SWITCH & CONNECTOR SELECTION

OMRON

2019

OMRON

Switch & Connector Selection

MEMO

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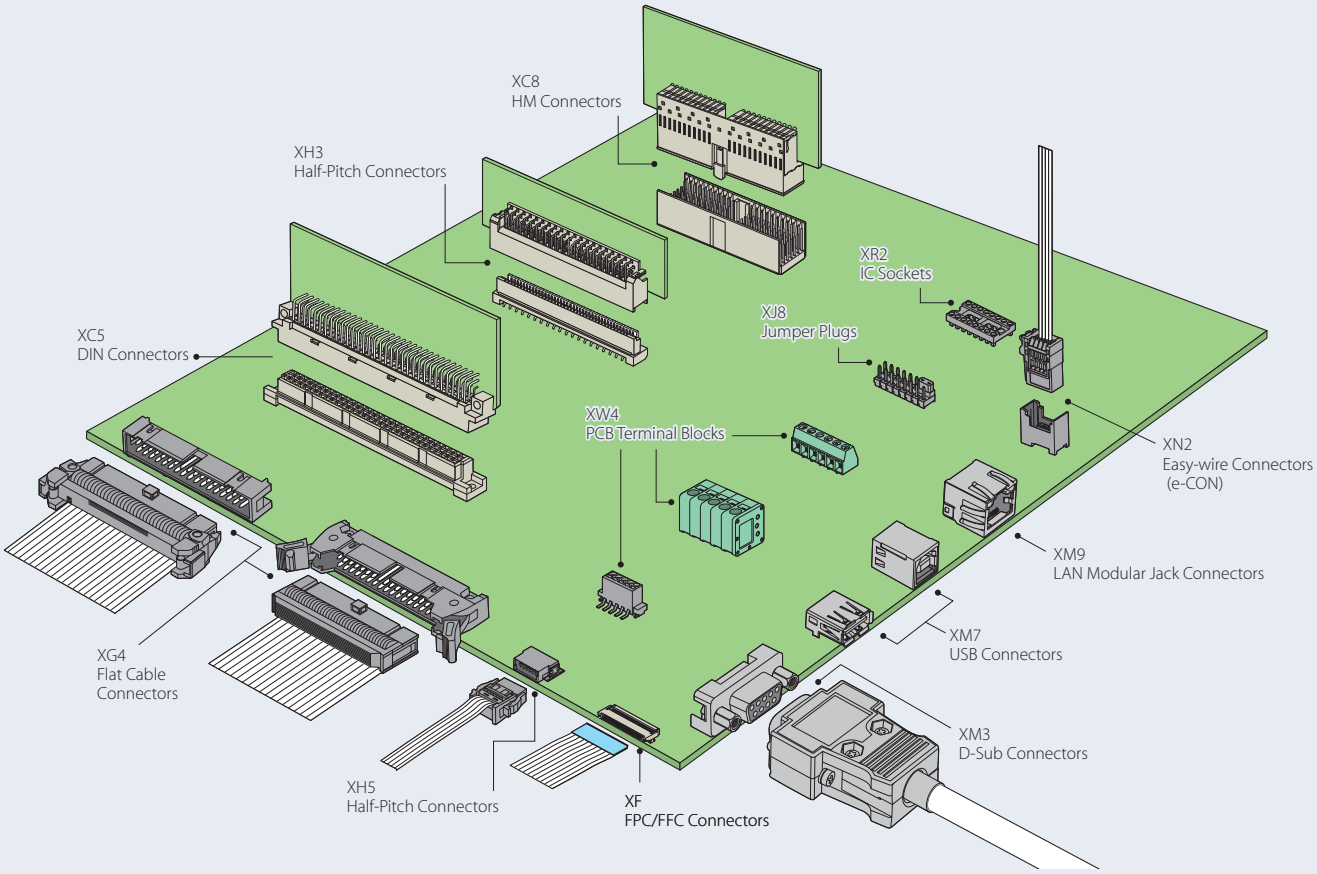
Connector

OMRON provides PCB Connector Series that meets the MIL, DIN, D-sub, and USB international standards.
We also provide PCB Terminal Block Connectors and other connectors that help increase mounting density and reliability of PCB.
Let OMRON handle your connector needs. You will find a model that perfectly matches your requirements.

Excellent operability & wide variation suitable to your connection applications



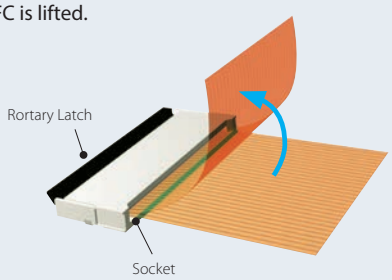
Board to FPC/FFC Connections

FPC/FFC Connectors P.11

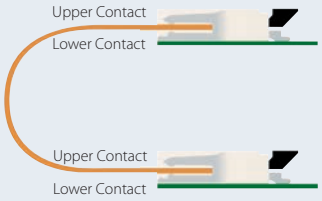
Improved insertion into FPC/FFC cable connectors with sure lock feeling to confirm proper connection.

Features of Rotary Backlock Mechanism

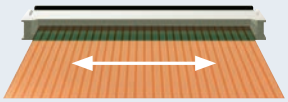
1 Rotary latch is independent of the FPC/FFC socket. The rotary latch will not release if the FPC/FFC is lifted.



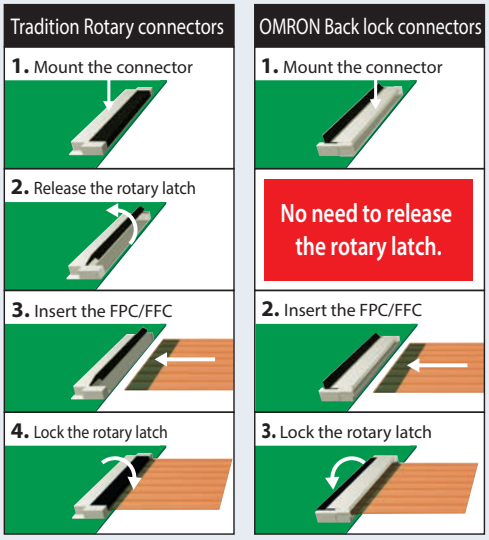
2 Dual contact. There is no need to distinguish between the upper and lower FPC/FFC connection.



3 Four-sided housing. Construction prevents FPC/FFC displacement.

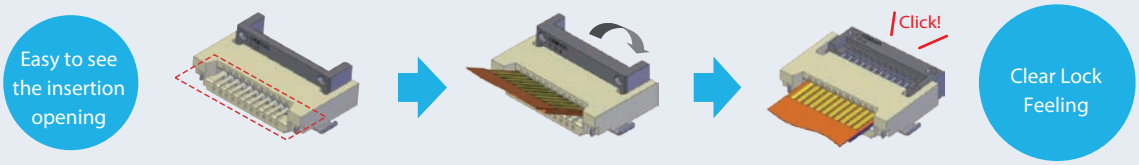


4 Delivered with the rotary latch open. Less work required for FPC/FFC mounting.

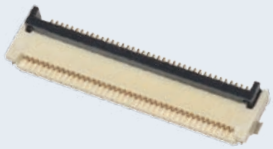


XF3M FPC/FFC Connectors

Improved FPC/FFC insertion and lock feeling



- Models available with 0.5-mm or 1.0-mm pitch.
- Models available with dual-sided contacts or upper sided.
  (Models with upper sided come only with a 0.5-mm pitch.)
- Models available with gold or tin-plated.
  (Tin-plated is available only with models with dual-sided contacts.)
- Applicable FPC/FFC thickness of 0.3mm.



Small reels are available with only 100 connectors to fit small-scale applications.

Small reel 100pcs / reel

Standard reel 1,500pcs / reel

* Applicable Connectors : XF3M / XF3M(1) / XF2M * Standard reel of XF3M-8015-1BE is 1,000pcs / reel

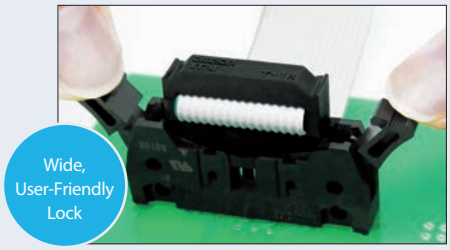
Board to Wire Connections

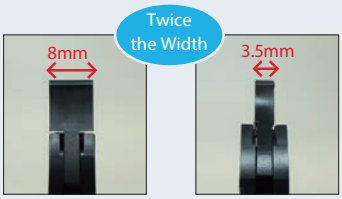
Flat Cable Connectors P.12

OMRON Flat Cable Connectors are compliant with MIL standards and provide high reliability and workability to support a broad range of requirements for board-to-wire connections.

Flat Cable Connectors Plug

■ The user-friendly lock is wide enough to use your entire finger, which improves operability when connecting and disconnecting.



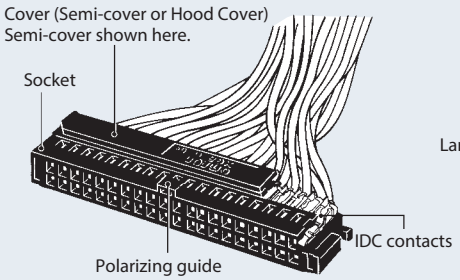


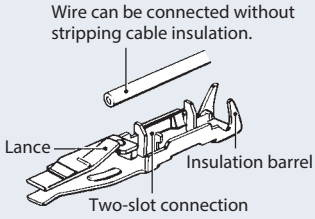
Wide lock type　　Slim lock type

■ Ensures secure and stable connection.

XG5M
IDC Socket for Discrete Wires

■ Easy connection for Discrete Wires

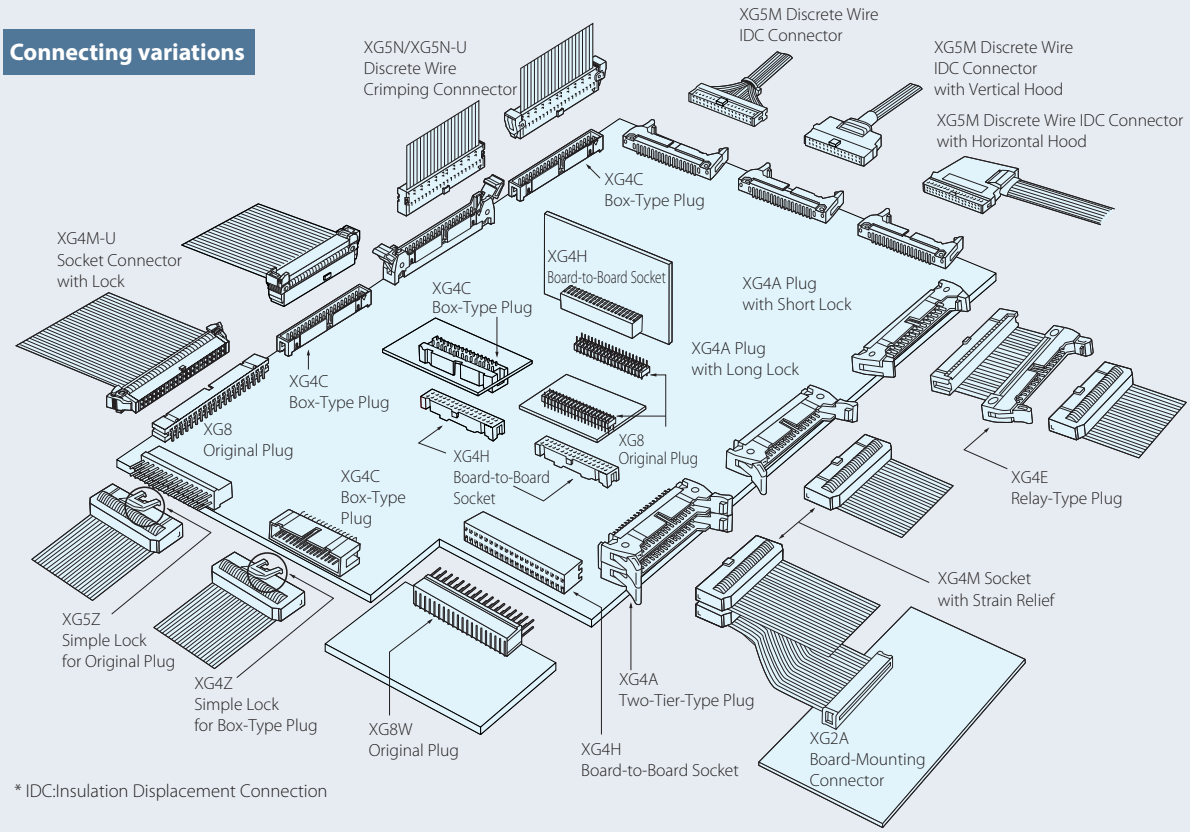




XG5N-U
Crimped Socket for Discrete Wires

■ Easy-to-use lock levers

Connecting variations



* IDC:Insulation Displacement Connection

Board to Wire Connections

PCB Terminal Blocks P.13

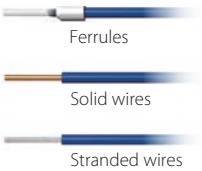
Ideal for control device interfaces

XW4A/XW4B/XW4C/XW4E DIP terminal type

- Models available with push-in and screw types.
- Push-in type available with 3.5-mm or 5.0-mm pitch.
- Just insert solid wires or ferrules to complete wiring. (Push-in type)
- Screw type available with 3.81-mm or 5.08-mm pitch.
- Repeated repairs are possible.

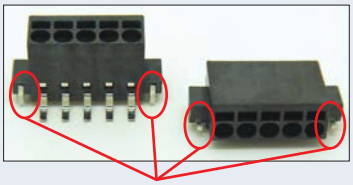
Push-in type XW4C

Connect any of 3 types of wires.



XW4H/XW4K/XW4L SMT terminal type

- Push-in type with 2.54-mm pitch.
- Hold-downs are provided on both ends to achieve robust mounting by increasing solder mounting strength.



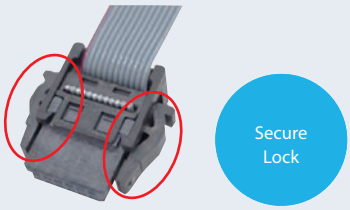
- An active lock mechanism prevents the terminal blocks from coming off to provide superior vibration and shock resistance.

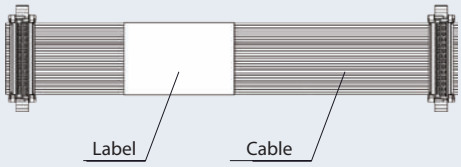
Half-Pitch Connectors P.16

1.27-mm pitch Sockets with Cable

XH5H-N Sockets with Cable (Sockets on both ends)

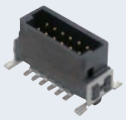
- Less work required by 1.27-mm pitch socket with cable, such as wire assembly, continuity check, etc.
- Cable length available with 100-mm / 200-mm / 300-mm.





- Please use the following plugs for mating.

XH5A-N
Right-angle
SMT



XH5E-N
Straight
SMT

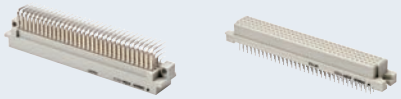
Board to Board Connections

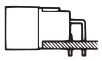
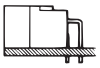
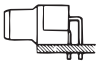
DIN Connectors P.14

High-density, high-reliability connectors compliant with international standards.

XC5 DIN-Style Connectors

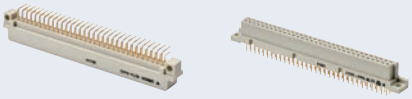
- Ideal for automated soldering because the connectors sit on top of the board.



	Standard DIN	DIN style 1	DIN style 2
PCB mounting	 Fixed at PCB edge	 PCB surface mounting	 PCB surface mounting

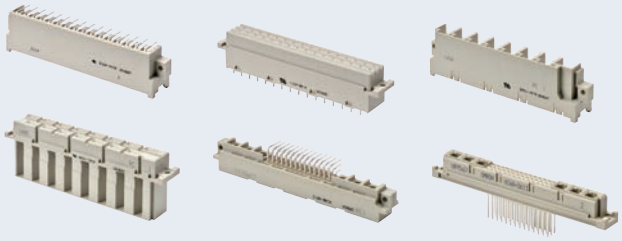
XC7 Sequence Connectors

- A three-stage sequence is realized.
- Hot-swapping of daughter boards is possible by connecting the power line first and disconnecting the power line last.
- Insertion durability of 5,000 cycles, high reliability achieved by mated length of 4mm.



XC4 Medium/High-Current Connectors

- Carry medium/high current (6 to 40A) for board-to-board or board-to-wire applications.



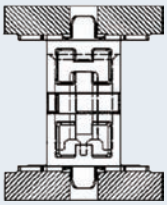
Half-Pitch Connectors P.16

1.27mm pitch connectors for space-saving.

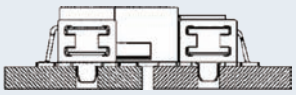
XH5-N

- SMT type. Back surfaces of circuit boards can be used for mounting the other components.
- Various BtoB and BtoW connecting solutions.

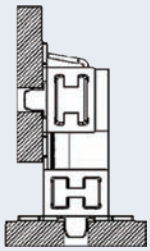
●Stacking connection



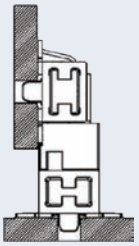
●Horizontal connection



●Vertical connection



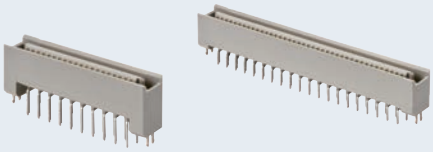
Right-angle Pins: Socket
Straight Pins: Plug



Right-angle Pins: Plug
Straight Pins: Socket

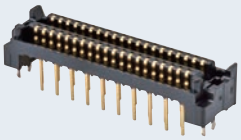
XH3

- The stacking height can be flexibly adjusted from 12 to 20mm.



XH4A

- Integrated male/female connectors with the stacking height from 5 to 11mm.
  (Surface-mounted connectors can be adjusted from 5 to 9mm.)



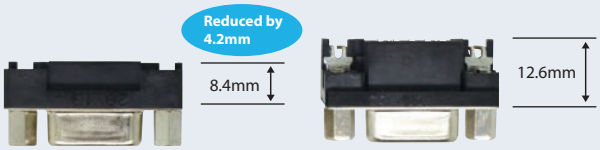
External Connections

D-Sub Connectors P.17

Space-saving models also available.

XM3B-LS Slim D-Sub Connectors

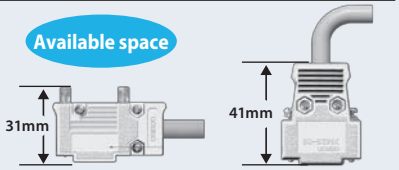
- Board mounting area is reduced by 33% (compared with previous models) using depth of 8.4mm.



Slim model　　Previous model

XM2S Hood Covers

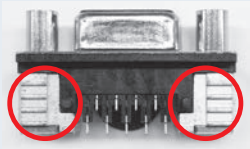
- Space-saving by right-angle connecting cable.



Right-angle Connecting Cable　　Straight Connecting Cable

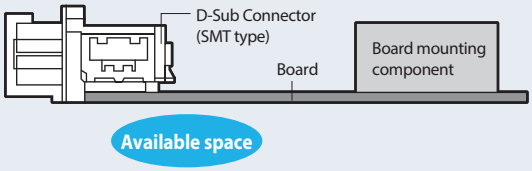
XM3K-N/XM3L-N D-Sub SMT Connectors

- Hold-downs with rib structure provide enough pulling force performance.



- Through holes are not needed.

  Back surfaces of circuit boards can be used for mounting the other components.

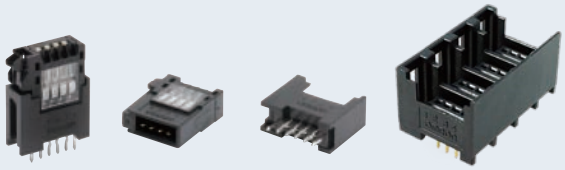


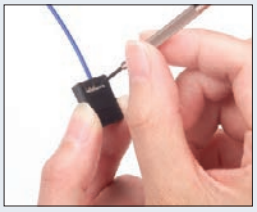
Easy-Wire Connectors (e-CON) P.18

Easy-wire connectors with *e*-CON specifications, ideal for connecting sensors.

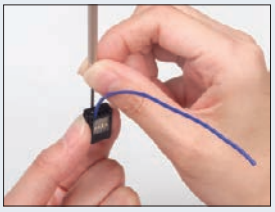
XN2 Easy-wire Connectors (e-CON)

- No special tools required for easy wiring.
- Rewiring (repairing) is possible.
- Each connector accepts any wire size from stranded wire AWG28 (0.08mm²) to AWG20 (0.5mm²). (External sheath diameter: 1.5mm max.)
- With the simple tool Jig(XW2Z-0001), assembly can be completed for 4 wires simultaneously, is available.





No special tools required for easy wiring.



Rewiring (repairing) is possible.

Tool Jig
XW2Z-0001

External Connections

USB Connectors P.18

Small interface connectors conforming to USB2.0 standards.

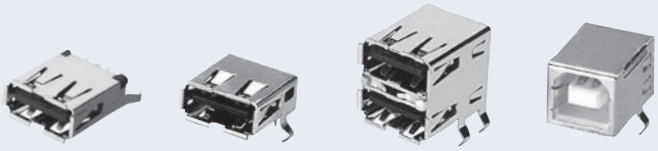
XM7 USB Connectors

mini-USB Connectors

- Insertion durability of 5,000 times.
- Lineup includes models with right-angle DIP terminals and SMT terminals.
- Models with SMT terminals are available with reel packaging.

USB Connectors

- Insertion durability of 1,500 times.



LAN Modular Jack Connectors P.18

Small interface connectors.

XM9 LAN Modular Jack Connectors

- Models available with or without indicators to match application needs.

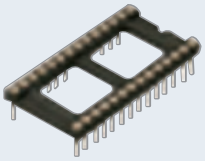
Other Connections

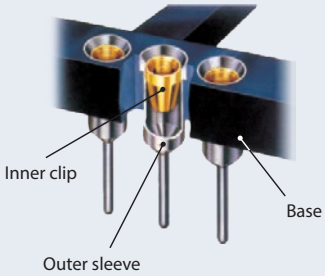
IC Sockets P.19

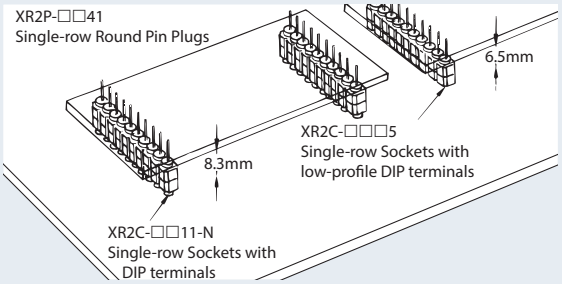
Excellent reliability and can tolerate momentary interruptions in power.

XR2 IC Sockets

- Round pins and 4-point (4-finger) contact construction ensure long life and excellent shock and vibration durability.
- One-row connectors allow you to freely adjust the pitch between rows and can be divided into the required number of contacts.
- Low-profile stacking possible in combination with single-row IC sockets (XR2C and XR2P).



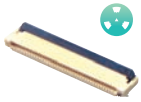




Connector

Board to FPC/FFC Connections

The products with this mark are also available in package reels of 100 pcs.

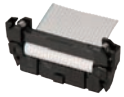
Classification	FPC/FFC Connections					
Model	XF3M					XF2M
Appearance						
Contact pitch	0.5mm			1.0mm		0.5mm
Type	Side-entry					Side-entry
	Dual contact Au flash	Dual contact Sn	Upper contact Au flash	Dual contact Au flash	Dual contact Sn	Dual contact Au
No.of contacts * 100						
90						
80	80					
70						
60	60					60
50	50 51 53 54 55 57	(50)				50 54 55
40	40 41 42 45	(40)(41)(42)(45)	40			40 42 45
30	35 36 37 38 30 31 32 33 34	(35)(36)(37)(38) (30)(31) 32 (33)(34)	(35)(36)(37)(38) (30)(31)(32)(33)(34)	30 32	(30)(32)	30 32 33 34 35 36 38
20	25 26 28 29 20 21 22 23 24	(25)(26)(28)(29) 20 (21)(22)(23)(24)	25 26 (28)(29) 20 (21) 22 (23) 24	25 26 28 20 22 23 (24)	(25)(26)(28) 20 22 (23)(24)	20 22 24 26
10	15 16 17 18 19 10 11 12 13 14	(15)(16)(17)(18)(19) 10 (11)(12)(13)(14)	15 16 17 18 19 10 11 12 13 14	15 16 (17) 18 10 11 12 14	(15)(16)(17) 18 10 (11) 12 (14)	10 12 14 18
	4 5 6 7 8 9	(4)(5)(6)(7)(8) 9	(4)(5) 6 7 8 9	4 5 6 7 8 9	(4)(5) 6 (7) 8 9	6 8
Rated current	0.5A AC/DC					0.5A AC/DC
Rated voltage	50V AC/DC					50V AC/DC
Ambient operating temperature	-30 to +85°C					-30 to +85°C
Applicable FPC/FFC thickness	0.3±0.05mm					0.3±0.05mm
Applicable board thickness	—					—
Terminal shape						
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.					

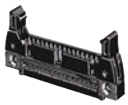
* Consult your OMRON representative for the marketing dates for the numbers of contacts in parentheses in the No. of contacts row.

Terminal shape: Straight DIP terminals, Right-angle DIP terminals, Wrapping terminals, Solder cup terminals, IDC contacts, Solder-free straight terminals, Solder-free wrapping terminals, SMT terminals, Crimp contacts

Connector

Board to Wire Connections

Classification	Flat Cable Connectors					
	Flat Cable Connectors Plug				Flat Cable Connectors Sockets	
Model	XG4A-□□31/71 □□34/74	XG4A-□□32/72 □□35/75	XG4A-□□33/73 □□36/76	XG4A-□□39/79-A	XG4M	XG4M-U
Appearance						
Contact pitch	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm
Type	Plug with long lock	Plug with short lock	Plug without lock	Two-tier plug	Socket	Socket with lock
No.of contacts 100						
90						
80						
70						
60	60 64	60 64	60 64	60 64	60 64	60 64
50	50	50	50	50	50	50
40	40	40	40	40	40	40
30	30 34	30 34	30 34	30 34	30 34	30 34
20	20 26	20 26	20 26	20 26	20 26	20 26
10	10 14 16	10 14 16	10 14 16	10 14 16	10 14 16	10 14 16
Rated current	3A	3A	3A	3A	1A	1A
Rated voltage	300VAC	300VAC	300VAC	300VAC	250VAC	250VAC
Ambient operating temperature	-55 to +105℃	-55 to +105℃	-55 to +105℃	-55 to +105℃	-55 to +105℃	-55 to +105℃
Applicable wires	—	—	—	—	1.27mm pitch flat cable incorporating AWG28	1.27mm pitch flat cable incorporating AWG28
Applicable board thickness	1.6mm	1.6mm	1.6mm	1.6mm	—	—
Terminal shape						
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.					

Classification	Flat Cable Connectors					
	IDC Plugs		Box-type Plugs	Board-to-Board Sockets	Flat Cable Connectors for PCBs	
Model	XG4E-□□31/71	XG4E-□□32/72	XG4C	XG4H	XG2A	
Appearance						
Contact pitch	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm	
Type	Plug with long lock	Plug with short lock	Plug	Socket	Standard terminal arrangement	Reverse terminal arrangement
No.of contacts 100						
90						
80						
70						
60	60 64	60 64	60 64	60 64	60 64	
50	50	50	50	50	50	
40	40	40	40	40	40	
30	30 34	30 34	30 34	30 34	30 34	
20	20 26	20 26	20 26	20 26	20 26	
10	10 14 16	10 14 16	10 14 16	10 14 16	10 14 16	
Rated current	1A	1A	3A	3A	1A	
Rated voltage	250VAC	250VAC	300VAC	300VAC	250VAC	
Ambient operating temperature	-55 to +105℃	-55 to +105℃	-55 to +105℃	-55 to +105℃	-55 to +85℃	
Applicable wires	1.27mm pitch flat cable incorporating AWG28	1.27mm pitch flat cable incorporating AWG28	—	—	1.27mm pitch flat cable incorporating AWG28	
Applicable board thickness	—	—	1.6mm	1.6mm	1.6mm	
Terminal shape						
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.					

Note: Inquire about the compliant standards for individual models.
For the latest No. of contacts information, please visit our website, which is noted on the last page.

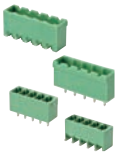
Terminal shape: Straight DIP terminals, Right-angle DIP terminals, Wrapping terminals, Solder cup terminals, IDC contacts, Solder-free straight terminals, Solder-free wrapping terminals, SMT terminals, Crimp contacts

Connector

Board to Wire Connections

The products with this mark are also available in package reels of 100 pcs.

Classification	Original Plugs		IDC Socket for Discrete Wires			Crimped Socket for Discrete Wires		
Model	XG8A/XG8V	XG8B/XG8W	XG5M	XG5S-□□01	XG5S-□□□2	XG5N	XG5N-U	XG5W-0231/0232
Appearance								
Contact pitch	2.54mm	2.54mm	2.54mm	—	—	2.54mm	2.54mm	—
Type	One-row plugs	Two-row plugs	Socket	Semi-cover	Hood-cover	Socket	Socket with lock	Crimp contact
No.of contacts 100		100						
90								
80								
70		60	60 64		60	60 64	60 64	
60	50	50	50		50	50	50	
50		40	40		40	40	40	
40	36	30 34	30 34	30 32	30 34	30 34	30 34	
30	20	20 26	20 26	20 25	20 26	20 26	20 26	
20	10 12 13 15 16 17	10 14 16	10 14 16	10 13 15 17		10 14 16	10 14 16	
10	2 3 4 5 6 7 8			5 7 8				
Rated current	3A	3A	3A max.	—	—	3A max.	3A max.	3A max.
Rated voltage	300VAC	300VAC	300VAC	—	—	250VAC	250VAC	250VAC
Ambient operating temperature	-55 to +105°C	-55 to +105°C	-55 to +85°C	-55 to +85°C	-55 to +85°C	-55 to +105°C	-55 to +105°C	-55 to +105°C
Applicable wires	—	—	Discrete wires AWG24,26,28	—	—	Discrete wires AWG22,24,26,28	Discrete wires AWG22,24,26,28	Discrete wires AWG22,24,26,28
Applicable board thickness	1.6mm	1.6mm	—	—	—	—	—	—
Terminal shape				—	—			
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.							

Classification	PCB Terminal Blocks					
	Push-in SMT Terminal Type		Push-in Type	Screw Type	Connector Terminal Blocks	
Model	XW4K	XW4H/XW4L	XW4C	XW4E	XW4A	XW4B
Appearance	*1	*1				
Contact pitch	2.54mm	2.54mm	3.5mm, 5.0mm	3.81mm, 5.08mm	3.81mm, 5.08mm	3.81mm, 5.08mm
Type	Plug	Socket Board-mounting	Board-mounting	Board-mounting	Plug	Socket
No.of contacts 100						
90						
80						
70						
60						
50						
40						
30				20		
20	10 11 12	10 11 12	10	10 12 14 16 18	10	10
10	2 3 4 5 6 7 8 9	2 3 4 5 6 7 8 9	2 3 4 5 6 7 8 9	2 3 4 5 6 7 8 9	2 3 4 5 6 7 8 9	2 3 4 5 6 7 8 9
Rated current	6A *2	6A *2	10A/17.5A/24A	8A/10A/13.5A/14A	8A/12A/16A	8A/12A/15A
Rated voltage	160VAC	160VAC	200VAC/300VAC/400VAC	160VAC/250VAC/300VAC	160VAC/250VAC/300VAC	160VAC/250VAC/300VAC
Ambient operating temperature	-40 to +125°C	-40 to +125°C	-40 to +100°C	-40 to +100°C	-40 to +100°C	-40 to +100°C
Applicable wires	—	Discrete wires AWG26 to 20	Discrete wires AWG24 to 12	Discrete wires AWG26 to 16	—	Discrete wires AWG28 to 14
Applicable board thickness	—	—	1.6mm	1.6mm	1.6mm	—
Terminal shape						—
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.					

*1. XW4K and XW4L only.
*2. This is the maximum value for the connector.
If the rated current of the cable is lower than the rated current of the connector, use the rated current of the cable.

Terminal shape: Straight DIP terminals, Right-angle DIP terminals, Wrapping terminals, Solder cup terminals, IDC contacts, Solder-free straight terminals, Solder-free wrapping terminals, SMT terminals, Crimp contacts

Connector

Board-to-Board Connections

Classification	DIN Connectors							
	DIN-standard Type				DIN-style			
Model	XC5A/XC5E-□□□□	XC5B/XC5F-□□□□	XC5C/XC5G-□□□□	XC5D/XC5H-□□□□	XC5A-□□□□-1 XC5E-□□□□-2/3	XC5B-□□□□-0/3 XC5F-□□□□-2	XC5C-□□□□-1	XC5D-□□□□-0
Appearance								
Contact pitch	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm
Type	Double-row plugs	Double-row sockets	Triple-row plugs	Triple-row sockets	Double-row plugs	Double-row sockets	Triple-row plugs	Triple-row sockets
No.of contacts 100	100	100			100	100		
90			96 *	96 *			96	96
80								
70	64 *	64 *	64 *	64 *	64	64	64	64
60	50	50			50	50		
50	44	44	48 *	48 *	44	44		
40	32 *	32 *	32 *	32 *	30 32	30 32		
30	20	20			20 24	20 24		
20					10 14 16	10 14 16		
10								
Rated current	2A	2A	2A	2A	2A	2A	2A	2A
Rated voltage	300VAC	300VAC	300VAC	300VAC	300VAC	300VAC	300VAC	300VAC
Ambient operating temperature	-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +125°C
Applicable wires	—	—	—	—	—	—	—	—
Applicable board thickness	1.6mm	1.6mm	1.6mm	1.6mm	1.6mm	1.6mm	1.6mm	1.6mm
Terminal shape								
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.							

* DIN 41612 and IEC 603-2 compliant.

Classification	DIN Connectors						
	Stacking-connect Type	Fine-fit Type (Press-fit)				Quadruple-row,128-contact Type	
Model	XC5K	XC5E-□□□P-11□□	XC5B-□□□P-11□□	XC5G-□□□P-11□□	XC5D-□□□P-11□□	XC5M	XC5N
Appearance							
Contact pitch	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm
Type	Double-row plugs	Double-row plugs	Double-row sockets	Triple-row plugs	Triple-row sockets	Quadruple-row plugs	Quadruple-row sockets
No.of contacts 100		100	100			128	128
90				96	96		
80							
70		64	64	64	64		
60							
50				48	48		
40	32	32	32				
30	20						
20	16						
10							
Rated current	2A	2A	2A	2A	2A	2A	2A
Rated voltage	300VAC	300VAC	300VAC	300VAC	300VAC	300VAC	300VAC
Ambient operating temperature	-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +125°C
Applicable wires	—	—	—	—	—	—	—
Applicable board thickness	1.6mm	1.6 to 3.2mm	1.6 to 3.2mm	1.6 to 3.2mm	1.6 to 3.2mm	1.6mm	1.6mm
Terminal shape							
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.						

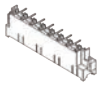
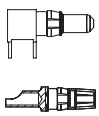
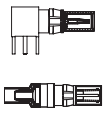
Note: Inquire about the compliant standards for individual models.
For the latest No. of contacts information, please visit our website, which is noted on the last page.

Terminal shape: Straight DIP terminals, Right-angle DIP terminals, Wrapping terminals, Solder cup terminals, IDC contacts, Solder-free straight terminals, Solder-free wrapping terminals, SMT terminals, Crimp contacts

Connector

Board-to-Board Connections

Classification	DIN Connectors			
	Sequence Type			
Model	XC7A	XC7B	XC7C	XC7D
Appearance				
Contact pitch	2.54mm	2.54mm	2.54mm	2.54mm
Type	Double-row plugs	Double-row sockets	Triple-row plugs	Triple-row sockets
No.of contacts 100	100	100		
90	90	90	96	96
80				
70	64	64		
60				
50				
40				
30				
20				
10				
Rated current	2A	2A	2A	2A
Rated voltage	300VAC	300VAC	300VAC	300VAC
Ambient operating temperature	-55 to +125℃	-55 to +125℃	-55 to +125℃	-55 to +125℃
Applicable wires	—	—	—	—
Applicable board thickness	1.6mm	1.6mm	1.6mm	1.6mm
Terminal shape				
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.			

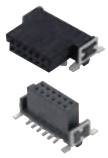
Classification	DIN Connectors										
	Medium/High-current Type										
Model	XC4A	XC4B	XC4E	XC4F	XC4G	XC4H	XC4K	XC4L	XC4M	XC4W	
Appearance											
Contact pitch	5.08mm		5.08mm		5.08mm		5.08mm		2.54mm	—	—
Type	Plug	Socket	Plug	Socket	Plug	Socket	Plug	Socket	Plug	High-current contacts for XC4M	Coaxial contacts for XC4M
No.of contacts 100											
90											
80											
70									78 *1		
60									60 *1		
50											
40	48		48						42 *1		
30			32		32						
20											
10							15				
									2 4 6 *2		
Rated current	6A		6A		6A		15A		2A	10A/20A/40A	—
Rated voltage	380VAC		500VAC		500VAC		500VAC		300VAC	300VAC	—
Ambient operating temperature	-55 to +125℃		-55 to +125℃		-55 to +125℃		-55 to +125℃		-55 to +125℃	-55 to +125℃	-55 to +125℃
Applicable wires	—		—		—		—		—	φ 1.7mm/2.8mm /4.8mm	φ 3.2mm
Applicable board thickness	1.6mm		1.6mm		1.6mm		1.6mm		1.6mm	1.6mm	1.6mm
Terminal shape							(Faston tab terminals #250)				
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.										

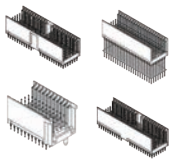
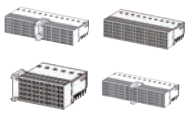
*1. The numbers shown are the number of signal circuit contacts.
*2. The numbers shown are the slots for XC4W.

Terminal shape: Straight DIP terminals, Right-angle DIP terminals, Wrapping terminals, Solder cup terminals, IDC contacts, Solder-free straight terminals, Solder-free wrapping terminals, SMT terminals, Crimp contacts

Connector

Board-to-Board Connections

Classification	Half-pitch Connectors				
	SMT Type		Cable with Connectors on Both Ends	Board-to-Board Connectors	
Model	XH5A-N/XH5E-N	XH5F-N/XH5B-N	XH5H-N	XH3A	XH3B
Appearance					
Contact pitch	1.27mm	1.27mm	1.27mm	1.27mm	1.27mm
Type	Plug	Socket	Socket	Plug	Socket
No.of contacts 100				100 120	100 120
90					
80	80	80	80	80	80
70					
60	68	68	68	60 68	60 68
50	50	50	50	50	50
40				40	40
30				30	30
20	26	26	26	20	20
10	12	12	12		
Rated current	1A	1A	1A	0.5A	0.5A
Rated voltage	100VAC	100VAC	100VAC	125VAC	125VAC
Ambient operating temperature	-55 to +105°C	-55 to +105°C	-55 to +105°C	-55 to +105°C	-55 to +105°C
Applicable wires	—	—	—	—	—
Applicable board thickness	—	—	—	1.6mm	1.6mm
Terminal shape			—		
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.				

Classification	Half-pitch Connectors			HM Connectors	
	Low-profile Stacking Connectors	Board-to-Board Connectors			
Model	XH4A	XH2A	XH2B	XC8A/XC8C/ XC8E/XC8K	XC8B/XC8D/ XC8F/XC8L
Appearance					
Contact pitch	1.27mm	1.27mm	1.27mm	2.0mm	2.0mm
Type	Plug/Socket Integrated	Plug	Socket	Plug	Socket
No.of contacts 100	100	100	100	110 125	110 125
90				95	95
80	80	80	80		
70					
60	60	60 68	60 68		
50	50	50	50	55	55
40	40	40	40		
30		30	30		
20		20	20		
10					
Rated current	0.5A	0.5A	0.5A	1A	1A
Rated voltage	125VAC	125VAC	125VAC	500VAC	500VAC
Ambient operating temperature	-55 to +105°C	-55 to +105°C	-55 to +105°C	-55 to +125°C	-55 to +125°C
Applicable wires	—	—	—	—	—
Applicable board thickness	1.6mm	1.6mm	1.6mm	1.6mm to 6.0mm	1.6mm to 3.4mm
Terminal shape					
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.				

Note: Inquire about the compliant standards for individual models.
For the latest No. of contacts information, please visit our website, which is noted on the last page.

Terminal shape: Straight DIP terminals, Right-angle DIP terminals, Wrapping terminals, Solder cup terminals, IDC contacts, Solder-free straight terminals, Solder-free wrapping terminals, SMT terminals, Crimp contacts

Connector

External Connections

Classification	D-Sub Connectors						
	D-Sub Connector		Hood Cover			D-Sub Connector	
Model	XM3A/XM3C	XM3B/XM3D/XM3F	XM2S-□□1□	XM2S-□□2□	XM2S-E	XM2C-L/XM2E-L	XM2F-L/XM3B-L
Appearance							
Contact pitch	2.74mm, 2.76mm	2.74mm, 2.76mm	—	—	—	2.77mm	2.77mm
Type	Plug	Socket	Straight-angle connection	Right-angle connection	Straight-angle connection with ESD protection	Plug	Socket
No.of contacts 100							
90							
80							
70							
60							
50							
40	37	37	37				
30	25	25	25	25		25	25
20	15	15	15			15	15
10	9	9	9	9	9	9	9
Rated current	3A/5A	5A	—	—	—	3A	3A
Rated voltage	300VAC	300VAC	—	—	—	300VAC	300VAC
Ambient operating temperature	-55 to +105°C	-55 to +105°C	-25 to +85°C	-25 to +85°C	-25 to +85°C	-25 to +105°C	-25 to +105°C
Applicable wires	AWG22 max.	AWG22 max.	—	—	—	—	—
Applicable board thickness	1.6mm	1.6mm	—	—	—	1.6mm	1.6mm
Terminal shape			—	—	—		
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.						

Classification	D-Sub Connectors					
	D-sub SMT Connectors		High-density D-sub Connectors		Slim D-sub Connectors	
Model	XM3K-N	XM3L-N	XM4K	XM4L	XM3C-LS	XM3B-LS
Appearance						
Contact pitch	2.76mm	2.76mm	2.29mm	2.29mm	2.74mm	2.74mm
Type	Plug	Socket	Plug	Socket	Plug	Socket
No.of contacts 100						
90						
80						
70						
60						
50						
40						
30						
20	25	25				
10			15	15		
	9	9			9	9
Rated current	3A	3A	3A	3A	3A	3A
Rated voltage	300VAC	300VAC	300VAC	300VAC	300VAC	300VAC
Ambient operating temperature	-55 to +105°C	-55 to +105°C	-25 to +105°C	-25 to +105°C	-25 to +105°C	-25 to +105°C
Applicable wires	—	—	—	—	—	—
Applicable board thickness	—	—	1.6mm	1.6mm	1.0mm,1.6mm	1.0mm,1.6mm
Terminal shape						
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.					

Terminal shape: Straight DIP terminals, Right-angle DIP terminals, Wrapping terminals, Solder cup terminals, IDC contacts, Solder-free straight terminals, Solder-free wrapping terminals, SMT terminals, Crimp contacts

Connector

External Connections

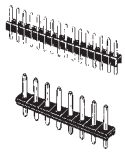
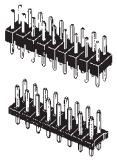
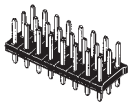
Classification	Easy-wire Connectors for Industrial Components		USB Connectors		LAN Modular Jack Connectors
Model	XN2A	XN2B/XN2D	XM7A/XM7B	XM7D	XM9B
Appearance					
Contact pitch	2.0mm	2.0mm	2.0mm,2.5mm	0.8mm	2.04mm
Type	Plug	Socket	USB2.0	USB2.0 mini-USB	Without indicator/ With indicator
No.of contacts 100					
90					
80					
70					
60					
50					
40					
30					
20					
10					
	3 4 5 6 8	3 4 5 6 8	4	5	8
Rated current	3A max.	3A max.	1A	1A	1.5A
Rated voltage	32VDC	32VDC	30VAC	30VAC	250VAC
Ambient operating temperature	-30 to +75°C	-30 to +75°C	-40 to +60°C	0 to +50°C	-45 to +80°C
Applicable wires	Discrete wires AWG28 to 20	Discrete wires AWG28 to 20	—	—	—
Applicable board thickness	—	1.6mm	1.6mm	1.0mm	1.6mm
Terminal shape	—				
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.				

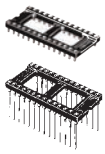
Note: Inquire about the compliant standards for individual models.
For the latest No. of contacts information, please visit our website, which is noted on the last page.

Terminal shape: Straight DIP terminals, Right-angle DIP terminals, Wrapping terminals, Solder cup terminals, IDC contacts, Solder-free straight terminals, Solder-free wrapping terminals, SMT terminals, Crimp contacts

Connector

Other Connections

Classification	Jumper Plugs/Sockets			
Model	XG8S/XJ8B	XG8T/XJ8C	XJ8D	XJ8A
Appearance				
Contact pitch	2.54mm	2.54mm	2.54mm	2.54mm
Type	Single-row plugs	Double-row plugs	Triple-row plugs	Jumper socket
No.of contacts 100				
90				
80				
70				
60				
50				
40				
30				
20		20	21 24	
10	12 14 16 18	10 12 14 16 18	12 15 18	
	2 3 4 5 6 7 8 9	2 4 6 8	3 6 9	2
Rated current	2A	2A	2A	2A
Rated voltage	300VAC	300VAC	300VAC	300VAC
Ambient operating temperature	-55 to +105°C	-55 to +105°C	-55 to +105°C	-55 to +105°C
Applicable wires	—	—	—	—
Applicable board thickness	1.6mm	1.6mm	1.6mm	1.6mm
Terminal shape				
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.			

Classification	IC Sockets					
Model	XR2A	XR2B	XR2T	XR2C	XR2P	XR3G
Appearance						
Contact pitch	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm	1.778mm
Type	Open-frame sockets	Closed-frame sockets	Open-frame sockets with seal Tape	Single-row sockets	Round Pin plugs	Shrink IC sockets
No.of contacts 100						
90						
80						
70						
60	64					64
50	50					52
40	40 42 48	40	40 48			42
30	32	32	32	32	32	32
20	20 22 24 28	24 28	20 22 24 28	20	20	28
10	14 16 18	16	14 16 18	10 16	10 16	
	8		8			
Rated current	1A	1A	1A	1A	1A	1A
Rated voltage	300VAC	300VAC	300VAC	300VAC	300VAC	150VAC
Ambient operating temperature	-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +125°C
Applicable wires	—	—	—	—	—	—
Applicable board thickness	1.6mm	1.6mm	1.6mm	1.6mm	1.6mm	1.6mm
Terminal shape						
International standards	See the "Standards certification / conformity list" for information on conformity to certification standards.					

Terminal shape: Straight DIP terminals, Right-angle DIP terminals, Wrapping terminals, Solder cup terminals, IDC contacts, Solder-free straight terminals, Solder-free wrapping terminals, SMT terminals, Crimp contacts

Switch

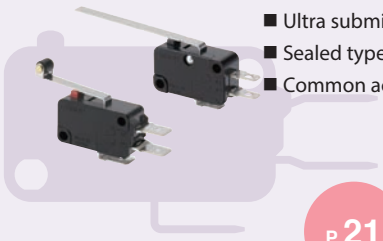
Miniature switches to be installed in devices and mounted on the PCB.
Enable to select suitable switches from wide variations according to the applications and shapes.

Detection Switches

Used to detect the positions of objects.

Basic Switches

- Miniature types(V-size)
- Subminiature types(S-size)
- Ultra subminiature types(J-size)
- Sealed types
- Common accessories



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Door Switches/Power Switches

- Miniature door
- Door interlock

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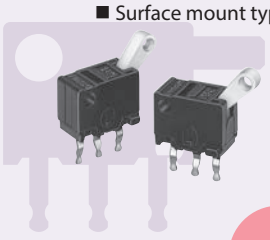
Miniature Detection Switches

- Through hole mount types
- Surface mount types



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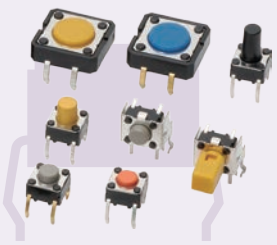
Manual Switches

Used to allow workers to make inputs to equipment.

Tactile Switches

- Through-hole mounting types
- Surface mounting types
- Illuminated types
- Sealed types



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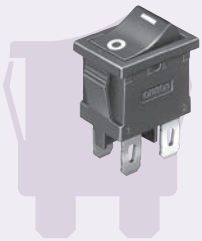
Rocker Switches

- Miniature types
- Illuminated types
- Reset function types



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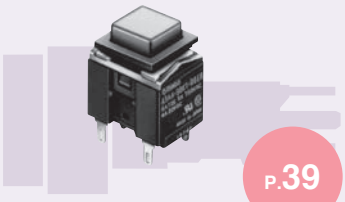
Pushbutton Switches/Indicators

- Round types
- Square types
- Common accessories



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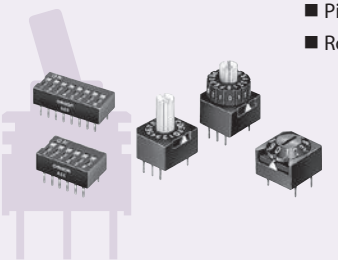
Setting Switches

Used to set up the operation of equipment.

DIP Switches

- Slide types
- Piano types
- Rotary types



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Thumbwheel Switches

- Push operation types
- Rotary operation types

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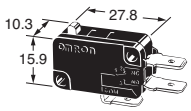
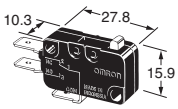
Switch

Basic Switches

Classification		Miniature Basic Switches (V-size)									
Model		V					D3V				
Appearance											
		V-21	V-16	V-15	V-11	V-10	D3V-21G	D3V-16	D3V-11	D3V-6	D3V-01
Features		Standard miniature basic switch offers high reliability.					Miniature basic switch with wide range variation from 0.1A to 21A. V series compatible mounting.				
Contact form		SPDT / SPST-NC / SPST-NO					SPDT / SPST-NC / SPST-NO				
Contact	Specification	Rivet					Rivet				Crossbar
	Material	Silver alloy			Silver		Silver alloy				Gold alloy
	Gap	1mm					0.5mm	1.0mm/0.5mm			1.0mm
Ratings (resistive load)		21A 250VAC 0.6A 125VDC 0.3A 250VDC	16A 250VAC 0.6A 125VDC 0.3A 250VDC	15A 250VAC 0.6A 125VDC 0.3A 250VDC	11A 250VAC 0.6A 125VDC 0.3A 250VDC	10A 250VAC 0.6A 125VDC 0.3A 250VDC	21A 250VAC 0.6A 125VDC 0.3A 250VDC	16A 250VAC 0.6A 125VDC 0.3A 250VDC	11A 250VAC 0.6A 125VDC 0.3A 250VDC	6A 250VAC 0.4A 125VDC 0.3A 250VDC	0.1A 125VAC 0.1A 30VDC
Inrush current	NC / NO	50A max.	40A max.	36A max.	24A max.		50A max.	40A max.	24A max.	15A max.	—
Minimum applicable load (reference values)		160mA at 5VDC					160mA at 5VDC				1mA at 5VDC
Contact resistance (initial values)		15mΩ max.					50mΩ max.	30mΩ max.			0.49N:50mΩmax. 0.25N:100mΩmax.
Operating force (see note1)		3.92N max.	1.96N max. 3.92N max.		0.98N max.	0.98N max. 1.96N max.	1.23N max.	1.96N max.	0.98N max. 1.96N max.	0.49N max. 0.98N max.	0.49N max.
Durability (see note1)	Mechanical	50,000,000 operations min.					10,000,000 operations min.				
	Electrical	100,000 operations min.			300,000 operations min.		50,000 operations min.	100,000 operations min.	200,000 operations min.	500,000 operations min.	
Degree of protection		IEC IP40					IEC IP40				
Ambient operating temperature		-25 to +80°C	-25 to +105°C (Heat resistive:-25 to +150°C)				-25 to +85°C	-25 to +105°C			-25 to +85°C
Ambient operating humidity		85%RH max. (for +5 to +35°C)					85%RH max. (for +5 to +35°C)				
Actuators		Pin plunger Hinge lever Simulated roller lever Hinge roller lever					Pin plunger Hinge lever Simulated roller lever Hinge roller lever				
Terminals		Quick-connect (#250)	Solder Quick-connect (#187) Quick-connect (#250)				Solder Quick-connect (#187) Quick-connect (#250)				
Approved standard (see note2)	UL	●					●				
	CSA	●					●				
	EN/IEC	○ (VDE approval)	○ (VDE approval)	—	○ (VDE approval)	—	○ (VDE approval)				

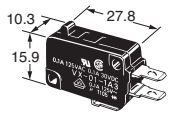
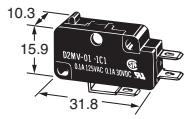
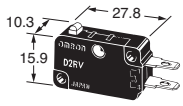
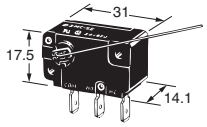
Note 1: For pin plunger type

Note 2 ● : Approved model with standard marking on the switch

○ : Approved model. However no-approved types are included. They are without standard marking on the switch. Consult your OMRON sales representative.

Switch

Basic Switches

Classification		Miniature Basic Switches (V-size)						
Model		VX		D2MV		D2RV	D2MC	
Appearance								
		VX-5	VX-01	D2MV-1	D2MV-01		D2MC-5	D2MC-01
Features		Miniature basic switch with low operating force and high contact reliability.		Highly reliable basic switch with ultra low operating force.		High reliability for micro load applications, even in adverse atmosphere.	Rotary-action switch with low torque operation.	
Contact form		SPDT / SPST-NC / SPST-NO		SPDT		SPST-NO	SPDT	
Contact	Specification	Rivet	Crossbar	Needle	Crossbar	Reed switches	Rivet	Crossbar
	Material	Silver alloy	Gold alloy	Silver	Gold alloy		Silver alloy	Gold alloy
	Gap	0.5mm		0.5mm			0.5mm	
Ratings (resistive load)		5A 250VAC	0.1A 125VAC 0.1A 30VDC	1A 125VAC 1A 30VDC	0.1A 125VAC 0.1A 30VDC	Switching voltage 100V DC max. Switching current 0.25ADC max. Contact capacity 10WDC max.	5A 125VAC 5A 250VAC	0.5A 125VAC 0.5A 30VDC
Inrush current	NC	15A max.	—	1A max.	0.1A max.	—	15A max.	0.5A max.
	NO						7A max.	
Minimum applicable load (reference values)		160mA at 5VDC	1mA at 5VDC	30mA at 5VDC	1mA at 5VDC	0.1mA at 5VDC	160mA at 5VDC	1mA at 5VDC
Contact resistance (initial values)		30mΩ max.	50mΩ max.	30mΩ max.	50mΩ max.	150mΩ max.	20mΩ max.	100mΩ max.
Operating force (see note1)		0.25N max. 0.49N max.		0.10N max. 0.25N max. 0.49N max.		0.25N max. 0.49N max. 0.98N max.	0.5mN·m max. 0.75mN·m max. 1.00mN·m max.	
Durability (see note1)	Mechanical	50,000,000 operations min.	10,000,000 operations min.	10,000,000 operations min.		10,000,000 operations min.	10,000,000 operations min.	
	Electrical	500,000 operations min.	1,000,000 operations min.	500,000 operations min.	1,000,000 operations min.	3,000,000 operations min.	100,000 operations min.	
Degree of protection		IEC IP40		IEC IP40		IEC IP40	IEC IP40	
Ambient operating temperature		-25 to +105°C		-25 to +80°C		-10 to +60°C	-25 to +80°C	
Ambient operating humidity		85%RH max. (for +5 to +35°C)		85%RH max. (for +5 to +35°C)		85%RH max. (for +5 to +35°C)	85%RH max. (for +5 to +35°C)	
Actuators		Pin plunger Hinge lever Simulated roller lever Hinge roller lever		Pin plunger Hinge lever Simulated roller lever Hinge roller lever		Pin plunger Hinge lever Simulated roller lever Hinge roller lever	Rotary action	
Terminals		Solder Quick-connect (#187)		Solder		Solder	Quick-connect (#205)	
Approved standard (see note2)	UL	●		●		—	●	
	CSA	●		●		—	●	
	EN/IEC	● (VDE approval)		—		—	—	

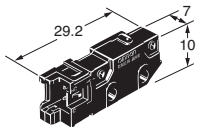
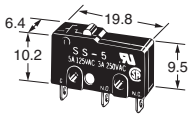
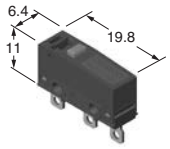
Note 1: For pin plunger type

Note 2 ● : Approved model with standard marking on the switch

○ : Approved model. However no-approved types are included. They are without standard marking on the switch. Consult your OMRON sales representative.

Switch

Basic Switches

Classification		Subminiature Basic Switches (S-size)					
Model		D3M	SS			SS-P	
Appearance							
			SS-10	SS-5	SS-01	SS-3P	SS-01P
Features		Quick-connect terminals simplify wiring.	S-size standard basic switch offers high reliability and easy-to-use.			SS series compatible mounting. One-piece terminals construction to keep out flux.	
Contact form		SPST-NC / SPST-NO	SPDT / SPST-NC / SPST-NO			SPDT	
Contact	Specification	Crossbar	Rivet		Crossbar	Rivet	Crossbar
	Material	Gold alloy	Silver alloy	Silver	Gold alloy	Silver	Gold alloy
	Gap	0.5mm	0.5mm		0.25mm	0.5mm	
Ratings (resistive load)		0.1A 30VDC	10.1A 250VAC	5A 125VAC 3A 250VAC	0.1A 125VAC 0.1A 30VDC	3A 125VAC 3A 30VDC	0.1A 125VAC 0.1A 30VDC
Inrush current	NC	1A max.	20A max.		1A max.	9A max.	—
	NO		15A max.	10A max.			
Minimum applicable load (reference values)		1mA at 5VDC	160mA at 5VDC		1mA at 5VDC	160mA at 5VDC	1mA at 5VDC
Contact resistance (initial values)		100mΩ max.	OF 1.47N : 30mΩ max.	OF 1.47N : 30mΩ max. OF 0.49N : 50mΩ max.	OF 1.47N : 50mΩ max. OF 0.49N : 100mΩ max. OF 0.25N : 150mΩ max.	50mΩ max.	100mΩ max.
Operating force (see note1)		1.50N max.	1.47N max.	0.49N max. 1.47N max.	0.25N max. 0.49N max. 1.47N max.	1.5N max.	
Durability (see note1)	Mechanical	500,000 operations min.	10,000,000 operations min.	30,000,000 operations min.		1,000,000 operations min.	
	Electrical	200,000 operations min.	50,000 operations min.	200,000 operations min.		125VAC 70,000 operations min. 30VDC: 100,000 operations min.	200,000 operations min.
Degree of protection		IEC IP40	IEC IP40			IEC IP40	
Ambient operating temperature		-25 to +85°C	-25 to +85°C			-25 to +85°C	
Ambient operating humidity		80%RH max. (for +5 to +35°C)	85%RH max. (for +5 to +35°C)			85%RH max. (for +5 to +35°C)	
Actuators		Pin plunger Hinge lever Simulated roller lever Hinge roller lever	Pin plunger Hinge lever Simulated roller lever Hinge roller lever			Pin plunger Hinge lever Simulated roller lever	
Terminals		The terminals connect to JST's XA Connector	Solder Quick-connect (#110) PCB			Solder Quick-connect (#110) PCB	
Approved standard (see note2)	UL	●	●			●	
	CSA	●	●			●	
	EN/IEC	● (TUV approval)	○ (VDE approval)		—	● (VDE approval)	

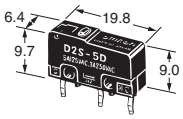
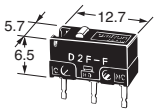
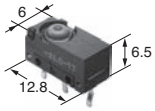
Note 1: For pin plunger type

Note 2 ● : Approved model with standard marking on the switch

○ : Approved model. However no-approved types are included. They are without standard marking on the switch. Consult your OMRON sales representative.

Switch

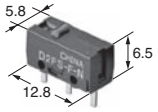
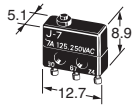
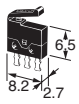
Basic Switches

Classification		Subminiature Basic Switches (S-size)			Ultra Subminiature Basic Switches (J-size)						
Model		D2S			D2F					D2FD	
Appearance											
					D2F-5	D2F		D2F-01			
		D2S-10	D2S-5	D2S-01	(OF 1.47N)	(OF 1.47N)	(OF 0.74N)	(OF 1.47N)	(OF 0.74N)	D2FD-2	D2FD-01
Features		S-size basic switch with superb flux resistance.			Ultra subminiature basic switches with wide variations, which meet a wide range of applications.					Dust proof basic switch conforms to IP6X.	
Contact form		SPDT			SPDT					SPDT	
Contact	Specification	Rivet		Crossbar	Crossbar					Crossbar	
	Material	Silver alloy		Gold alloy	Silver alloy			Gold alloy		Silver alloy	Gold alloy
	Gap	0.5mm			0.25mm					0.25mm	
Ratings (resistive load)		10.1A 250VAC	5A 125VAC 3A 250VAC	0.1A 125VAC 0.1A 30VDC	5A 250VAC	3A 125VAC 2A 30VDC	1A 125VAC 0.5A 30VDC	0.1A 30VDC		2A 125VAC 2A 30VDC	0.1A 125VAC 0.1A 30VDC
Inrush current	NC	20A max.		1A max.	—	—	—	—	—	—	—
	NO	15A max.	10A max.								
Minimum applicable load (reference values)		160mA at 5VDC		1mA at 5VDC	100mA at 5VDC			1mA at 5VDC		100mA at 5VDC	1mA at 5VDC
Contact resistance (initial values)		OF 1.47N : 30mΩ max.	OF 1.47N : 30mΩ max. OF 0.49N : 50mΩ max.	OF 1.47N : 50mΩ max. OF 0.49N : 100mΩ max.	30mΩ max.		50mΩ max.	100mΩ max		30mΩ max.	100mΩ max.
Operating force (see note1)		1.47N max.	0.49N max. 1.47N max.		1.47N max.		0.74N max.	1.47N max.	0.74N max.	2.0N max.	
Durability (see note1)	Mechanical	10,000,000 operations min.	30,000,000 operations min.		1,000,000 operations min.					300,000 operations min.	
	Electrical	50,000 operations min.	200,000 operations min.		10,000 operations min.	30,000 operations min.		100,000 operations min.		30,000 operations min.	100,000 operations min.
Degree of protection		IEC IP40			IEC IP40					IEC IP6X	
Ambient operating temperature		-25 to +85°C			-40 to +85°C					-20 to +70°C	
Ambient operating humidity		85%RH max. (for +5 to +35°C)			85%RH max. (for +5 to +35°C)					85%RH max. (for +5 to +35°C)	
Actuators		Pin plunger Hinge lever Simulated roller lever Hinge roller lever			Pin plunger Hinge lever Simulated roller lever (R1.3) Simulated roller lever (R2.5) Hinge roller lever					Pin plunger Hinge lever Simulated roller lever	
Terminals		Self-clinching PCB Solder			PCB (straight, right angle, left angle, self-clinching) Solder					Self-clinching PCB Solder	
Approved standard (see note2)	UL	○			—	●		●		—	
	CSA	○			—	●		●		—	
	EN/IEC	—			—					—	

Note 1: For pin plunger type
Note 2 ● : Approved model with standard marking on the switch
○ : Approved model. However no-approved types are included. They are without standard marking on the switch.
Consult your OMRON sales representative.

Switch

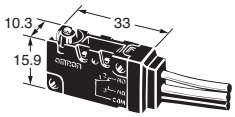
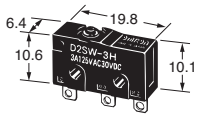
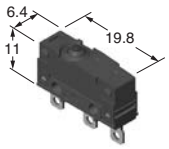
Basic Switches

Classification		Ultra Subminiature Basic Switches (J-size)			
Model		D2FS	J	D2MQ	
Appearance					
Features		Suitable for low frequency long life use tools.	Ultra subminiature models capable of 7A load.	Snap action switch with thin 2.7mm.	
Contact form		SPST-NO	SPDT	SPDT	
Contact	Specification	Crossbar	Rivet	Rivet	
	Material	Silver	Silver alloy+ Gold plated	Silver plated	Gold plated
	Gap	0.4mm	0.35mm	0.15mm	
Ratings (resistive load)		0.1A 6VDC	7A 125VAC 7A 250VAC	0.5A 30VDC	50mA 30VDC
Inrush current	NC	—	—	—	—
	NO				
Minimum applicable load (reference values)		1mA at 5VDC	1mA at 5VDC	50mA at 5VDC	5mA at 5VDC
Contact resistance (initial values)		100mΩ max.	15mΩ max.	100mΩ max.	
Operating force (see note1)		0.85N max.	1.37N max.	1.18N max.	
Durability (see note1)	Mechanical	100,000 operations min.	10,000,000 operations min.	30,000 operations min.	
	Electrical	10,000 operations min.	50,000 operations min.	10,000 operations min.	
Degree of protection		IEC IP40	IEC IP40	IEC IP40	
Ambient operating temperature		-20 to +70°C	-10 to +80°C	-15 to +70°C	
Ambient operating humidity		85%RH max. (for +5 to +35°C)	85%RH max. (for +5 to +35°C)	35 to 85%RH (for +5 to +35°C)	
Actuators		Pin plunger Hinge lever	Pin plunger Hinge lever Hinge roller lever	Pin plunger Hinge lever Leaf lever	
Terminals		PCB (straight, right angle, left angle) Self-clinching PCB	Solder	PCB (straight, right angle, left angle)	
Approved standard (see note2)	UL	—	○	—	
	CSA	—	○	—	
	EN/IEC	—	—	—	

Note 1: For pin plunger type
Note 2 ● : Approved model with standard marking on the switch
○ : Approved model. However no-approved types are included. They are without standard marking on the switch.
Consult your OMRON sales representative.

Switch

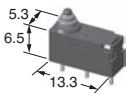
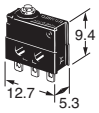
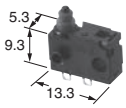
Basic Switches

Classification		Sealed Basic Switches					
Model		D2VW		D2SW		D2SW-P	
Appearance							
		D2VW-5	D2VW-01	D2SW-3	D2SW-01	D2SW-P2	D2SW-P01
Features		Sealed miniature basic switch conforms to IP67.		Sealed subminiature basic switch conforms to IP67.		Sealed basic switch with simplified construction, mounting compatible with SS and D2SW series.	
Contact form		SPDT / SPST-NC / SPST-NO		SPDT / SPST-NC / SPST-NO		SPDT / SPST-NC / SPST-NO	
Contact	Specification	Rivet	Crossbar	Rivet	Crossbar	Rivet	Crossbar
	Material	Silver alloy	Gold alloy	Silver	Gold alloy	Silver	Gold alloy
	Gap	0.5mm		0.5mm		0.5mm	
Ratings (resistive load)		5A 125VAC 5A 250VAC 5A 30VDC	0.1A 125VAC 0.1A 30VDC	3A 125VAC 2A 250VAC 3A 30VDC	0.1A 125VAC 0.1A 30VDC	2A 250VAC 2A 30VDC	0.1A 125VAC 0.1A 30VDC
Inrush current	NC	15A max.	—	20A max.	1A max.	6A max.	—
	NO			10A max.			
Minimum applicable load (reference values)		160mA at 5VDC	1mA at 5VDC	160mA at 5VDC	1mA at 5VDC	160mA at 5VDC	1mA at 5VDC
Contact resistance (initial values)		Terminal model : 50mΩ max. Molded lead wire 300mm : 100mΩ max. Molded lead wire 1,000mm : 200mΩ max.		Terminal model:30mΩ max. Molded lead wire :50mΩ max.	Terminal model :50mΩ max. Molded lead wire : 70mΩ max.	Terminal model:50mΩ max. Molded lead wire :100mΩ max.	Terminal model:100mΩ max. Molded lead wire :150mΩ max.
Operating force (see note1)		1.96N max.		1.77N max.		1.8N max.	
Durability (see note1)	Mechanical	10,000,000 operations min.		5,000,000 operations min.		1,000,000 operations min.	
	Electrical	100,000 operations min.	1,000,000 operations min.	200,000 operations min.		50,000 operations min.	200,000 operations min.
Degree of protection		IEC IP67(Excluding the terminals on terminal model)		IEC IP67(Excluding the terminals on terminal model)		IEC IP67(Excluding the terminals on terminal model)	
Ambient operating temperature		-40 to +85°C		-40 to +85°C		-20 to +70°C	
Ambient operating humidity		95%RH max. (for +5 to +35°C)		95%RH max. (for +5 to +35°C)		85%RH max. (for +5 to +35°C)	
Actuators		Pin plunger Hinge lever Simulated roller lever Hinge roller lever		Pin plunger Hinge lever Simulated roller lever Hinge roller lever		Pin plunger Hinge lever Simulated roller lever Hinge roller lever	
Terminals		Molded lead wire Solder		Molded lead wire Solder Quick-connect (#110) PCB		Molded lead wire Solder Quick-connect (#110) PCB	
Approved standard (see note2)	UL	○		○		○	
	CSA	○		○		○	
	EN/IEC	○ (VDE approval)		○ (VDE approval)		○ (VDE approval)	

Note 1: For pin plunger type
Note 2 ● : Approved model with standard marking on the switch
○ : Approved model. However no-approved types are included. They are without standard marking on the switch.
Consult your OMRON sales representative.

Switch

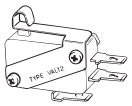
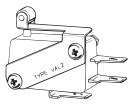
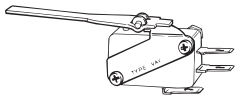
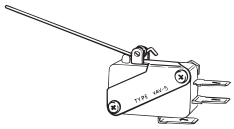
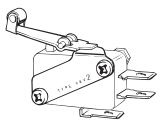
Basic Switches

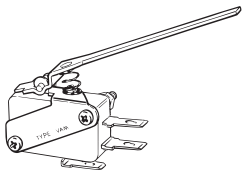
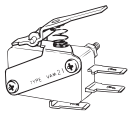
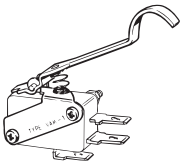
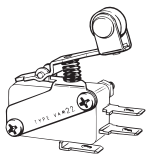
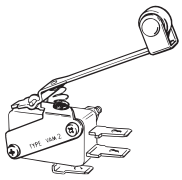
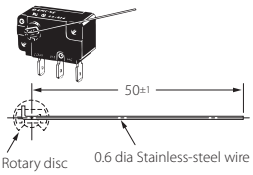
Classification		Sealed Basic Switches			
Model		D2HW	D2JW	D2QW	D2AW
Appearance					
Features		Small sealed snap-action switch with a very long stroke for reliable ON/OFF action.	Sealed ultra subminiature basic switch conforms to IP67.	Sealed long stroke slide-contact switch for reliable ON/OFF action even in severe environmental conditions.	Long stroke seal switch with high reliability and high insulation Performance.
Contact form		SPDT / SPST-NC / SPST-NO	SPDT / SPST-NC / SPST-NO	SPST-NC / SPST-NO	SPST-NC / SPST-NO
Contact	Specification	Crossbar	Crossbar	Slide	Slide
	Material	Gold alloy	Gold alloy	Gold plated / Silver plated	Silver plated
	Gap	0.5mm	0.5mm	—	—
Ratings (resistive load)		0.1A 125VAC 2A 12VDC 1A 24VDC 0.5A 42VDC	0.1A 30VDC	0.1A 30VDC 10mA 14VDC	0.1A 12VDC
Inrush current	NC	—	0.1A max.	—	—
	NO				
Minimum applicable load (reference values)		1mA at 5VDC	1mA at 5VDC	1mA at 5VDC	1mA at 5VDC
Contact resistance (initial values)		Terminal model:100mΩ max. Molded lead wire :150mΩ max.	Terminal model:100mΩ max. Molded lead wire :140mΩ max.	Terminal model:100mΩ max. Molded lead wire :150mΩ max.	Terminal model:100mΩ max.
Operating force (see note1)		0.75N max.	2.45N max.	1.5N max.	1.0N max.
Durability (see note1)	Mechanical	1,000,000 operations min.	1,000,000 operations min.	500,000 operations min.	200,000 operations min.
	Electrical	100,000 operations min.	100,000 operations min.	0.1A 30VDC : 200,000 operations min. 10mA 14VDC : 500,000 operations min.	200,000 operations min.
Degree of protection		IEC IP67(Excluding the terminals on terminal model)	IEC IP67(Excluding the terminals on terminal model)	IEC IP67(Excluding the terminals on terminal model)	IEC IP67(Excluding the terminals on terminal model)
Ambient operating temperature		-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C
Ambient operating humidity		95%RH max. (for +5 to +35°C)	35 to 98%RH (for +5 to +35°C)	95%RH max. (for +5 to +35°C)	95%RH max. (for +5 to +35°C)
Actuators		Pin plunger Hinge lever Simulated roller lever Hinge roller lever Leaf lever Simulated leaf lever	Pin plunger Hinge lever Simulated roller lever Hinge roller lever	Pin plunger Simulated leaf lever Leaf lever Bent leaf lever	Pin plunger Leaf lever Simulated roller leaf lever
Terminals		Molded lead wire Solder PCB (straight, right angle, left angle)	Molded lead wire Solder	Molded lead wire Solder PCB	Solder PCB
Approved standard (see note2)	UL	○	—	—	—
	CSA	○	—	—	—
	EN/IEC	—	—	—	—

Note 1: For pin plunger type
Note 2 ● : Approved model with standard marking on the switch
○ : Approved model. However no-approved types are included. They are without standard marking on the switch.
Consult your OMRON sales representative.

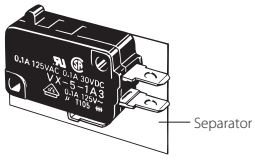
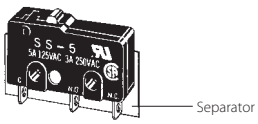
Basic Switch Common Accessories

Actuator (sold separately)

Model	Appearance	Applicable switches
leaf spring VAL		V D2VW pin plunger type with OF over 1.96N
Simulated roller Leaf Spring VAL12		V D2VW pin plunger type with OF over 1.96N
Roller Leaf Spring VAL2 VAL02		V D2VW pin plunger type with OF over 1.96N
Long Hinge Lever VAV		V D2RV D2VW pin plunger type with OF over 0.98N
Hinge Wire Lever VAV-5		V D3V VX D2MV D2RV D2VW pin plunger type with OF over 0.25N
Hinge Roller Lever VAV2		V D2RV D2VW pin plunger type with OF over 0.98N

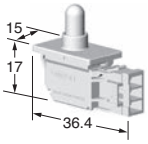
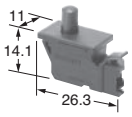
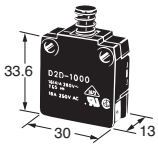
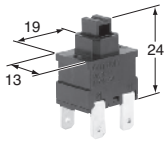
Model	Appearance	Applicable switches
Reverse Long Hinge Lever VAM		V D3V VX D2MV D2RV
Reverse Hinge Lever VAM21		V D3V VX D2MV D2RV
Reverse Hinge Modified Lever VAM-1		V D3V VX D2MV D2RV
Reverse Roller Modefied Lever VAM22		V D3V VX D2MV D2RV
Reverse Long Hinge Roller Lever VAM2		V D3V VX D2MV D2RV
Actuator Lever CAA1M		D2MC

Separator (sold separately)

Model	Thickness	Appearance	Applicable switches
SEPARATOR FOR V0.18	0.18mm		V D3V VX D2MV D2RV D2VW
SEPARATOR FOR V0.25	0.25mm		
SEPARATOR FOR SS0.18	0.18mm		SS SS-P SSG D2S D2SW D2SW-P
SEPARATOR FOR SS0.4	0.4mm		

Switch

Door Switches / Power Switches

Classification		Miniature Door Switches		Door Power Switches		Miniature Power Switches
Model		D3D	D3DC	D2D		C4V
Appearance						
				Standard	Pull-on lock	
Features		Door switch with long stroke, 9mm.	Door switch indicated the OP with long stroke.	Door interlock power switch with contact gap,3mm.		Miniature power switch with contact gap, over 3mm.
Contact form		SPDT / SPST-NC / SPST-NO	SPST-NC / SPST-NO	DPST-NO/DPST-NO+SPST-NC/SPST-NC/SPST-NO/ SPST-NO+SPST-NC		DPST-NO / SPST-NO
Contact	Specification	Crossbar	Rivet	Rivet		Rivet
	Material	Gold alloy	Silver	Silver		Silver alloy
	Gap	0.5mm	0.3mm	3mm min.	1mm	3mm
Ratings (resistive load)		1A 125VAC 0.5A 250VAC	0.1A 30VDC	16A 250VAC	10A 250VAC	8A 125/250VAC
Inrush current	NC	—	—	30A max.	24A max.	—
	NO					
Minimum applicable load (reference values)		1mA at 5VDC	1mA at 5VDC	160mA at 5VDC		—
Contact resistance (initial values)		100mΩ max.	300mΩ max.	50mΩ max.		50mΩ max.
Operating force (see note1)		2.0N max.	1.0N max.	5.88N max. 2.94N max.	19.61N max. 1.96N max.	7N max.
Durability (see note1)	Mechanical	300,000 operations min.	100,000 operations min.	10,000,000 operations min.		10,000 operations min.
	Electrical	50,000 operations min.	100,000 operations min.	100,000 operations min.		10,000 operations min.
Degree of protection		IEC IP00	IEC IP00	IEC IP40		IEC IP00
Ambient operating temperature		-30 to +60°C	-25 to +85°C	-25 to +85°C		-10 to +55°C
Ambient operating humidity		85%RH max. (for +5 to +35°C)	85%RH max. (for +5 to +35°C)	85%RH max. (for +5 to +35°C)		45 to 85%RH (for +5 to +35°C)
Actuators		Plunger Lever	Plunger	Pin plunger		Plunger
Terminals		The terminals connect to JST's HL Connector	The terminals connect to JST's XA Connector	Quick-connect (#250)		Quick-connect (#187)
Approved standard (see note2)	UL	●	●	●		●
	CSA	●	●	●		●
	EN/IEC	● (VDE approval)	—	● (VDE approval)		● (TUV approval)

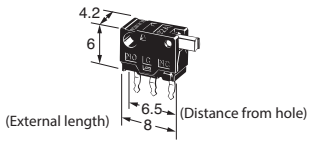
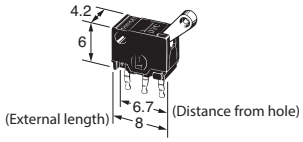
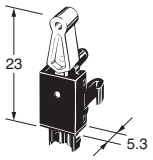
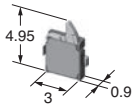
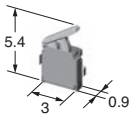
Note 1: For pin plunger type

Note 2 ● : Approved model with standard marking on the switch

○ : Approved model. However no-approved types are included. They are without standard marking on the switch. Consult your OMRON sales representative.

Switch

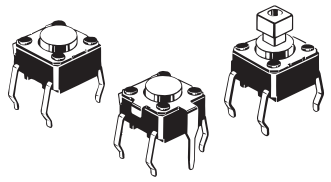
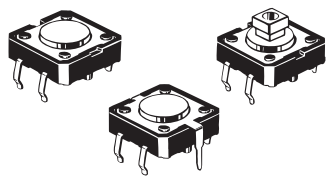
Miniature Detection Switches

Classification		Detection Switches					Surface Mount Detection Switches	
Model		D2A		D3C		D2X	D3SK	D3SH
Appearance								
		Standard	Low operating force	Standard	Low operating force			
Features		Detection switch with push action.		Detection switch with lever action.		Detection switch with connector terminals.	The smallest detection switch in the industry with high precision operation.	SMD detection switch. Ideal for miniature mobile devices.
Contact form		SPDT		SPDT		SPST-NC	SPST-NC / SPST-NO	SPST-NC / SPST-NO
Contact	Specification	Slide		Slide		Slide	Slide	Slide
	Material	Silver plated		Silver plated		Gold plated	Gold plated/Silver plated	Gold plated/Silver plated
Ratings (resistive load)		0.1A 30VDC		0.1A DC30V		0.1A 30VDC	1mA 5VDC	1mA 5VDC
Minimum applicable load (reference values)		1mA at 5VDC		1mA at 5VDC		1mA at 5VDC	15μA at 3VDC	15μA at 3VDC
Contact resistance (initial values)		50mΩ max.		50mΩ max.		200mΩ max.	3Ω max.	3Ω max.
Operating force (see note1)		0.98N max.	0.49N max.	1.28N max.	0.39N max.	0.49N max.	0.4N max.	0.3N max.
Durability (see note1)	Mechanical	—		—		1,000,000 operations min.	150,000 operations min.	150,000 operations min.
	Electrical	50,000 operations min		50,000 operations min		50,000 operations min	100,000 operations min	100,000 operations min
Degree of protection		IEC IP00		IEC IP00		IEC IP00	IEC IP40	IEC IP40
Ambient operating temperature		-10 to +80°C		-20 to +80°C		-10 to +70°C	-25 to +85°C	-25 to +85°C
Ambient operating humidity		85%RH max. (for +5 to +35°C)		85%RH max. (for +5 to +35°C)		45 to 85%RH (for +5 to +35°C)	85%RH max. (for +5 to +35°C)	85%RH max. (for +5 to +35°C)
Actuators		Pin plunger		Rotary lever		Rotary lever	Rotary lever	Rotary lever
Terminals		PCB		PCB		The terminals connect to Tyco Electronics Japan's CT Connector	Surface mount PCB	Surface mount PCB
Approved standard (see note2)	UL	—		—		—	—	—
	CSA	—		—		—	—	—
	EN/IEC	—		—		—	—	—

Note 1: For pin plunger type
Note 2 ● : Approved model with standard marking on the switch
○ : Approved model. However no-approved types are included. They are without standard marking on the switch.
Consult your OMRON sales representative.

Switch

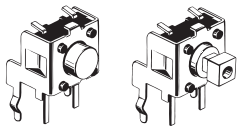
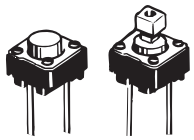
Tactile Switches

Mounting			Through-hole mounting						
Sealed / Unsealed			Unsealed						
Model			B3F						
Size			6×6mm			12×12mm			
Appearance									
Series			B3F-1000		B3F-1000-G	B3F-4000		B3F-5000	B3F-5001
			Standard		Micro load	Standard		Long durability	High reliability
Features			Standard tactile switch with through-hole terminals Wide range of models, including 6×6mm,12×12mm, side-operated, radial taping packaged, high-force and gold plated types.						
Contact materials			Silver plated		Gold plated	Silver plated		Silver plated	Gold plated
Ratings (resistive load)			1 to 50mA, 3 to 24VDC		100μA to 50mA, 3 to 24VDC	1 to 50mA, 3 to 24VDC			
Minimum applicable load (reference values)			10μA at 1VDC						
Contact resistance (initial values)			100mΩ max.						
Operating force			0.98N	1.47N	2.55N	1.76N	1.27N	2.55N	1.27N	1.27N
Durability			1,000,000 operations min.	300,000 operations min.	100,000 operations min.	300,000 operations min.	3,000,000 operations min.	1,000,000 operations min	10,000,000 operations min	10,000,000 operations min
Plunger	Flat type (height:4.3mm)	Without ground	B3F-1000	B3F-1002	B3F-1005	B3F-1002-G	B3F-4000	B3F-4005	B3F-5000	B3F-5001
		With ground	B3F-1100	B3F-1102	B3F-1105	B3F-1102-G	B3F-4100	B3F-4105	B3F-5100	B3F-5101
	Flat type (height:5.0mm)	Without ground	B3F-1020	B3F-1022	B3F-1025	B3F-1022-G	—	—	—	—
		With ground	B3F-1120	B3F-1122	B3F-1125	B3F-1122-G	—	—	—	—
	Flat type (height:9.5mm)	Without ground	B3F-1070	B3F-1072	B3F-1075	B3F-1072-G	—	—	—	—
		With ground	—	—	—	—	—	—	—	—
	Projected type (height:7.3mm)	Without ground	B3F-1050	B3F-1052	B3F-1055	B3F-1052-G	B3F-4050	B3F-4055	B3F-5050	B3F-5051
		With ground	B3F-1150	B3F-1152	B3F-1155	—	B3F-4150	B3F-4155	B3F-5150	B3F-5151
	Others	Without ground	—	—	—	—	—	—	—	—
		With ground	—	—	—	—	—	—	—	—
Degree of protection			—						
Washing			Not possible						
Ambient operating temperature			-25 to +70℃						
Ambient operating humidity			35 to 85%RH (for +5 to +35℃)						
Packaging			Bag						
Key top (sold separately)	4×4mm		B32-10□0			—			
	φ6mm		B32-20□0			—			
	D-shaped		B32-21□0			—			
	9×9mm		—			B32-12□0			
	12×12mm		—			B32-13□0			
	φ9.5mm		—			B32-16□0			

Note: The color is indicated in □ models for key tops. (Refer to page 35 for details)

Switch

Tactile Switches

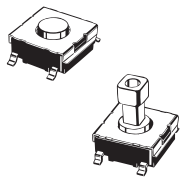
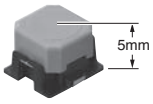
Mounting			Through-hole mounting				
Sealed / unsealed			Unsealed				
Model			B3F				
Size			6×6mm				
Appearance							
Series			B3F-3000		B3F-3000-G	B3F-6000	
			Side-operated		Micro load	Radial taping	
Features			Standard tactile switch with through-hole terminals Wide range of models, including 6×6mm,12×12mm, side-operated, radial taping packaged, high-force and gold plated types.				
Contact materials			Silver plated		Gold plated	Silver plated	
Ratings (resistive load)			1 to 50mA, 3 to 24VDC		100μA to 50mA, 3 to 24VDC	1 to 50mA, 3 to 24VDC	
Minimum applicable load (reference values)			10μA at 1VDC				
Contact resistance (initial values)			100mΩ max.				
Operating force			0.98N	1.47N	2.55N	1.76N	0.98N	1.47N
Durability			1,000,000 operations min.	300,000 operations min.	100,000 operations min.	300,000 operations min.	1,000,000 operations min.	300,000 operations min.
Plunger	Flat type (height:4.3mm)	Without ground	—	—	—	—	B3F-6000	B3F-6002
		With ground	B3F-3100	B3F-3102	B3F-3105	—	B3F-6100	B3F-6102
	Flat type (height:5.0mm)	Without ground	—	—	—	—	B3F-6020	B3F-6022
		With ground	B3F-3120	B3F-3122	B3F-3125	B3F-3122-G	B3F-6120	B3F-6122
	Flat type (height:9.5mm)	Without ground	—	—	—	—	—	—
		With ground	—	—	—	—	—	—
	Projected type (height:7.3mm)	Without ground	—	—	—	—	B3F-6050	B3F-6052
		With ground	B3F-3150	B3F-3152	B3F-3155	—	B3F-6150	B3F-6152
	Others	Without ground	—	—	—	—	—	—
		With ground	—	—	—	—	—	—
Degree of protection			—				
Washing			Not possible				
Ambient operating temperature			-25 to +70°C				
Ambient operating humidity			35 to 85%RH (for +5 to +35°C)				
Packaging			Bag			Radial taping	
Key top (sold separately)		4×4mm	B32-10□0			B32-10□0	
		φ6mm	B32-20□0			B32-20□0	
		D-shaped	B32-21□0			B32-21□0	
		9×9mm	—			—	
		a12×12mm	—			—	
		φ9.5mm	—			—	

Note: The color is indicated in □ models for key tops. (Refer to page 35 for details)

Switch

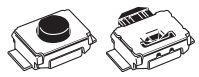
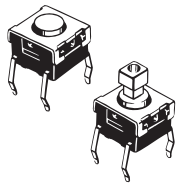
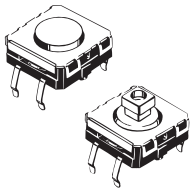
Tactile Switches

The products with this mark are also available in package reels of 100 pcs.

Mounting			Surface mount											
Sealed / Unsealed			Unsealed											
Model			B3FS					B3AL						
Size			6×6mm			12×12mm		6×6.9mm						
Appearance														
Series			B3FS-1000			B3FS-4000								
Features			Standard tactile switch with surface mounting terminals.					Long-stroke tactile switch with high operating force and high durability.						
Contact materials			Silver plated					Silver plated						
Ratings (resistive load)			1 to 50mA, 3 to 24VDC					1 to 50mA, 5 to 16VDC						
Minimum applicable load (reference values)			10μA at 1VDC					—						
Contact resistance (initial values)			100mΩ max.					100mΩ max.						
Operating force			0.98N	1.47N	2.55N	1.47N	2.55N	1.96N	2.45N	3.0N	3.5N	4.0N	4.5N	5.0N
Durability			1,000,000 operations min.	300,000 operations min.	100,000 operations min.	3,000,000 operations min.	1,000,000 operations min.	1,000,000 operations min.						500,000 operations min.
Plunger	Flat type (height:3.1mm)	Without ground	B3FS-1000	B3FS-1002	B3FS-1005	—	—	—	—	—	—	—	—	—
		With ground	—	—	—	—	—	—	—	—	—	—	—	—
	Flat type (height:3.4mm)	Without ground	—	—	—	—	—	—	—	—	—	—	—	—
		With ground	—	—	—	—	—	—	—	—	—	—	—	—
	Flat type (height:4.3mm)	Without ground	B3FS-1010	B3FS-1012	B3FS-1015	B3FS-4002P	B3FS-4005P	—	—	—	—	—	—	—
		With ground	—	—	—	—	—	—	—	—	—	—	—	—
	Flat type (height:5.1mm)	Without ground	—	—	—	—	—	—	—	—	—	—	—	—
		With ground	—	—	—	—	—	—	—	—	—	—	—	—
	Projected type (height:7.3mm)	Without ground	B3FS-1050	B3FS-1052	—	B3FS-4052P	B3FS-4055P	—	—	—	—	—	—	—
		With ground	—	—	—	—	—	—	—	—	—	—	—	—
	Others	Without ground	—	—	—	—	—	B3AL-1000	B3AL-1001	B3AL-1002	B3AL-1003	B3AL-1006	B3AL-1005	B3AL-1004
		With ground	—	—	—	—	—	—	—	B3AL-1002-MS	B3AL-1003-MS	—	—	—
Degree of protection			—					—						
Washing			Not possible					Not possible						
Ambient operating temperature			-25 to +70°C					-40 to +90°C						
Ambient operating humidity			35 to 85%RH (for +5 to +35°C)					35 to 85%RH (for +5 to +35°C)						
Packaging			Bag/Embossed taping			Embossed taping		Bag/Embossed taping						
Key top (sold separately)	4×4mm		B32-10□0			—		—						
	φ6mm		B32-20□0			—		—						
	D-shaped		B32-21□0			—		—						
	9×9mm		—			B32-12□0		—						
	12×12mm		—			B32-13□0		—						
	φ9.5mm		—			B32-16□0		—						

Note: The color is indicated in □ models for key tops. (Refer to page 35 for details)

Tactile Switches

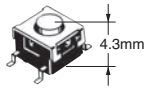
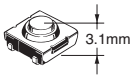
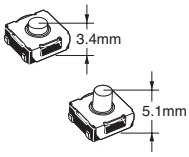
Mounting			Surface mount				
Sealed / unsealed			Unsealed		Sealed		
Model			B3U		B3W		
Size			3×2.5mm		6×6mm		12×12mm
Appearance							
Series			B3U-1000	B3U-3000	B3W-1000		B3W-4000
			Top-operated	Side-operated			
Features			Surface mounted ideal for high-density mounting.		Standard sealed tactile switch with through-hole terminals. Sealed construction for highly reliable operation in locations exposed to dust or water.		
Contact materials			Silver plated		Silver plated		
Ratings (resistive load)			1 to 50mA, 3 to 12VDC		1 to 50mA, 3 to 24VDC		
Minimum applicable load (reference values)			10μA at 1VDC		10μA at 1VDC		
Contact resistance (initial values)			100mΩ max.		100mΩ max.		
Operating force			1.5N	1.59N	1.57N max.	2.26N max.	1.96N max.	3.43N max.
Durability			200,000 operations min.	100,000 operations min.	1,000,000 operations min.	300,000 operations min.	3,000,000 operations min.	1,000,000 operations min.
Plunger	Flat type (height:3.1mm)	Without ground	—	—	—	—	—	—
		With ground	—	—	—	—	—	—
	Flat type (height:3.4mm)	Without ground	—	—	—	—	—	—
		With ground	—	—	—	—	—	—
	Flat type (height:4.3mm)	Without ground	—	—	B3W-1000	B3W-1002	B3W-4000	B3W-4005
		With ground	—	—	B3W-1100	B3W-1102	B3W-4100	B3W-4105
	Flat type (height:5.1mm)	Without ground	—	—	B3W-1020	B3W-1022	—	—
		With ground	—	—	—	—	—	—
	Projected type (height:7.3mm)	Without ground	—	—	B3W-1050	B3W-1052	B3W-4050	B3W-4055
		With ground	—	—	B3W-1150	B3W-1152	B3W-4150	B3W-4155
	Others	Without ground	B3U-1000P	B3U-3000P	—	—	—	—
		With ground	B3U-1100P	B3U-3100P	—	—	—	—
Degree of protection			—		IEC IP67		
Washing			Not possible		Possible		
Ambient operating temperature			-25 to +70°C		-25 to +70°C		
Ambient operating humidity			35 to 85%RH (for +5 to +35°C)		35 to 85%RH (for +5 to +35°C)		
Packaging			Embossed taping		Bag		
Key top (sold separately)	4×4mm		—		B32-10□0		—
	φ6mm		—		B32-20□0		—
	D-shaped		—		B32-21□0		—
	9×9mm		—		—		B32-12□0
	12×12mm		—		—		B32-13□0
	φ9.5mm		—		—		B32-16□0

Note: The color is indicated in □ models for key tops. (Refer to page 35 for details)

Switch

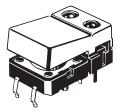
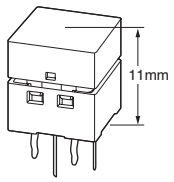
Tactile Switches

The products with this mark are also available in package reels of 100 pcs.

Mounting			Surface mouant						
Sealed / unsealed			Sealed						
Model			B3S		B3SN		B3SL		B3SE
Size			6×6mm		6×6mm		6×6mm		6×6mm
Appearance									
Series			B3S-1000						
Features			Surface mounting tactile switch with sealed structure.		Surface mounting thin type tactile switch with sealed structure.		Surface mounting tactile switch with sealed structure and middle stroke.		6×6mm surface mounting tactile switch with high durability, ultra thin, and sealed structure.
Contact materials			Silver plated		Silver plated	Gold plated	Silver plated		Silver plated
Ratings (resistive load)			1 to 50mA, 3 to 24VDC		1 to 50mA, 3 to 24VDC		1 to 50mA, 3 to 12VDC		1 to 50mA at 3 to 12VDC
Minimum applicable load (reference values)			10μA at 1VDC		10μA at 1VDC		10μA at 1VDC		10μA at 1VDC
Contact resistance (initial values)			100mΩ max.		100mΩ max.		100mΩ max.		100mΩ max.
Operating force			1.57N max.	2.26N max.	1.57N	1.76N	1.96N	3.5N	1.96N
Durability			500,000 operations min.	300,000 operations min.	100,000 operations min.		100,000 operations min.		1,000,000 operations min.
Plunger	Flat type (height:3.1mm)	Without ground	—	—	B3SN-3012	B3SN-3012P-G	—	—	—
		With ground	—	—	B3SN-3112	—	—	—	—
	Flat type (height:3.4mm)	Without ground	—	—	—	—	B3SL-1002P	B3SL-1005P	—
		With ground	—	—	—	—	—	—	—
	Flat type (height:4.3mm)	Without ground	B3S-1000	B3S-1002	—	—	—	—	—
		With ground	B3S-1100	B3S-1102	—	—	—	—	—
	Flat type (height:5.1mm)	Without ground	—	—	—	—	B3SL-1022P	B3SL-1025P	—
		With ground	—	—	—	—	—	—	—
	Projected type (height:7.3mm)	Without ground	—	—	—	—	—	—	—
		With ground	—	—	—	—	—	—	—
	Others	Without ground	—	—	—	—	—	—	B3SE-1002P
		With ground	—	—	—	—	—	—	—
Degree of protection			IEC IP67		IEC IP67		IEC IP67		IEC IP67
Washing			Possible		Possible		Not possible		Not possible
Ambient operating temperature			-25 to+ 70°C		-25 to +70°C		-25 to +90°C		-25 to + 70°C
Ambient operating humidity			35 to 85%RH (for +5 to +35°C)		35 to 85%RH (for +5 to +35°C)		35 to 85%RH (for +5 to +35°C)		35 to 85%RH (for +5 to +35°C)
Packaging			Bag/Embossed taping		Bag/Embossed taping	Embossed taping	Embossed taping		Embossed taping
Key top (sold separately)		4×4mm	—		—		—		—
		φ6mm	—		—		—		—
		D-shaped	—		—		—		—
		9×9mm	—		—		—		—
		12×12mm	—		—		—		—
		φ9.5mm	—		—		—		—

Note: The color is indicated in □ models for key tops. (Refer to page 35 for details)

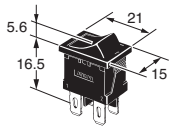
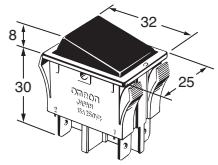
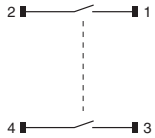
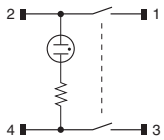
Tactile Switches

Mounting	Through-hole mounting				
Sealed / unsealed	Unsealed				
Model	B3J	B3W-9			
Size	12×18mm	10×10mm		12×12mm	
Appearance					
Features	Hinged tactile switches.	3-colors illminated tactile switches with 2 LEDs. Display 2 different labels in combination with text combination films.			
Contact materials	Silver plated	Silver plated			
Ratings (resistive load)	1 to 50mA, 3 to 24VDC	1 to 50mA, 3 to 24VDC			
Minimum applicable load (reference values)	10μA at 1VDC	10μA at 1VDC			
Contact resistance (initial values)	100mΩ max.	100mΩ max.			
Operating force	1.27N	1.57N max.	2.26N max.	1.57N max.	2.26N max.
Durability	3,000,000 operations min.	1,000,000 operations min.	300,000 operations min.	1,000,000 operations min.	300,000 operations min.
Non-Illuminated	B3J-1□00	—	—	—	—
Illuminated / 1 LED types	B3J-2□00	B3W-9000-□1□	B3W-9002-□1□	B3W-9010-□1□	B3W-9012-□1□
	B3J-3□00				
	B3J-4□00				
Illuminated / 2 LED types	B3J-5□00	B3W-9000-□2□	B3W-9002-□2□	B3W-9010-□2□	B3W-9012-□2□
	B3J-6□00				
	B3J-7□00				
Degree of protection	—	—			
Washing	Not possible	Not possible			
Ambient operating temperature	-25 to +70℃	-25 to +70℃			
Ambient operating humidity	35 to 85%RH (for +5 to +35℃)	35 to 85%RH (for +5 to +35℃)			
Packaging	Tray	Tray			
Optional accessories (sold separately)	—	B3W-9 Text combination films B3W-9□□-F□			

Tactile Switch Key Top

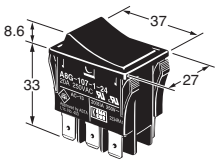
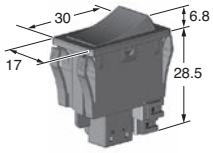
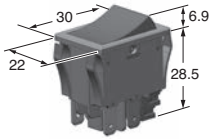
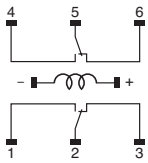
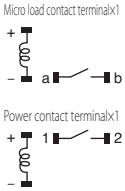
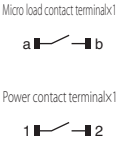
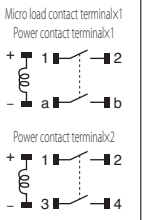
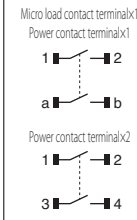
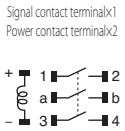
Classifications	Key top					
Model	B32					
Size	6×6mm switches B3F-1000 / -1000-G / -3000 / -3000-G / -6000 / B3W-1000 / B3FS-1000			12×12mm switches B3F-4000 / -5000 / -5001 / B3W-4000 / B3FS-4000		
Color	4×4mm	φ6mm	D type	9×9mm	12×12mm	φ9.5mm
Ivory	B32-1000	B32-2000	B32-2100	B32-1200	B32-1300	B32-1600
Black	B32-1010	B32-2010	B32-2110	B32-1210	B32-1310	B32-1610
Orange	B32-1020	—	—	B32-1220	B32-1320	B32-1620
Yellow	B32-1030	—	—	B32-1230	B32-1330	B32-1630
Blue	B32-1040	—	—	B32-1240	B32-1340	—
Green	B32-1050	—	—	B32-1250	B32-1350	—
White	B32-1060	—	—	B32-1260	B32-1360	—
Red	B32-1080	—	—	B32-1280	B32-1380	—

Rocker Switches

Classifications		Miniature Rocker Switches		Illuminated Rocker Switches	
Model		A8L		A8A	
Appearance					
Features		Miniature rocker switch for high capacity switching.		Illuminated Rocker Switches.	
Contact form		SPST	DPST	DPST	
				Non-illuminated 	Illuminated 
Case color		Black		White / Black / Gray	
Cap color		Black		Non-illuminated:White/Red/Green/Blue/Yellow/Black Illuminated:Red/Green/Orange	
Marking		With / Without		With / Without	
Ratings (resistive load)		10A 250VAC 10A 125VAC		16A 250VAC 16A 125VAC	
Inrush current		100A max.		100A max.	
Operating force		SPST : 2.16N DPST : 3.92N		19.6N max.	
Durability	Mechanical	50,000 operations min.		40,000 operations min.	
	Electrical	10,000 operations min.		20,000 operations min.	
Protection of Degree		IEC IP40		IEC IP40	
Terminals		Solder / PCB / Quick-connect (#187)		Quick-connect (#250)	
Ambient operating temperature		-20 to +55℃		-20 to +50℃	
Ambient operating humidity		45 to 85%RH (for +5 to +35℃)		45 to 85%RH (for +5 to +35℃)	
Approved standard	UL	●		●	
	cUL	●		●	
	CSA				
	EN	●		●	
Optional accessories (sold separetely)		—		A8A-RUBBER CAP	

Switch

Rocker Switches

Classifications		Rocker Switches with reset function					
Model		A8G	A8GS				A8GS-T
Appearance							
Features		Rocker switch with reset function for switching 20A.	Small size rocker switch with reset function.				Remote reset rocker switch with delay OFF function.
Contact form		DPDT	SPST		DPST		DPST / SPST
		With reset function	With reset function	Without reset function	With reset function	Without reset function	With reset and delay off funtion
							
Case color		Black	Black				Black
Cap color		Black	Black				Black
Marking		Without	With / Without				With / Without
Ratings (resistive load)		Contact : 20A 250VAC Reset coil : 185mA 24VDC	Power contact : 10A 250VAC / 16A 125VAC Micro load contact : 0.2A 5VDC Reset coil : 455mA 5VDC / 300mA 3.3VDC				Power contact : 10A 250VAC / 16A 125VAC Micro load contact : 0.2A 5VDC Reset coil : 455mA 5VDC
Inrush current		100A max.	117A max. (Power contact)				—
Operating force		19.6N max.	Micro load contact SPST : 1.0N / Power contact SPST : 1.5N / DPST 2.0N				1.8N
Durability	Mechanical	Switch operation : 100,000 operations min.	Switch operation : 30,000 operations min. Coil operation : 10,000 operations min.				Switch operation : 30,000 operations min. Coil operation : 10,000 operations min.
	Electrical	Switch operation : 50,000 operations min. Coil operation : 10,000 operations min.	Switch operation : 10,000 operations min.				Switch operation : 10,000 operations min. Coil operation : 10,000 operations min.
Protection of Degree		IEC IP40	IEC IP40				IEC IP40
Terminals		Contact : Quick-connect(#250) Reset Coil : Quick-connect(#110)	Micro load contact terminal : CT connector Power contact terminal : Quick-connect treminals(#187), Solder terminals				Micro load contact terminal : CT connector Power contact terminal : Quick-connect treminals(#187), Solder terminals
Ambient operating temperature		-10 to +55°C	-10 to +55°C				-10 to +55°C
Ambient operating humidity		45 to 85%RH (for +5 to +35°C)	90%RH max. (for +5 to +35°C)				90%RH max. (for +5 to +35°C)
Approved standard	UL	●	●				●
	cUL	●					
	CSA		●				●
	EN	●	●				●

Switch

Pushbutton Switches

Panel cutout		Round (12dia.)		Round (16dia.)	Square
Model		A3C	M2C	A16□-P	A3A
Appearance					
Features		Pushbutton switch (illuminated/non-illuminated) with cylindrical 12dia. body.	Indicator with cylindrical 12dia. body.	Pushbutton switch (illuminated/non-illuminated) with cylindrical 16dia. body and PCB terminals.	Lighted pushbutton switch with square body.
Body		20mm	20mm	21mm	12.5mm
Shape of pushbutton		Rectangular Square Round	Rectangular Square Round	Rectangular Square Round	Square Round
Color of pushbutton	Illuminated	LED lamp Red Green White Yellow	LED lamp Red Green White Yellow	LED lamp Red Green Yellow Pure White Blue Pure Yellow	LED lamp Red Green Yellow
	Non-Illuminated	Red Green Yellow White Blue Black	—	Red Green Yellow Pure White Blue Black Pure Yellow	Red Green Yellow Light gray Blue Black Gray Dark gray
Contact form		SPDT	—	DPDT / SPDT	SPDT / SPST-NO
Action		Momentary Alternate	—	Momentary Alternate	Momentary Alternate
Operating force		2.45N max.	—	IP40 : 4.41N max. IP66 : 4.91N max.	2.45N max.
Ratings (resistive load)	Standard load	0.5A 250VAC 1A 125VAC 1A 30VDC	—	3A 250VAC 5A 125VAC 3A 30VDC	SPST-NO : 2A 250VAC 6A 125VAC 4A 30VDC SPDT : 3A 125VAC 2A 30VDC
	Micro load	0.1A 125VAC 0.1A 30VDC	—	—	—
Minimum applicable load		1mA at 5VDC	—	1mA at 5VDC	1mA at 5VDC
Durability		100,000 operations min.	—	100,000 operations min.	50,000 operations min.
Degree of protection		IEC IP40	IEC IP40	IEC IP40 / 66	IEC IP40
Terminals		Solder	Solder	PCB	Solder PCB
Ambient operating temperature		-10 to +55°C	-10 to +55°C	-10 to +55°C	-10 to +55°C
Ambient operating humidity		35 to 85%RH	35 to 85%RH	35 to 85%RH	35 to 85%RH
Approved standard		UL / CSA / CCC	UL / CSA	UL / CSA / EN / CCC	UL / CSA

Pushbutton Switches

Accessories, Tools and Replacements for A3C/M2C (sold separately)

Accessories

Name	Shape	Classification	Model	Remarks
Socket		Wire-wrap terminals	A3C-4101	Cannot be used together with Insulation Cover.
		PCB terminals	A3C-4102	
		Solder terminals	A3C-4103	
Insulation Cover		—	A3C-3002	Cannot be used together with Socket.
Switch Guard		For rectangular	A3CJ-5050	Cannot be used together with Dust Cover.
		For square, round	A3CA-5050	
Dust Cover		For rectangular	A3CJ-5060	Cannot be used together with Switch Guard. Can be used together with Dust Cover attached.

Tools

Name	Shape	Classification	Model
Tightening Tools		—	A3C-3004
Extractor		—	A3PJ-5080

Replacements

Name	Shape	Classification	Model
Legend Plate		For rectangular	A3CJ-5201
		For square	A3CA-5201
		For round	A3CT-5201

Accessories for A3A (sold separately)

Flange (Select according to panel color.)

Name	Shape		Classification		Model
Flange	Square □12.7		Flange alone	Black	A3A-241
				Light gray	A3A-242
	Round φ12.7			Black	A3A-251
				Light gray	A3A-252
			Leaf spring alone		A3A-200
	Square □12.7		Flange and leaf spring (one each)	Black	A3A-211
				Light gray	A3A-212
	Round φ12.7			Black	A3A-221
				Light gray	A3A-222

An A3A with solder terminals is provided with a round or square black flange and leaf spring. A round black flange is provided with each A3A having solder terminals and a round pushbutton. A square black flange is provided with each A3A having solder terminals and a square pushbutton.

Pushbutton Hand Switches

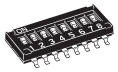
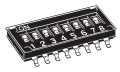
Model		C2U	C2UW	
Appearance				
Series		C2U (wired)	C2UW-D (wired)	C2UW-L (wireless)
Features		Double action hand switch.	Double action hand switch with a sub switch.	Double action hand switch with a sub switch.
Contact form		DPST	Main switch : DPST Sub switch : SPST-NO	
Action		Momentary	Momentary	
Operating force		1st stage : 4.9±1.47N 2nd stage : 15.69±2.94N	Main switch 1st stage : 4.7±1.5N 2nd stage : 12.6±3.0N Sub switch : 4N max.	
Ratings (resistive load)		2A 30VDC 2A 125VAC	Main switch : 10mA 14VDC 0.1A 30VDC Sub switch : 50mA 24VDC	Internal battery CR17345/CR123A (Lithium primary battery 3VDC)
Durability	Mechanical	500,000 operations min.	Main switch/Sub switch : 400,000 operations min.	
	Electrical	200,000 operations min.		
Degree of protection		IEC IP00	IEC IP00	IEC IP00
Ambient operating temperature		-10 to +40°C	0 to +40°C	
Ambient operating humidity		75%RH max.(for +5 to +35°C)	90%RH max.(for +5 to +35°C)	
Wireless certification		—	—	As of September 2018* Japan, USA, EU, Korea, Canada, Australia, India, Brazil

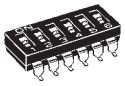
* Contact your OMRON representative for the latest countries to have acquired wireless certification.

Switch

Slide DIP Switches

The products with this mark are also available in package reels of 100 pcs.

Mounting		Surface mounting					
Model		A6H					
Terminal pitch		1.27mm (Half pitch)					
Appearance							
Features		Slide DIP switch with ultra low profile,1.55mm and half pitch.					
Actuator types		Flat actuator			Flat actuator with seal tape		
Packaging		Tube	Embossed taping standard reel (4,000 pcs)	Embossed taping small reel (500 pcs)	Tube	Embossed taping standard reel (4,000 pcs)	Embossed taping small reel (500 pcs)
Contact material		Gold plated					
Ratings(resistive load)		25mA 24VDC / 10μA (minimum current) at 3.5VDC					
Contact resistance(initial values)		200mΩ max.					
No. of poles	1	—	—	—	—	—	—
	2	A6H-2101	A6H-2101-P	A6H-2101-PM	A6H-2102	A6H-2102-P	A6H-2102-PM
	3	—	—	—	—	—	—
	4	A6H-4101	A6H-4101-P	A6H-4101-PM	A6H-4102	A6H-4102-P	A6H-4102-PM
	5	—	—	—	—	—	—
	6	A6H-6101	A6H-6101-P	A6H-6101-PM	A6H-6102	A6H-6102-P	A6H-6102-PM
	7	—	—	—	—	—	—
	8	A6H-8101	A6H-8101-P	A6H-8101-PM	A6H-8102	A6H-8102-P	A6H-8102-PM
	9	—	—	—	—	—	—
	10	A6H-0101	A6H-0101-P	A6H-0101-PM	A6H-0102	A6H-0102-P	A6H-0102-PM
Durability		1,000 operations min.					
Washing		Not possible			Possible		
Degree of protection		IEC IP40					
Ambient operating temperature		-20 to +70°C					
Ambient operating humidity		35 to 95%RH (for +5 to +35°C)					

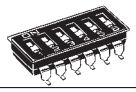
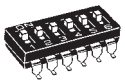
Mounting		Surface mounting					
Model		A6HF			A6S-H		
Terminal pitch		1.27mm (Half pitch)			2.54mm (Standard pitch)		
Appearance							
Features		Slide DIP switches with a height of 2.3mm and half pitch.			Standard surface mounting slide DIP switches. Washable, with seal tape available.		
Actuator types		Flat actuator with seal tape			Flat actuator		
Packaging		Tube	Embossed taping standard reel (2,000 pcs)	Embossed taping small reel (500 pcs)	Tube	Embossed taping standard reel (900 pcs)	Embossed taping small reel (400 pcs)
Contact material		Gold plated			Gold plated		
Ratings(resistive load)		25mA 24VDC / 10μA (minimum current) at 3.5VDC			25mA 24VDC / 10μA (minimum current) at 3.5VDC		
Contact resistance(initial values)		200mΩ max.			200mΩ max.		
No. of poles	1	—	—	—	A6S-1101-H	A6S-1101-PH	—
	2	A6HF-2102	A6HF-2102-P	A6HF-2102-PM	A6S-2101-H	A6S-2101-PH	—
	3	—	—	—	A6S-3101-H	A6S-3101-PH	A6S-3101-PMH
	4	A6HF-4102	A6HF-4102-P	A6HF-4102-PM	A6S-4101-H	A6S-4101-PH	A6S-4101-PMH
	5	—	—	—	A6S-5101-H	A6S-5101-PH	—
	6	A6HF-6102	A6HF-6102-P	A6HF-6102-PM	A6S-6101-H	A6S-6101-PH	A6S-6101-PMH
	7	—	—	—	A6S-7101-H	A6S-7101-PH	—
	8	A6HF-8102	A6HF-8102-P	A6HF-8102-PM	A6S-8101-H	A6S-8101-PH	A6S-8101-PMH
	9	—	—	—	A6S-9101-H	—	—
	10	A6HF-0102	A6HF-0102-P	A6HF-0102-PM	A6S-0101-H	—	A6S-0101-PMH
Durability		1,000 operations min.			1,000 operations min.		
Washing		Possible			Not possible		
Degree of protection		IEC IP40			IEC IP40		
Ambient operating temperature		-30 to +85°C			-20 to +70°C		
Ambient operating humidity		35 to 95%RH (for +5 to +35°C)			35 to 95%RH (for +5 to +35°C)		

Note:Default actuator setting is OFF for Slide DIP Switches and Piano DIP Switches.
Be sure to read the Safety precautions common to all DIP Switches for correct use.

Switch

Slide DIP Switches

The products with this mark are also available in package reels of 100 pcs.

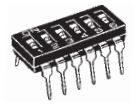
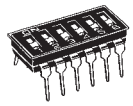
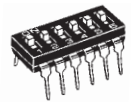
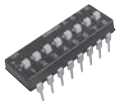
Mounting		Surface mounting					
Model		A6S-H					
Terminal pitch		2.54mm (Standard pitch)					
Appearance							
Features		Standard surface mounting slide DIP switches. Washable, with seal tape available.					
Actuator types		Flat actuator with seal tape			Raised actuator		
Packaging		Tube	Embossed taping standard reel (800/900 pcs)	Embossed taping small reel (400 pcs)	Tube	Embossed taping standard reel (700/800 pcs)	Embossed taping small reel (400 pcs)
Contact material		Gold plated					
Ratings(resistive load)		25mA 24VDC / 10μA (minimum current) at 3.5VDC					
Contact resistance(initial values)		200mΩ max.					
No. of poles	1	A6S-1102-H	A6S-1102-PH	—	A6S-1104-H	A6S-1104-PH	—
	2	A6S-2102-H	A6S-2102-PH	A6S-2102-PMH	A6S-2104-H	A6S-2104-PH	—
	3	A6S-3102-H	A6S-3102-PH	—	A6S-3104-H	A6S-3104-PH	—
	4	A6S-4102-H	A6S-4102-PH	A6S-4102-PMH	A6S-4104-H	A6S-4104-PH	A6S-4104-PMH
	5	A6S-5102-H	A6S-5102-PH	—	A6S-5104-H	A6S-5104-PH	—
	6	A6S-6102-H	A6S-6102-PH	A6S-6102-PMH	A6S-6104-H	A6S-6104-PH	A6S-6104-PMH
	7	A6S-7102-H	A6S-7102-PH	—	A6S-7104-H	A6S-7104-PH	—
	8	A6S-8102-H	A6S-8102-PH	A6S-8102-PMH	A6S-8104-H	A6S-8104-PH	A6S-8104-PMH
	9	A6S-9102-H	A6S-9102-PH	—	A6S-9104-H	A6S-9104-PH	—
	10	A6S-0102-H	A6S-0102-PH	A6S-0102-PMH	A6S-0104-H	A6S-0104-PH	A6S-0104-PMH
Durability		1,000 operations min.					
Washing		Possible			Not possible		
Degree of protection		IEC IP40					
Ambient operating temperature		-20 to +70°C					
Ambient operating humidity		35 to 95%RH (for +5 to +35°C)					

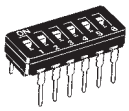
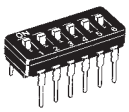
Mounting		Surface mounting				
Model		A6SN				
Terminal pitch		2.54mm (Standard pitch)				
Appearance						
Features		Surface mounting slide DIP switch with high contact reliability. Washable, even without seal tape available.				
Actuator types		Flat actuator			Raised actuator	
Packaging		Tube	Embossed taping standard reel (750 pcs)		Tube	Embossed taping standard reel (700 pcs)
			Without seal tape	With seal tape		
Contact material		Gold plated				
Ratings(resistive load)		25mA 24VDC / 10μA (minimum current) at 3.5VDC				
Contact resistance(initial values)		200mΩ max.				
No. of poles	1	A6SN-1101	—	—	A6SN-1104	—
	2	A6SN-2101	A6SN-2101-P	A6SN-2102-P	A6SN-2104	A6SN-2104-P
	3	A6SN-3101	A6SN-3101-P	A6SN-3102-P	A6SN-3104	A6SN-3104-P
	4	A6SN-4101	A6SN-4101-P	A6SN-4102-P	A6SN-4104	A6SN-4104-P
	5	A6SN-5101	A6SN-5101-P	A6SN-5102-P	A6SN-5104	A6SN-5104-P
	6	A6SN-6101	A6SN-6101-P	A6SN-6102-P	A6SN-6104	A6SN-6104-P
	7	A6SN-7101	A6SN-7101-P	A6SN-7102-P	A6SN-7104	A6SN-7104-P
	8	A6SN-8101	A6SN-8101-P	A6SN-8102-P	A6SN-8104	A6SN-8104-P
	9	A6SN-9101	A6SN-9101-P	A6SN-9102-P	A6SN-9104	A6SN-9104-P
	10	A6SN-0101	A6SN-0101-P	A6SN-0102-P	A6SN-0104	A6SN-0104-P
Durability		1,000 operations min.				
Washing		Possible				
Degree of protection		IEC IP40				
Ambient operating temperature		-30 to +85°C				
Ambient operating humidity		35 to 95%RH (for +5 to +35°C)				

Note: Default actuator setting is OFF for Slide DIP Switches and Piano DIP Switches.
Be sure to read the Safety precautions common to all DIP Switches for correct use.

Switch

Slide DIP Switches

Mounting		Through-hole mounting				
Model		A6T			A6TN	
Terminal pitch		2.54mm (Standard pitch)			2.54mm (Standard pitch)	
Appearance						
Features		Standard through-hole mounting slide DIP switch. Washable, with seal tape available.			Through-hole mounting slide DIP switch with high contact reliability. Washable, even without seal tape available.	
Actuator types		Flat actuator	Flat actuator with seal tape	Raised actuator	Flat actuator	Raised actuator
Packaging		Tube			Tube	
Contact material		Gold plated			Gold plated	
Ratings(resistive load)		25mA 24VDC / 10μA (minimum current) at 3.5VDC			25mA 24VDC / 10μA (minimum current) at 3.5VDC	
Contact resistance(initial values)		200mΩ max.			200mΩ max.	
No. of poles	1	A6T-1101	A6T-1102	A6T-1104	A6TN-1101	A6TN-1104
	2	A6T-2101	A6T-2102	A6T-2104	A6TN-2101	A6TN-2104
	3	A6T-3101	A6T-3102	A6T-3104	A6TN-3101	A6TN-3104
	4	A6T-4101	A6T-4102	A6T-4104	A6TN-4101	A6TN-4104
	5	A6T-5101	A6T-5102	A6T-5104	A6TN-5101	A6TN-5104
	6	A6T-6101	A6T-6102	A6T-6104	A6TN-6101	A6TN-6104
	7	A6T-7101	A6T-7102	A6T-7104	A6TN-7101	A6TN-7104
	8	A6T-8101	A6T-8102	A6T-8104	A6TN-8101	A6TN-8104
	9	A6T-9101	A6T-9102	A6T-9104	A6TN-9101	A6TN-9104
	10	A6T-0101	A6T-0102	A6T-0104	A6TN-0101	A6TN-0104
Durability		1,000 operations min.			1,000 operations min.	
Washing		Not possible	Possible	Not possible	Possible	
Degree of protection		IEC IP40			IEC IP40	
Ambient operating temperature		-20 to +70°C			-30 to +85°C	
Ambient operating humidity		35 to 95%RH (for +5 to +35°C)			35 to 95%RH (for +5 to +35°C)	

Mounting		Through-hole mounting			
Model		A6D		A6E-N	
Terminal pitch		2.54mm (Standard pitch)		2.54mm (Standard pitch)	
Appearance					
Features		Through-hole mounting slide DIP switch with high environmental resistance by sealed construction.		Box type through-hole mounting slide DIP switches.	
Actuator types		Flat actuator	Raised actuator	Flat actuator	Raised actuator
Packaging		Tube		Tube	
Contact material		Gold plated		Gold plated	
Ratings(resistive load)		30mA 30VDC / 10μA (minimum current) at 3.5VDC		25mA 24VDC / 10μA (minimum current) at 3.5VDC	
Contact resistance(initial values)		100mΩ max.		200mΩ max.	
No. of poles	1	—	—	—	—
	2	A6D-2100	A6D-2103	A6E-2101-N	A6E-2104-N
	3	A6D-3100	A6D-3103	A6E-3101-N	A6E-3104-N
	4	A6D-4100	A6D-4103	A6E-4101-N	A6E-4104-N
	5	A6D-5100	A6D-5103	A6E-5101-N	A6E-5104-N
	6	A6D-6100	A6D-6103	A6E-6101-N	A6E-6104-N
	7	A6D-7100	A6D-7103	A6E-7101-N	A6E-7104-N
	8	A6D-8100	A6D-8103	A6E-8101-N	A6E-8104-N
	9	A6D-9100	A6D-9103	A6E-9101-N	A6E-9104-N
	10	A6D-0100	A6D-0103	A6E-0101-N	A6E-0104-N
Durability		2,000 operations min.		1,000 operations min.	
Washing		Possible		Not possible	
Degree of protection		Internally sealed (IEC IP64 equivalency)		IEC IP40	
Ambient operating temperature		-20 to +70°C		-20 to +70°C	
Ambient operating humidity		35 to 95%RH (for +5 to +35°C)		35 to 95%RH (for +5 to +35°C)	

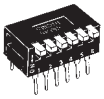
Note: Default actuator setting is OFF for Slide DIP Switches and Piano DIP Switches.
Be sure to read the Safety precautions common to all DIP Switches for correct use.

Switch

Piano DIP Switches

The products with this mark are also available in package reels of 100 pcs.

Mounting		Surface mounting						
Model		A6HR			A6SR			
Terminal pitch		1.27mm (Half pitch)			2.54mm (Standard pitch)			
Appearance								
Features		Miniature piano DIP switch with half pitch terminals.			Piano DIP switch with surface mounting terminals.			
Actuator types		Long actuator			Short actuator		Long actuator	
Packaging		Tube	Embossed taping standard reel (1000 pcs)	Embossed taping small reel (500 pcs)	Tube	Embossed taping standard reel	Tube	Embossed taping standard reel
Contact material		Gold plated			Gold plated			
Ratings(resistive load)		25mA 24VDC / 10μA (minimum current) at 3.5VDC			25mA 24VDC / 10μA (minimum current) at 3.5VDC			
Contact resistance(initial values)		200mΩ max.			200mΩ max.			
No. of poles	1	—	—	—	—	—	—	—
	2	A6HR-2104	A6HR-2104-P	A6HR-2104-PM	A6SR-2101	A6SR-2101-P	A6SR-2104	A6SR-2104-P
	3	—	—	—	—	—	—	—
	4	A6HR-4104	A6HR-4104-P	A6HR-4104-PM	A6SR-4101	A6SR-4101-P	A6SR-4104	A6SR-4104-P
	5	—	—	—	—	—	—	—
	6	A6HR-6104	A6HR-6104-P	A6HR-6104-PM	A6SR-6101	A6SR-6101-P	A6SR-6104	A6SR-6104-P
	7	—	—	—	—	—	—	—
	8	A6HR-8104	A6HR-8104-P	A6HR-8104-PM	A6SR-8101	A6SR-8101-P	A6SR-8104	A6SR-8104-P
	9	—	—	—	—	—	—	—
	10	A6HR-0104	A6HR-0104-P	A6HR-0104-PM	A6SR-0101	A6SR-0101-P	A6SR-0104	A6SR-0104-P
Durability		1,000 operations min.			1,000 operations min.			
Washing		Not possible			Not possible			
Degree of protection		IEC IP40			IEC IP40			
Ambient operating temperature		-30 to +85°C			-20 to +70°C			
Ambient operating humidity		35 to 95%RH (for +5 to +35°C)			35 to 95%RH (for +5 to +35°C)			

Mounting		Through-hole mounting				
Model		A6TR		A6DR	A6FR	
Terminal pitch		2.54mm (Standard pitch)		2.54mm (Standard pitch)	2.54mm (Standard pitch)	
Appearance						
Features		Low profile piano DIP switch with through-hole terminals.		Through-hole mounting piano DIP switch with high environmental resistance by sealed construction.	Box type through-hole mounting piano DIP switch.	
Actuator types		Short actuator	Long actuator	Long actuator	Short actuator	Long actuator
Packaging		Tube		Box	Tube	
Contact material		Gold plated		Gold plated	Gold plated	
Ratings(resistive load)		25mA 24VDC / 10μA (minimum current) at 3.5VDC		30mA 30VDC / 10μA (minimum current) at 3.5VDC	25mA 24VDC / 10μA (minimum current) at 3.5VDC	
Contact resistance(initial values)		200mΩ max.		100mΩ max.	200mΩ max.	
No. of poles	1	—	—	—	—	—
	2	A6TR-2101	A6TR-2104	A6DR-2100	A6FR-2101	A6FR-2104
	3	—	—	—	A6FR-3101	A6FR-3104
	4	A6TR-4101	A6TR-4104	A6DR-4100	A6FR-4101	A6FR-4104
	5	—	—	—	A6FR-5101	A6FR-5104
	6	A6TR-6101	A6TR-6104	A6DR-6100	A6FR-6101	A6FR-6104
	7	—	—	—	A6FR-7101	A6FR-7104
	8	A6TR-8101	A6TR-8104	A6DR-8100	A6FR-8101	A6FR-8104
	9	—	—	—	A6FR-9101	A6FR-9104
	10	A6TR-0101	A6TR-0104	A6DR-0100	A6FR-0101	A6FR-0104
Durability		1,000 operations min.		2,000 operations min.	1,000 operations min.	
Washing		Not possible		Possible	Not possible	
Degree of protection		IEC IP40		Internally sealed (IEC IP64 equivalency)	IEC IP40	
Ambient operating temperature		-20 to +70°C		-20 to +70°C	-20 to +70°C	
Ambient operating humidity		35 to 95%RH (for +5 to +35°C)		35 to 95%RH (for +5 to +35°C)	35 to 95%RH (for +5 to +35°C)	

Note:Default actuator setting is OFF for Slide DIP Switches and Piano DIP Switches.
Be sure to read the Safety precautions common to all DIP Switches for correct use.

Rotary DIP Switches

The products with this mark are also available in package reels of 100 pcs.

Mounting					Surface mounting			
Model					A6KS			
Terminal pitch					7.2×7.2mm			
Appearance								
Features					Top actuated miniature(7.2×7.2mm) rotary DIP switch with surface mounting terminals.			
Actuator types					Tube		Embossed taping standard reel	
Packaging					Gold plated			
Contact material					25mA 24VDC / 10μA (minimum current) at 3.5VDC			
Ratings(resistive load)					200mΩ max.			
Position					10	16	10	16
Types	Flat	Real code	Top actuated	4x1Terminals	—	—	—	—
				3x3Terminals	A6KS-102RF	A6KS-162RF	A6KS-102RF-P	A6KS-162RF-P
				5x2Terminals	A6KS-104RF	A6KS-164RF	A6KS-104RF-P	A6KS-164RF-P
			Side actuated	4x1Terminals	—	—	—	—
				3x3Terminals	—	—	—	—
				5x2Terminals	—	—	—	—
	Extended actuator		Top actuated	4x1Terminals	—	—	—	—
				3x3Terminals	A6KS-102RS	A6KS-162RS	A6KS-102RS-P	A6KS-162RS-P
				5x2Terminals	A6KS-104RS	A6KS-164RS	A6KS-104RS-P	A6KS-164RS-P
			Side actuated	4x1Terminals	—	—	—	—
				3x3Terminals	—	—	—	—
				5x2Terminals	—	—	—	—
Durability					20,000 steps min.			
Washing					Not possible			
Degree of protection					IEC IP60			
Ambient operating temperature					-30 to +80℃			
Ambient operating humidity					35 to 95%RH (for +5 to +35℃)			

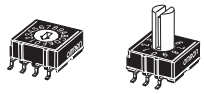
Mounting					Surface mounting			
Model					A6KSV			
Terminal pitch					7.2×7.2mm			
Appearance								
Features					Side actuated miniature(7.2×7.2mm) rotary DIP switch with surface mounting terminals.			
Actuator types					Tube		Embossed taping standard reel	
Packaging					Gold plated			
Contact material					25mA 24VDC / 10μA (minimum current) at 3.5VDC			
Ratings(resistive load)					200mΩ max.			
Position					10	16	10	16
Types	Flat	Real code	Top actuated	4x1Terminals	—	—	—	—
				3x3Terminals	—	—	—	—
				5x2Terminals	—	—	—	—
			Side actuated	4x1Terminals	—	—	—	—
				3x3Terminals	—	—	—	—
				5x2Terminals	A6KSV-104RF	A6KSV-164RF	A6KSV-104RF-P	A6KSV-164RF-P
	Extended actuator		Top actuated	4x1Terminals	—	—	—	—
				3x3Terminals	—	—	—	—
				5x2Terminals	—	—	—	—
			Side actuated	4x1Terminals	—	—	—	—
				3x3Terminals	—	—	—	—
				5x2Terminals	A6KSV-104RS	A6KSV-164RS	A6KSV-104RS-P	A6KSV-164RS-P
Durability					20,000 steps min.			
Washing					Not possible			
Degree of protection					IEC IP60			
Ambient operating temperature					-30 to +80℃			
Ambient operating humidity					35 to 95%RH (for +5 to +35℃)			

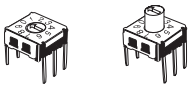
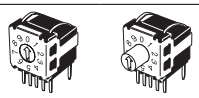
Note:Default rotor setting is 0 for Rotary DIP Switches.
Be sure to read the Safety precautions common to all DIP Switches for correct use.

Switch

Rotary DIP Switches

The products with this mark are also available in package reels of 100 pcs.

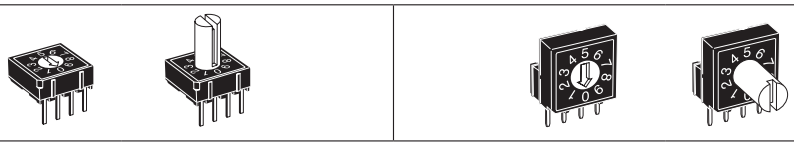
Mounting					Surface mounting			
Model					A6RS			
Terminal pitch					9.8×9.9mm			
Appearance								
Features					Surface mounting rotary DIP switch.			
Actuator types					Tube		Embossed taping standard reel	
Packaging					Gold plated			
Contact material					25mA 24VDC / 10μA (minimum current) at 3.5VDC			
Ratings (resistive load)					200mΩ max.			
Position					10	16	10	16
Types	Flat	Real code	Top actuated	4x1Terminals	A6RS-101RF	A6RS-161RF	A6RS-101RF-P	A6RS-161RF-P
				3x3Terminals	A6RS-102RF	A6RS-162RF	A6RS-102RF-P	A6RS-162RF-P
				5x2Terminals	—	—	—	—
			Side actuated	4x1Terminals	—	—	—	—
				3x3Terminals	—	—	—	—
				5x2Terminals	—	—	—	—
	Extended actuator		Top actuated	4x1Terminals	A6RS-101RS	A6RS-161RS	A6RS-101RS-P	A6RS-161RS-P
				3x3Terminals	A6RS-102RS	A6RS-162RS	A6RS-102RS-P	A6RS-162RS-P
				5x2Terminals	—	—	—	—
			Side actuated	4x1Terminals	—	—	—	—
				3x3Terminals	—	—	—	—
				5x2Terminals	—	—	—	—
Durability					5,000 steps min.			
Washing					Not possible			
Degree of protection					IEC IP60			
Ambient operating temperature					-25 to +80℃			
Ambient operating humidity					35 to 95%RH (for +5 to +35℃)			

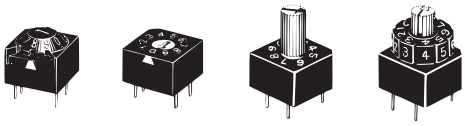
Mounting					Through-hole mounting			
Model					A6K		A6KV	
Terminal pitch					7.2×7.2mm			
Appearance								
Features					Miniature (7.2×7.2mm) rotary DIP switch with through-hole terminals.			
Actuator types					Tube			
Packaging					Gold plated			
Contact material					25mA 24VDC / 10μA (minimum current) at 3.5VDC			
Ratings (resistive load)					200mΩ max.			
Position					10	16	10	16
Types	Flat	Real code	Top actuated	4x1Terminals	—	—	—	—
				3x3Terminals	A6K-102RF	A6K-162RF	—	—
				5x2Terminals	A6K-104RF	A6K-164RF	—	—
			Side actuated	4x1Terminals	—	—	—	—
				3x3Terminals	—	—	A6KV-102RF	A6KV-162RF
				5x2Terminals	—	—	A6KV-104RF	A6KV-164RF
	Extended actuator		Top actuated	4x1Terminals	—	—	—	—
				3x3Terminals	A6K-102RS	A6K-162RS	—	—
				5x2Terminals	A6K-104RS	A6K-164RS	—	—
			Side actuated	4x1Terminals	—	—	—	—
				3x3Terminals	—	—	A6KV-102RS	A6KV-162RS
				5x2Terminals	—	—	A6KV-104RS	A6KV-164RS
Durability					20,000 steps min.			
Washing					Not possible			
Degree of protection					IEC IP60			
Ambient operating temperature					-30 to +80℃			
Ambient operating humidity					35 to 95%RH (for +5 to +35℃)			

Note: Default rotor setting is 0 for Rotary DIP Switches.
Be sure to read the Safety precautions common to all DIP Switches for correct use.

Switch

Rotary DIP Switches

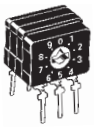
Mounting					Through-hole mounting			
Model					A6R		A6RV	
Terminal pitch					9.8×9.9mm			
Appearance								
Features					Through-hole mounting rotary DIP switch.			
Actuator types					Tube			
Packaging					Gold plated			
Contact material					25mA 24VDC / 10μA (minimum current) at 3.5VDC			
Ratings (resistive load)					200mΩ max.			
Position					10	16	10	16
Types	Flat	Real code	Top actuated	4x1Terminals	A6R-101RF	A6R-161RF	—	—
				3x3Terminals	A6R-102RF	A6R-162RF	—	—
				5x2Terminals	—	—	—	—
			Side actuated	4x1Terminals	—	—	A6RV-101RF	A6RV-161RF
				3x3Terminals	—	—	A6RV-102RF	A6RV-162RF
				5x2Terminals	—	—	—	—
	Extended actuator		Top actuated	4x1Terminals	A6R-101RS	A6R-161RS	—	—
				3x3Terminals	A6R-102RS	A6R-162RS	—	—
				5x2Terminals	—	—	—	—
			Side actuated	4x1Terminals	—	—	A6RV-101RS	A6RV-161RS
				3x3Terminals	—	—	A6RV-102RS	A6RV-162RS
				5x2Terminals	—	—	—	—
Durability					5,000 steps min.			
Washing					Not possible			
Degree of protection					IEC IP60			
Ambient operating temperature					-25 to +80℃			
Ambient operating humidity					35 to 95%RH (for +5 to +35℃)			

Mounting			Through-hole mounting	
Model			A6A	
Terminal pitch			10×10mm	
Appearance				
Features			Sealed rotary DIP switch with various selections for code setting.	
Actuator types			Box	
Packaging			Gold plated	
Contact material			0.1A 28VDC / 1mA (minimum current) at 5VDC	
Ratings (resistive load)			200mΩ max.	
Position			10	16
Types	Cone	Real code	A6A-10R	A6A-16R
		Complementary code	A6A-10C	A6A-16C
	Flat	Real code	A6A-10RF	A6A-16RF
		Complementary code	A6A-10CF	A6A-16CF
	Extended actuator	Real code	A6A-10RS	A6A-16RS
		Complementary code	A6A-10CS	A6A-16CS
	Wheel	Real code	A6A-10RW	A6A-16RW
		Complementary code	A6A-10CW	A6A-16CW
Durability			2,000 steps min.	
Washing			Possible	
Degree of protection			Internally sealed (IEC IP64 equivalency)	
Ambient operating temperature			-10 to +70℃	
Ambient operating humidity			45 to 85%RH (for +5 to +35℃)	

Note: Default rotor setting is 0 for Rotary DIP Switches.
Be sure to read the Safety precautions common to all DIP Switches for correct use.

Switch

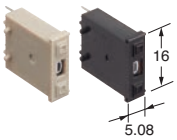
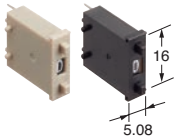
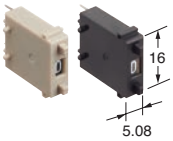
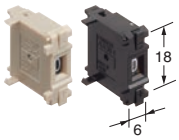
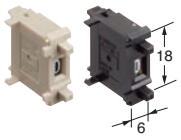
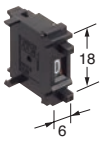
Rotary DIP Switches

Mounting				Through-hole mounting			
Model				A6C		A6CV	
Terminal pitch				9×6.6mm		9×7.1mm	
Appearance							
Features				Internally sealed DIL-IC top actuated type DIP switch.		Internally sealed DIL-IC side actuated type rotary DIP switch.	
Actuator types				Tube		Box	
Packaging				Gold plated		Gold plated	
Contact material				0.1A 30VDC / 10μA (minimum current) at 3.5VDC		0.1A 30VDC / 10μA (minimum current) at 3.5VDC	
Ratings (resistive load)				200mΩ max.		200mΩ max.	
Position				10	16	10	16
Types	Flat	Real code	Top actuated	A6C-10R(N)	A6C-16R(N)	—	—
			Side actuated	—	—	A6CV-10R	A6CV-16R
Durability				2,000 steps min.		2,000 steps min.	
Washing				Possible		Possible	
Degree of protection				Internally sealed (IEC IP64 equivalency)		Internally sealed (IEC IP64 equivalency)	
Ambient operating temperature				-20 to +70℃		-20 to +70℃	
Ambient operating humidity				35 to 95%RH (for +5 to +35℃)		35 to 95%RH (for +5 to +35℃)	

Note: Default rotor setting is 0 for Rotary DIP Switches.
Be sure to read the Safety precautions common to all DIP Switches for correct use.

Switch

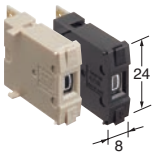
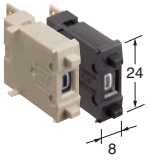
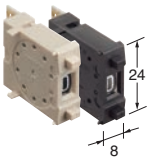
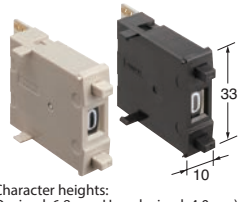
Thumbwheel Switches Line up

Category		Push Operation										
Model		A7DP-2		A7D-2		A7D-1		A7CN-L2		A7CN-2		A7CN-1
Shape (mm)		Push-operated Switches  (Character height: 3.2mm)		 (Character height: 3.2mm)		 (Character height: 3.2mm)		Locking Switches  (Character height: 3.4mm)		 (Character height: 3.4mm)		 (Character height: 3.4mm)
Features		• For DC circuits (3.3 to 30VDC) • Saves space • Can be manufactured with stoppers						• 3.3 to 28VDC • For building into small machines • Switching current: 1mA to 0.1A				
Installation method		One-step mounting Front mounting (PCB Terminals)				Screw mounting (Back mounting)		One-step mounting (Front mounting)				Screw mounting (Back mounting)
Terminals		PCB Terminals						PCB Terminals				
Dust resistance		Yes (IP50)						Yes (IP50)				
Case color		Light gray	Black	Light gray	Black	Light gray	Black	Light gray	Black	Light gray	Black	Black
Switch units according to output codes	03 (decimal code)	—		—		—		—		—		—
	06 (binary code decimal)	A7DP-206	A7DP-206-1	A7D-206	A7D-206-1	A7D-106	A7D-106-1	A7CN-L206	A7CN-L206-1	A7CN-206	A7CN-206-1	A7CN-106-1
	07 (binary coded decimal, with component-adding provision)	—		—		—		—		—		—
	19 (decimal code, with component-adding provision)	—		—		—		—		—		—
	54 (binary coded hexadecimal)	—		—		—		—		—		—
	55 (binary coded hexadecimal, with component-adding provision)	—		—		—		—		—		—
End caps		A7D-2M	A7D-2M-1	A7D-2M	A7D-2M-1	A7D-1M	A7D-1M-1	A7CN-2M	A7CN-2M-1	A7CN-2M	A7CN-2M-1	A7CN-1M-1
Spare unit		A7D-2PA	A7D-2PA-1	A7D-2PA	A7D-2PA-1	A7D-1PA	A7D-1PA-1	A7CN-2PA	A7CN-2PA-1	A7CN-2PA	A7CN-2PA-1	A7CN-1PA-1
Connector	Solder terminals	—						—				
	PCB terminals	—						—				

Note: Only basic specifications are provided in the table. Always refer to the specified pages for detailed specifications and to precautions before attempting to use the product.

Switch

Thumbwheel Switches Line up

Category		Push Operation										Rotary Operation
Model		A7BL		A7BS		A7BS-20□-S		A7PS		A7PH		A7MD
Shape (mm)		Locking Switches  (Character height: 4.8mm)		 (Character heights: Decimal: 4.8mm, Hexadecimal: 3.2mm)		Switches with External Stoppers  (Character height: 4.8mm)		Long-life Switches  (Character heights: Decimal: 6.8mm, Hexadecimal: 4.0mm)				(Character height: 2.8mm)
Features		• For medium-size devices • Can be manufactured with stoppers		• For medium-size devices • Hexadecimal models available • Can be manufactured with stoppers		• For medium-size devices		• Mechanical durability: 100,000 operations min • For medium-size and large devices • 50VAC or 3.3 to 28VDC • Can be manufactured with stoppers		• Mechanical durability: 2,000,000 operations min • For medium and large devices • 125VAC or 3.3 to 28VDC • Can be manufactured with stoppers		• For PCBs in small devices
Installation method		One-step mounting (Front mounting)						One-step mounting (Front mounting)				Secured to panel with PCB.
Terminals		Solder Terminals						Solder Terminals				PCB Terminals
Dust resistance		Yes (IP50)						Yes (IP50)				Yes (simple dust resistance)
Case color		Light gray	Black	Light gray	Black	Light gray	Black	Light gray	Black	Light gray	Black	Black
Switch units according to output codes	03 (decimal code)	—		—		—		A7PS-203	A7PS-203-1	A7PH-203	A7PH-203-1	—
	06 (binary code decimal)	A7BL-206	A7BL-206-1	A7BS-206	A7BS-206-1	A7BS-206-S	A7BS-206-S-1	A7PS-206	A7PS-206-1	A7PH-206	A7PH-206-1	A7MD-106-P-09
	07 (binary coded decimal, with component-adding provision)	A7BL-207	A7BL-207-1	A7BS-207	A7BS-207-1	A7BS-207-S	A7BS-207-S-1	A7PS-207	A7PS-207-1	A7PH-207	A7PH-207-1	—
	19 (decimal code, with component-adding provision)	—		—	—	—		A7PS-219	A7PS-219-1	—		—
	54 (binary coded hexadecimal)	—		A7BS-254	A7BS-254-1	—		A7PS-254	A7PS-254-1	A7PH-254	A7PH-254-1	—
	55 (binary coded hexadecimal, with component-adding provision)	—		A7BS-255	A7BS-255-1	—		A7PS-255	A7PS-255-1	—		—
End caps		A7B-M	A7B-M-1	A7B-M	A7B-M-1	A7B-M	A7B-M-1	A7P-M	A7P-M-1	A7P-M	A7P-M-1	A7MD-1M
Spare unit		A7B-PA	A7B-PA-1	A7B-PA	A7B-PA-1	A7B-PA	A7B-PA-1	A7P-PA	A7P-PA-1	A7P-PA	A7P-PA-1	A7MD-PA
Connector	Solder terminals	A7B-C						NRT-C/NRT-CN				—
	PCB terminals	A7B-CP						NRT-CP				—

Note 1: The A7BS can be manufactured in PCB-mounting models.
Note 2: Only basic specifications are provided in the table. Always refer to the specified pages for detailed specifications and to precautions before attempting to use the product.

Please check each region's Terms & Conditions by region website.

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