COMMERCIAL & MILITARY GRADES, SUB-SUBMINIATURE DOUBLE BREAK, SNAP-ACTION

MIL-PRF-8805/76 (0.200 inches wide)

OTTO's B3-2XXXX series is a sub-subminiature switch that meets all requirements of MIL-PRF-8805/76. Designed to switch at least one million mechanical cycles, the B3 surpasses the requirements of the military in these categories: contact resistance less than 25mΩ, contact pressure, contact bounce and overall cycle life. For MIL-PRF-8805/76 requirements, B3-22141 has standard silver with gold contacts, SPDT double break two circuit (Form Z), solder terminals in thermoset case material. Gold plate contacts are available for non-military applications. UL recognized and CSA certified models available.

MIL-PRF-8805/101 (0.156 inches wide)

For your really difficult projects, try OTTO'S B3 series. They meet the OTTO inspired MIL-PRF-8805/101 specification. Only 0.156" thick, think of all those extra 0.044" you can use in those tight ganged jobs. With the B3 series, you can get an extra pole in where only four MIL-PRF-8805/76s fit, with room to spare. Examine the characteristics. With the MIL-PRF-8805/101, the only thing you give up is the extra space the MIL-PRF-8805/76 takes. Cycle life, very low contact resistance, higher than normal contact pressures, minimal contact bounce...everything is exactly as provided by the MIL-PRF-8805/76 specification.

For MIL-PRF-8805/101 requirements, B3-11141 (PC pin) and B3-12141 (turret) have silver with gold contacts and SPDT double break (Form Z) contact. For commercial applications, a variety of contact forms, special forces and gold plate contacts are available. Most versions are also UL recognized and CSA certified.

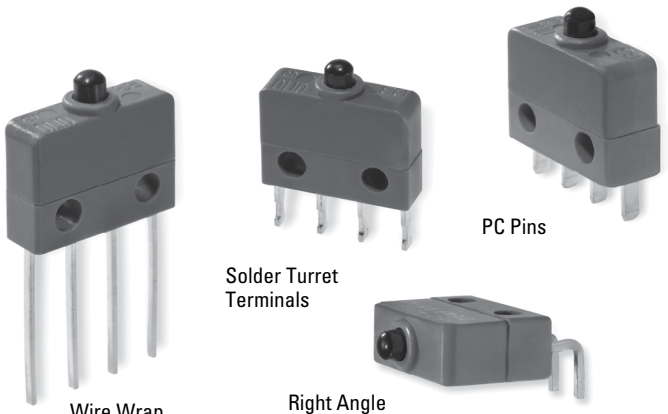
Great circuit versatility is available with either switch style. You have your choice of normally open (Form X) or closed (Form Y), 3 terminal (Form C) and 4 terminal (Form Z) SPDT double break.

Features:

- **Low level switching capability**
- **Less than 25mΩ contact resistance**
- **Up to 8 amps switching capability**
- **Button accepts actuation directly from a cam**
- **Choice of 0.156" & 0.200" wide models**
- **Choice of 6 standard terminal styles or wire leads**
- **Available in Commercial & Military grades**
- **UL recognized & CSA certified**
- **Qualified under MIL-PRF-8805/76 & MIL-PRF-8805/101**
- **RoHS/WEEE/Reach compliant**

APPLICATIONS

OTTO sub-subminiature switches are designed to meet all applications requiring MIL-PRF-8805/76 or MIL-PRF-8805/101 switches. Basic switches are designed for miniature spaces where cam or other limit actuators are used. In addition, toggle, pushbutton and lever actuators are available.



Standard Characteristics/Ratings:

ELECTRICAL RATINGS:

Circuitry	Load	Sea Level @ 28VDC	70,000 feet @ 28VDC	Sea Level @ 115VAC, 60/400Hz
SPST-NO or NC	Resistive	8A	8A	8A
Form Z		5A	5A	5A
Form C		5A	5A	5A
Gold Contacts		5A	5A	N/A
SPST-NO or NC	Inductive*	5A	3A	5A
Form Z		3A	2A	3A
Form C		2.5A	1.5A	2.5A
Gold Contacts		3A	2A	3A
*L/R = 0.026				
Lamp		1A	N/A	1A
Motor		5A	N/A	
DWV		1050Vrms	400Vrms	

Low Level:	Gold contacts 10mA @ 30mV
Electrical Life:	50,000 cycles at full load
Mechanical Life:	1,000,000 cycles
Seal:	Unsealed
Operating Temp Range:	-65°C to +125°C
Operating Force:	5 oz +3/-2 oz typical, 6 oz max, or 5 oz min options
Release Force:	1.5 oz min
Operate Point:	0.320 +/- 0.015 inches from mounting holes
Overtravel:	0.004 inches min
Movement Differential:	0.018 +/- 0.008 inches

MATERIALS:

Case:	Thermoset, blue
Cover:	Thermoplastic, blue
Button:	Thermoplastic, black
Terminals:	Brass with gold
Contacts:	Stationary: Silver with gold plate Moveable: Silver with gold plate
Terminal Hardware:	None provided
Mounting Hardware:	None provided

BASIC SWITCHES

COMMERCIAL & MILITARY GRADES, SUB-SUBMINIATURE DOUBLE BREAK, SNAP-ACTION

CONTACT CONFIGURATIONS:

MIL-PRF-8805/76 and MIL-PRF-8805/101 specify single pole, double throw, double break (Form Z) contact configuration. Available and included in the military specifications are SPNO and SPNC double break, (Form X and Y). The MIL-PRF-8805/101 also specifies SPDT Form C.

MILITARY APPROVALS

(MIL-PRF-8805/76 & MIL-PRF-8805/101)

Certain OTTO B3 models have been qualified to the military specifications for these parts. The following is a partial listing. Consult the Cross Reference that appears at the back of this catalog for the latest, complete listings.

MILITARY NO.	OTTO P/N	MILITARY NO.	OTTO P/N
MS27257-1	B3-26141	M8805/101-011	B3-15141
MS27257-2	B3-22141	M8805/101-012	B3-15142
M8805/101-001	B3-10064	M8805/101-013	B3-13141
M8805/101-002	B3-10065	M8805/101-014	B3-13142
M8805/101-003	B3-10066	M8805/101-015	B3-11131
M8805/101-004	B3-10067	M8805/101-016	B3-11132
M8805/101-005	B3-10063	M8805/101-017	B3-12131
M8805/101-006	B3-10072	M8805/101-018	B3-12132
M8805/101-007	B3-11141	M8805/101-019	B3-15131
M8805/101-008	B3-11142	M8805/101-020	B3-15132
M8805/101-009	B3-12141	M8805/101-021	B3-13131
M8805/101-010	B3-12142	M8805/101-022	B3-13132

ORDERING INFORMATION:

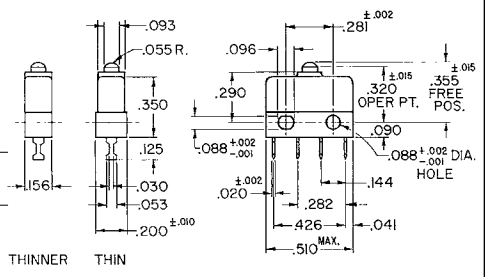
B3 Basic

Select the OTTO B3 basic switch to match your specific circuit and mechanical requirements. To order, specify your requirement using the OTTO Part Number Code shown below.

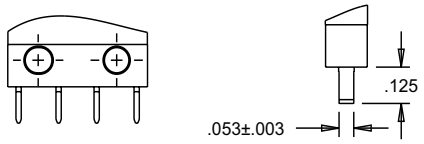
Example: B3-12141 is 0.156" wide, has 1/8" long turret terminals, 5 oz operating force, SPDT double break and silver/gold contacts (MIL-PRF-8805/101).

Basic Switch shown with Solder Turret Terminals

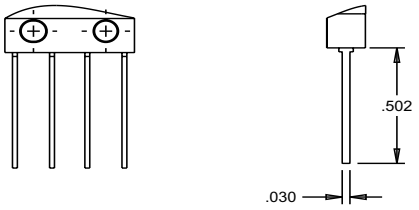
Terminal Style	Dim. "A" Length
2	0.125"
3	0.187"



Printed Circuit Pin Terminal Style 1

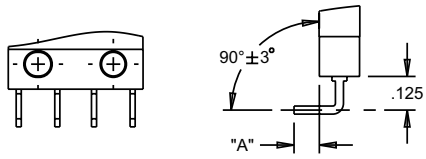


Wire Wrap Terminal Style 4



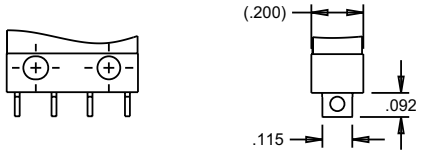
Right Angle Printed Circuit Terminal Style 5

SWITCH WIDTH	DIM. "A"
.156	.092
.200	.070



Solder Terminal Style 6

Available on the 0.200" model only.



B3 PART NUMBER CODE

Bold Code items signify conformance to MIL-PRF-8805 specifications.

B3 – X X X X X

Model

1. 0.156" (MIL Grade)
2. 0.200" (MIL Grade)
3. 0.156" (Com'l Grade)
4. 0.200" (Com'l Grade)

Terminal Style or Wire Length

1. PC Pins
2. Turret, 1/8" lg.
3. Turret, 3/16" lg.
4. Wire Wrap
5. Right Angle PC Pins
6. Solder ①
A. With Wires 06.0" lg.
B. With Wires 12.0" lg.
C. With Wires 18.0" lg.
D. With Wires 24.0" lg.
E. With Wires 30.0" lg.

Operating Force

1. 5 $^{+3}_{-2}$ oz
2. 5 oz min
3. 6 oz max

Circuitry

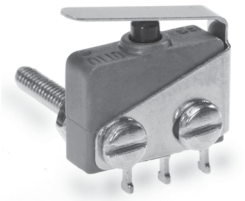
1. SPNO-DB, Form X
2. SPNC-DB, Form Y
3. SPDT, Form C
4. SPDT-DB, Form Z

Contact Material

1. Silver/Gold – High Current
2. Silver/Gold – Low Current

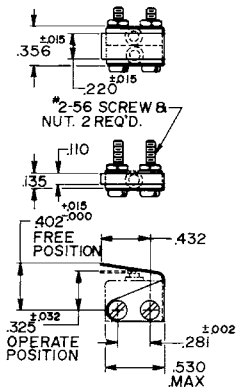
① Available on 0.200" wide models only.

Auxiliary Lever Actuators for B3



Catalog Number	Number of Poles
A1-101-02	1
A3-102	2

Supplied with two 2-56 panhead screws, hex nuts and lockwashers.



Mouser Electronics

Authorized Distributor

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OTTO:

B3-11131 B3-11132 B3-11141 B3-11142 B3-12131 B3-12132 B3-12141 B3-12142 B3-13131 B3-13132 B3-13141 B3-10064 B3-10065 B3-41141 B3-11111 B3-11112 B3-11231 B3-11232 B3-11311 B3-11331 B3-11341 B3-12111 B3-12112 B3-12121 B3-12122 B3-12221 B3-12222 B3-12231 B3-12232 B3-12241 B3-12242 B3-12311 B3-12312 B3-12321 B3-12322 B3-12341 B3-12342 B3-13111 B3-13341 B3-13342 B3-14121 B3-14122 B3-14131 B3-14132 B3-14141 B3-14142 B3-14211 B3-14231 B3-14331 B3-14332 B3-14341 B3-14342 B3-15212 B3-15231 B3-15232 B3-15242 B3-15342 B3-21111 B3-21132 B3-21141 B3-21142 B3-21212 B3-21241 B3-21341 B3-22111 B3-22121 B3-22131 B3-22132 B3-22142 B3-22211 B3-22212 B3-22231 B3-22241 B3-22242 B3-22311 B3-22331 B3-22332 B3-22341 B3-22342 B3-24121 B3-24132 B3-24141 B3-24212 B3-24232 B3-25141 B3-25241 B3-25311 B3-26111 B3-26131 B3-26132 B3-26142 B3-26242 B3-2A241 B3-31111 B3-31131 B3-31132 B3-31141 B3-31142 B3-31212 B3-31242