



- DC-2 GHz
- DC-6 GHz
- DC-12.4 GHz
- Medium/High Power
- 1M Life Cycles

RF Characteristics

Frequency GHz	VSWR (max)	Isolation dB (min)	Ins. Loss dB (max)
DC-1	1.15	85	0.15
1-2	1.20	80	0.20
2-4	1.25	70	0.25
4-8	1.35	60	0.40
8-12.4	1.50	60	0.50

Note: Performance applies to N, BNC, and TNC type connectors. Consult with factory for SC-type connectors.

Specifications

Operating Voltage (across temperature range):

- 12 Vdc (11-14 Vdc)
- 24 Vdc (20-28 Vdc)
- 28 Vdc (24-32 Vdc)

Coil Current (max. @ nom. Vdc & 25°C)*:

- 12 Vdc 275 mA
- 24 Vdc 155 mA
- 28 Vdc 115 mA

Switching Time:

20 ms maximum

Operating Temperature:

- 25°C to +65°C (Standard)
- 55°C to +85°C (Extended "T" Option)

Mechanical Life Cycles*:

1,000,000 minimum

Vibration, Operating:

10G RMS, 20-2000 Hz

Mechanical Shock, Non-Operating:

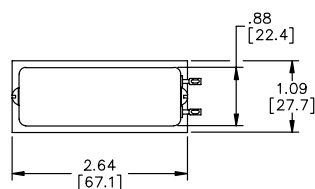
50G, 1/2 Sine, 11 ms

Nominal Weight*:

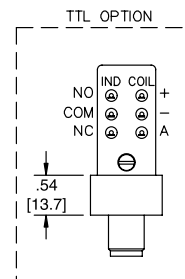
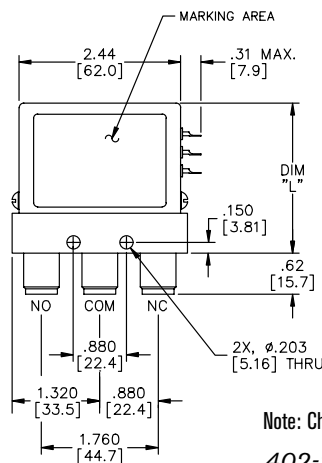
9.0 oz. (255 g.)

* Performance and weight varies depending on selected options. Values listed are for Standard 402 Failsafe model.

Mechanical



DIM "L" (MAX)	MODEL*	ELEC. SCHEM.
2.30 [58.4]	402-2X01	1
2.30 [58.4]	402-2X0132	1
2.30 [58.4]	402-2X0102A	2
2.30 [58.4]	402-2X0132A	2



Note: Chart reflects N, BNC, and TNC type of connectors only.

402-2X0132 Shown

For Electrical Schematic, see page # 1-8

Part Number Selector

402 J - 2 2 01 02 A - ROHS

Special Options	Actuator	Coil Voltage	Connectors	Indicators	Circuit Options
A = High Power	2 = Failsafe	2 = 12 Vdc	01 = N Female	02 = No Indicators**	A = TTL High
I = Immersion Seal	6 = Failsafe with	3 = 28 Vdc	02 = BNC Female	32 = Indicators	B = TTL High Military (JANTX)
J = 'D' Connector	Suppression Diode	8 = 24 Vdc	03 = TNC Female	**Declared only with	L = TTL Low
P = Power Connector		9 = 15 Vdc	53 = SC Female*	Circuit Options	
S = Epoxy Seal					
T = -55°C to + 85°C					

*Consult Dow-Key for dimensions

Note: TTL option includes suppression diode. Other options may be available and all combinations may not be possible. Please consult with factory.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
J	REVISED PER ECO #5299	8/31/98	J.A.
K	REVISED AND REDRAWN PER ECO #9350	7/02/08	K.R.
L	REVISED PER ECO #10803	4/18/14	K.R.

Nominal Coil Voltage	Part Number
12 Vdc	402-2201
15 Vdc	402-2901
20 Vdc	402-2701
24 Vdc	402-2801
28 Vdc	402-2301
48 Vdc	402-2401

REVISIONS	L	L	L			
SHEET NO.	1	2	3			
APPROVALS			DATE			
DRAWN S. LEE			6/30/08			
ENG G. NICKLAUS			7/01/08			
ENG. MGR. R. SZNUK			7/01/08			
SALES MGR. A. CHEUNG			7/01/08			
Q.A. MGR. N. SANDERS			7/01/08			
MFG. MGR. R. GONZALEZ			7/01/08			



DowKey®
Microwave
CORPORATION

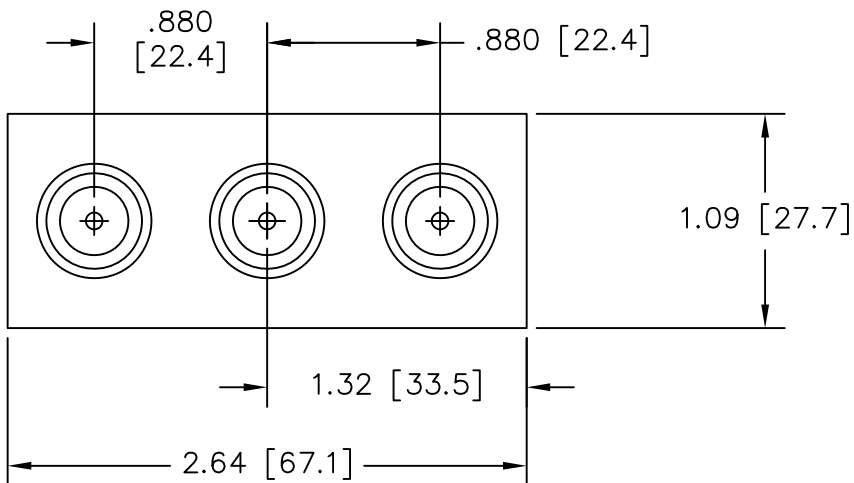
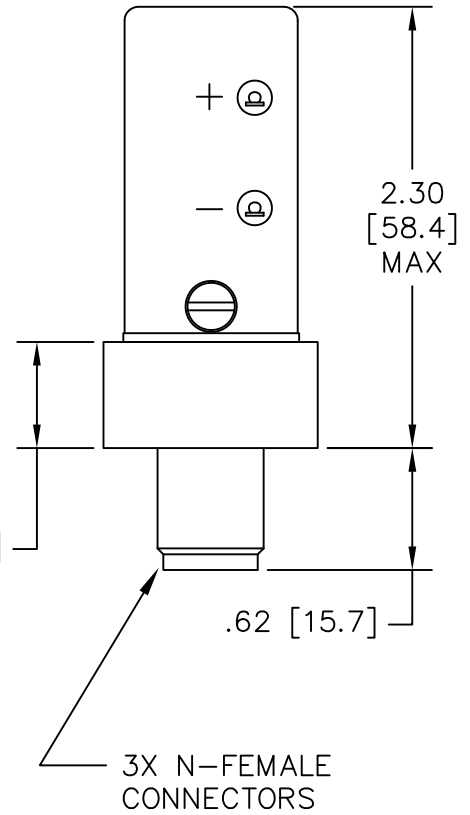
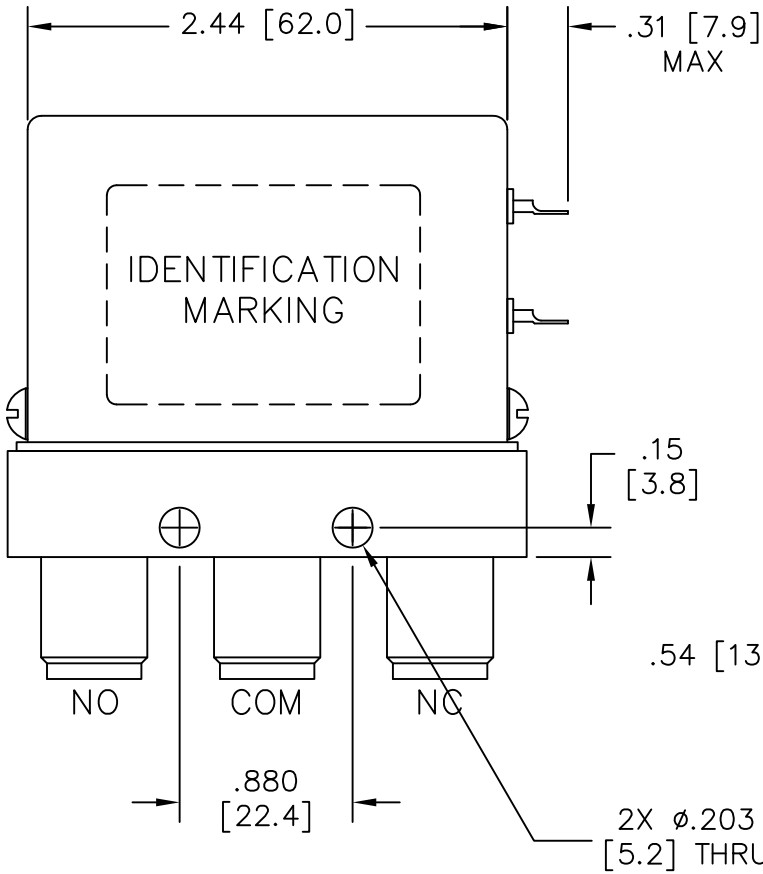
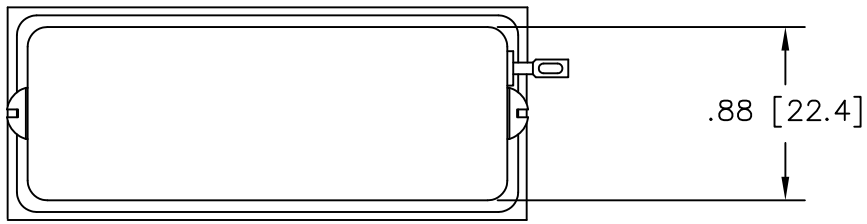
4822 McGrath Street
Ventura, CA. 93003-5641
PH: (805) 650-0260
FAX: (805) 650-1734

A **DOVER** TECHNOLOGIES COMPANY

SWITCH, SPDT, FAILSAFE
N-FEMALE CONNECTORS,

CODE IDENT. NO. 00471	DWG. NO. 402-2X01	SCALE NONE	FINAL ASSY:	SHEET 1 OF 3
--------------------------	----------------------	------------	-------------	--------------

OUTLINE DRAWING:



[] MILLIMETERS

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:
 .XXX ±.010 ANGLES: ±3'
 .XX ±.030

CODE IDENT. NO.
 00471

DWG. NO.

402-2X01

REV.
 L

SCALE NONE

SHEET 2 OF 3

SPECIFICATIONS:

1. RF CHARACTERISTICS:

1.1 FREQUENCY (GHz):	0-1	1-2	2-4	4-8	8-12.4
1.2 VSWR (RATIO MAX):	1.15:1	1.20:1	1.25:1	1.45:1	1.50:1
1.3 INSERTION LOSS (dB MAX):	0.15	0.20	0.25	0.40	0.50
1.4 ISOLATION (dB MIN):	85	80	70	60	60
1.5 RF POWER (WATTS CW MAX):	600	400	300	200	175

2. ACTUATION DATA:

2.1

NOMINAL VOLTAGE	OPERATING VOLTAGE	CURRENT (TYP) @ NOMINAL VOLTAGE & 25°C
12Vdc	11-14	260mA
15Vdc	13-17	230mA
20Vdc	17-23	180mA
24Vdc	20-28	145mA
28Vdc	24-32	110mA
48Vdc	42-56	70mA

2.2 SWITCHING TIME: 20mS MAX.
 2.3 OPERATING MODE: FAILSAFE

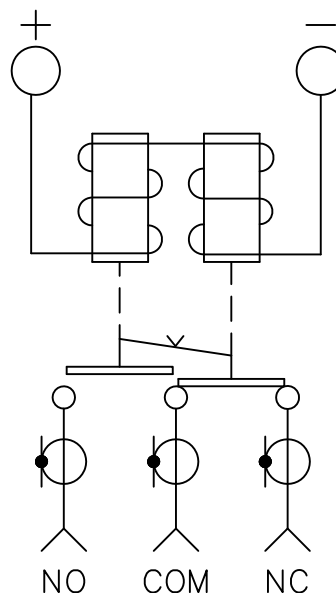
3. MECHANICAL:

3.1 RF CONTACTS: BREAK BEFORE MAKE
 3.2 WEIGHT: 7.4oz. (210g.) NOMINAL
 3.3 DESIGN LIFE: 1,000,000 CYCLES MIN

4. ENVIRONMENTAL:

4.1 OPERATING TEMPERATURE: -25°C TO +65°C
 4.2 STORAGE TEMPERATURE: -55°C TO +85°C
 4.3 SEAL: GASKET

SCHEMATIC:



CODE IDENT. NO. 00471	DWG. NO. 402-2X01	REV. L
SCALE NONE	SHEET 3 OF 3	