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REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	A	INITIAL DRAWN	20NOV2019	RV	MB

Electrical Characteristics

Operate Sensitivity—

Single-coil form, 100 mW,
Dual-coil form, 180 mW

Contact Arrangement—

4-pole double-throw (4C)

Contact Ratings —

DC resistive — 2 amps at 28 volts
DC inductive — 0.5 amp at 28 volts,
200 mH
AC resistive — 0.5 amp at 115 volts
(enclosure isolated from ground, or
enclosure and movable contact at same
potential)

AC — 0.125 amp at 115 volts
(enclosure at line potential with respect
to movable contact)

Low-level — 50 µA at 50 mV
Peak AC or DC

Contact Resistance —

0.050 ohms max.;
0.150 ohms after life tests

Life —

100,000 operations at rated loads listed;
1,000,000 operations at low-level loads

.150 Grid-space
Magnetic Latching Relays
Type 3SBM (4PDT)

Product Facts

- Low profile... only 0.32 inches high
- Internal diode for coil transient suppression available
- Qualified to MIL-R-39016/31
- Suitable for low pulse operation — 2 ms at rated voltage

Coil Table (All Values DC)*

Coil Code Letter	SINGLE COIL, SENSITIVITY 1, (100 mW)			
	Coil Resistance @ 25C (Ohms) ± 10%	Maximum Set-Reset Values		Suggested Source Volts‡
		Calibration Code 5 Voltage (Volts)	Calibration Code 6 Current (mA)	
N	57	2.4	42	3.6– 8.5
R	256	5.1	20	7.6–18
T	830	9.1	11	14–32
V	1700	13.0	7.7	20–46
W	3250	18.0	5.5	28–63

Coil Code Letter	DUAL COIL, SENSITIVITY CODE 2, (180 mW)			
	Coil Resistance @ 25C (Ohms) ± 10%	Maximum Set-Reset Values		Suggested Source Volts‡
		Calibration Code 5 Voltage (Volts)	Calibration Code 6 Current (mA)	
H	10	1.4	135	2.0– 3.7
N	37	2.6	70	3.8– 7.2
R	145	5.2	35	7.6–14.5
T	450	9.0	20	14–25
V	975	13.5	13.5	20–35
W	2140	20.0	9.2	30–54

*Values listed are factory test and inspection values. User should allow for meter variations.

†Applicable over the operating temperature range in circulating air.

Operating Characteristics

Operate Time — 4 ms max.

Release Time — 4 ms max.

Contact Bounce — 1.5 ms

Dielectric Strength —

500 volts rms at sea level;
350 volts rms at 70,000 feet and above

Insulation Resistance —

1,000 megohms min. over temperature range

Environmental Characteristics

Vibration — 30 G, 55 to 3,000 Hz

Shock — 150 G at 11 ms

Temperature — -65°C to +125°C


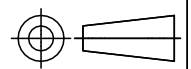
See page 1-62 for Mounting Forms,
Terminals and Circuit Diagrams.

Ordering Instructions

Type 3SBM relays can be ordered by specifying the correct catalog number. This number is derived by choosing the proper CODE for each of the six relay characteristics in the order in which the codes are listed.

Relay Characteristic
Catalog No.

3SBM 6 13 1 N 2
Type _____
Calibration _____
Mounting _____
Header _____
Coil Resistance _____
Sensitivity _____

THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN RV 20NOV2019	 TE Connectivity			
		CHK RV 20NOV2019				
DIMENSIONS: INCHES		APVD MB 20NOV2019	NAME 3SBM—SERIES			
		PRODUCT SPEC	—			
		APPLICATION SPEC	—			
MATERIAL		WEIGHT	SIZE A3	CAGE CODE	DRAWING NO	RESTRICTED TO
—		—	—	—	©3SBM—SERIES	—
CUSTOMER DRAWING			SCALE NTS	SHEET 1 of 3	REV A	

Coil Table Single Diode (All Values DC)*

Coil Code Letter	Dual Coil, Sensitivity Code 5 (180 mW)			
	Coil Resistance @ 25C (ohms) ± 10%	MAX. SET—RESET VALUES		Suggested Source Volts†
		Calibration Code 5 Voltage (Volts)	Calibration Code 6 Current (mA)	
H	10	1.4	135	2.0- 3.7
N	37	2.6	70	3.8- 7.2
R	145	5.2	35	7.6-14.5
T	450	9.0	20	14-25
V	975	13.5	3.5	20-35
W	2140	20.0	9.2	30-54

*Values listed are factory test and inspection values. User should allow for meter variations.
†Applicable over the operating temperature range in circulating air.
**Coil resistance cannot be measured by conventional bridge.

Coil Table Dual Diode (All Values DC)*

Coil Code Letter	Dual Coil, Sensitivity Code 6 (180 mW)			
	Coil Resistance @ 25C (ohms) ± 10% **	MAX. SET—RESET VALUES		Suggested Source Volts†
		Calibration Code 5 Voltage (Volts)	Calibration Code 6 Current (mA)	
H	10	2.4	135	2.6- 4.1
N	37	3.6	70	3.8- 7.2
R	145	6.2	35	7.6-14.5
T	450	10.0	20	14.0-25.0
V	975	14.5	13.5	20.0-35.0
W	2140	21.0	9.2	30.0-45.0

Coil Table (All Values DC)*

Coil Code Letter	SINGLE COIL, SENSITIVITY 1, (100 mW)			
	Coil Resistance @ 25C (Ohms) ± 10%	Maximum Set-Reset Values		Suggested Source Volts†
		Calibration Code 5 Voltage (Volts)	Calibration Code 6 Current (mA)	
N	57	2.4	42	3.6– 8.5
R	256	5.1	20	7.6–18
T	830	9.1	11	14–32
V	1700	13.0	7.7	20–46
W	3250	18.0	5.5	28–63

*Values listed are factory test and inspection values. User should allow for meter variations.
†Applicable over the operating temperature range in circulating air.

Coil Code Letter	DUAL COIL, SENSITIVITY CODE 2, (180 mW)			
	Coil Resistance @ 25C (Ohms) ± 10%	Maximum Set-Reset Values		Suggested Source Volts†
		Calibration Code 5 Voltage (Volts)	Calibration Code 6 Current (mA)	
H	10	1.4	135	2.0– 3.7
N	37	2.6	70	3.8– 7.2
R	145	5.2	35	7.6–14.5
T	450	9.0	20	14–25
V	975	13.5	13.5	20–35
W	2140	20.0	9.2	30–54

Operating Characteristics

Operate Time — 4 ms max.
Release Time — 4 ms max.
Contact Bounce — 1.5 ms
Dielectric Strength (Note 1) — 500 volts rms at sea level; 350 volts rms at 70,000 feet and above
Insulation Resistance (Note 1) — 1,000 megohms min. over temperature range

Environmental Characteristics

Vibration — 30 G, 55 to 3,000 Hz
Shock — 150 G at 11 ms
Temperature — -65°C to +125°C

Semiconductor Characteristics at 25°C

Max. Negative Transient — 1 volt
Breakdown Voltage — 100 Vdc min.
Max. Leakage Current — 1 µA @ 50 Vdc

Note 1: Tests for dielectric with-standing voltage and insulation resistance should be made with “coil terminals” shorted together to avoid unnecessary electrical stress to semiconductor elements.


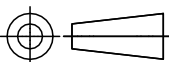
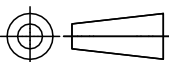
Electrical Characteristics

Contact Arrangement — 4-pole double-throw (4C)
Operate Sensitivity — Single-coil form, 100 mW, Dual-coil form, 180 mW per coil
Contact Ratings — DC resistive — 2 amps at 28 volts
DC inductive — 0.5 amp at 28 volts, 200 mH
AC resistive — 0.5 amp at 115 volts (enclosure isolated from ground, or enclosure and movable contact at same potential)
AC — 0.125 amp at 115 volts (enclosure at line potential with respect to movable contact)
Low-level — 50 µA at 50 mV
Peak AC or DC
Contact Resistance — 0.050 ohms max.; 0.150 ohms after life test
Life — 100,000 operations at rated loads listed; 1,000,000 operations at low-level loads

.150 Grid-space Hybrid
Magnetic Latching Relays
Single Diode, Dual Diode
Type 3SBM (4PDT)

Product Facts

- Low profile... only 0.32 inches high
- Suitable for pulse operation
- Qualified to MIL-R-39016/35
- Qualified to MIL-R-39016/36

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		CHK RV	20NOV2019					
DIMENSIONS: INCHES	<div></div>	TOLERANCES UNLESS OTHERWISE SPECIFIED:		APVD MB	20NOV2019	NAME 3SBM—SERIES — —		
				PRODUCT SPEC —				
	<div></div>			APPLICATION SPEC		RESTRICTED TO		
				—		—		
MATERIAL	FINISH	WEIGHT		SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO	
—	—	—		A3	—	Ⓒ=3SBM—SERIES	—	
CUSTOMER DRAWING						SCALE	SHEET	REV
						NTS	2 of 3	A

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REVISIONS

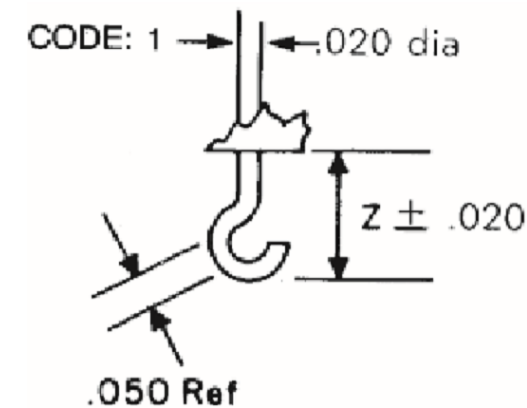
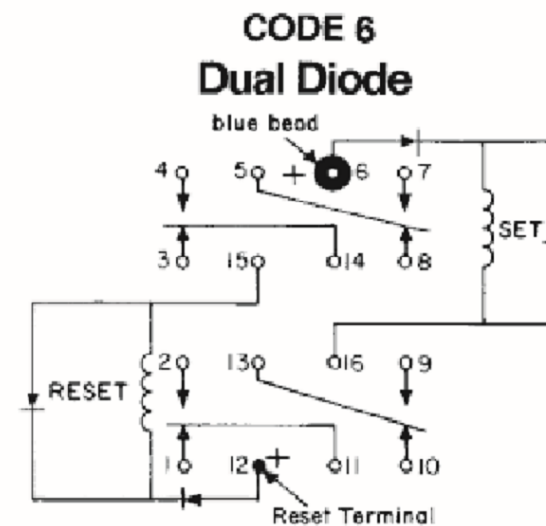
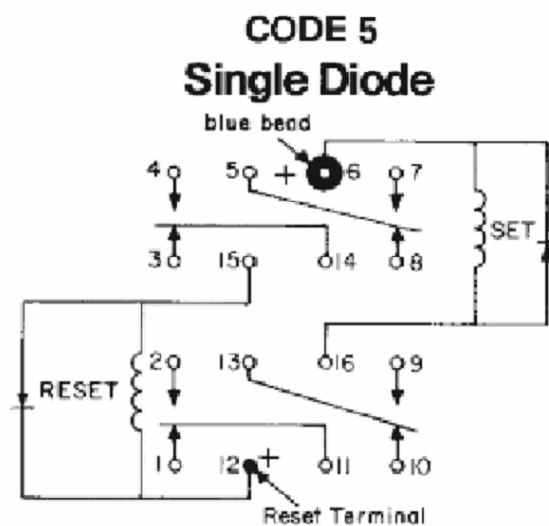
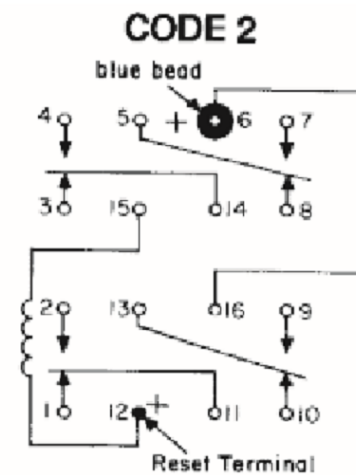
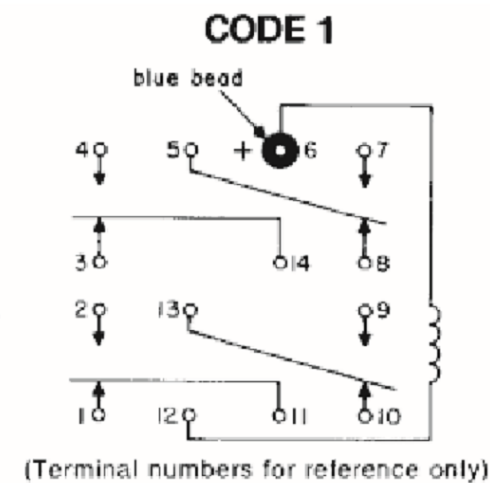
P	LTR	DESCRIPTION	DATE	DWN	APVD
	—	SEE SHEET 1	—	—	—

Header and Connection Diagrams

Dual Coil

When the SET coil is pulsed with plus polarity on the blue bead, the movable contacts take the position shown in the connection diagram. The contacts are transferred when the RESET coil is pulsed with plus polarity on the reset terminal. A new pulse of the SET coil with plus polarity on the blue bead will transfer the contacts back.

The contacts can also be transferred by applying a pulse of opposite polarity to the coil previously pulsed. However, this method requires slightly more power than the more normal form of operation described in the previous paragraph.

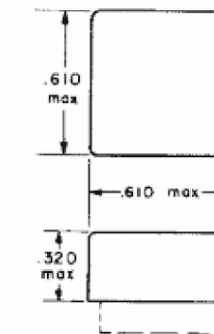


Header Types

Type	Z Dimension	Header Code
Solder Hook	0.13	1

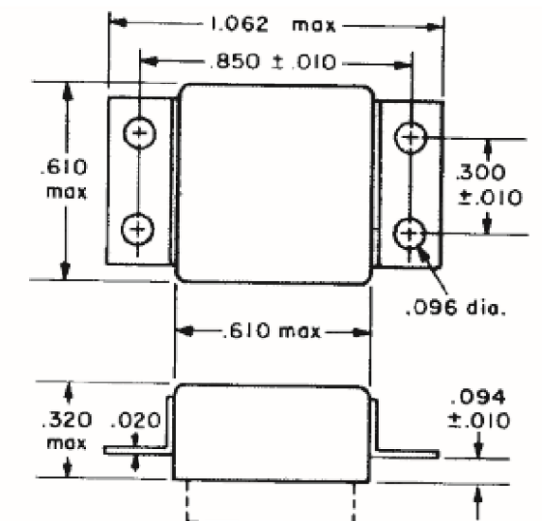
Mounting Forms (3SBM)

(Vibration note with each form is acceleration from 55 to 3000 Hz)



ALL DIMENSIONS IN INCHES

TOLERANCES Unless otherwise specified:	
Hundredths	±0.020
Thousandths	±0.005



No Mount

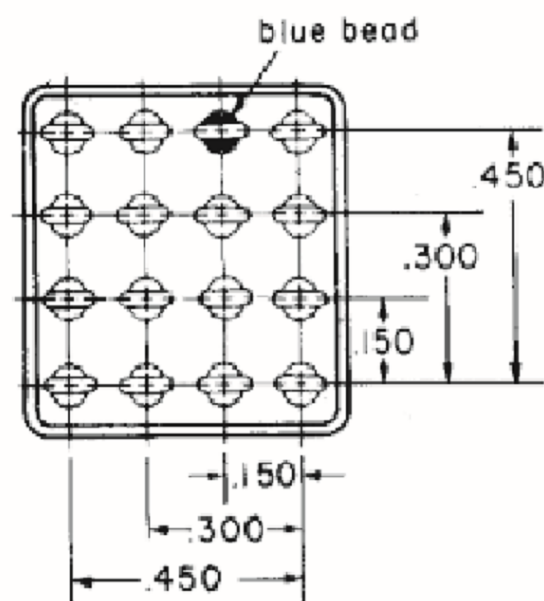
Mounting Code	Vibration*
00	30g

*Assumes relay held securely by potting or other means.

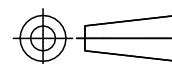
End Bracket

Mounting Code	Vibration
13	30g

Terminal numbers for reference only



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DIMENSIONS:
INCHES

MATERIAL

TOLERANCES UNLESS OTHERWISE SPECIFIED:

0 PLC ± —
1 PLC ± —
2 PLC ± —
3 PLC ± —
4 PLC ± —
ANGLES ± —

FINISH

DWN RV 20NOV2019

CHK RV 20NOV2019

APVD MB 20NOV2019

PRODUCT SPEC

APPLICATION SPEC

WEIGHT

CUSTOMER DRAWING



TE Connectivity

NAME

3SBM—SERIES

SIZE

A3

CAGE CODE

—

DRAWING NO

C=3SBM—SERIES

RESTRICTED TO

—

SCALE NTS

SHEET 3 of 3

REV A