALL PACKAGES
- EIGHT DIFFERENT PACKAGES
- OPTICALLY ISOLATED.
- ZERO CROSS SWITCHING
- INTERNAL SNUBBER
- IDEAL FOR TIGHT DESIGNS
- WIDE CHOICE OF DESIGN OPTIONS
- INPUT ISOLATED FROM OUTPUT
- REDUCED CURRENT SURGES FOR MOST LOADS
- EXCELLENT TRANSIENT PROTECTION

DC INPUT-AC OUTPUT

MANUFACTURED UNDER ISO 9002

MAX. LOAD CURRENT	CONTROL VOLTAGE RANGE	NOMINAL LOAD VOLTAGE	DESCRIPTION AND FEATURES	STYLE
2.5 A	3-30 or 6-30 VDC	24, 120 or 240 VAC	MINIATURE PRINTED CIRCUIT MOUNT RELAY, ONLY 0.500" HIGH	H
3 A	3-32 or 6-32 VDC	24, 120 or 240 VAC	SINGLE IN - LINE PACKAGE, USES ONLY 0.680 SQ. INCHES BOARD AREA	V
4 A	3-30 or 6-30 VDC	24, 120 or 240 VAC	COMPACT RELAY, PRINTED CIRCUIT MOUNT	F
NEW 5 A	3-32 VCD	24 to 280 VAC	SINGLE IN-LINE PACKAGE, USES ONLY 0.680 SQ. INCHES BOARD AREA	V
6 A	3-30 or 6-30 VDC	120 or 240 VAC	LOW PROFILE RELAY, PANEL OR PRINTED CIRCUIT MOUNT	L
6 A	3-30 or 6-30 VDC	120 or 240 VAC	COMPACT RELAY, PANEL OR PRINTED CIRCUIT MOUNT	M
6 A	3-30 or 6-30 VDC	120 or 240 VAC	COMPACT RELAY, MEETS FIT/FUNCTION REPLACEMENTS FOR LARGER CLASS 6 STYLE RELAYS, QUICK CONNECT TERMINALS	N
6 A	3-30 or 6-30 VDC	120 or 240 VAC	COMPACT RELAY, MEETS FIT/FUNCTION REPLACEMENTS FOR LARGER CLASS 6 STYLE RELAYS, SCREW TERMINALS	S
10 A	3-30 or 6-30 VDC	120 or 240 VAC	COMPACT RELAY, PANEL OR PRINTED CIRCUIT MOUNT 10 AMP	M
12 A	3-30 or 6-30 VDC	120 or 240 VAC	COMPACT RELAY, MEETS FIT/FUNCTION REPLACEMENTS FOR LARGER CLASS 6 STYLE RELAYS, QUICK CONNECT TERMINALS	N
12 A	3-30 or 6-30 VDC	120 or 240 VAC	COMPACT RELAY, MEETS FIT/FUNCTION REPLACEMENTS FOR LARGER CLASS 6 STYLE RELAYS, SCREW TERMINALS	S
25 A	3-30 VDC	120 or 240 VAC	HIGH OUTPUT VERSION OF ABOVE STYLE "S"	S

DC INPUT-DC OUTPUT

MAX. LOAD CURRENT	CONTROL VOLTAGE RANGE	NOMINAL LOAD VOLTAGE	DESCRIPTION AND FEATURES	STYLE
3 A	3-15 or 9-30 VDC	3 to 60 VDC	SINGLE IN - LINE PACKAGE, USES ONLY 0.680 SQ . INCHES BOARD SPACE	V
3 A	3-15 or 9-30 VDC	3 to 60 VDC	COMPACT RELAY, PRINTED CIRCUIT. MOUNT	F
5 A	3-15 VDC	3 to 60 VDC	COMPACT RELAY, MEETS FIT/FUNCTION REPLACEMENTS FOR LARGER CLASS 6 STYLE RELAYS, QUICK CONNECT TERMINALS	N
5 A	3-15 VDC	3 to 60 VDC	COMPACT RELAY, MEETS FIT/FUNCTION REPLACEMENTS FOR LARGER CLASS 6 STYLE RELAYS, SCREW TERMINALS	S
NEW 5 A	3-32 VCD	3 to 60 VAC	SINGLE IN-LINE PACKAGE, USES ONLY 0.680 SQ. INCHES BOARD AREA	V

ORDERING CODE

70S2- | 04- | D- | 03 - | V

CLASS:

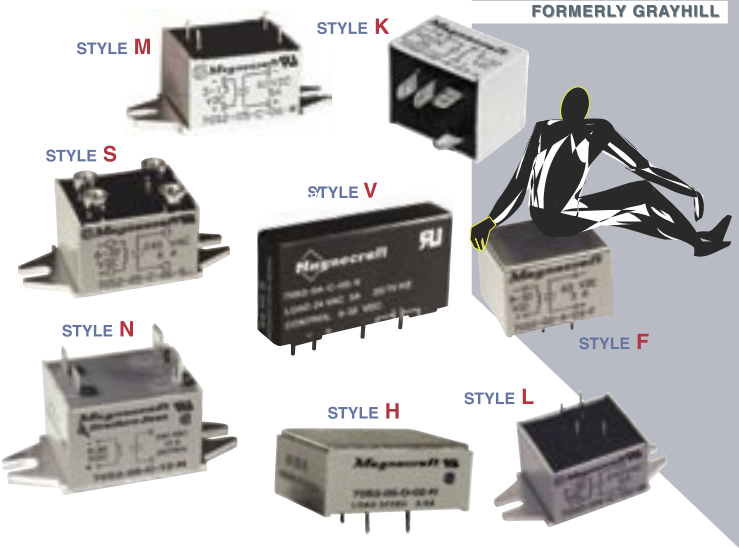
CONTROL VOLTAGE:
01 = 3 - 15 VDC, DC/DC RELAYS
02 = 9 - 30 VDC, DC/DC RELAYS
03 = 3 - 30 VDC, 25 A S PACK
04 = 3 - 30 VDC (OR 32 VDC), DC/AC RELAYS
05 = 6 - 30 VDC (OR 32 VDC), DC/AC RELAYS

LOAD VOLTAGE RANGE:
A = 3-60 VDC B = 120 VAC
C = 240 VAC D = 24 VAC

MAX CURRENT RATING
02 = 2.5 A 04 = 4 A 06 = 6 A 12 = 12 A
03 = 3 A 05 = 5 A 10 = 10A 25 = 25 A

PACKAGE STYLE
F, H, L, M, N, S OR V.

FORMERLY GRAYHILL



LIFETIME WARRANTY.

PHONE: (843) 393-5778 FAX: (843) 393-4123 EMAIL: info@magnecraft.com

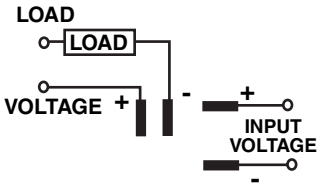
70S2 SERIES SOLID STATE "K" STYLE RELAY

DC/AC, SPST-N.O., 4 AMPS

c UL us
UL Recognized
File No. E52197

168986

WIRING DIAGRAM
(VIEWED FROM PIN END)



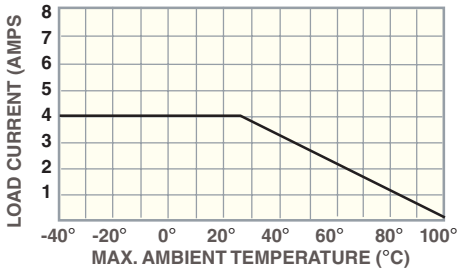
OBSERVE POLARITY

GENERAL SPECIFICATIONS (@ 25°C)

INPUT CHARACTERISTICS								
Style:	70S2-04-B	70S2-04-C	70S2-04-D	70S2-04-B	70S2-05-C	70S2-05-D	70S2-01-A	70S2-02-A
Control Voltage Range:	3 - 30 VDC	3 - 30 VDC	3 - 30 VDC	6 - 30 VDC	6 - 30 VDC	6 - 30 VDC	3 - 15 VDC	9 - 30 VDC
Typical Input Current:	1.0 -17 mA	1.0 - 6.0 mA	1.0 -17 mA	1.0 -6.0 mA	1.0 -17 mA	1.0 - 6.0 mA	5 - 40 mA	5 - 17 mA
Must Release Voltage:	1.0 VDC	1.0 VDC	1.0 VDC	1.0 VDC	1.0 VDC	1.0 VDC	1.0 VDC	2 VDC
Max. Reverse Control Voltage:	5 VDC	5 VDC	5 VDC	5 VDC	5 VDC	5 VDC	5 VDC	5 VDC
OUTPUT CHARACTERISTICS								
Load Voltage Range:	24 -140 VAC	24-280 VAC	8 - 50 VAC	24 -140 VAC	24 - 280 VAC	8 - 50 VAC	3 - 60 VDC	3 - 60 VDC
Rated Load Current :	4 Amp	4 Amp	4 Amp	4 Amp	4 Amp	4 Amp	3 Amp	3 Amp
Maximum off-State Voltage dv/dt:	300 V/u Sec							
Minimum Load Current:	75 mA	75 mA	75 mA	75 mA	75 mA	75 mA	100 mA	100 mA
Non-Repetitive Surge Current (1 Cycle):	60 Amp	60 Amp	60 Amp	60 Amp	60 Amp	60 Amp	7 Amp-1sec	7 Amp-1sec
Maximum Off State Leakage Current (Rms):	6 mA	6 mA	3 mA	6 mA	6 mA	6 mA	10 uA	10 uA
Typical On-State Voltage Drop (Rms):	1.6 V	1.6 V	1.6 V	1.6 V	1.6 V	1.6 V	1.2 V	1.2 V
Minimum Peak Blocking Voltage:	400 V	600 V	200 V	400 V	600 V	200 V	105 V	105 V
Operating Frequency Range:	25 to 70 Hz	25 to 70 Hz	25 to 70 Hz	25 to 70 Hz	25 to 70 Hz	25 to 70 Hz	DC	DC
Maximum Turn - On Time:	8.3 mS	8.3 mS	8.3 mS	8.3 mS	8.3 mS	8.3 mS	75 uS	75 uS
Maximum Turn - Off Time:	8.3 mS	8.3 mS	8.3 mS	8.3 mS	8.3 mS	8.3 mS	500 uS	500 uS

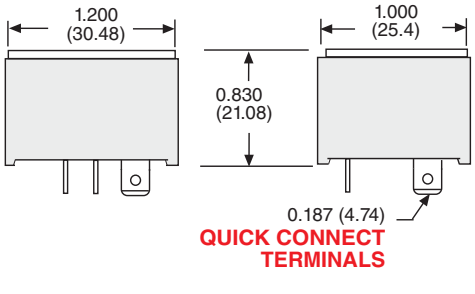
MISCELLANEOUS CHARACTERISTICS	
Dielectric Strength (Input/Output/Base):	3000 V rms. Min.
Insulation Resistance:	100 megohms minimum @ 500 VDC
Operating Temperature Range:	-40°C to +100°C
Storage Temperature Range:	-40°C to +125°C
Weight:	40 grams approx.

Figure 1: Maximum Continuous Current **vs.** Ambient Temperature

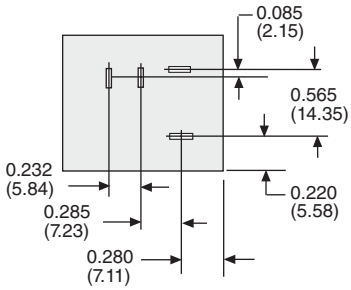


OUTLINE DIMENSIONS

DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



TERMINAL BOTTOM VIEW



Mating Sockets
70-459-1: SCREW/DIN
See Section 7

STANDARD PART NUMBERS	LOAD VOLTAGE RANGE	RATED LOAD CURRENT
70S2-04-B-04-K	24 - 140 VAC	4 AMPS
70S2-04-C-04-K	24 - 280 VAC	4 AMPS
70S2-04-D-04-K	8 - 50 VAC	4 AMPS
70S2-05-B-04-K	24 - 140 VAC	4 AMPS
70S2-05-C-04-K	24 - 280 VAC	4 AMPS
70S2-05-D-04-K	8 - 50 VAC	4 AMPS
70S2-01-A-03-K	3 - 60 VDC	3 AMPS
70S2-02-A-03-K	3 - 60 VDC	3 AMPS

CONSULT FACTORY FOR OTHER CONFIGURATIONS.

STYLE K

PHONE: (843) 393-5778 FAX: (843) 393-4123 EMAIL: info@magnecraft.com