Tactile Switch

Tactile Switch with Sealed Construction for Automatic Soldering

- Sealed construction conforming to IP67 (IEC-60529) provides high reliability in locations exposed to dust or water.
- Available in two sizes: 6 mm square and 12 mm square
- Dome-shaped contact mechanism assures short key stroke and a sharp click to confirm actuation
- · Ground terminal available to protect against static electricity
- Projected plunger types that allow the installation of B32-series Special Key Tops are available.
- RoHS Compliant

Ordering Information



					Мо	del		
				Without g	round terminal	With ground terminal		
Туре	Plunger	Switch height	Operating force		Bags	Bags		
Standard 6x6 mm	Flat	4.3 mm	General-purpose: 16	^{) g} B3	W-1000	B3W-1100		
			High-force: 230	^{) g} B3	W-1002	B3W-1102		
	Projected	7.3 mm	General-purpose: 16	^{) g} B3	W-1050	B3W-1150		
			High-force: 23	^{) g} B3	W-1052	B3W-1152		
Standard 12x12 mm	Flat	4.3 mm	General-purpose: 20	^{) g} B3	W-4000	B3W-4100		
			High-force: 350	^{) g} B3	W-4005	B3W-4105		
	Projected	7.3 mm	General-purpose: 20	^{) g} B3	W-4050	B3W-4150		
			High-force: 350	^{) g} B3	W-4055	B3W-4155		

Note: Bulk Packaged, 100 switches per bag. Order in multiples of the package quantity. **Important Note:** Switches cannot be water-washed.

Accessories

See "B32" Tactile Switch Key Top data sheet for keycaps that fit projected plunger B3W models.

Plunger Identification Table

Use this table to determine keyswitch type by plunger color.

Plunger color	Operating force	Туре
White	160 g	B3W-1000, 1050, 1100, 1150
White	200 g	B3W-4000, 4050, 4100, 4150
Yellow	230 g	B3W-1002, 1052, 1102, 1152
Yellow	350 g	B3W-4005, 4055, 4105, 4155

Specifications

■ Characteristics

Contact form		SPST-NO											
Switching capacity		1 to 50 mA, 5 to 24 VDC (resistive load)											
Contact resistance		100 mΩ max. (rated: 1 mA, 5 VDC)											
Insulation resistance		100 MΩ min. (at 250 VDC)											
Dielectric strength		500 VAC, 50/60 Hz for 1 min.											
Bounce time		5 ms max.											
Vibration resistance		Malfunction: 10 to 55 Hz, 1.5-mm double amplitude											
Shock resistance		Destruction: 1,000 m/s ² (approx. 100 G) max. Malfunction: 100 m/s ² (approx. 10 G) max.											
Ambient operating tempera	ture	-25° to 70°C (at 60% RH max.) with no icing or condensation											
Ambient operating humidity	1	35% to 85% (at 5 to 35°C)											
Service life	General purpose	B3W-1□□□ :	1,000,000 operations min.	B3W-4□□□ :	3,000,000 operations min.								
	High force		300,000 operations min.	1,000,000 operations m									
Weight		B3W-1 : Approx. 0.30 g B3W-4 : Approx. 1.00 g											

■ Operating Characteristics

	B3W-	1	B3W-4					
Characteristics	General-purpose	High-force	General-purpose	High-force				
Operating force (OF) max.	160 g	230 g	200 g	350 g				
Release force (RF) min.	20 g	50 g	30 g	50 g				
Pretravel (PT)	0.25 +0.	² / _{-0.1} mm	0.3 ^{+0.2} / _{-0.1} mm					

Engineering Data

Operating Force vs. Stroke (Typical Example)

B3W-1



Construction





Dimensions

- Note: 1. Unless otherwise specified, all units are in millimeters and a tolerance of \pm 0.4 mm applies to all dimensions.
 - 2. Terminal numbers are not indicated on this switch. With the switch turned over so that the logo mark "OMRON" is visible on the upper part of the rear side of the switch base, the terminal on the right of the logo mark is numbered "1" and that on the bottom right is "3." Accordingly, two terminals on the left side are numbered "2" and "4" respectively.



OMRON

12 x 12 mm Models



Precautions

Be sure to read the precautions common to all Tactile Switches, contained in the Technical User's Guide, "Tactile Switches, Technical Information" for correct use.

OMRON

																											M	EMO
			— 	т ·	— — I	-1		т – Т				т —												— 	— ·		1	
			 		 _	-! I		 _		 		⊥ 			 				⊥	 	L I	L	J	 	 _		.	
Ē	_			 	 		 	 			 	 _		 	 _	 	 	 	 		 –	 		¦	 	<u> </u>		
	_		 	 	 _+ _	-1		 	 	 	 +	∣ + —	 	 	 + -	 	 	 +	 +	 	∣ ⊢– –	∣ ⊢ —	 	 	 	∣ _+	 	
			I I	I I	1	1	I I	1	1	1	1	∣ ↓	1	1	1	1	1	1	1	1		l I	1	1	I I	1	I I	
	_			+ I	-+ 	-!		+ - 1			∔ 1	+		⊢ ·	+ 1		 	+ I	+ — 1		 	⊢ — I			+ - 1	-+	·I —	
-	_			<u> </u>	<u> </u>		<u> </u>	<u> </u>		'	<u> </u>	<u> </u> 		<u> </u>	<u> </u>			<u> </u>	<u> </u>	<u> </u>		 		'	<u> </u>	<u> </u>	¦	
	_		 	 	∣ + –	-1		⊥ + -	 —	 	। †− -	 + —	 —	 	 + -	 	 	 	 † —	 —	। ⊢ -	 	1 1 —	 	∣ †− •	⊥ + —		
			l I	I I	1	1	I I	, ↓ _	1	1	1	1	1	1	1	1	1	1	1	1		l I	1	1	I I	1	I I	
			— 		+ -	-1		+ -		— 		+			+ - 							 	1 —	— 		-+	· —	
			' 	<u> </u>		-'			<u> </u>	' I	<u> </u>	<u> </u>	' <u> </u>	<u> </u>	<u> </u>	<u> </u>	'	<u> </u>	<u> </u>	' <u> </u>	L	<u> </u>	!	'	⊥ ⊥		' <u> </u>	
Г Г	_		 	 	і т —	-,		і т –	, 	 	י ד –	т —	¦		і т —	1 —	 	 	і т —	 —	 	 	1 —	 		- 		
I L	_		 	∣ ↓ .	∣ _↓	-1		' + -	 	 	। ↓	∣ ↓		⊥ ∟.	∣ ↓ _	 	 	। ↓	। ↓	 	∣ 	∣ ∟		 	∣ ↓ .	∣ _↓		· ·
			I I	I I	1	1	I I	1	1													 	I I	I I	I I	1		
				 	 	-!	ц Т	 	J		⊥ 	 	 	L .	 	J	! 	⊥ _ 	⊥ 	! 	∟ _ 	L	 I		 	 _	. I	
-	_	—	¦	<u> </u>	<u> </u>			<u> </u>		¦	<u> </u>	<u> </u>	¦		<u> </u>		<u></u>	<u> </u>	<u> </u>	-	 	 			<u> </u>	<u> </u>		
 -	_		 	·	' + -	-	⊢ .	' + -			+	· +	 	⊢ -	' + -		 	+	' + —	 	ı ⊢ –	⊢ —	1 —		· +- ·	, + —	· · · ·	
I I			i I	I I	1	1	I I	I I	1	I I	1	, 	1	1	1	1	i I	1	1	I I	 	 	i I	1	I I	1	i I	
	_				-+ 	-1		+ 				+							+			 						
-		—	'— 	<u> </u>	<u> </u>		<u> </u>	<u> </u>	<u>'</u>	'— 		<u> </u>					·	<u> </u>	<u> </u>	·	' I	<u>'</u>	<u> </u>	'— 	<u>-</u> -	<u> </u>	' —	
	_			- -	+ -			+ -	1 -		' 	+	—	- ·	- 	1 —		- 	; † —	—	, 	, F —	1 —		, 	- 	·	
Ļ	_			· ↓ ·	, 	-	, L	+ –		' 		' +		· 	' 			, 	+			L _			, , .	, 		· ·
			1	1	1	1	1	1	1		1	1		1			i I	1		1			i I	1	1	1		
			' 	<u> </u>		-' <u>-</u> -	· <u> </u>	 	-' 	' 	 	<u> </u>	' <u>—</u> 	· <u> </u>	<u> </u>	-' 	' 	 	 	' <u>—</u> 	' 	<u>'</u> 	' 	' 		- <u> </u>	' <u>—</u>	
Γ	_	—	;—		<u> </u>			<u> </u>	-			<u> </u>	; —	· ·	<u> </u>	1 -		<u> </u>	<u> </u>			<u> </u>	; —		<u> </u>	<u> </u>		
ŀ	_		—	+ -	+ -	-		+ -		—	+	· + —	—		+ -		—	+	+ —	—	├─ -	- —		—	· +- ·	+ —	· ·	 ⊢ -
Ì			Ì	1	Ì		Ì	i															Ì	Ì	Ì	i	Ì	
																	1				-					1		
Ì		—		<u> </u>		- <u>i</u> —	· ·	<u> </u>	- 		- 	<u> </u>	; —	· ·	<u> </u>	<u> </u>		- –	<u> </u>		 		<u> </u>		<u> </u>	<u> </u>	; <u> </u>	
F	-	_		+ -	+ -	-		+ -	1 -		+ -	+		-	+ -	1 —		+ -	† —				1 —		+ -	+ -		\vdash –
Ļ	_			Ļ.			Ļ .	Ļ _			Ļ _	÷		Ļ.	Ļ _			Ļ _	÷						Ļ.	- 	_	⊢ ⊣
		_									-			.				-			-				.			
Γ				\top	Τ -			Τ -	1 —		Γ -	Τ —		<u> </u>	Τ -	1 —		Γ -	Τ —		— -	Γ -	1 —		Γ.	Τ —	-	
⊢	_		—	+ -	+ -	-	\vdash	+ -		—	+ -	+ -	—	⊢ -	+ -			+ -	+ —	—	⊢ -	⊢ −	- I	—	+ -	+ -	—	⊢ ⊣
L				L.							L _			L.				L _			L _	L _			L.			
Γ				.				Τ	_		Γ -	Ι		<u> </u>		Ī			_			_	Ī —		<u> </u>			$\overline{}$
\vdash	-	-		+	+ -	-	\vdash	+ -	—		+ -	+ —	—	\vdash	+ -			+ -	+ —	—	⊢ -	+ -	1 —		+ -	+ -		\vdash \dashv
L				⊥ .	⊥ _			⊥ _			⊥ _	↓		∟.	⊥ _			⊥ _	↓		L _	L _			⊥ .	⊥ _		
F				\uparrow	+ -	-		+ -	1 —		† -	† —		- ·	† –	1 —		† -	† —	—	⊢ -		1 —		+ -	+ -		$\vdash \dashv$
\vdash	_				+ -	-	\vdash	+ -				+		⊢ .	+ -			⊢ -	+ —		⊢ -	⊢ _				+ -		$\vdash \dashv$
				<u> </u>					<u> </u>		<u> </u>			L .	<u> </u>			<u> </u>	<u> </u>		L	<u> </u>	<u> </u>		<u> </u>			
Γ				Γ	\top			Τ	1			Τ						\top	Τ] —		Γ			
L		—	I	⊥ .			L .			I	L _		I	L .	L _		I	L _	L	I	L _	L		I	⊥ .		I	

All sales are subject to Omron Electronic Components LLC standard terms and conditions of sale, which can be found at http://www.components.omron.com/components/web/webfiles.nsf/sales_terms.html

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS. To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.



55 E. Commerce Drive, Suite B Schaumburg, IL 60173

OMRON ON-LINE

Global - http://www.omron.com USA - http://www.components.omron.com

847-882-2288

Cat. No. X303-E-1

Specifications subject to change without notice

Printed in USA

11/10