

# Air Cylinder: Standard Type Double Acting, Single Rod

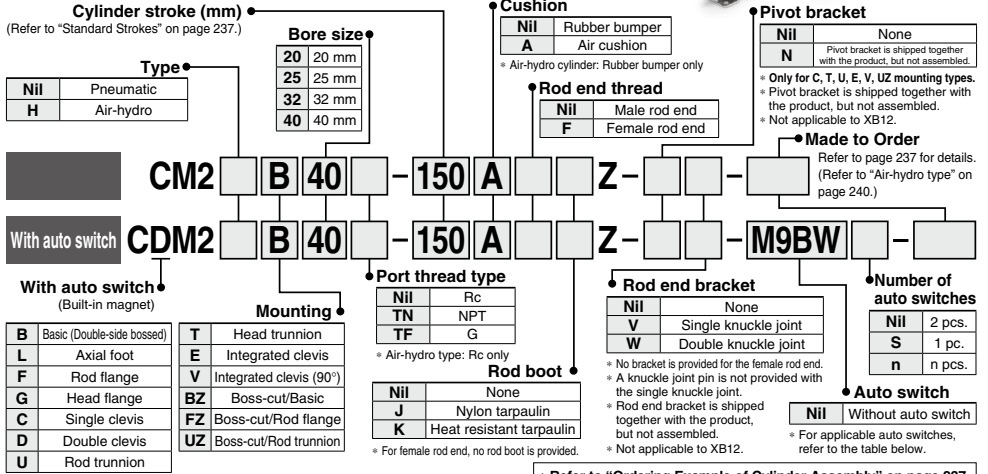
## CM2 Series

ø20, ø25, ø32, ø40

RoHS



### How to Order



\* Refer to "Ordering Example of Cylinder Assembly" on page 237.

### Applicable Auto Switches/Refer to pages 1271 to 1365 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length (m)				Pre-wired connector	Applicable load						
					DC	AC	Perpendicular	In-line	0.5 (NII)	1 (M)	3 (L)	5 (Z)			None (N)					
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NV	M9N	●	●	○	—	○	IC circuit					
				3-wire (PNP)				M9PV	M9P	●	●	○	—	○						
		2-wire		M9BV				M9B	●	●	○	—	○	—						
		—		H7C				●	●	○	—	○								
		Terminal conduit		—				K39A	—	—	—	●	—	—		IC circuit				
		—		K39A				—	—	—	—	●	—	—		—				
	Diagnostic indication (2-color indicator)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NVV	M9NW	●	●	○	—	○	IC circuit					
	3-wire (PNP)			M9PVV				M9PW	●	●	○	—	○							
	2-wire			M9BVV				M9BW	●	●	○	—	○	—						
	—			H7NF				●	●	○	—	○								
Water resistant (2-color indicator)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NAV*1	M9NA*1	○	○	○	—	○	IC circuit						
3-wire (PNP)			M9PAV*1				M9PA*1	○	○	○	—	○								
2-wire			M9BAV*1				M9BA*1	○	○	○	—	○	—							
4-wire (NPN)			—				H7NF	●	●	○	—	○								
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	24 V	12 V	—	A96V	A96	●	●	—	—	—	IC circuit					
				—				A93V*2	A93	●	●	—	—	—						
				100 V or less				A90V	A90	●	●	—	—	—		IC circuit				
				100 V, 200 V				—	B54	●	●	—	—	—						
				200 V or less				—	B64	●	●	—	—	—						
		Connector		Terminal conduit				Yes	2-wire	24 V	12 V	—	—	C73C	●	●	●	●	—	IC circuit
		—							C80C				●	●	●	●	—	—		
		—							A33A				—	—	—	●	—	—	PLC	
		—							A34A				—	—	—	●	—	—		
		—							A44A				—	—	—	●	—	—	Relay, PLC	
Diagnostic indication (2-color indicator)	Grommet	Yes	—	—	—	—	B59W	●	●	—	—	—								

\*1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance.

\*2 A water-resistant type cylinder is recommended for use in an environment which requires water resistance.

\*3 2 1 m type lead wire is only applicable to D-A93.

\* Lead wire length symbols: 0.5 m ..... NII (Example) M9NV  
1 m ..... M (Example) M9NVV  
3 m ..... L (Example) M9NWL  
5 m ..... Z (Example) M9NVZ  
None ..... N (Example) H7CN

\* Solid state auto switches marked with "○" are produced upon receipt of order.

\* Do not indicate suffix "N" for no lead wire on the D-A93□□/A44A/G39A/K39A models.

\* Since there are other applicable auto switches than listed above, refer to page 331 for details.

\* For details about auto switches with pre-wired connector, refer to pages 1340 and 1341.

\* The D-A93□□/M9□□□ auto switches are shipped together, (but not assembled). (However, only the auto switch mounting brackets are assembled before shipment.)

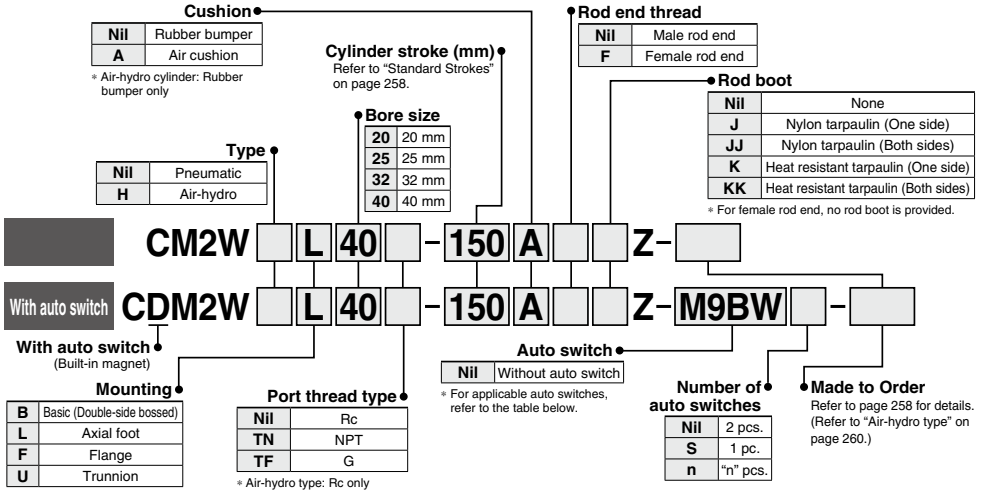
# Air Cylinder: Standard Type Double Acting, Double Rod

## CM2W Series

∅20, ∅25, ∅32, ∅40

RoHS

### How to Order



### Applicable Auto Switches/Refer to pages 1271 to 1365 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length (m)					Pre-wired connector	Applicable load			
					DC	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)					
																M9NV	M9N	●
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	M9PV	M9P	●	●	○	○	○	○	IC circuit	Relay, PLC		
				3-wire (PNP)			M9BV	M9B	●	●	○	○	○					
		Connector		2-wire	12 V	—	H7C	●	—	●	—	—	—	—	—		—	
				Terminal conduit		3-wire (NPN)	5 V, 12 V	—	G39A	—	—	—	●	—	—		—	IC circuit
		Diagnostic indication (2-color indicator)		Grommet	Yes	2-wire		12 V	—	—	K39A	—	—	—	●		—	—
						3-wire (NPN)	M9NVV			M9NW	●	●	○	○	○		○	IC circuit
	3-wire (PNP)		M9PVV	M9PV		●	●	○	○	○	○	—						
	2-wire		M9BWW	M9BW		●	●	○	○	○	○	—						
	3-wire (NPN)		M9NAV <sup>*1</sup>	M9NA <sup>*1</sup>		○	○	○	○	○	○	○	IC circuit					
	3-wire (PNP)		M9PAV <sup>*1</sup>	M9PA <sup>*1</sup>		○	○	○	○	○	○	○	—					
	Water resistant (2-color indicator)	Grommet	Yes	2-wire	12 V	—	M9BAV <sup>*1</sup>	M9BA <sup>*1</sup>	○	○	○	○	○	○	—			
				3-wire (NPN)			5 V, 12 V	—	H7NF	●	—	●	—	—	—		—	IC circuit
With diagnostic output (2-color indicator)		Grommet		Yes	4-wire (NPN)	5 V, 12 V		—	A96V	A96	●	—	●	—	—	—	IC circuit	
					—		A93V <sup>*2</sup>		A93	●	—	●	—	—	—	—		
		Connector			2-wire	24 V	12 V	100 V	A90V	A90	●	—	●	—	—	—	IC circuit	
								100 V or less	—	B54	●	—	●	—	—	—	—	
Terminal conduit	2-wire	24 V	12 V	100 V, 200 V	—	B64	●	—	●	—	—	—	—	—				
				200 V or less	—	C73C	●	—	●	—	—	—	—	—				
				24 V or less	—	C80C	●	—	●	—	—	—	—	—	IC circuit			
				—	—	A33A	—	—	—	—	—	—	—	—	—			
DIN terminal	2-wire	24 V	12 V	100 V	—	A34A	—	—	—	—	—	—	—	—	PLC			
				200 V	—	A44A	—	—	—	—	—	—	—	—	—	—		
Grommet	2-wire	24 V	12 V	—	—	B59W	●	—	●	—	—	—	—	—	—	Relay, PLC		

\*1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance.

Please contact SMC regarding water resistant types with the above model numbers.

\*2 1 m type lead wire is only applicable to D-A93.

\* Lead wire length symbols: 0.5 m ..... Nil (Example) M9NW  
 1 m ..... M (Example) M9NWM  
 3 m ..... L (Example) M9NWL  
 5 m ..... Z (Example) M9NZ  
 None ..... N (Example) H7CN

\* Solid state auto switches marked with "○" are produced upon receipt of order.  
 \* Do not indicate suffix "N" for no lead wire on D-A3□A/A44□G39A/K39A models.

\* Since there are other applicable auto switches than listed above, refer to page 331 for details.

\* For details about auto switches with pre-wired connector, refer to pages 1340 and 1341.

\* The D-A9□□/M9□□□ auto switches are shipped together, (but not assembled). (However, only the auto switch mounting brackets are assembled before shipment.)

# Air Cylinder: Standard Type Single Acting, Spring Return/Extend

## CM2 Series

ø20, ø25, ø32, ø40

RoHS

### How to Order

<b>B</b> Basic (Double-side bossed)	<b>T</b> Head trunnion
<b>L</b> Axial foot	<b>E</b> Integrated clevis
<b>F</b> Rod flange	<b>V</b> Integrated clevis (90°)
<b>G</b> Head flange	<b>BZ</b> Boss-cut/Basic
<b>C</b> Single clevis	<b>FZ</b> Boss-cut/Rod flange
<b>D</b> Double clevis	<b>UZ</b> Boss-cut/Rod trunnion
<b>U</b> Rod trunnion	

**Mounting**

**Cylinder stroke (mm)**  
Refer to "Standard Strokes" on page 268.

<b>S</b> Single acting, Spring return
<b>T</b> Single acting, Spring extend

**Action**

<b>Nil</b> Male rod end	<b>F</b> Female rod end
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**Rod end thread**

<b>Nil</b> None	<b>N</b> 2 pcs.
<b>V</b> Single knuckle joint	<b>S</b> 1 pc.
<b>W</b> Double knuckle joint	<b>n</b> "n" pcs.

**Pivot bracket**

**Nil** None

**N** Pivot bracket is shipped together with the product, but not assembled.

\* Only for C, T, U, E, V, UZ mounting types.  
\* Pivot bracket is shipped together with the product, but not assembled.

**Made to Order**  
Refer to page 268 for details.

**CM2 B 32-150 S Z**

**With auto switch CDM2 B 32-150 S Z M9BW**

**With auto switch (Built-in magnet)**

<b>20</b> 20 mm	<b>Nil</b> None	<b>Nil</b> Without auto switch
<b>25</b> 25 mm	<b>V</b> Single knuckle joint	* For applicable auto switches, refer to the table below.
<b>32</b> 32 mm	<b>W</b> Double knuckle joint	
<b>40</b> 40 mm		

**Bore size**

**Rod end bracket**

**Auto switch**

**Number of auto switches**

\* No bracket is provided for the female rod end.  
\* A knuckle joint pin is not provided with the single knuckle joint.  
\* Rod end bracket is shipped together with the product, but not assembled.  
\* Not applicable to XB12.

\* Refer to "Ordering Example of Cylinder Assembly" on page 268.

### Applicable Auto Switches/Refer to pages 1271 to 1365 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Lead voltage		Auto switch model		Lead wire length (m)				Pre-wired connector	Applicable load			
					DC	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)			None (N)		
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	M9NV	M9N	●	●	○	—	○	Relay, PLC			
				3-wire (PNP)			M9PV	M9P	●	●	○	—	○				
		Connector		2-wire	12 V	M9BV	M9B	●	●	○	—	○					
				3-wire (NPN)		—	H7C	●	—	●	—	○					
	Terminal conduit	Grommet	Yes	2-wire	5 V, 12 V	—	G39A	—	—	●	—	—	IC circuit				
				3-wire (PNP)	12 V	—	K39A	—	—	●	—	—	IC circuit				
	Diagnostic indication (2-color indicator)	Water resistant (2-color indicator)	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	M9NVV	M9NW	●	●	○	—		○	Relay, PLC	
					3-wire (PNP)			M9PVV	M9PV	●	●	○	—		○		
					2-wire	12 V	M9BVV	M9BV	●	●	○	—	○				
					3-wire (NPN)		M9NAV <sup>*1</sup>	M9NA <sup>*1</sup>	○	○	○	—	○		IC circuit		
3-wire (PNP)					M9PAV <sup>*1</sup>	M9PA <sup>*1</sup>	○	○	○	—	○						
2-wire					12 V	M9BAV <sup>*1</sup>	M9BA <sup>*1</sup>	○	○	○	—	○					
4-wire (NPN)	5 V, 12 V	—	H7NF	●	—	●	—	○	IC circuit								
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	5 V	—	A96V	A96	●	—	●	—	—	IC circuit	Relay, PLC		
							100 V	A93V <sup>*2</sup>	A93	●	●	●	—	—			
				100 V or less	A90V	A90	●	●	●	—	—	IC circuit					
				100 V, 200 V	—	B54	●	—	●	—	—	—					
		Connector		2-wire	24 V	12 V	200 V or less	—	B64	●	—	●	—	—		—	
							24 V or less	—	C73C	●	—	●	—	●		—	IC circuit
		Terminal conduit		Grommet	Yes	—	—	—	C80C	●	—	●	—	—		—	
						—	—	A33A	—	—	—	—	●	—		—	PLC
		DIN terminal		Grommet	Yes	100 V, 200 V	—	—	A34A	—	—	—	—	—		—	Relay, PLC
						—	—	A44A	—	—	—	—	●	—		—	
Diagnostic indication (2-color indicator)	—	—	—	—	—	B59W	●	—	●	—	—	—	—				

\*1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance.

\*2 Please contact SMC regarding water resistant types with the above model numbers.

\*3 2 m type lead wire is only applicable to D-A93.

\* Lead wire length symbols: 0.5 m ..... Nil (Example) M9NW  
1 m ..... M (Example) M9NWM  
3 m ..... L (Example) M9NWL  
5 m ..... Z (Example) M9NZ  
None ..... N (Example) H7CN

\* Solid state auto switches marked with "○" are produced upon receipt of order.  
\* Do not indicate suffix "N" for no lead wire on D-A3□A/A44A/G39A/K39A models.

\* Since there are other applicable auto switches than listed above, refer to page 331 for details.

\* For details about auto switches with pre-wired connector, refer to pages 1340 and 1341.

\* The D-A9□□/M9□□ auto switches are shipped together, (but not assembled). (However, only the auto switch mounting brackets are assembled before shipment.)

# Air Cylinder: Non-rotating Rod Type

## Double Acting, Single Rod

# CM2K Series

ø20, ø25, ø32, ø40



### How to Order

<b>B</b> Basic (Double-side bossed)	<b>T</b> Head trunnion	<b>Cylinder stroke (mm)</b> Refer to "Standard Strokes" on page 283.	<b>Pivot bracket</b>	
<b>L</b> Axial foot	<b>E</b> Integrated clevis			<b>Nil</b> None
<b>F</b> Rod flange	<b>V</b> Integrated clevis (90°)			<b>N</b> Pivot bracket is shipped together with the product, but not assembled.
<b>G</b> Head flange	<b>BZ</b> Boss-cut/Basic			* Only for C, T, U, E, V, UZ mounting types.
<b>C</b> Single clevis	<b>FZ</b> Boss-cut/Rod flange	<b>Bore size</b>	* Pivot bracket is shipped together with the product, but not assembled.	
<b>D</b> Double clevis	<b>UZ</b> Boss-cut/Rod trunnion			<b>20</b> 20 mm
<b>U</b> Rod trunnion				<b>25</b> 25 mm
				<b>32</b> 32 mm
		<b>40</b> 40 mm		
		<b>Cushion</b>	<b>Made to Order</b> Refer to page 283 for details.	
				<b>Nil</b> Rubber bumper
				<b>A</b> Air cushion

**CM2K B 40 - 150 A [ ] [ ] Z - [ ] [ ] - [ ]**

**With auto switch CDM2K B 40 - 150 A [ ] [ ] Z - [ ] [ ] - M9BW [ ] - [ ]**

**With auto switch (Built-in magnet)**

**Rod end thread**

<b>Nil</b>	Male rod end
<b>F</b>	Female rod end

**Rod boot**

<b>Nil</b>	None
<b>J</b>	Nylon tarpaulin
<b>K</b>	Heat resistant tarpaulin

\* For female rod end, no rod boot is provided.

**Rod end bracket**

<b>Nil</b>	None
<b>V</b>	Single knuckle joint
<b>W</b>	Double knuckle joint

\* No bracket is provided for the female rod end.  
\* A knuckle joint pin is not provided with the single knuckle joint.  
\* Rod end bracket is shipped together with the product, but not assembled.  
\* Not applicable to XB12.

**Auto switch**

<b>Nil</b>	Without auto switch
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\* For applicable auto switches, refer to the table below.

**Number of auto switches**

<b>Nil</b>	2 pcs.
<b>S</b>	1 pc.
<b>n</b>	"n" pcs.

\* Refer to "Ordering Example of Cylinder Assembly" on page 283.

**Applicable Auto Switches**/Refer to pages 1271 to 1365 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length (m)					Pre-wired connector	Applicable load
					DC	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	Nine (N)		
Solid state auto switch	—	Grommet	No	3-wire (NPN)	5 V, 12 V	—	M9NV	M9N	●	●	●	○	—	○	IC circuit
				3-wire (PNP)			M9PV	M9P	●	●	●	○	—	○	
		2-wire		M9BV	M9B	●	●	●	○	—	○	—			
		Terminal conduit		—	H7C	●	—	●	●	—	—				
	Diagnostic indication (2-color indicator)	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	—	G39A**	—	—	—	●	—	—	IC circuit
				2-wire			—	K39A**	—	—	—	●	—	—	
	Water resistant (2-color indicator)	Grommet	No	3-wire (NPN)	5 V, 12 V	—	M9NVV	M9NV	●	●	●	○	—	○	IC circuit
				3-wire (PNP)			M9PVV	M9PV	●	●	●	○	—	○	
				2-wire	M9BVV	M9BV	●	●	●	○	—	○	—		
				4-wire (NPN)	M9NAV*1	M9NA*1	○	○	○	○	—	—		IC circuit	
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	5 V	—	A96V	A96	●	●	●	—	—	—	IC circuit
				100 V			A93V*2	A93	●	●	●	—	—	—	
		100 V or less		A90V	A90	●	●	●	—	—	—	IC circuit			
		200 V or less		—	B54**	●	●	●	—	—	—	—			
		24 V or less		—	B64**	●	●	●	—	—	—				
		2-wire		—	C73C	●	●	●	●	—	—	IC circuit			
Terminal conduit	—	C80C	●	●	●	●	—	—	—						
DIN terminal	100 V, 200 V	—	A33A**	—	—	—	—	—		—	PLC				
Diagnostic indication (2-color indicator)	Grommet	Yes	100 V, 200 V	—	—	A34A**	—	—	—	—	—	—	—	Relay, PLC	
			—	—	A44A**	—	—	—	—	—	—				
—	—	—	—	—	—	—	B59W	●	●	●	—	—	—	—	

\*1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance.  
Please contact SMC regarding water resistant types with the above model numbers.

\*2 1 m type lead wire is only applicable to D-A93.

\* Lead wire length symbols: 0.5 m ..... Nil (Example) M9NW  
1 m ..... M (Example) M9MWM  
3 m ..... L (Example) M9NWL  
5 m ..... Z (Example) M9NZ  
None ..... N (Example) H7CN

\* Solid state auto switches marked with "○" are produced upon receipt of order.  
\* Do not indicate suffix "N" for no lead wire on the D-A3C/A/A44A/G39A/K39A models.  
\* D-A3C/A/A44A/G39A/K39A/B54/B64 cannot be mounted on bore sizes ø20 and ø25 cylinder with air cushion.

\* Since there are other applicable auto switches than listed above, refer to page 331 for details.  
\* For details about auto switches with pre-wired connector, refer to pages 1340 and 1341.  
\* The D-A93□/M9□□ auto switches are shipped together, (but not assembled). (However, only the auto switch mounting brackets are assembled before shipment.)

# Air Cylinder: Non-rotating Rod Type

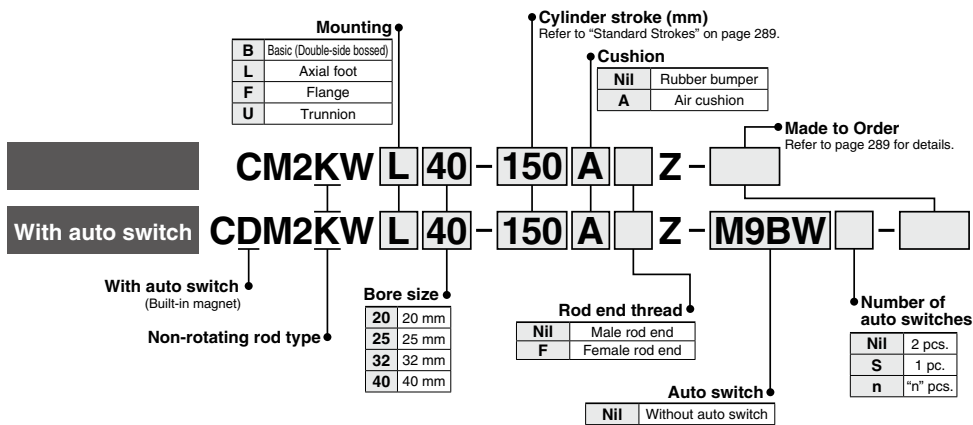
## Double Acting, Double Rod

# CM2KW Series

ø20, ø25, ø32, ø40



### How to Order



\* For applicable auto switches, refer to the table below.

### Applicable Auto Switches/Refer to pages 1271 to 1365 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model	Lead wire length (m)					Pre-wired connector	Applicable load					
					DC	AC		0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)							
Solid state auto switch	Diagnostic indication (2-color indicator)	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	M9NV	M9N	●	●	○	—	○	IC circuit	Relay, PLC				
				3-wire (PNP)			M9PV	M9P	●	●	○	—							
		Connector		2-wire	M9BV		M9B	●	●	○	—	○							
				Terminal conduit	3-wire (NPN)		—	H7C	●	●	●	—	—						
		Water resistant (2-color indicator)		Grommet	Yes		2-wire	5 V, 12 V	—	G39A**	—	—	●			—	—	—	IC circuit
							3-wire (PNP)	—	K39A**	—	—	●	—			—	—	—	—
	With diagnostic output (2-color indicator)	Grommet	Yes	2-wire	5 V, 12 V	—	M9NVV	M9NV	●	●	○	—	○	IC circuit					
				3-wire (NPN)	M9PVV		M9PV	●	●	○	—	○							
				3-wire (PNP)	M9BVV		M9BV	●	●	○	—	○							
				2-wire	—		M9BWW	●	●	○	—	○							
				3-wire (NPN)	5 V, 12 V		M9NAV*1	M9NA*1	○	○	○	○	○			IC circuit			
				3-wire (PNP)	5 V, 12 V		M9PAV*1	M9PA*1	○	○	○	○	○						
2-wire	12 V	M9BAV*1	M9BA*1	○	○	○	○	○	IC circuit										
4-wire (NPN)	5 V, 12 V	—	H7NF	●	●	●	—	—		—	—	—							
Reed auto switch	Diagnostic indication (2-color indicator)	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	A96V	A96	●	—	●	—	—	IC circuit	Relay, PLC				
				Connector			100 V	A93V*2	A93	●	●	●	—			—			
							100 V or less	A90V	A90	●	●	●	—			—			
				Terminal conduit			100 V, 200 V	—	B54**	●	●	●	—			—			
							200 V or less	—	B64**	●	●	●	—			—			
				DIN terminal Grommet			24 V or less	—	C73C	●	●	●	●			—	IC circuit		
		—	—		C80C	●	●	●	●	—									
		Grommet	Yes	No	Yes	2-wire	24 V	12 V	—	A33A**	—	—	●	—		—	PLC		
									—	A34A**	—	—	●	—		—			
									—	A44A**	—	—	●	—		—			
									—	A44A**	—	—	●	—		—			
									—	B59W	●	●	—	—		—			
—	—								—	—	—	—	—	—	—	Relay, PLC			

\*1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance. Please contact SMC regarding water resistant types with the above model numbers.

\*2 1 m type lead wire is only applicable to D-A93.

\* Lead wire length symbols: 0.5 m ..... Nil (Example) M9NW  
 1 m ..... M (Example) M9NWW  
 3 m ..... L (Example) M9NWL  
 5 m ..... Z (Example) M9NZ  
 None ..... N (Example) H7CN

\* Solid state auto switches marked with "C" are produced upon receipt of order.  
 \* Do not indicate suffix "N" for no lead wire on the D-A3□A/A44A/G39A/K39A models.  
 \*\* D-A3□A/A44A/G39A/K39A/B54/B64 cannot be mounted on bore sizes ø20 and ø25 cylinder with air cushion.

\* Since there are other applicable auto switches than listed above, refer to page 331 for details.

\* For details about auto switches with pre-wired connector, refer to pages 1340 and 1341.

\* The D-A9□□/M9□□ auto switches are shipped together, (but not assembled). (However, only the auto switch mounting brackets are assembled before shipment.)

# Air Cylinder: Non-rotating Rod Type Single Acting, Spring Return/Extend

## CM2K Series

∅20, ∅25, ∅32, ∅40

RoHS

### How to Order



**Mounting**

B	Basic (Double-side bossed)
L	Axial foot
F	Rod flange
G	Head flange
C	Single clevis
D	Double clevis
U	Rod trunnion

**Head trunnion**

T	Head trunnion
E	Integrated clevis
V	Integrated clevis (90°)
BZ	Boss-cut/Basic
FZ	Boss-cut/Rod flange
UZ	Boss-cut/Rod trunnion

**Cylinder stroke (mm)**  
Refer to "Standard Strokes" on page 294.

**Action**

S	Single acting, Spring return
T	Single acting, Spring extend

**Rod end thread**

Nil	Male rod end
F	Female rod end

**Pivot bracket**

Nil	None
N	Pivot bracket is shipped together with the product, but not assembled.

\* Only for C, T, U, E, V, UZ mounting types.  
\* Pivot bracket is shipped together with the product, but not assembled.

**CM2K L 32 - 150 S [ ] Z - [ ] - [ ]**

**With auto switch CDM2K L 32 - 150 S [ ] Z - [ ] - [ ] M9BW [ ] - [ ]**

**With auto switch (Built-in magnet)**

**Bore size**

20	20 mm
25	25 mm
32	32 mm
40	40 mm

**Rod end bracket**

Nil	None
V	Single knuckle joint
W	Double knuckle joint

\* No bracket is provided for the female rod end.  
\* A knuckle joint pin is not provided with the single knuckle joint.  
\* Rod end bracket is shipped together with the product, but not assembled.  
\* Not applicable to XB12.

**Auto switch**

Nil	Without auto switch
-----	---------------------

\* For applicable auto switches, refer to the table below.

**Number of auto switches**

Nil	2 pcs.
S	1 pc.
n	"n" pcs.

**Made to Order**  
Refer to page 294 for details.

\* Refer to "Ordering Example of Cylinder Assembly" on page 294.

### Applicable Auto Switches/Refer to pages 1271 to 1365 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length (m)					Pre-wired connector	Applicable load			
					DC	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)					
									●	●	○	○	○			○		
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	M9NV	M9N	●	●	○	○	○	○	IC circuit	Relay, PLC		
				3-wire (PNP)			M9PV	M9P	●	●	○	○	○					
		Connector		2-wire	12 V	—	M9BV	M9B	●	●	○	○	○	○	—			
				Terminal conduit			3-wire (NPN)	5 V, 12 V	—	H7C	●	●	○	○			○	IC circuit
		Diagnostic indication (2-color indicator)		Grommet	Yes	2-wire	12 V	—	—	G39A	—	—	—	●	—		IC circuit	
						3-wire (NPN)	5 V, 12 V		—	K39A	—	—	—	●	—			
	Water resistant (2-color indicator)	—	Grommet	Yes	3-wire (PNP)	5 V, 12 V	—	M9NWW	M9NW	●	●	○	○	○	IC circuit			
					3-wire (NPN)			M9PVV	M9PV	●	●	○	○	○				
					2-wire	12 V	—	M9BWW	M9BW	●	●	○	○	○	—			
								3-wire (NPN)	5 V, 12 V	—	M9NAV*1	M9NA*1	○	○			○	○
					3-wire (PNP)	5 V, 12 V	—	M9PAV*1	M9PA*1	○	○	○	○	○	IC circuit			
					2-wire	12 V	—	M9BAV*1	M9BA*1	○	○	○	○	○			IC circuit	
4-wire (NPN)	5 V, 12 V	—	—	H7NF	●	●	○	○	○	○	IC circuit							
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	24 V	12 V	—	A96V	A96	●	●	○	○	○	IC circuit	Relay, PLC		
								100 V	A93V*2	A93	●	●	○	○			○	
								100 V or less	A90V	A90	●	●	○	○			○	IC circuit
								100 V, 200 V	—	B54	●	●	○	○			○	
								200 V or less	—	B64	●	●	○	○			○	—
								—	—	C73C	●	●	○	○			○	
		24 V or less		—	C80C	●	●	○	○	○	IC circuit							
		—		—	A33A	—	—	—	●	—		PLC						
		100 V, 200 V		—	A34A	—	—	—	●	—	—							
		—		—	A44A	—	—	—	●	—		Relay, PLC						
		—		—	B59W	●	●	○	○	○	○							

\*1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance. Please contact SMC regarding water resistant types with the above model numbers.

\*2 1 m type lead wire is only applicable to D-A93.

\* Lead wire length symbols: 0.5 m ..... Nil (Example) M9NW  
1 m ..... M (Example) M9NWM  
3 m ..... L (Example) M9NWL  
5 m ..... Z (Example) M9NWZ  
None ..... N (Example) H7CN

\* Solid state auto switches marked with "○" are produced upon receipt of order.  
\* Do not indicate suffix "N" for no lead wire on the D-A3□□A/A44A/G39A/K39A models.

\* Since there are other applicable auto switches than listed above, refer to page 331 for details.

\* For details about auto switches with pre-wired connector, refer to pages 1340 and 1341.

\* The D-A9□□/M9□□ auto switches are shipped together, (but not assembled). (However, only the auto switch mounting brackets are assembled before shipment.)

# Air Cylinder: Direct Mount Type

## Double Acting, Single Rod

# CM2R Series

∅20, ∅25, ∅32, ∅40



### How to Order

**Type**

Nil	Pneumatic
H	Air-hydro

**Bore size**

20	20 mm
25	25 mm
32	32 mm
40	40 mm

**Cylinder stroke (mm)**  
Refer to "Standard Strokes" on page 300.

**Cushion**

Nil	Rubber bumper
A	Air cushion

\* Air-hydro cylinder: Rubber bumper only

**Made to Order**  
Refer to page 300 for details.  
(Refer to "Air-hydro type" on page 302.)

**CM2**  **R**  **A**  **20** - **100** **A**  **Z** -  -

**With auto switch** **CDM2**  **R**  **A**  **20** - **100** **A**  **Z** -  -  **M9BW**  -

**With auto switch**  
(Built-in magnet)

**Mounting**

A	Bottom mounting type
B	Front mounting type

**Rod end thread**

Nil	Male rod end
F	Female rod end

**Rod end bracket**

Nil	None
V	Single knuckle joint
W	Double knuckle joint

**Number of auto switches**

Nil	2 pcs.
S	1 pc.
n	"n" pcs.

**Auto switch**

Nil	Without auto switch
-----	---------------------

\* No bracket is provided for the female rod end.  
\* A knuckle joint pin is not provided with the single knuckle joint.  
\* Rod end bracket is shipped together with the product, but not assembled.

\* Refer to "Ordering Example of Cylinder Assembly" on page 300.

### Applicable Auto Switches/Refer to pages 1271 to 1365 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model					Pre-wired connector	Applicable load						
					DC	AC	Perpendicular	In-line	Lead wire length (m)										
									0.5 (Nil)	1 (M)	3 (L)			5 (Z)	None (N)				
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	24 V	—	M9NV	M9N	●	●	○	○	○	IC circuit	Relay, PLC				
				3-wire (PNP)			M9PV	M9P	●	●	○	○	○						
		Connector		2-wire			M9BV	M9B	●	●	○	○	○						
				Terminal conduit			3-wire (NPN)	—	H7C	●	●	●	●			—			
		Diagnostic indication (2-color indicator)		Grommet			Yes	2-wire	5 V, 12 V	—	G39A**	—	—			●	—	—	IC circuit
								3-wire (PNP)	—	K39A**	—	—	●			—	—	—	—
	Water resistant (2-color indicator)	—	Grommet	Yes	3-wire (NPN)	24 V	—	M9NVV	M9NV	●	●	○	○	○		IC circuit			
					3-wire (PNP)			M9PVV	M9PV	●	●	○	○	○					
					2-wire			M9BWW	M9BW	●	●	○	○	○					
					3-wire (NPN)			M9NAV*1	M9NA*1	○	○	○	○	○			IC circuit		
					3-wire (PNP)			M9PAV*1	M9PA*1	○	○	○	○	○					
					2-wire			M9BAV*1	M9BA*1	○	○	○	○	○			IC circuit		
4-wire (NPN)	—	H7NF	●	●	○	○	○	—	—										
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	24 V	12 V	A96V	A96	●	—	●	—	—	IC circuit	Relay, PLC				
							100 V	A93V*2	A93	●	●	●	—	—		—			
							100 V or less	A90V	A90	●	●	●	—	—		—	IC circuit		
							200 V or less	—	B54**	●	●	●	—	—		—	—		
							24 V or less	—	B64**	●	●	●	—	—		—	—		
							—	—	C73C	●	●	●	●	—		—	—	IC circuit	
		Connector	No	Yes	2-wire	24 V	12 V	—	C80C	●	●	●	●	—		—	—		
								—	A33A**	—	—	—	●	—		—	—	PLC	
								100 V, 200 V	A34A**	—	—	—	—	●		—	—	—	
								—	A44A**	—	—	—	—	—		●	—	—	Relay, PLC
								—	B59W	●	●	●	—	—		—	—	—	
								—	—	—	—	—	—	—		—	—	—	—

\*1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance.  
Please contact SMC regarding water resistant types with the above model numbers.

\*2 1 m type lead wire is only applicable to D-A93.

\* Lead wire length symbols: 0.5 m ..... Nil (Example) M9NW  
1 m ..... M (Example) M9NWM  
3 m ..... L (Example) M9NWL  
5 m ..... Z (Example) M9NWZ  
None ..... N (Example) H7CN

\* Solid state auto switches marked with "○" are produced upon receipt of order.  
\* Do not indicate suffix "N" for no lead wire on the D-A3□A/A44A/G39A/K39A models.  
\*\* D-A3□A/A44A/G39A/K39A/B54/B64 cannot be mounted on bore sizes ø20 and ø25 cylinder with air cushion.

\* Since there are other applicable auto switches than listed above, refer to page 331 for details.  
\* For details about auto switches with pre-wired connector, refer to pages 1340 and 1341.  
\* The D-A9□□/M9□□ auto switches are shipped together, (but not assembled). (However, only the auto switch mounting brackets are assembled before shipment.)

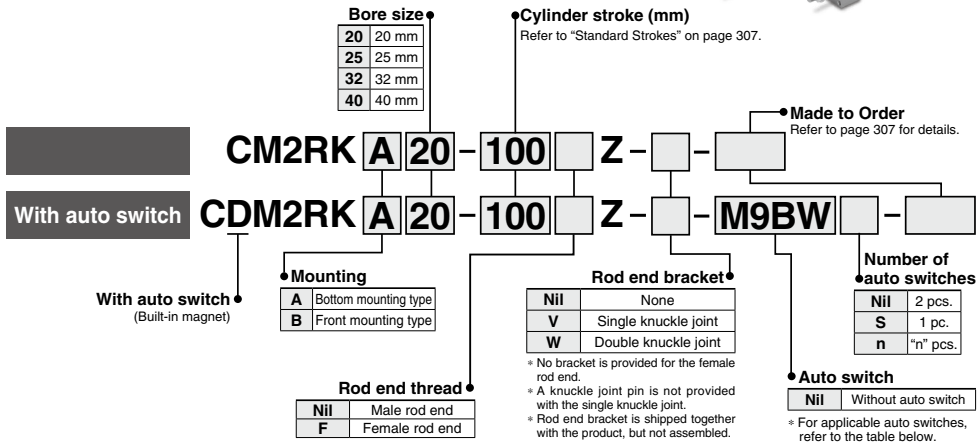
# Air Cylinder: Direct Mount, Non-rotating Rod Type Double Acting, Single Rod

# CM2RK Series



ø20, ø25, ø32, ø40

## How to Order



\* Refer to "Ordering Example of Cylinder Assembly" on page 307.

## Applicable Auto Switches/Refer to pages 1271 to 1365 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length (m)					Pre-wired connector	Applicable load											
					DC	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)													
									●	●	○	○	○			○										
Solid state auto switch	Diagnostic indication (2-color indicator)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NV	M9N	●	●	○	○	○	○	IC circuit	Relay, PLC									
				3-wire (PNP)				M9PV	M9P	●	●	○	○	○	○											
				2-wire				M9BV	M9B	●	●	○	○	○	○											
		Terminal conduit		No				3-wire (NPN)	5 V, 12 V	—	G39A	—	—	—	●	—		—	—	IC circuit						
								2-wire	12 V	—	K39A	—	—	—	●	—		—	—	—						
								3-wire (NPN)	5 V, 12 V	—	M9NVV	M9NW	●	●	○	○		○	○	○	IC circuit					
	Water resistant (2-color indicator)	Grommet	Yes	3-wire (PNP)	24 V	5 V, 12 V	—	M9PVV	M9PV	●	●	○	○	○	○	○		IC circuit								
				2-wire				—	M9BWW	M9BW	●	●	○	○	○	○			○	—						
				3-wire (NPN)				5 V, 12 V	M9NAV <sup>*1</sup>	M9NA <sup>*1</sup>	○	○	○	○	○	○			○	○	IC circuit					
				Grommet				No	3-wire (PNP)	24 V	12 V	—	M9PAV <sup>*1</sup>	M9PA <sup>*1</sup>	○	○		○	○	○	○	○	IC circuit			
									2-wire				—	M9BAV <sup>*1</sup>	M9BA <sup>*1</sup>	○		○	○	○	○	○		○	○	—
									4-wire (NPN)				5 V, 12 V	—	H7NF	●		●	○	○	○	○		○	○	IC circuit
Reed auto switch	Diagnostic indication (2-color indicator)	Grommet	Yes	3-wire (NPN equivalent)	24 V	12 V	—	A96V	A96	●	—	●	—	—	—	IC circuit	Relay, PLC									
				Connector				No	100 V	A93V <sup>*2</sup>	A93	●	●	●	—	—		—	—	—	—					
									100 V or less	A90V	A90	●	●	●	—	—		—	—	—	IC circuit					
									100 V, 200 V	—	B54	●	●	●	●	—		—	—	—	—					
				Terminal conduit				No	200 V or less	—	B64	●	●	●	●	—		—	—	—	—	—				
									24 V or less	—	C73C	●	●	●	●	●		—	—	—	IC circuit					
		—							—	C80C	●	●	●	●	●	—		—	—	—						
		DIN terminal Grommet		Yes				100 V	—	A33A	—	—	—	—	●	—		—	—	—	PLC					
								200 V	—	A34A	—	—	—	—	●	—		—	—	—	—					
								—	—	A44A	—	—	—	—	—	●		—	—	—	Relay, PLC					
								—	—	A44A	—	—	—	—	—	●		—	—	—	—					
								—	—	B59W	●	●	●	—	—	—		—	—	—	—					
—	—		—		—	—	—	—	—	—	—	—	—	—	—											

\*1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance.  
Please contact SMC regarding water resistant types with the above model numbers.

\*2 1 m type lead wire is only applicable to D-A93.

\* Lead wire length symbols: 0.5 m ..... Nil (Example) M9NW  
1 m ..... M (Example) M9NWM  
3 m ..... L (Example) M9NWL  
5 m ..... Z (Example) M9NZ  
None ..... N (Example) H7CN

\* Solid state auto switches marked with "○" are produced upon receipt of order.  
\* Do not indicate suffix "N" for no lead wire on D-A3□A/A44A/G39A/K39A models.

\* Since there are other applicable auto switches than listed above, refer to page 331 for details.

\* For details about auto switches with pre-wired connector, refer to pages 1340 and 1341.  
\* The D-A9□□/M9□□ auto switches are shipped together, (but not assembled). (However, only the auto switch mounting brackets are assembled before shipment.)

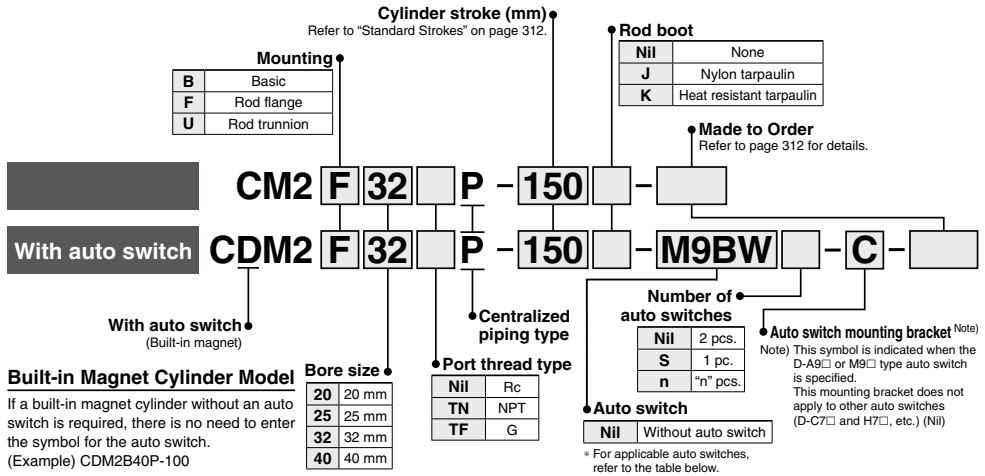


# Air Cylinder: Centralized Piping Type Double Acting, Single Rod

## CM2□P Series

∅20, ∅25, ∅32, ∅40

### How to Order



**Applicable Auto Switches**/Refer to pages 1271 to 1365 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model	Lead wire length (m)					Pre-wired connector	Applicable load						
					DC	AC		0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)								
															Perpendicular	In-line	○	●	○	○
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	M9NV	M9N	●	●	○	—	○	IC circuit	Relay, PLC					
				3-wire (PNP)			12 V	M9PV	M9P	●	●	○	—			○				
				2-wire	5 V, 12 V	M9BV	M9B	●	●	○	—	○								
		Terminal conduit		12 V	—	H7C	●	—	●	—	—	—								
		Diagnostic indication (2-color indicator)		Grommet	3-wire (NPN)	5 V, 12 V	—	G39A	—	—	●	—	—			—	—	IC circuit		
					3-wire (PNP)			12 V	K39A	—	—	●	—			—	—			
	2-wire		5 V, 12 V		M9NVV	M9NV	●	●	○	—	○	—	IC circuit							
	Water resistant (2-color indicator)	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	M9PVV	M9PV	●	●	○	—	○	IC circuit						
				3-wire (PNP)			12 V	M9BVV	M9BV	●	●	○	—			○				
				2-wire	5 V, 12 V	M9NAV <sup>*1</sup>	M9NA <sup>*1</sup>	○	○	○	—	○	—			IC circuit				
				3-wire (PNP)	12 V	M9PAV <sup>*1</sup>	M9PA <sup>*1</sup>	○	○	○	—	○	—							
				2-wire	5 V, 12 V	M9BAV <sup>*1</sup>	M9BA <sup>*1</sup>	○	○	○	—	○	—							
4-wire (NPN)				5 V, 12 V	—	H7NF	●	—	●	—	—	—	IC circuit							
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	●	—	●	—	—	IC circuit	Relay, PLC				
				100 V				A93V <sup>*2</sup>	A93	●	●	●	—	—	—					
				100 V or less	A90V	A90	●	—	●	—	—	—	—	IC circuit						
				100 V, 200 V	—	B54	●	—	●	—	—	—	—							
				200 V or less	—	B64	●	—	●	—	—	—	—							
				—	—	C73C	●	—	●	—	—	—	—							
		Connector		2-wire	No	No	24 V or less	24 V	12 V	—	C80C	●	—	●	—		—	IC circuit		
											—	A33A	—	—	—		—	—	—	—
											100 V, 200 V	A34A	—	—	—		—	—	—	—
											—	A44A	—	—	—		—	—	—	—
											—	B59W	●	—	●		—	—	—	—
											—	—	—	—	—		—	—	—	—
Terminal conduit	2-wire	Yes	Yes	—	—	—	—	—	—	—	—	—	—	PLC						
								—	—	—	—	—	—	—	—	—				
								—	—	—	—	—	—	—	—	—				
								—	—	—	—	—	—	—	—	—				
								—	—	—	—	—	—	—	—	—				
								—	—	—	—	—	—	—	—	—				
DIN terminal Grommet	2-wire	Yes	Yes	—	—	—	—	—	—	—	—	—	—	Relay, PLC						
								—	—	—	—	—	—	—	—	—				
								—	—	—	—	—	—	—	—	—				
								—	—	—	—	—	—	—	—	—				
								—	—	—	—	—	—	—	—	—				
								—	—	—	—	—	—	—	—	—				

\*1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance.

Please contact SMC regarding water resistant types with the above model numbers.

\*2 1 m type lead wire is only applicable to D-A93.

\* Lead wire length symbols: 0.5 m ..... Nil (Example) M9NV  
1 m ..... M (Example) M9NVV  
3 m ..... L (Example) M9NWL  
5 m ..... Z (Example) M9NWX  
None ..... N (Example) H7CN

\* Solid state auto switches marked with "○" are produced upon receipt of order.

\* Since there are other applicable auto switches than listed above, refer to page 331 for details.

\* For details about auto switches with pre-wired connector, refer to pages 1340 and 1341.

\* The D-A9□/M9□ auto switches are shipped together, (but not assembled), (However, only the auto switch mounting brackets are assembled before shipment.)