

DESCRIPTION

Coto's Molded DYAD dry reed switch is ideally suited for small signal switching applications. This switch has sputtered ruthenium contacts and an extraordinary seal strength achieved by a patented laser sealed glass. In low level dry switching environments, this switch typically provides > 1 billion operations. It has hermetically sealed contacts and offers a wide range of available magnetic sensitivities. In addition, the molding process provides a solid plastic outer shell. This plastic shell provides superior mechanical strength, eliminates concerns over handling glass switches, and provides an ideal solution for high speed, automated assembly environments.



FEATURES

- Small size
- SMT-compatible
- Easily formed leads
- Sputtered ruthenium contacts
- Hermetically sealed contacts
- Fast switching speed - up to 500Hz
- Wide range of available magnetic sensitivities
- Superior mechanical strength
- Enhanced for better auto placement
- RoHS Compliant 

APPLICATIONS

- Security
 - proximity sensors
 - smoke alarms
- Automotive
 - level sensor
 - lamp current sensor
- Relays

SPECIFICATIONS

All parameters are at 25°C unless otherwise stated

Parameters	Conditions	Min	Typ	Max	Units
Contact Ratings					
Operate ampere turns range	Full Blade Tolerance = +/-1.5 NI	10		30	NI
Release ampere turns range	Full Blade Tolerance = +/-1.5 NI	5		30	NI
Switching Voltage	Max DC/PeakAC Resistive			200	VDC
Switching Current	Max DC/PeakAC Resistive			0.5	Amps
Carry Current	Max DC/PeakAC Resistive			1.5	Amps
Contact Rating	Max DC/PeakAC Resistive			10	VA
Life Expectancy	1V, 10mA Signal Level		1000		x10 ⁶ Ops
	10V, 10mA Low Level		500		x10 ⁶ Ops
	50V, 100mA Telecom Load		2		x10 ⁶ Ops
	100V, 100mA Rated Loads		2		x10 ⁶ Ops
Static Contact Resistance	50mV, 10mA ¹		80	150	mOhms
Contact Material			Ru		
Switch Specifications					
Insulation Resistance ²	100V, 25°C, 40% RH	10 ⁹	10 ¹¹		Ohms
Capacitance	Across Open Contacts		0.3		pF
Dielectric Strength ⁴	Between Contacts	250	300		VDC/Peak AC
Operate Time, including bounce	At nominal coil voltage, 10Hz Square Wave			0.5	ms
Release Time	Zener-Diode Suppression ³			0.2	ms
Environmental Ratings					
Storage Temperature		-40		+125	°C
Operating Temperature		-40		+125	°C
Soldering Temperature				+240	°C
Vibration Resittance	5Hz - 200Hz			20	Gs
Shock Resistance	11+/-1ms, sine wave			30	Gs
Shock Resistance-survivability	11+/-1ms, sine wave			500	Gs

¹ Contact resistance measured with 4 terminal method, 1.1" between test leads

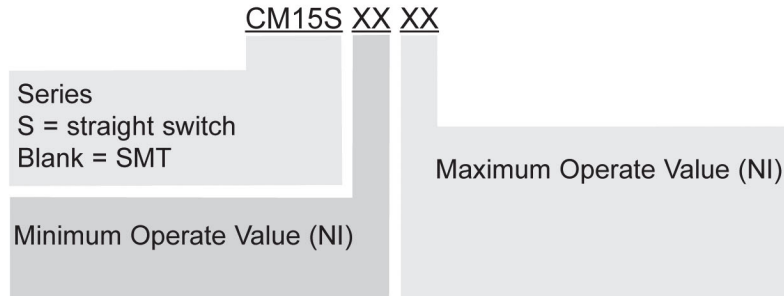
² >10¹² ohms is available upon request

³ A 24V zener in series with a diode across the coil

⁴ 15 ampere turn minimum

ORDERING INFORMATION

A complete part number is represented by the digits below



Surface Mount

Refer to operating characteristics table for a complete part number.

Overmolded DYAD

Part #	Operate Range (NI) ¹
CM15S1015	10 to 15
CM15S1020	10 to 20
CM15S1030	10 to 30
CM15S1520	15 to 20
CM15S1525	15 to 25
CM15S2025	20 to 25

¹ Tolerance = +/-1.5NI

Overmolded DYAD Surface Mount

Part #	Operate Range (NI) ^{1,2,3}
CM15-2024	10 to 15
CM15-2259	10 to 20
CM15-2282	10 to 30
CM15-2025	15 to 20
CM15-2249	15 to 25
CM15-2026	20 to 25

¹ Tolerance = +/-1.5NI

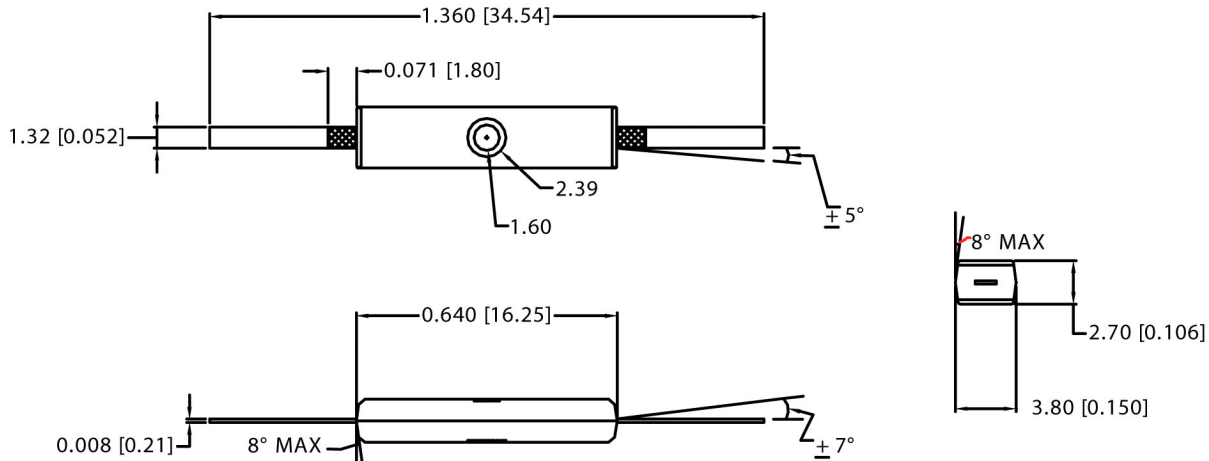
² Full Blade Sensitivity

³ Surface Mount switches are packaged 3,000 parts per reel

MECHANICAL DIMENSIONS

Dimensions in inches (mm)

Overmolded DYAD



MECHANICAL DIMENSIONS

Dimensions in inches (mm)

Overmolded DYAD SMT

