Applicable Auto Switch Variations

Rotary Actuators Applicable Auto Switch Variations

						,												. —
Typo	Auto switch	Electrical	Auto switch model	Applicable series	CDRA1	CDRB2	CDRB1	CDRQ2	CRJ	MRQ		MDSO		MSQ	MSZ	CDRQ2X	MSQX	Page
Туре	mounting type	entry	Auto Switch Model	Size	30 to 100	10 to 40 CDRB2	50 to 100	10 to 40	05, 1	32, 40	1,3	7, 20	1 to 7	10 to 200	10 to 50 MSZ	10 to 40 CDRQ2)	10 to 50	Pa
			D-M9N/M9P/M9B		•	•	•	•	•	\perp	+	+	-	•	-	•	•	- 806
			D-M9NV/M9PV/M9BV D-F8N/F8P/F8B															- 807
_			D-Y59A/Y7P/Y59B						T				T					
Solid State Auto Switch			D-Y69A/Y7PV/Y69B								T							- 808
<u> </u>		Grommet	D-S991/S992/D-S99V1/S99V2		_	•	+	+	+	+	•	+	+	+	+	+	+	- 809
0	Direct	Grommor	D-T991/T992/D-T99V1/T99V2		+	•	+	+	+	+	•	+	+	\dashv	+	+	+	- 809
13			D-S9P1/S9P2/D-S9PV1/S9PV2		_	•	+	\top	+	+	•	\pm	+	\dashv	\top	+	\top	- 809
▼			D-S791/S792		_	•	•	\top	+	+	+	•	+	\dashv	\top	+	\top	-810
l at			D-T791/T792			•	•	\top	\top	T	\top	•	\top	\top	十	\top	\top	-810
Š			D-S7P1/S7P2		_	Ŧ	Ŧ	\top	\top	T	\top	-	\top	1	\top	\top	\top	-810
<u>i</u> ë		Connector			\top	•	•	\top	\top	\top	\top	•	\top	1	\top	\top	\top	-810
ၓ		Grommet	D-F79/F7P/J79			T	T	T	T	Ŧ	T	T		T	寸	T	T	-811
	Rail		D-F7NV/F7PV/F7BV			T	T	T	T	Ŧ	T	T		T	寸	T		-812
		Connector	D-J79C							7	1							-813
ļ,	Tie-rod	Grommet	D-F59/F5P/J59 D-M9NW/M9PW/M9BW					T	T		T			T	T			-814
			D-M9NWV/M9PWV/M9BWV		•	+	+	•	•	+	+	+	•	•	•	•	•	815
	Direct	Grommet	D-Y7NW/Y7PW/Y7BW			4	4	4	4	4	4	4	4	4	4	4	\perp	-816
2-color indicator			D-Y7NWV/Y7PWV/Y7BWV							\perp								
	Rail	Grommet	D-F79W/F7PW/J79W D-F7NWV/F7BWV							I						-817 -818		
	Tie-rod	Grommet	D-F/NWV/F/BWV							Ĭ								-819
2-color indicator	Tie-tou	Grommet	D-F79F			\perp				\perp	\perp							- 820
with diagnostic	Rail	Grommet	D-F59F			\perp			\perp	I	\perp				\perp			- 821
output			D-M9NA/M9PA/M9BA		\perp			\perp	\perp				\perp	\perp	1			
Water	Direct	-	D-M9NAV/M9PAV/M9BAV		T			T	T				T	▝	Ť	T	T	- 822
resistant 2-color		Grommet	D-Y7BA			+	+	+	+	+	+	+	+	+	+	+	+	823
indicator	Rail	1	D-F7BA/F7BAV			+	+	+	+	٠	+	+	+	+	+	+	+	- 824
	Tie-rod		D-F5BA		_	+		+	+	+	+	+	+	$^{+}$	+	+	+	825
With timer	Rail	Grommet	D-F7NT			T	+	\top	$^{+}$	•	\top	T	+	+	$^{+}$	T	\top	- 826
1	Tie-rod		D-F5NT			T		\top	T		\top			1	\top		\top	827
Trimmer	Direct	Grommet	D-Y7K								Ť			T	T			- 828
			D-A90/A93/A96 D-A90V/A93V/A96V		•	+	+	•	+	+	+	+	+	•	•	•	•	- 840
			D-90/97			•	4	4	4	4	•	4	4	4	4	4	4	- 841
ا ء ا		Grommet	D-90A/93A		_	J	_	_	+	4	J		4	4	4	4	_	-842
달	Direct		D-R731/R732		_	<u>.</u>	•	_	+	4	\perp	•	_	4	4	4	\perp	- 843
3			D-R801/R802			•	•	+	+	+	+	•	+	4	+	+	+	- 843
Reed Auto Switch		0	D-R731C/R732C			•	•	+	\perp	\perp	+	•	_	4	+	_	\perp	- 844
5		Connector	D-R801C/R802C		-	•	•	+	+	+	+	•	-	4	+	-	+	- 844
ן ק			D-A72/A73/A80		+	+	+	+	+	•	+	-	+	+	+	+	+	- 845
<u>e</u>		Grommet	D-A72H/A73H								1			1				- 846
ш.	Rail	0	D-A76H/A80H							I								
		Connector	D-A73C/A80C D-A53/A54/A56							T	T							- 847
		Grommet	D-A53/A54/A56 D-A64/A67		+	+	+	\top	+	+	Ť	+	+	+	+	+	\top	- 848
2-color	Rail	Grommet	D-A79W			+	+	+	+	•	+	+	+	+	+	-	+	- 849
indicator	Tie-rod	Grommet	D-A59W		+	+	+	+	+	+	+	+	+	+	+	+	+	- 850

Air Grippers Applicable Auto Switch Variations

	Auto switch	Electrical		Applicable series	MHZ2		MHZ (L) 2	T		MHZJ2		MHF2	MHL2	MDHR	MHK (L) 2	MHS	HSL	ָ ק	MHS		MHC2	MHT2	MHW2	MHY2	BHG BHG	a
Type	mounting type	entry	Auto switch model	Size	W 9			20 to 40			20, 25	8 to 20 M	10 to 40 M	10 to 30 M	12 to 25 MI	16 to 25	32 to 03	16 M	8		10 to 25	32 to 63 MI	20 to 50 MI	10 to 25 MI	10 to 25 MRHQ	Page
			D-M9N/M9P/M9B D-M9NV/M9PV/M9BV		•	•	•		•	•	•	•	•	•	•)	•	+	•	•	•	•	•	ï	806
		Grommet	D-F8N/F8P/F8B		•	+	₽∙	29		•	•	+	t	+	t	Н			7	_	+	†	+	+	+	807
_			D-M9N/M9P/M9B-746		t	t	t	Н		+	Ť	t	t	T	t	П		Ħ	7	1	+	†	†	†	•	765
Solid State Auto Switch			D-Y59A/Y7P/Y59B D-Y69A/Y7PV/Y69B		+	+	╁	Н		+	+	+	+	+	╀	Н		\dashv	\dashv	\dashv	+	+	+	+	+	808
Š	ļ <u>, </u>		D-S991/S992/D-S99V1/S99V2		+	1	L	Н		4	+	+	+	\perp	╄	Ш		_	4	4	4	4	4	+	4	809
%	Direct		D-T991/T992/D-T99V1/T99V2		+	╄	-	Н		4	+	+	+	+	╀	Н		4	4	4	4	+	4	+	4	809
🐧			D-S9P1/S9P2/D-S9PV1/S9PV2		+	╄	<u> </u>	Н		4	+	+	+	+	╀	Н		4	4	4	4	+	4	+	+	809
d		Grommet	D-S791/S792		+	+	╀	Н	_	4	+	+	+	+	╀	Н		\dashv	\dashv	4	+	+	+	+	+	810
ta			D-T791/T792		+	╄	\vdash	Н	\vdash	+	+	+	+	+	╀	Н		\dashv	\dashv	+	+	+	+	+	+:	810
ဟု			D-S7P1/S7P2		+	╄	\vdash	Н	\vdash	+	+	+	+	+	╀	Н		\dashv	\dashv	+	+	+	+	+	+:	810
∺		Connector	D-T791C/T792C		+	╀	\vdash	Н	\vdash	+	+	+	+	+	╀	Н		\dashv	\dashv	+	+	+	+	+	+:	810
ŏ		Grommet	D-F79/F7P/J79		+	+	\vdash	Н		+	+	+	+	+	\vdash	Н		\dashv	\dashv	+	+	+	+	+	+	811
	D-::	Grommet	D-F7NV/F7PV/F7BV		+	+	╁	Н		+	+	+	+	+	╀	Н		\dashv	\dashv	\dashv	+	+	+	+	+:	812
	Rail	Connector	D-J79C		+	╁	╁	Н	-	+	+	+	+	+	╁	Н		H	\dashv	+	+	+	+	+	+	813
		Grommet	D-F59/F5P/J59		+	+	╁	Н	\dashv	+	+	+	+	+	╀	Н		+	\dashv	\dashv	+	+	+	+	+	814
	Direct Gror		D-M9NW/M9PW/M9BW		•	٠,	•	Ы	H		•	┢	┢	4	Ь-	H	н		H	H	Н	4	•	•	4	815
		Grommet	D-M9NWV/M9PWV/M9BWV D-Y7NW/7PW/7BW		Ī	Ī	ľ			Ī	Ī	Ī	Ţ	Ī	Ī				I	Ī	Ī	I	Ī	Ī		
2-color			D-Y7NWV/7PWV/7BWV		t	t	t	Н		\top	t	t	t	+	t	Н		\dashv	7	1	+	\dagger	+	$^{+}$	+	816
indicator	Poil	Crommot	D-F79W/F7PW/J79W		+	+	+	Н	\dashv	+	+	+	+	+	╀	Н		+	\dashv	\dashv	+	+	+	+	+:	817
	Rail	Grommet	D-F7NWV/7BWV		+	╁	╁	Н	\dashv	+	+	+	+	+	╀	Н		\dashv	\dashv	\dashv	+	+	+	+	+	818
	Tie-rod	Grommet	D-F59W/F5PW/J59W		+	+	╁	Н	-	+	+	+	+	+	╀	Н		\dashv	\dashv	+	+	+	+	+	+	819
2-color indicator with diagnostic	Rail	Grommet	D-F79F		+	+	╁	Н	\dashv	+	+	+	+	+	╀	Н		\dashv	\dashv	\dashv	+	+	+	+	+	820
output	I tall	Grommer	D-F59F		+	+	+	Н	\dashv	+	+	+	+	+	╀	Н		+	\dashv	\dashv	+	+	+	+	+	821
			D-M9NA/M9PA/M9BA		٠	٠	Ы	Н	Н	┢	٠	┢	┢	•	Ь	Ы	н		Н	H	┥	4	•	•	4	822
Water resistant	Direct	1	D-M9NAV/M9PAV/M9BAV D-Y7BA																						Т	823
2-color indicator	Rail	Grommet	D-F7BA/F7BAV																							824
indicator	Tie-rod		D-F5BA					Ш						┸	L				┙							825
	Rail		- D-F7NT		⊥			Ш						┸	L				┙			\perp		\perp		826
With timer	Tie-rod	Grommet	- D-F5NT		⊥			Ш						┸	L				┙			\perp		\perp		827
Trimmer		Grommet			1	1	4	Ы			1	╧	1	\perp	L		_				_	\perp	4	\perp		828
			D-A90/A93/A96			T	ľ						T		l						T	1	T			
			D-A90V/A93V/A96V		Ť	T	T	П		1	Ť	Ť	t	T	T	П		Ħ	┪	1	1	7	T	†	†	840
		Crommot	D-90/97		+	+	H	Н	\dashv	+	+	+	+	+	╁	Н		H	\dashv	+	+	+	+	+	+	841
5	Direct	Grommet	D-90A/93A		+	+	H	Н	\dashv	+	+	+	+	+	╁	Н		H	\dashv	+	+	+	+	+	+	842
₹ [Direct		D-R731/R732		+	+	H	Н		+	+	+	+	+	╁	Н		\dashv	\dashv	+	+	+	+	+	+	843
ြိ			D-R801/R802		+	+	╁	Н		+	+	$^{+}$	+	+	+	Н		+	\dashv	+	+	+	+	+	+	843
일		Connector	D-R731C/R732C		$^{+}$	+	t	Н		+	t	t	t	+	H	Н		\dashv	\dashv	7	$^{+}$	†	†	+	+	844
₹			D-R801C/R802C		+	+	t	Н		+	t	$^{+}$	t	+	╁	Н		\dashv	\dashv	+	$^{+}$	$^{+}$	$^{+}$	+	+	844
Reed Auto Switch			D-A72/A73/A80		+	t	t	Н		+	+	$^{+}$	+	+	+	H		\forall		\forall	+	+	†	+	+	845
ĕ	Grommet D-A72H/A73H D-A76H/A80H		\dashv	4	+	+	+	+	+	+	846															
-	Rail	Connector	D-A73C/A80C		1		L	Ш		4		L			L	Ш					1	1	1	1	1	847
			D-A53/A54/A56																							
		Grommet	D-A64/A67		T	T		П			T	T	T			П			T		T	T	T	T		848
2-color		Grommet	D-A79W		+	+	H	Н		+	+	+	+	+	+	H		\forall	\dashv	+	+	+	+	+	+	849
indicator	Tie-rod	Grommet	D-A59W		+	+	+	Н		+	+	+	+	+	+	Н		\vdash	+	+	+	+	+	+	+	850

Solid State Auto Switch **Direct Mounting Type** D-M9N(V)/D-M9P(V)/D-M9B(V) **(** € RoHS



Grommet

- 2-wire load current is reduced (2.5 to 40 mA).
- Using flexible cable as standard



∆Caution

Precautions

Fix the auto switch with the existing screw installed on the auto switch body. The auto switch may be damaged if a screw other than the one supplied is used.

Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

PLC: Programmable Logic Controller

D-M9□, D-M9	D-M9□, D-M9□V (With indicator light)											
Auto switch model	D-M9N	D-M9NV	D-M9P	D-M9PV	D-M9B	D-M9BV						
Electrical entry direction	In-line	Perpendicular	In-line	Perpendicular	ar In-line Perpend							
Wiring type		3-w	rire		2-v	vire						
Output type	NPN PN				NP -							
Applicable load		IC circuit, Relay, PLC				elay, PLC						
Power supply voltage	5	5, 12, 24 VDC (4.5 to 28 V)				_						
Current consumption		10 mA	or less		_							
Load voltage	28 VDC	or less	-	_	24 VDC (10	to 28 VDC)						
Load current		40 mA	or less		2.5 to 40 mA							
Internal voltage drop	0.8 V or le	ess at 10 mA	(2 V or less	at 40 mA)	4 V o	r less						
Leakage current		100 μA or les		0.8 mA	or less							
Indicator light		Red LED illuminates when turned ON.										
Standard	CE marking, RoHS											

Oilproof Flexible Heavy-duty Lead Wire Specifications

Auto sw	itch model	D-M9N(V)	D-M9P(V)	D-M9B(V)		
Sheath	Outside diameter [mm]	2.6				
	Number of cores	3 cores (Brow	2 cores (Brown/Blue)			
Insulator	Outside diameter [mm]	0.88				
0	Effective area [mm²]		0.15			
Conductor	Strand diameter [mm]		0.05			
Minimum bending radiu	s [mm] (Reference values)	17				

Note 1) Refer to page 800 for solid state auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

SMC

Weight

(g)

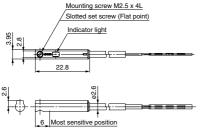
(mm)

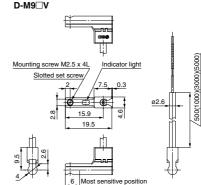
Auto swit	ch model	D-M9N(V)	D-M9P(V)	D-M9B(V)				
	0.5 m (Nil)	8	8					
Lead wire length	1 m (M)	1	13					
Leau wire lengin	3 m (L)	4	41					
	5 m (Z)	6	68				68 6	

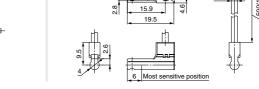
Dimensions

D-M9□

© 806







Solid State Auto Switch **Direct Mounting Type** D-F8N/D-F8P/D-F8B



Refer to SMC website for the details of the products conforming to the international standards.

Grommet



Precautions

Fix the auto switch with the existing screw installed on the auto switch body. The auto switch may be damaged if a screw other than the one supplied is used.

Auto Switch Specifications

PLC: Programmable Logic Controller D-F8□ (With indicator light) Auto switch model D-F8N D-F8P D-F8B Electrical entry direction Perpendicular Perpendicular Perpendicular Wiring type 3-wire 2-wire Output type Applicable load IC circuit, 24 VDC Relay, PLC 24 VDC relay, PLC 5, 12, 24 VDC (4.5 to 28 VDC) Power supply voltage Current consumption 10 mA or less Load voltage 28 VDC or less 24 VDC (10 to 28 VDC) Load current 40 mA or less 80 mA or less 2.5 to 40 mA 1.5 V or less Internal voltage drop (0.8 V or less 0.8 V or less 4 V or less at 10 mA load current) 0.8 mA or less at 24 VDC Leakage current 100 μA or less at 24 VDC Red LED illuminates when turned ON Indicator light CE marking, RoHS Standard

Oilproof Heavy-duty Lead Wire Specifications

Op. 00. 110	onproof floary daty zona fino opcomonione										
Auto swi	itch model	D-F8N	D-F8P	D-F8B							
Sheath	Outside diameter [mm]		ø2.7								
Insulator	Number of cores	3 cores (Brow	2 cores (Brown/Blue)								
insulator	Outside diameter [mm]	ø0	ø0.96								
Conductor	Effective area [mm²]	0.	15	0.18							
Conductor	Strand diameter [mm]										
Minimum bending radiu	s [mm] (Reference values)	17									

Note 1) Refer to page 800 for solid state auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

Weight

(g)

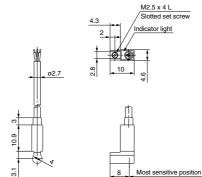
Auto swi	tch model	D-F8N	D-F8P	D-F8B
	0.5 m (Nil)		7	
Lead wire length	3 m (L)		32	
	5 m (Z)		52	

Dimensions

(mm)

D-F8N/D-F8P/D-F8B

SMC



Solid State Auto Switch Direct Mounting Type

D-Y59⁸/D-Y69⁸/D-Y7P(V) **(** €



Grommet

Using flexible cable as standard spec.



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

PLC: Programmable Logic Controller

0.8 mA or less at 24 VDC

D-Y5□, D-Y6□	D-Y5□, D-Y6□, D-Y7P, D-Y7PV (With indicator light)											
Auto switch model	D-Y59A	D-Y69A	D-Y7P	D-Y7PV	D-Y59B	D-Y69B						
Electrical entry direction	In-line	Perpendicular	In-line	Perpendicular	In-line	Perpendicular						
Wiring type		3-v	vire		2-wire							
Output type	NF	PN	PI	NΡ	_							
Applicable load		IC circuit, F	Relay, PLC		24 VDC relay, PLC							
Power supply voltage	5,	12, 24 VDC (4.5 to 28 VD	C)	_							
Current consumption		10 mA	or less		_							
Load voltage	28 VDC	or less			24 VDC (10 to 28 VD							
Load current	40 mA	or less	80 mA	or less	2.5 to 40 mA							
Internal voltage drop	1.5 V c (0.8 V c at 10 mA los	or less	0.8 V	or less	4 V c	or less						

100 μA or less at 24 VDC

Red LED illuminates when turned ON.

CE marking, RoHS

Oilproof Flexible Heavy-duty Lead Wire Specifications

Auto swi	itch model	D-Y□9A	D-Y7P□	D-Y□9B		
Sheath	Outside diameter [mm]	ø3.4				
Inquilator	Number of cores	3 cores (Brow	2 cores (Brown/Blue)			
Insulator	Outside diameter [mm]					
Conductor	Effective area [mm²]		0.15			
Conductor	Strand diameter [mm]	ø0.05				
Minimum bending radius	s [mm] (Reference values)	21				

Note 1) Refer to page 800 for solid state auto switch common specifications. Note 2) Refer to page 800 for lead wire lengths.

Leakage current

Indicator light

Standard

Weight

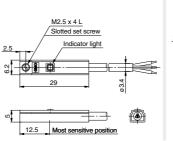
(g)

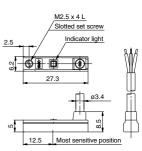
Auto swit	Auto switch model		D-Y69A	D-Y7P(V	')	D-Y59B	D-Y69B	
	0.5 m (Nil)	10				9		
Lead wire length	3 m (L)		5	3		5	0	
	5 m (Z)	87				8	3	

Dimensions

D-Y59A/D-Y7P/D-Y59B

(mm)





D-Y69A/D-Y7PV/D-Y69B



Solid State Auto Switch **Direct Mounting Type**

Grommet

D---2

D-□□□**V**2

D-001

D-□□□V1

Right-hand mounting Left-hand mounting

Right-hand mounting Left-hand mounting

D-S99(V)/D-S9P(V)/D-T99(V)

Auto Switch Specifications

the products conforming to the international standards.

PLC: Programmable Logic Controller D-S99(V)/D-S9P(V)/D-T99(V) (With indicator light) D-S991 D-S99V1 D-S9P1 D-S9PV1 D-T99V1 D-T991 Auto switch model D-S992 D-S99V2 D-S9P2 D-S9PV2 D-T992 D-T99V2 Electrical entry direction In-line Perpendicular In-line Perpendicular In-line Perpendicular Wiring type 3-wire 2-wire Output type PNF IC circuit, Relay, PLC 24 VDC relay, PLC Applicable load Power supply voltage 12, 24 VDC (4.5 to 28 VDC) Current consumption 10 mA or less 24 VDC (10 to 28 VDC) Load voltage 28 VDC or less Load current 40 mA or less 80 mA or less 5 to 40 mA 1.5 V or less Internal voltage drop 0.8 V or less 4 V or less (0.8 V or less at load current 10 mA) Leakage current 100 μA or less at 24 VDC 0.8 mA or less at 24 VDC Indicator light Red LED illuminates when turned ON CE marking Standard

Note 1) Refer to page 800 for solid state auto switch common specifications. Note 2) Refer to page 800 for lead wire lengths.

Oilproof Heavy-duty Lead Wire Specifications

Auto sv	vitch model	D-S99□	D-S9P□	D-T99□				
Sheath	Outside diameter [mm]	ø3.4						
Insulator	Number of cores	3 cores (Brov	2 cores (Brown/Blue)					
IIISUIAIOI	Outside diameter [mm]							
Conductor	Effective area [mm ²]		0.2					
Coriductor	Strand diameter [mm]		ø0.08					
Minimum bending rad	ius [mm] (Reference values)		21					

Weight

(g)

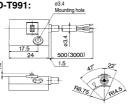
Auto switch model		D-S99□	D-S99V□	D-S9P□	D-S9PV□	D-T99□	D-T99V□
	0.5 m (NiI)	12	12	12	12	12	12
Lead wire length	3 m (L)	49	46	46	46	46	46
	5 m (7)	79	79	79	79	79	79

Dimensions

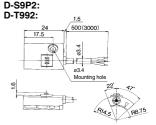
D-S992: Left-hand mounting

D-S9P1:

D-T991:



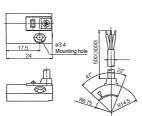
D-S991: Right-hand mounting



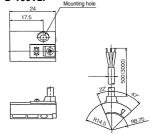
D-S99V1: Right-hand mounting D-S9PV1:

D-T99V1:

D-S99V2: Left-hand mounting D-S9PV2: D-T99V2:



ØSMC



809

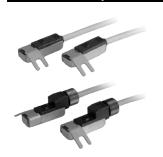


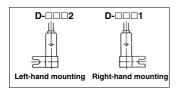
Solid State Auto Switch Direct Mounting Type D-S79/D-S7P/D-T79(C)

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(q)

Grommet, Connector Electrical Entry: In-line





∧Caution

Precautions

- Confirm that the connector is appropriately tightened. If tightened insufficiently, the waterproof performance will deteriorate.
- Refer to Best Pneumatics No. 2-1 for the details.

Lead wires with a connector indication

Part No. of Lead Wires with Connectors

(Applicable only for connector type)		
Model	Lead wire length	
D-LC05	0.5 m	
D-LC30	3 m	
D-LC50	5 m	

Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

PLC: Programmable Logic Controller

D-S79/D-T79 (With indicator light)				
Auto switch model	D-S791, D-S792	D-S7P1, D-S7P2	D-T791, D-T792, D-T791C, D-T792C	
Wiring type	3-v	/ire	2-wire	
Output type	NPN	PNP	I	
Applicable load		Relay, PLC	24 VDC relay, PLC	
Power supply voltage	5, 12, 24 VDC (4.5 to 28 VDC)		_	
Current consumption	10 mA or less			
Load voltage	28 VDC or less	1	24 VDC (10 to 28 VDC)	
Load current		80 mA or less	5 to 40 mA	
Internal voltage drop	1.5 V or less (0.8 V or less at 10 mA) 0.8 V or less		4 V or less	
Leakage current	100 μA or less at 24 VDC		0.8 mA or less at 24 VDC	
Indicator light	Red LED illuminates when turned ON.			
Standard	CE marking			

Note 1) Refer to page 800 for solid state auto switch common specifications. Note 2) Refer to page 800 for lead wire lengths.

Oilproof Heavy-duty Lead Wire Specifications

Auto sv	vitch model	D-S79□ D-S7P□ D-T79□		D-T79□
Sheath	Outside diameter [mm]	ø3.4		
Insulator	Number of cores	3 cores (Brown/Blue/Black) 2 cores (Brown/Blue/Black)		2 cores (Brown/Blue)
IIISUIAIOI	Outside diameter [mm]	ø1.1		
Conductor	Effective area [mm ²]	0.2		
Conductor	Strand diameter [mm]	ø0.08		
Minimum bending rad	lius [mm] (Reference values)		21	

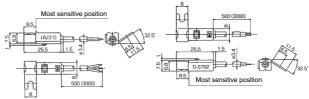
Weight

Auto switch mode	el	D-S79□	D-S7P□	D-T79□	D-T79□C
	0.5 m (NiI)	13	13	13	14
Lead wire length	3 m (L)	50	50	50	51
	5 m (Z)	80	80	80	81

Dimensions

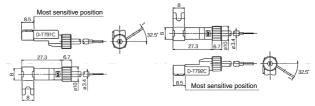
D-S791: Right-hand mounting D-S792: Left-hand mounting D-S7P1: D-S7P2:

D-T791:



D-T792:

D-T791C: Right-hand mounting D-T792C: Left-hand mounting



Solid State Auto Switch Rail Mounting Type D-F79/D-J79



Refer to SMC website for the details of the products conforming to the international standards.

Grommet



Auto Switch Specifications

PLC: Programmable Logic Controller

D-F7□, D-J79 (With indicator light)				
Auto switch model	D-F79	D-F79 D-F7P		
Wiring type	3-v	vire	2-wire	
Output type	NPN	PNP	_	
Applicable load	IC circuit, F	Relay, PLC	24 VDC Relay, PLC	
Power supply voltage	5, 12, 24 VDC (4.5 to 28 VDC) —			
Current consumption	10 mA	_		
Load voltage	28 VDC or less —		24 VDC (10 to 28 VDC)	
Load current	40 mA or less 80 mA or less		5 to 40 mA	
Internal voltage drop	1.5 V or less (0.8 V or less at 10 mA load current)		4 V or less	
Leakage current	100 μA or less at 24 VDC 0.8 mA or less at 24 VDC			
Indicator light	Red LED illuminates when turned ON.			
Standard	CE marking, RoHS			

Oilproof Heavy-duty Lead Wire Specifications

Auto swi	tch model	D-F79 D-F7P D-J79		D-J79
Sheath	Outside diameter [mm]	ø3.4		
la sudata a	Number of cores	3 cores (Brown/Blue/Black) 2 cores (Brown/B		2 cores (Brown/Blue)
Insulator	Outside diameter [mm]	n] ø1.1		
Conductor	Effective area [mm²]	0.2		
Conductor	Strand diameter [mm]	ø0.08		
Minimum bending radius [mm] (Reference values)			21	

Note 1) Refer to page 800 for solid state auto switch common specifications.

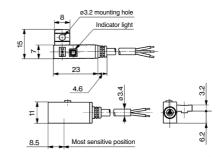
Note 2) Refer to page 800 for lead wire lengths.

Weight

(g)

Auto switch model		D-F79	D-F7P	D-J79
	0.5 m (Nil)	1	3	11
Lead wire length	3 m (L)	5	7	50
	5 m (Z)	9	2	81

Dimensions







Solid State Auto Switch Rail Mounting Type

D-F7NV/D-F7PV/D-F7BV (€ RoHS



Grommet Electrical entry: Perpendicular



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

	PLC: Programmable Logic Controller				
D-F7□V (With ind	D-F7□V (With indicator light)				
Auto switch model	D-F7NV	D-F7PV	D-F7BV		
Wiring type	3-w	vire	2-wire		
Output type	NPN	PNP	_		
Applicable load	IC circuit, F	24 VDC Relay, PLC			
Power supply voltage	5, 12, 24 VDC (4.5 to 28 VDC) —				
Current consumption	10 mA	or less	_		
Load voltage	28 VDC or less	28 VDC or less —			
Load current	40 mA or less	80 mA or less	5 to 40 mA		
Internal voltage drop	1.5 V or less (0.8 V or less at 10 mA load current) 0.8 V or less		4 V or less		
Leakage current	100 μA or less at 24 VDC 0.8 mA or less at 24 VD				
Indicator light	Red LED illuminates when turned ON.				
Standard	CE marking, RoHS				

Oilproof Heavy-duty Lead Wire Specifications

Auto swi	itch model	D-F7NV D-F7PV D-F7B\		D-F7BV
Sheath	Outside diameter [mm]	ø3.4		
la sudata a	Number of cores	3 cores (Brown/Blue/Black) 2 cores (Brown/B		2 cores (Brown/Blue)
Insulator	Outside diameter [mm]	ø1.1		
Conductor	Effective area [mm²]	0.2		
Conductor	Strand diameter [mm]	ø0.08		
Minimum bending radius [mm] (Reference values)			21	

Note 1) Refer to page 800 for solid state auto switch common specifications.

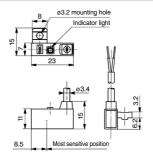
Note 2) Refer to page 800 for lead wire lengths.

Weight

(g)

Auto switch model		D-F7NV	D-F7PV	D-F7BV
	0.5 m (Nil)	1	3	11
Lead wire length	3 m (L)	57		50
	5 m (Z)	92		81

Dimensions



Solid State Auto Switch Rail Mounting Type **D-J79C**



Refer to SMC website for the details of the products conforming to the international standards.

Connector



△Caution

Precautions

- Confirm that the connector is appropriately tightened. If tightened insufficiently, the waterproof performance will deteriorate.
- Refer to Best Pneumatics No. 2-1 for the details.

Lead wires with a connector indication

Part No. of Lead Wires with Connectors (Applicable only for connector type)

Model	Lead wire length	
D-LC05	0.5 m	
D-LC30	3 m	
D-LC50	5 m	

Auto Switch Specifications

PLC: Programmable Logic Controller

D-J79C (With indicator I	-J79C (With indicator light)			
Auto switch model	D-J79C			
Wiring type	2-wire			
Output type	_			
Applicable load	24 VDC Relay, PLC			
Power supply voltage	_			
Current consumption	_			
Load voltage	24 VDC (10 to 28 VDC)			
Load current	5 to 40 mA			
Internal voltage drop	4 V or less			
Leakage current	0.8 mA or less at 24 VDC			
Indicator light	Red LED illuminates when turned ON.			
Standard	CE marking, RoHS			

Note 1) Refer to page 800 for solid state auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

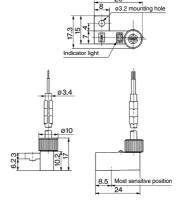
Note 3) Lead wires with a connector may be shipped with auto switches.

Weight

(g)

Auto swit	tch model	D-J79C
	0.5 m (Nil)	13
Lead wire length	3 m (L)	52
	5 m (Z)	83

Dimensions







Solid State Auto Switch Tie-rod Mounting Type D-F59/D-F5P/D-J59



Refer to SMC website for the details of the products conforming to the international standards. (Except D-J51)

Grommet



Auto Switch Specifications

			PLC: Programmable Logic Controller
D-F5□, D-J5□	(With indicat	or light)	
Auto switch model	D-F59	D-F5P	D-J59
Wiring type	3-v	vire	2-wire
Output type	NPN	PNP	_
Applicable load	IC circuit, F	Relay, PLC	24 VDC Relay, PLC
Power supply voltage	5, 12, 24 VDC	(4.5 to 28 VDC)	_
Current consumption	10 mA	or less	_
Load voltage	28 VDC or less	_	24 VDC (10 to 28 VDC)
Load current	40 mA or less	80 mA or less	5 to 40 mA
Internal voltage drop	1.5 V or less (0.8 V or less at 10 mA load current)	0.8 V or less	4 V or less
l aalvama augusud	100 u A or les	ss at 24 VDC	0.8 mA or less
Leakage current	100 μA 01 les	33 at 24 VDC	at 24 VDC
Indicator light		Red LED illuminate	es when turned ON.

Oilproof Heavy-duty Lead Wire Specifications

Auto sw	itch model	D-F59 D-F5P D-J59		D-J59
Sheath	Outside diameter [mm]	ø4		
Insulator	Number of cores	3 cores (Brown/Blue/Black) 2 cores (Brown/B		2 cores (Brown/Blue)
insulator	Outside diameter [mm]	mm] Ø1.22		
Conductor	Effective area [mm²]	0.3		
Strand diameter [mr		ø0.08		
Minimum bending radiu	s [mm] (Reference values)		24	

CE marking, RoHS

Note 1) Refer to page 800 for solid state auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

Weight

Standard

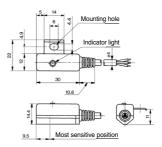
(g)

Auto swit	Auto switch model		D-F5P	D-J59
	0.5 m (Nil)	23		21
Lead wire length	3 m (L)	81 127		71
	5 m (Z)			111

Dimensions

(mm)

D-F59/D-F5P/D-J59



2-Color Indicator Solid State Auto Switch Direct Mounting Type D_MQNW/\/\D_MQDW/\/\D_MQRW/\/\\ D_MQNW/\/\D_MQDW/\/\D_MQRW/\/\\ D_MQNW/\/\D_MQDW/\/\D_MQRW/\/\\ D_MQNW/\/\D_MQDW/\/\D_MQRW/\/\\ D_MQNW/\/\D_MQDW/\/\D_MQRW/\/\D_MQDW/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\/\D_MQDW/\\D_MQDW/\\D_MQDW/\\D_MQDW/\\D_MQDW/\\D_MQDW/\\D_MQDW/\\D_MQDW/\D_MQDW/\\D_MQDW/\\D_MQDW/\\D_MQDW/\D_MQDW/\\D_MQDW/\\D_MQDW/\D_MQDW/\\D_MQDW/\D_MQD

D-M9NW(V)/D-M9PW(V)/D-M9BW(V) **(**



Grommet

- 2-wire load current is reduced (2.5 to 40 mA).
- Using flexible cable as standard spec.
- The proper operating range can be determined by the color of the light. (Red → Green ← Red)



△Caution

D-M9□W

ı	Prec	auti	ons

Fix the auto switch with the existing screw installed on the auto switch body. The auto switch may be damaged if a screw other than the one supplied is used.

Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

PLC: Programmable Logic Controller

D-M9□W, D-M9□WV (With indicator light)						
Auto switch model	D-M9NW	D-M9NWV	D-M9PW	D-M9PWV	D-M9BW	D-M9BWV
Electrical entry direction	In-line	Perpendicular	In-line	Perpendicular	In-line	Perpendicular
Wiring type		3-v	/ire		2-1	vire
Output type	N	PN	PI	NP	-	_
Applicable load		IC circuit, F	Relay, PLC		24 VDC r	elay, PLC
Power supply voltage		5, 12, 24 VDC (4.5 to 28 V)			-	_
Current consumption		10 mA or less			-	_
Load voltage	28 VD0	C or less	-	_	24 VDC (10	to 28 VDC)
Load current		40 mA	or less		2.5 to	40 mA
Internal voltage drop	0.8 V or l	ess at 10 mA	(2 V or less	at 40 mA)	4 V c	r less
Leakage current		100 μA or less at 24 VDC			0.8 mA	or less
Indiantas liebt	Operating range ········ Red LED illuminates.					
Indicator light Proper operating range Green LED il				ED illuminate	s.	
Standard			CE marki	ng, RoHS		

Oilproof Flexible Heavy-duty Lead Wire Specifications

Auto swi	tch model	D-M9NW(V) D-M9PW(V) D-M9BW		D-M9BW(V)
Sheath	Outside diameter [mm]	2.7 x 3.2 (ellipse)		
la sudata a	Number of cores	3 cores (Brow	2 cores (Brown/Blue)	
Insulator	Outside diameter [mm]	0.88		
0	Effective area [mm²]	0.15		
Conductor	Strand diameter [mm]	0.05		
Minimum bending radius	[mm] (Reference values)		17	·

Note 1) Refer to page 800 for solid state auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

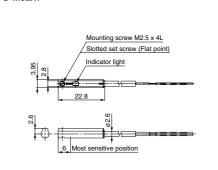
Weight

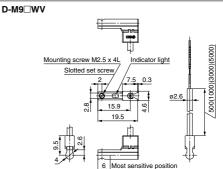
(g)

Auto switch model		D-M9NW(V)	D-M9PW(V)	D-M9BW(V)
	0.5 m (Nil)	8		7
Lead wire length	1 m (M)	14		13
Leau wire lengin	3 m (L)		41	
	5 m (Z)	68		63

Dimensions (mm)

ØSMC







2-Color Indicator Solid State Auto Switch **Direct Mounting Type**



Grommet

- The proper operating range can be determined by the color of the light. $(Red \rightarrow Green \leftarrow Red)$
- Using flexible cable as standard spec.



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards. PLC: Programmable Logic Controller

D-Y7□W, D-Y7□WV (With indicator light)						
Auto switch model	D-Y7NW	D-Y7NWV	D-Y7PW	D-Y7PWV	D-Y7BW	D-Y7BWV
Electrical entry direction	In-line	Perpendicular	In-line	Perpendicular	In-line	Perpendicular
Wiring type		3-w	/ire		2-1	vire
Output type	NI	PN	PI	NP	-	_
Applicable load		IC circuit, F	Relay, PLC		24 VDC i	elay, PLC
Power supply voltage	5,	5, 12, 24 VDC (4.5 to 28 VDC)			_	
Current consumption		10 mA or less			_	
Load voltage	28 VDC	or less	-	_	24 VDC (10) to 28 VDC)
Load current	40 mA	or less	80 mA	or less	2.5 to	40 mA
Internal voltage drop	1.5 V or less (0.8 V or less at 10 mA load current) 0.8 V or less			4 V (or less	
Leakage current	100 μA or less at 24 VDC			0.8 mA or le	ss at 24 VDC	
Indicator light				d LED illumir ····· Green LE		s.
Standard			CE mark	ing, RoHS		

Oilproof Flexible Heavy-duty Lead Wire Specifications

Auto swi	tch model	D-Y7NW□ D-Y7PW□ D-Y7BV		D-Y7BW□
Sheath	Outside diameter [mm]	ø3.4		
Insulator	Number of cores	3 cores (Brown/Blue/Black) 2 cores (Brown		
insulator	Outside diameter [mm]	ø1.0		
Conductor	Effective area [mm²]	0.15		
Conductor	Strand diameter [mm]	ø0.05		
Minimum bending radius	s [mm] (Reference values)		21	

Note 1) Refer to page 800 for solid state auto switch common specifications.

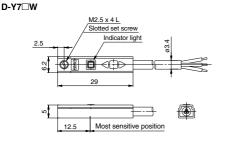
Note 2) Refer to page 800 for lead wire lengths.

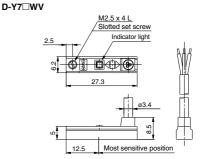
Weight

(g)

Auto switch model		D-Y7NW(V) D-Y7PW(V) D-Y7BW(V		
	0.5 m (Nil)	11		
Lead wire length	3 m (L)		54	
	5 m (Z)		88	

Dimensions (mm)





2-Color Indicator Solid State Auto Switch Rail Mounting Type

D-F79W/D-F7PW/D-J79W



Grommet

The proper operating range can be determined by the color of the light.

 $(Red \rightarrow Green \leftarrow Red)$



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

PLC: Programmable Logic Controller

D-F7□W, D-J79W (With indicator light)						
Auto switch model	D-F79W	D-F7PW	D-J79W			
Wiring type	3-w	vire	2-wire			
Output type	NPN	PNP	_			
Applicable load	IC circuit,	Relay, PLC	24 VDC Relay, PLC			
Power supply voltage	5, 12, 24 VDC	(4.5 to 28 VDC)	_			
Current consumption	10 mA	_				
Load voltage	28 VDC or less	28 VDC or less —				
Load current	40 mA or less	80 mA or less	5 to 40 mA			
Internal voltage drop	1.5 V or less (0.8 V or less at 10 mA load current)	(0.8 V or less 0.8 V or less				
Leakage current	100 μA or less at 24 VDC 0.8 mA or less at 24 VD					
Indicator light	Operating range Red LED illuminates. Proper operating range Green LED illuminates.					
Standard		CE marking, RoHS				

Oilproof Heavy-duty Lead Wire Specifications

Auto sw	Auto switch model D-F79W D-F7PW D-J79\		D-J79W	
Sheath	Outside diameter [mm]	ø3.4		
Insulator	Number of cores	3 cores (Brow	/n/Blue/Black)	2 cores (Brown/Blue)
	Outside diameter [mm]	ø1.1		
Conductor	Effective area [mm²]		0.2	
	Strand diameter [mm]	Ø0.08		
Minimum bending radius [mm] (Reference values)			21	

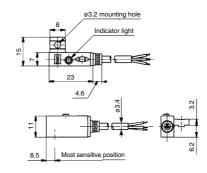
Note 1) Refer to page 800 for solid state auto switch common specifications. Note 2) Refer to page 800 for lead wire lengths.

Weight

(g)

Auto switch model		D-F79W	D-F7PW	D-J79W
	0.5 m (Nil)	1	3	11
Lead wire length	3 m (L)	5	7	50
	5 m (Z)	9	2	81

Dimensions







2-Color Indicator Solid State Auto Switch Rail Mounting Type

D-F7NWV/D-F7BWV

 ϵ



Grommet
Electrical entry: Perpendicular

The proper operating range can be determined by the color of the light.

 $(Red \rightarrow Green \leftarrow Red)$



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

PLC: Programmable Logic Controller

D-F7□WV (With indicator light)			
Auto switch model	D-F7NWV	D-F7BWV	
Wiring type	3-wire	2-wire	
Output type	NPN	_	
Applicable load	IC circuit, Relay, PLC	24 VDC Relay, PLC	
Power supply voltage	5, 12, 24 VDC (4.5 to 28 VDC)	_	
Current consumption 10 mA or less —		_	
Load voltage	Itage 28 VDC or less 24 VDC (10 to 28		
Load current	40 mA or less	5 to 40 mA	
Internal voltage drop 1.5 V or less (0.8 V or less at 10 mA load current)		4 V or less	
Leakage current	100 μA or less at 24 VDC	0.8 mA or less at 24 VDC	
Indicator light	Operating range ········ Red LED illuminates. Proper operating range ······· Green LED illuminates.		
Standard	CE marking, RoHS		

Oilproof Heavy-duty Lead Wire Specifications

Auto switch model		D-F7NWV	D-F7BWV
Sheath	Outside diameter [mm]	ø3.4	
Inculator	Number of cores	3 cores (Brown/Blue/Black)	2 cores (Brown/Blue)
Insulator	Outside diameter [mm]	ø1.1	
Conductor	Effective area [mm²]	0.	2
	Strand diameter [mm]	Ø0.08	
Minimum bending radius [mm] (Reference values)		2	1

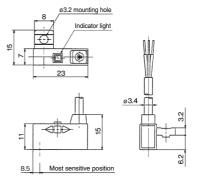
Note 1) Refer to page 800 for solid state auto switch common specifications. Note 2) Refer to page 800 for lead wire lengths.

Weight

(g)

Auto swit	ch model	D-F7NWV	D-F7BWV
	0.5 m (Nil)	13	11
Lead wire length	3 m (L)	57	50
	5 m (Z)	92	81

Dimensions





2-Color Indicator Solid State Auto Switch **Tie-rod Mounting Type**

D-F59W/D-F5PW/D-J59W



Grommet

The proper operating range can be determined by the color of the light.

 $(Red \rightarrow Green \leftarrow Red)$



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards. PLC: Programmable Logic Controller

		1 20.1100	frammable Logic Controller		
D-F5□W, D-J5	D-F5□W, D-J59W (With indicator light)				
Auto switch model	D-F59W D-F5PW D-J59W				
Wiring type	3-v	vire	2-wire		
Output type	NPN	PNP	_		
Applicable load	IC circuit, F	Relay, PLC	24 VDC Relay, PLC		
Power supply voltage	5, 12, 24 VDC ((4.5 to 28 VDC)	_		
Current consumption	10 mA	or less	_		
Load voltage	28 VDC or less	28 VDC or less —			
Load current	40 mA or less	40 mA or less 80 mA or less			
Internal voltage drop	1.5 V or less (0.8 V or less at 10 mA load current) 0.8 V or less		4 V or less		
Leakage current	100 μA or less at 24 VDC 0.8 mA or less at 24		0.8 mA or less at 24 VDC		
Indicator light	Operating range Red LED illuminates. Proper operating range Green LED illuminates.				
Standard	CE marking, RoHS				

Oilproof Heavy-duty Lead Wire Specifications

Onproof ficary daty Lead wife openinguions				
Auto switch model		D-F59W	D-F5PW	D-J59W
Sheath	Outside diameter [mm]	ø4		
Inculator	Number of cores	3 cores (Brow	rn/Blue/Black)	2 cores (Brown/Blue)
Insulator	Outside diameter [mm]	ø1.22		
Effective area [mm²]			0.3	
Conductor	Strand diameter [mm]	Ø0.08		
Minimum bending radius [mm] (Reference values)			24	

Note 1) Refer to page 800 for solid state auto switch common specifications. Note 2) Refer to page 800 for lead wire lengths.

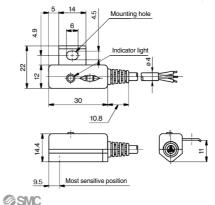
Weight

(g)

Auto swit	Auto switch model		D-F5PW	D-J59W
	0.5 m (Nil)	2	3	21
Lead wire length	3 m (L)	81		71
	5 m (Z)	12	27	111

Dimensions

(mm)



D-□

2-Color Indicator with Diagnostic Output Solid State Auto Switch: Rail Mounting Type

D-F79F

Grommet

Since the diagnostic output signal can be detected in the red display area, the difference of detecting position can be confirmed by the side of (Programmable Logic PLC Controller).



Auto Switch Specifications

Refer to SMC website for the details of PLC: Programmable Logic Controller

the products conforming to the

international standards.

D-F79F (With indicator light)		
Auto switch model	D-F79F	
Wiring type	4-wire	
Output type	NPN	
Diagnostic output	Normal operation	
Applicable load	IC circuit, Relay, PLC	
Power supply voltage	5, 12, 24 VDC (4.5 to 28 VDC)	
Current consumption	10 mA or less	
Load voltage	28 VDC or less	
Load current	50 mA or less at the total amount of normal output and diagnostic output	
Internal voltage drop	1.5 V or less (0.8 V or less at 5 mA)	
Leakage current	100 μA or less at 24 VDC	
Indicator light	Operating range Red LED illuminates. Proper operating range Green LED illuminates.	
Standard	CE marking, RoHS	

Oilproof Heavy-duty Lead Wire Specifications

Auto switch model		D-F79F
Sheath	Outside diameter [mm]	ø3.4
Inculator	Number of cores	4 cores (Brown/Blue/Black/Orange)
Insulator	Outside diameter [mm]	ø0.98
Conductor	Effective area [mm²]	0.2
	Strand diameter [mm]	ø0.08
Minimum bending radius	s [mm] (Reference values)	21

Note 1) Refer to page 800 for solid state auto switch common specifications. Note 2) Refer to page 800 for lead wire lengths.

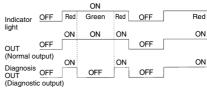
Weight

(g)

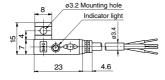
Auto switch model		D-F79F
	0.5 m (Nil)	13
Lead wire length	3 m (L)	56
	5 m (Z)	90

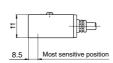
Diagnostic Output Operation

The diagnostic output signal is output within the red display area (where indicator light is Red), and it is not output within the proper operating range (where indicator light is Green). When the auto switch detecting position is not adjusted, the diagnostic output becomes activated.



Dimensions







2-Color Indicator with Diagnostic Output Solid State Auto Switch: Tie-rod Mounting Type

D-F59F

Refer to SMC website for the details of

Grommet

Since the diagnostic output signal can be detected in the red display area, the difference of detecting position can be confirmed by the side of PLC (Programmable Logic Controller).



Auto Switch Specifications

the products conforming to the international standards.

PLC: Programmable Logic Controller

D-F59F (With indicator light)		
Auto switch model	D-F59F	
Wiring type	4-wire	
Output type	NPN	
Diagnostic output	Normal operation	
Applicable load	IC circuit, Relay, PLC	
Power supply voltage	5, 12, 24 VDC (4.5 to 28 VDC)	
Current consumption	10 mA or less	
Load voltage	28 VDC or less	
Load current	50 mA or less at the total amount of normal output and diagnostic output	
Internal voltage drop	1.5 V or less (0.8 V or less at 5 mA)	
Leakage current	100 μA or less at 28 VDC	
Indicator light	Operating range ········· Red LED illuminates. Proper operating range ······· Green LED illuminates.	
Standard	CE marking, RoHS	

Oilproof Heavy-duty Lead Wire Specifications

onproor rioury duty zona who opcomountaile				
Auto sw	itch model	D-F59F		
Sheath	Outside diameter [mm]	ø4		
Insulator	Number of cores	4 cores (Brown/Blue/Black/Orange)		
insulator	Outside diameter [mm]	ø1.29		
Conductor	Effective area [mm²]	0.3		
Conductor	Strand diameter [mm]	ø0.08		
Minimum bending radiu	s [mm] (Reference values)	24		

Note 1) Refer to page 800 for solid state auto switch common specifications. Note 2) Refer to page 800 for lead wire lengths.

Weight

(g)

Auto switch model		D-F59F
	0.5 m (Nil)	22
Lead wire length	3 m (L)	77
	5 m (Z)	121

Diagnostic Output Operation

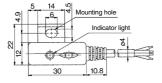
The diagnostic output signal is output within the red display area (where indicator light is Red), and it is not output within the proper operating range (where indicator light is Green). When the auto switch detecting position is not adjusted, the diagnostic output becomes activated.

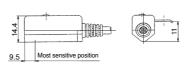
			ON			
Indicator light	OFF	Red	Green	Red	OFF	Red
9		ON	ON	ON		ON
OUT	OFF			L	OFF	
(Normal o		ON		ON		ON
Diagnosis OUT (Diagnosti	OFF	it)	OFF		OFF	

Dimensions

(mm)

D-□







Water Resistant 2-Color Indicator Solid State Auto Switch: Direct Mounting Type D-M9NA(V)/D-M9PA(V)/D-M9BA(V) (ROHS)

Grommet

- Water (coolant) resistant type
- 2-wire load current is reduced (2.5 to 40 mA).
- The proper operating range can be determined by the color of the light. (Red → Green ← Red)
- Using flexible cable as standard spec.



∆Caution

Precautions

Fix the auto switch with the existing screw installed on the auto switch body. The auto switch may be damaged if a screw other than the one supplied is used.

Please consult with SMC if using coolant

liquid other than water based solution.

Weight

(g)

Auto s	witch model	D-M9NA(V) D-M9PA(V)	D-M9BA(V)
	0.5 m (Nil)	8	7
Lead	1 m (M)	14	13
length	3 m (L)	41	38
length	5 m (Z)	68	63

Auto Switch Specifications

PLC: Programmable Logic Controller

D-M9□A, D-M9	D-M9□A, D-M9□AV (With indicator light)						
Auto switch model	D-M9NA	D-M9NAV	D-M9PA	D-M9PAV	D-M9BA	D-M9BAV	
Electrical entry direction	In-line	Perpendicular	In-line	Perpendicular	In-line	Perpendicular	
Wiring type		3-v	vire		2-v	vire	
Output type	N	PN	PI	NΡ	-	-	
Applicable load		IC circuit, F	Relay, PLC		24 VDC r	elay, PLC	
Power supply voltage		5, 12, 24 VDC (4.5 to 28 V)			-	_	
Current consumption		10 mA or less			-	-	
Load voltage	28 VD0	C or less		_	24 VDC (10	to 28 VDC)	
Load current		40 mA or less			2.5 to	40 mA	
Internal voltage drop	0.8 V or l	0.8 V or less at 10 mA (2 V or less at 40 mA) 4 V			4 V o	r less	
Leakage current	100 μA or less at 24 VDC 0.8 mA or less				or less		
Indicator light	Operating range Red LED illuminates. Proper operating range Green LED illuminates.				s.		
Standard		CE marking, RoHS					

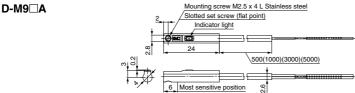
Oilproof Flexible Heavy-duty Lead Wire Specifications

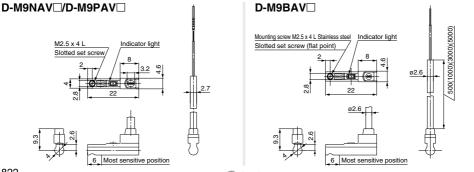
Auto switch model		D-M9NA□	D-M9NAV□	D-M9PA□	D-M9PAV□	D-M9BA□	D-M9BAV□
Sheath	Outside diameter [mm]	2.6	2.7 x 3.2 (ellipse)	2.6	2.7 x 3.2 (ellipse)	2.6	2.6
In a selection	Number of cores	3 0	3 cores (Brown/Blue/Black)			2 cores (Brown/Blue)	
Insulator	Outside diameter [mm]		0.9	0.88	0.9	0.	88
Effective area [mm²]		0.15					
Conductor	Strand diameter [mm]	mm] 0.05					
Minimum bending radius	[mm] (Reference values)	17	20	17	20	1	7

Note 1) Refer to page 800 for solid state auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

<u>Dimensions</u> (mm)





Water Resistant 2-Color Indicator Solid State Auto Switch: Direct Mounting Type

D-Y7BA

Refer to SMC website for the details of the products conforming to the

international standards.

Grommet

- Water (coolant) resistant type Using flexible cable as
- standard spec.
- The proper operating range can be determined by the color of the light. $(Red \rightarrow Green \leftarrow Red)$



. Caution

Precautions

Please consult with SMC if using coolant liquid other than water based solution. Detection characteristics (operating range) are the same as D-Y5 and D-Y7 W, but the detection area length is different.

Auto Switch Specifications

PLC: Programmable Logic Controller

D-Y7BA (With indicator light)			
Auto switch model	D-Y7BA		
Wiring type	2-wire		
Applicable load	24 VDC Relay, PLC		
Load voltage	24 VDC (10 to 28 VDC)		
Load current	2.5 to 40 mA		
Internal voltage drop	4 V or less		
Leakage current	0.8 mA or less at 24 VDC		
Indicator light	Operating range Red LED illuminates. Proper operating range Green LED illuminates.		
Standard	CE marking, RoHS		

Oilproof Flexible Heavy-duty Lead Wire Specifications

Auto switch model		D-Y7BA
Sheath	Outside diameter [mm]	ø3.4
Insulator	Number of cores 2 cores (Brown/Blue)	
insulator	Outside diameter [mm]	ø1
Conductor	Effective area [mm²]	0.15
Conductor	Strand diameter [mm]	ø0.05
Minimum bending radius	[mm] (Reference values)	21

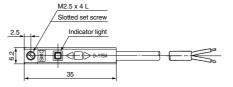
Note 1) Refer to page 800 for solid state auto switch common specifications. Note 2) Refer to page 800 for lead wire lengths.

Weight

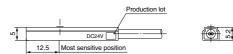
(g)

Auto switch model		D-Y7BA
Lood wire length	3 m (L)	54
Lead wire length	5 m (Z)	88

Dimensions









Water Resistant 2-Color Indicator Solid State Auto Switch: Rail Mounting Type D-F7BA(V)

Refer to SMC website for the details of

the products conforming to the international standards.

PLC: Programmable Logic Controller

D-F7BA(V) (With indicator light)				
Auto switch model	D-F7BA	D-F7BAV		
Electrical entry direction	In-line Perpendicular			
Wiring type	2-v	vire		
Output type	-	-		
Applicable load	24 VDC F	lelay, PLC		
Power supply voltage	_			
Current consumption	_			
Load voltage	24 VDC (10 to 28 VDC)			
Load current	5 to 40 mA			
Internal voltage drop	4 V or less			
Leakage current	0.8 mA or less at 24 VDC			
Indicator light	Operating range Red LED illuminates. Proper operating range Green LED illuminates.			
Standard	CE marking, RoHS			

Oilproof Heavy-duty Lead Wire Specifications

supreer rieary daty feat wife openingations			
Auto switch model		D-F7BA	
Sheath	Outside diameter [mm]	ø3.4	
Inculator	Number of cores	2 cores (Brown/Blue)	
Insulator	Outside diameter [mm]	ø1.1	
Conductor Effective area [mm²]		0.2	
Conductor	Strand diameter [mm]	ø0.08	
Minimum bending radiu	s [mm] (Reference values)	21	

Note 1) Refer to page 800 for solid state auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

Auto Switch Specifications

 Water (coolant) resistant type The proper operating range can be determined by the color of the light.

Grommet

 $(Red \rightarrow Green \leftarrow Red)$



∧Caution

Precautions

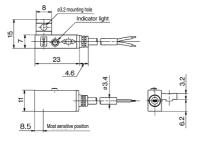
Please consult with SMC if using coolant liquid other than water based solution.

> Weight (g)

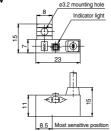
Auto switch model		D-F7BA D-F7BAV	
Lead wire length	3 m (L)	50	
Leau wire lengin	5 m (Z)	8	1

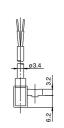
Dimensions (mm)

D-F7BA



D-F7BAV





Water Resistant 2-Color Indicator Solid State Auto Switch: Tie-rod Mounting Type

D-F5BA

Refer to SMC website for the details of

Grommet

 Water (coolant) resistant type The proper operating range can be determined by the color of the light. $(Red \rightarrow Green \leftarrow Red)$



.⚠Caution

Precautions

Please consult with SMC if using coolant liquid other than water based solution.

Auto Switch Specifications

PLC: Programmable Logic Controller

the products conforming to the

international standards.

D-F5BA (With indicator light)					
Auto switch model	D-F5BA				
Wiring type	2-wire				
Output type	_				
Applicable load	24 VDC Relay, PLC				
Power supply voltage	_				
Current consumption	_				
Load voltage	24 VDC (10 to 28 VDC)				
Load current	5 to 40 mA				
Internal voltage drop	4 V or less				
Leakage current	0.8 mA or less at 24 VDC				
Indicator light	Operating range Red LED illuminates. Proper operating range Green LED illuminates.				
Standard CE marking, RoHS					

Oilproof Heavy-duty Lead Wire Specifications

Olipi doli i le	Oliphool fleavy-duty Lead Wife Opecifications			
Auto switch model		D-F5BA		
Sheath Outside diameter [mm]		ø4		
Insulator	Number of cores	2 cores (Brown/Blue)		
	Outside diameter [mm]	ø1.22		
Conductor	Effective area [mm²]	0.3		
Conductor	Strand diameter [mm]	ø0.08		
Minimum bending radius [mm] (Reference values)		24		

Note 1) Refer to page 800 for solid state auto switch common specifications.

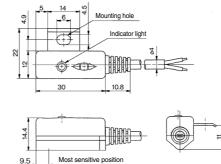
Note 2) Refer to page 800 for lead wire lengths.

Weight

(g)

Auto swit	tch model	D-F5BA
Lood wire length	3 m (L)	71
Lead wire length	5 m (Z)	111

Dimensions







Solid State Auto Switch with Timer Rail Mounting Type

D-F7NT

 $C \in$



Grommet

- With built-in OFF-delay timer (approx. 200 ms)
- Easy intermediate detection



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

PLC: Programmable Logic Controller

D-F7NT (With indicator light)				
Auto switch model	D-F7NT			
Wiring type	3-wire			
Output type	NPN			
Output operation	Off-delay			
Operating time	1 ms or less			
Off-delay time 200 ± 50 ms				
Applicable load IC circuit, Relay, PLC				
Power supply voltage	5, 12, 24 VDC (4.5 to 28 VDC)			
Current consumption	10 mA or less			
Load voltage	28 VDC or less			
Load current	40 mA or less			
Internal voltage drop	1.5 V or less (0.8 V or less at 10 mA)			
Leakage current 100 μA or less at 24 VDC				
Indicator light Red LED illuminates when turned ON.				
Standard	CE marking, RoHS			

Oilproof Heavy-duty Lead Wire Specifications

Auto switch model		D-F7NT		
Sheath Outside diameter [mm]		ø3.4		
Insulator	Number of cores	3 cores (Brown/Blue/Black)		
	Outside diameter [mm]	ø1.1		
	Effective area [mm²]	0.2		
	Strand diameter [mm]	ø0.08		
Minimum bending radius [mm] (Reference values)		21		

Note 1) Refer to page 800 for solid state auto switch common specifications. Note 2) Refer to page 800 for lead wire lengths.

Weight

(g)

Auto swit	tch model	D-F7NT
Lood wire longth	3 m (L)	57
Lead wire length	5 m (Z)	92

Timer Operation

Detection of intermediate positioning for high-speed cylinder

Detecting point dispersion occurs due to response time of PLC (sequencer); e.g. scanning.

Switch detecting time OFF ON (200 ms)

Switch operating range (mm)

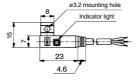
ON (200 ms)

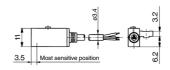
Switch output ON time OFF

Ex.) Cylinder speed — 1000 mm/sec.
PLC response time — 0.1 sec.
Detecting point dispersion — Within
100 mm (= 1000 mm/sec. x 0.1 sec.)

Take PLC response time into consider- PLC response time ation when using.

Dimensions





Solid State Auto Switch with Timer Tie-rod Mounting Type

D-F5NT





Grommet

- With built-in OFF-delay timer (approx. 200 ms)
- Easy intermediate detection



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

PLC: Programmable Logic Controller

D-F5NT (With indicator light)				
Auto switch model	D-F5NT			
Wiring type	3-wire			
Output type	NPN			
Output operation	Off-delay			
Operating time	1 ms or less			
Off-delay time	200 ± 50 ms			
Applicable load IC circuit, Relay, PLC				
Power supply voltage	5, 12, 24 VDC (4.5 to 28 VDC)			
Current consumption 10 mA or less				
Load voltage	28 VDC or less			
Load current	40 mA or less			
Internal voltage drop	1.5 V or less (0.8 V or less at 10 mA)			
Leakage current 100 μA or less at 24 VDC				
Indicator light Red LED illuminates when turned ON.				
Standard	CE marking, RoHS			

Oilproof Heavy-duty Lead Wire Specifications

onprocerricary and pour mile operations				
Auto switch model		D-F5NT		
Sheath Outside diameter [mm]		ø4		
Insulator	Number of cores	3 cores (Brown/Blue/Black)		
	Outside diameter [mm]	ø1.22		
Conductor	Effective area [mm²]	0.3		
Conductor	Strand diameter [mm]	ø0.08		
Minimum bending radius [mm] (Reference values)		24		

Note 1) Refer to page 800 for solid state auto switch common specifications.

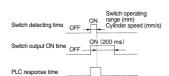
Note 2) Refer to page 800 for lead wire lengths.

Timer Operation

Detection of intermediate positioning for high-speed cylinder

Detecting point dispersion occurs due to response time of PLC (sequencer); e.g. scanning.

Ex.) Cylinder speed — 1000 mm/sec. PLC response time — 0.1 sec. Detecting point dispersion — Within 100 mm (= 1000 mm/sec. x 0.1 sec.) Table PLC response time into consideration when using.

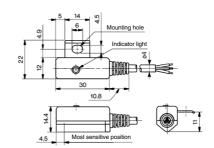


Weight

<u>11</u> (g)

	Auto switch model		D-F5NT
	Lead wire length	3 m (L)	81
		5 m (Z)	127

Dimensions









Made to Order Specifications: Solid State Auto Switch

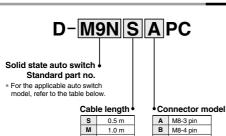
Refer to SMC website for the details of the products conforming to the international standards.

1 With Pre-wired Connector

- · Eliminates the harnessing work by cable with connector specifications
- Adopts global standardized connector (IEC947-5-2)
- IP67 construction



How to Order



L 3.0 m Note) L is available

for the D-P4DW type only.

D M12-4 pin

Note) Type D is available for the D-P4DW type

Connector Specifications

Connector model	M8-3 pin	M8-4 pin	M12-4 pin
Pin arrangement	1 4	3 4	② ① ③ ④

Applicable Auto Switch

	F	Electrical	A P I I I . I	Lead v	vire len	gth (m)
Mounting	Function	entry	Applicable model	0.5	1.0	3.0
		Grommet (In-line)	F79, F7P, J79	•	•	_
	_	Grommet (Perpendicular)	F7NV, F7PV, F7BV	•	•	_
	2-color	Grommet (In-line)	F79W, F7PW, J79W	•	•	_
Rail	indicator	Grommet (Perpendicular)	F7NWV, F7BWV	•	•	_
	With diagnostic output	Grommet (In-line)	F79F	•	•	-
type	Water resistant	Gioinnet (iiriiie)	F7BA	•	•	-
	Water resistant	Grommet (Perpendicular)	F7BAV	•	•	-
	With timer		F7NT	•	•	-
	Magnetic field resistant		P4DW	•	•	•
		Grommet (In-line)	H7A1, H7A2, H7B	•	•	_
	_		G59, G5P, K59	•	•	_
	2-color		H7NW, H7PW, H7BW	•	•	_
Band	indicator		G59W, G5PW, K59W	•	•	_
mounting type	Diagnostic output		H7NF, G59F	•	•	_
1,700	Water resistant		H7BA, G5BA	•	•	_
	With timer		G5NT	•	•	_
	Wide detection		G5NB	•	•	_
	_		F59, F5P, J59	•	•	_
Tie-rod	2-color indicator		F59W, F5PW, J59W	•	•	_
mounting	Diagnostic output		F59F	•	•	_
type	Water resistant		F5BA	•	•	_
	With timer		F5NT	•	•	_

Mounting	Function	Electrical	Applicable model	Lead v	AILE IEII	gui (iii)
woulding	i unction	entry	Applicable Illodel	0.5	1.0	3.0
		Grommet (In-line)	Y59A, Y7P, Y59B	•	•	_
		Grommet (Perpendicular)	Y69A, Y7PV, Y69B	•	•	_
		Grommet (In-line)	M9N, M9P, M9B	•	•	_
	_	Grommet	M9NV, M9PV, M9BV	•	•	_
		(Perpendicular)	F8N, F8P, F8B	•	•	_
		Grommet (In-line)	F6N, F6P, F6B	•	•	_
Direct	Normally	Grommet (In-line)	Y7G, Y7H	•	•	_
mounting	closed	Grommet (m-ine)	F9G, F9H	•	•	_
type		Grommet (In-line)	Y7NW, Y7PW, Y7BW	•	•	_
	2-color	Grommet (Perpendicular)	Y7NWV, Y7PWV, Y7BWV	•	•	_
	indicator	Grommet (In-line)	M9NW, M9PW, M9BW	•	•	_
		Grommet (Perpendicular)	M9NWV, M9PWV, M9BWV	•	•	_
		Grommet (In-line)	Y7BA	•	•	_
	Water resistant		M9NA, M9PA, M9BA	•	•	_
		Grommet (Perpendicular)	M9NAV, M9PAV, M9BAV	•	•	_
Determ		Grommet (In-line)	S791/2, S7P1/2, T791/2	•	•	_
Rotary	_	Gronnine (in riine)	S991/2, S9P1/2, T991/2	•	•	_
	.	Grommet (Perpendicular)	S99V1/2, T99V1/2	•	•	_





With Pre-wired Connector

M8-3 pin



M8-4 pin



Weight for Connector Type

•	,,	
Part no.	Connector type	Weight
D-□□□APC	M8-3 pin	4 g
D-□□□BPC	M8-4 pin	4 g
D-□□□DPC	M12-4 pin	About 11 g

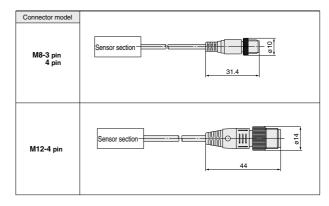
Connector Pin Arrangement

Sensor type	Col	Color distinction of lead wire			Meaning of contact number			ber
Sensor type	1 pin	2 pin	3 pin	4 pin	1 pin	2 pin	3 pin	4 pin
DC 2-wire type	Brown	_	_	Blue	OUT (+)	_	_	OUT (-)
DC 2-wire, Non-polar type	_	_	Brown	Blue	_	_	OUT (±)	OUT (Ŧ)
DC 3-wire type	Brown	_	Blue	Black	DC (+)	_	DC (-)	OUT
DC 4-wire type	Brown	Orange	Blue	Black	DC (+)	Diagnostic output	DC (-)	OUT

Connector Specifications

Connector model	M8-3 pin	M8-4 pin	M12-4 pin	
Pin arrangement	1 4	3 4	② ① ③ ④	
Conformed standard	JIS C 4524, JIS C 4525, IEC 947-5-2, NECA 0402			
Impact resistance	300 m/s ²			
Enclosure	IP67 (IEC60529 standard)			
Insulation resistance	100 MΩ or more at 500 VDC measured via megohmmeter			
Withstand voltage	1500 VAC 1 minute (b	oetween contacts), Lea	k current 1 mA or less	

Dimensions



Connection (Female side) Connector Cable

As the parts are not supplied from SMC, refer to the application examples listed in the below. (For detail such as catalog availability, etc., please contact each manufacturer.)

Connector size	Number of pins	Manufacturer	Applicable series example		
	3	Phoenix Contact	SAC-3P		
M8	3	Corrence Corporation	M8-3D		
IVIO		Corrence Corporation	M8-4D		
		OMROM Corporation	XS3		
	4	Phoenix Contact	SAC-4P		
		Corrence Corporation	VA-4D		
M12		4	4	OMROM Corporation	XS2
IVITZ			Azbil Corp.	PA5-4I	
		HIROSE ELECTRIC CO., LTD.	HR24		
		DDK Ltd.	CM01-8DP4S		

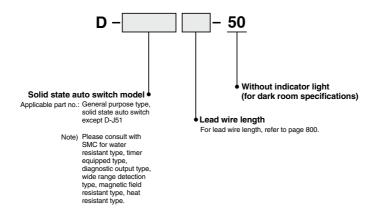


Made to Order Specifications: Solid State Auto Switch -50: Without Indicator Light (Dark room) Specifications -61: Oilproof Flexible Heavy-duty Cord Specifications

2 Without Indicator Light (for dark room specifications)

Symbol -50

Possible to use under the environment which hates a light.

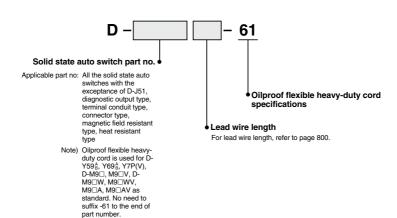


Dimensions and specifications are common as standard products with the exception of no indicator light.

3 Oilproof Flexible Heavy-duty Cord Specifications

Symbol -61

This is the product which uses a heavy-duty cord having flexible characteristics 5 times (SMC comparison) as strong as oilproof heavy-duty cord used in the standard products.



D-□

Dimensions are identical with D-F5 type, G5 type, J59 type, K59 type. Lead wire diameter is changed from ø4 to ø3.4. In other series products, it is common as standard product's specifications.



Reed Auto Switch Direct Mounting Type D-A90(V)/D-A93(V)/D-A96(V) (€

Grommet D-A93 D-A90 (V) D-A93V D-A96 (V)

∆Caution

Precautions

Fix the auto switch with the existing screw installed on the auto switch body. The auto switch may be damaged if a screw other than the one supplied is used.

Auto Switch Specifications

the products conforming to the international standards.

(g)

	PLC: Programmable Logic Controller				
D-A90, D-A90	V (Without indicate	or light)			
Auto switch model		D-A90, D-A90V			
Applicable load		IC circuit, Relay, PLC			
Load voltage	24 V AC or less	48 V DC or less	100 V AC or less		
Maximum load current	50 mA	40 mA	20 mA		
Circuit diagram*		4			
Contact protection circuit		None			
Internal resistance	1 Ω or les	1 Ω or less (Including lead wire length of 3 m)			
Standard	CE marking				
D-A93, D-A93V, D-A96, D-A96V (With indicator light)					
Auto switch model	D-A93,	D-A93, D-A93V D-A9			
Applicable load	Relay	, PLC	IC circuit		
Load voltage	24 VDC(4)	100 VAC	4 to 8 VDC		
Load current range and Maximum load current (3)	5 to 40 mA	5 to 20 mA	20 mA		
Circuit diagram*	3 5				
Contact protection circuit	None				
Internal voltage drop	D-A93: 2.4 V or less (up to 20 mA)/3 V or less (up to 40 mA) D-A93V: 2.7 V or less 0.8 V or less				
Indicator light	Red L	ED illuminates when turne	d ON.		
Standard		CE marking			

Oilproof Heavy-duty Lead Wire Specifications

	Auto swit	ch model	D-A90(V)	D-A93(V)	D-A96(V)	
	Sheath	Outside diameter [mm]	ø2.7			
	Insulator	Number of cores	2 cores (E	Brown/Blue)	3 cores (Brown/Blue/Black)	
	insulator	Outside diameter [mm]	øΩ).96	ø0.91	
	Canduatas	Effective area [mm²]	0.	.18	0.15	
	Conductor	Strand diameter [mm]	ø0.08			
Lead	d wire minimum bending ra	adius [mm] (Reference values)		17		

* Refer to the circuit diagram no. on page 803.

Note 1) Refer to page 800 for reed auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

Note 3) Under 5 mA, the strength of the indicator light is poor. In some cases, visibility of the indicator light will not be possible where the output signal is less than 2.5 mA. However, there is no problem in terms of contact output, when an output signal exceeds 1 mA or more.

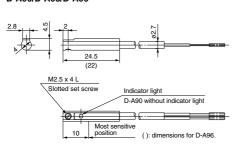
Note 4) The auto switches can operate at 12 VDC, but consider the internal voltage drop of the auto switch described in Reed Auto Switch Precautions on page 374.

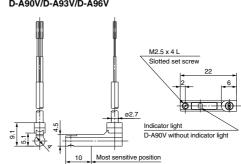
Weight

Mo	del	D-A90	D-A90V	D-A93	D-A93V	D-A96	D-A96V
	0.5 m (NiI)	6	6	6	6	8	8
Landarday Incomb	1 m (M)	_	_	11	_	_	_
Lead wire length	3 m (L)	30	30	30	30	41	41

Dimensions (mm) D-A90/D-A93/D-A96 D-A90V/D-A93V/D-A96V

5 m (Z)





47

Reed Auto Switch Direct Mounting Type D-90/D-97

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Grommet Lead wire: Parallel cord



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

		PLC: Programm	able Logic Controller	
D-90 (Without indicator li	ght)			
Auto switch model	D-90			
Applicable load	Relay, IC circuit, PLC			
Load voltage	5 VAC	12 VAC	24 VAC	
Load voltage	5 VDC	12 VDC	24 VDC	
Max. load current	50 mA			
Circuit diagram*	4			
Internal resistance	1 Ω or less (Including lead wire length of 3 m)			
Standard	CE marking			
D-97 (With indicator light)				
Auto switch model		D-97		
Applicable load		Relay, PLC		
Load voltage		24 VDC (4)		
Load current range (3)	5 to 40 mA			
Circuit diagram*	3			
Internal voltage drop	2.4 V or less			
Indicator light	Red LED illuminates when turned ON.			
Standard		CE marking		

Vinyl Parallel Cord Specifications

Auto switch model		D-90	D-97	
Insulator	Number of cores	2 cores		
Outside diameter [mm]		ø1.4		
Conductor	Effective area [mm ²]	0.2		
Conductor Strand diameter [mm]		ø0.08		
Lead wire minimum bending radius [mm] (Reference values)		Ç)	

^{*} Refer to the circuit diagram no. on page 803.

Note 1) Refer to page 800 for reed auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

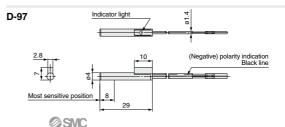
Note 3) Under 5 mA, the strength of the indicator light is poor. In some cases, visibility of the indicator light will not be possible where the output signal is less than 2.5 mA. However, there is no problem in terms of contact output, when an output signal exceeds 1 mA or more.

Note 4) The auto switches can operate at 12 VDC, but consider the internal voltage drop of the auto switch described in Reed Auto Switch Precautions on page 374.

Weight (9)

Auto switch mod	iel	D-90	D-97
	0.5 m (NiI)	5	5
Lead wire length	3 m (L)	23	23
	5 m (Z)	37	37

Dimensions D-90 Most sensitive position 8 23 1.4





Reed Auto Switch Direct Mounting Type D-90A/D-93A

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Grommet Lead wire: Heavy-duty cord



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

	PLC: Programmable Logic Controller				
D-90A (Without indicator I	ight)				
Auto switch model		D-9	90A		
Applicable load	Relay, IC circuit, PLC				
Load voltage	5 VAC	12 VAC	24 VAC	100 VAC	
	5 VDC	12 VDC	24 VDC	100 VDC	
Max. load current	50 mA 20 mA				
Circuit diagram*	4				
Internal resistance	1 Ω or less (Including lead wire length of 3 m)				
Standard	CE marking				
D-93A (With indicator ligh	t)				
Auto switch model		D-:	93A		
Applicable load		Rela	y, PLC		
Load voltage	24 VD	C (4)	10	0 VAC	
Load current range (3)	5 to 40 mA 5 to 20 mA				
Circuit diagram*	3				
Internal voltage drop	2.4 V or less				
Indicator light	Red LED illuminates when turned ON.				
Standard		CE m	narking		

Oilproof Heavy-duty Lead Wire Specifications

Auto switch model		D-90A·D-93A
Sheath	Outside diameter [mm]	ø3.4
Insulator	Number of cores	2 cores (Brown/Blue)
insulator	Outside diameter [mm]	ø1.1
Conductor Effective area [mm²]		0.2
Strand diameter [mm]		ø0.08
Lead wire minimum bending radius [mm] (Reference values)		21

^{*} Refer to the circuit diagram no. on page 803.

Note 3) Under 5 mA, the strength of the indicator light is poor. In some cases, visibility of the indicator light will not be possible where the output signal is less than 2.5 mA. However, there is no problem in terms of contact output, when an output signal exceeds 1 mA or more.

Note 4) The auto switches can operate at 12 VDC, but consider the internal voltage drop of the auto switch described in Reed Auto Switch Precautions on page 374.

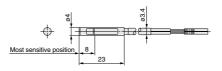
Weight (9)

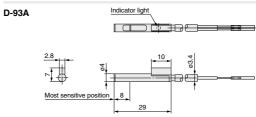
Auto quitab mass	dal	D-90A	D-93A
Auto switch model		D-90A	D-93A
Lead wire length	0.5 m (NiI)	9	9
	3 m (L)	47	47
	5 m (7)	77	77

Dimensions

(mm)

D-90A





Note 1) Refer to page 800 for reed auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

Reed Auto Switch Direct Mounting Type D-R73/D-R80

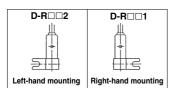
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Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

Grommet Electrical entry: In-line





		PLC: Progra	ammable Logic Controller	
D-R73□ (With indicator light)				
Auto switch model	D-R731, D-R732			
Applicable load		Relay, PLC		
Load voltage	24 VDC (4)		100 VAC	
Load current range (3)	5 to 40 mA		5 to 20 mA	
Circuit diagram*		3		
Internal voltage drop	2.4 V or less			
Indicator light	Red LED illuminates when turned ON.			
Standard	CE marking			
D-R80□ (Wi	thout indicator I	ight)		
Auto switch model		D-R801, D-R802		
Applicable load		Relay, IC circuit, PLC		
Load voltage	24 V _{DC} or less	48 V AC DC	100 V AC DC	
Max. load current	50 mA	40 mA	20 mA	
Circuit diagram*	4			
Internal resistance	1 Ω or less	(Including lead wire len	gth of 3 m)	
Standard		CE marking		

Oilproof Heavy-duty Lead Wire Specifications

Oliprool H	Diproof Heavy-duty Lead wire Specifications				
Auto switch model		D-R73□-D-R80□			
Sheath	Outside diameter [mm]	ø3.4			
Inquilator	Number of cores	2 cores (Brown/Blue)			
Insulator	Outside diameter [mm]	ø1.1			
Conductor	Effective area [mm ²]	0.2			
Conductor Strand diameter [mm]		ø0.08			
Lead wire minimum	bending radius [mm] (Reference values)	21			

* Refer to the circuit diagram no. on page 803.

Note 1) Refer to page 800 for reed auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

Note 3) Under 5 mA, the strength of the indicator light is poor. In some cases, visibility of the indicator light will not be possible where the output signal is less than 2.5 mA. However, there is no problem in terms of contact output, when an output signal exceeds 1 mA or more.

contact output, when an output signal exceeds 1 mA or more.

Note 4) The auto switches can operate at 12 VDC, but consider the internal voltage drop of the auto

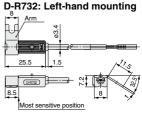
switch described in Reed Auto Switch Precautions on page 374. Weight (g)

Auto switch model		D-R73□	D-R80□
	0.5 m (NiI)	11	11
Lead wire length	3 m (L)	49	49
	5 m (Z)	79	79

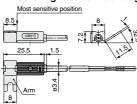
<u>Dimensions</u> D-R731: Right-hand mounting

(mm)

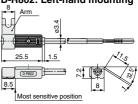
Most sensitive position 8.5 25.5 1.5 25.5 1.5 25.5 1.5 26.5 27.5 28.5 29.5 20.



D-R801: Right-hand mounting



D-R802: Left-hand mounting



D-□

Reed Auto Switch Direct Mounting Type D-R73□C/D-R80□C

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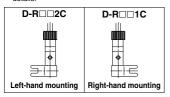
Connector Electrical entry: In-line



∆Caution

Precautions

- Confirm that there is no looseness after wiring. The looseness will decrease water resistance.
- Refer to Best Pneumatics No. 2-1 for the details.



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

	PLC: Programmable Logic Controller				
D-R73□C (W	D-R73□C (With indicator light)				
Auto switch model	D-R731C, D-R732C				
Applicable load	Relay, PLC				
Load voltage	24 VDC (5)				
Load current range (4)	5 to 40 mA				
Circuit diagram*	3				
Internal voltage drop	2.4 V or less				
Indicator light	Red LED illuminates when turned ON.				
Standard	CE marking				
D-R80□C (W	ithout indicator light)				
Auto switch model	D-R801C, D-R802C				
Applicable load	Relay, IC circuit, PLC				
Load voltage	24 V DC				
Max. load current	50 mA				
Circuit diagram*	4				
Internal resistance	1 Ω or less (Including lead wire length of 3 m)				
Standard	CE marking				

* Refer to the circuit diagram no. on page 803.

Note 1) Refer to page 800 for reed auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

Note 3) Lead wire with connector may be shipped with the auto switch.

Note 4) Under 5 mA, the strength of the indicator light is poor. In some cases, visibility of the indicator light will not be possible where the output signal is less than 2.5 mA. However, there is no problem in terms of contact output, when an output signal exceeds 1 mA or more.

Note 5) The auto switches can operate at 12 VDC, but consider the internal voltage drop of the auto switch described in Reed Auto Switch Precautions on page 374.

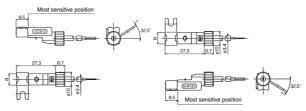
Weight

Auto switch model		D-R73□C	D-R80□C
Lood wire length	Lead wire length 0.5	12	12
Lead wire length (m)	3	51	51
(111)	5	81	81

Dimensions

(mm)

(g)



Most sensitive position

Lead wires with a connector indication Part No. of Lead Wires with Connectors (Applicable only for connector type) Model Lead wire length

Model	Lead wire length
D-LC05	0.5 m
D-LC30	3 m
D-LC50	5 m

Reed Auto Switch Rail Mounting Type D-A72/D-A73/D-A80

Grommet Electrical entry: Perpendicular



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

PLC: Programmable Logic Controller

		i Lo. i rogiami	nable Logic Controller	
D-A7 (With indicator light)				
Auto switch model	D-A72 D-A73			
Applicable load	Relay, PLC	Relay	, PLC	
Load voltage	200 VAC	24 VDC (4)	100 VAC	
Load current range (3)	5 to 10 mA	5 to 40 mA	5 to 20 mA	
Circuit diagram*		3		
Contact protection circuit	None			
Internal voltage drop	2.4 V or less			
Indicator light	Red LED illuminates when turned ON.			
Standard	CE marking			
D-A8 (Without indicator	r light)			
Auto switch model		D-A80		
Applicable load		Relay, IC circuit, PLC	;	
Load voltage	24 V DC or less	48 V DC	100 V AC DC	
Maximum load current	50 mA 40 mA 20 mA			
Circuit diagram*	4			
Contact protection circuit		None		
Internal resistance	1 Ω or less	(Including lead wire le	ength of 3 m)	
Standard	CE marking			

Oilproof Heavy-duty Lead Wire Specifications

Auto sw	Auto switch model		D-A72 D-A73 D-A80		
Sheath	Outside diameter [mm]		ø3.4		
Insulator	Number of cores	2 cores (Brown/Blue)			
insulator	Outside diameter [mm]	ø1.1			
Conductor	Effective area [mm ²]		0.2		
Conductor	Strand diameter [mm]	ø0.08			
Lead wire minimum bendin	ng radius [mm] (Reference values)		21		

^{*} Refer to the circuit diagram no. on page 803.

Note 1) Refer to page 800 for reed auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

Note 3) Under 5 mA, the strength of the indicator light is poor. In some cases, visibility of the indicator light will not be possible where the output signal is less than 2.5 mA. However, there is no problem in terms of contact output, when an output signal exceeds 1 mA or

Note 4) The auto switches can operate at 12 VDC, but consider the internal voltage drop of the auto switch described in Reed Auto Switch Precautions on page 374.

Weight

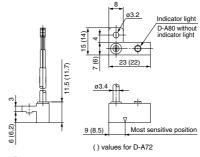
(g)

Auto swit	tch model	D-A72	D-A73	D-A80
	0.5 m (NiI)	10	10	10
Lead wire length	3 m (L)	47	47	47
	5 m (Z)	_	77	_

Dimensions

(mm)

D-□





Reed Auto Switch Rail Mounting Type D-A7 H/D-A80H

Grommet Electrical entry: In-line



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

PLC: Programmable Logic Controller

D-A7□H (With indicator	r light)				
Auto switch model	D-A72H D-A73H D-A76H				
Applicable load	Relay, PLC	Rela	ıy, PLC	IC circuit	
Load voltage	200 VAC	24 VDC (4)	100 VA	C 4 to 8 VDC	
Max. load current/Load current range(3)	5 to 10 mA	5 to 40 mA	5 to 20 m	nA 20 mA	
Circuit diagram*		3		(5)	
Contact protection circuit	None				
Internal voltage drop	2.4 V or less 0.8 V or less			0.8 V or less	
Indicator light	Red LED illuminates when turned ON.				
Standard	CE marking				
D-A80H (Without indica	tor light)				
Auto switch model		D-	A80H		
Applicable load			circuit, PLC		
Load voltage	24 V AC or less 48 V AC 100 V AC DC				
Maximum load current	50 mA 40 mA 20mA				
Circuit diagram*			4)		
Contact protection circuit	None				
Internal recietance	1.O or less (Including lead wire length of 3 m)				

Oilproof Heavy-duty Lead Wire Specifications

Auto swit	ch model	D-A72H/A73H D-A76H D-A80H		D-A80H
Sheath	Outside diameter [mm]	ø3.4		
Insulator	Number of cores	2 cores (Brown/Blue)	3 cores (Brown/Blue/Black)	2 cores (Brown/Blue)
irisulator	Outside diameter [mm]	ø1.1		
Conductor	Effective area [mm²]	0.2		
Conductor	Strand diameter [mm]	ø0.08		
Lead wire minimum bending radius [mm] (Reference values)			21	

CE marking

* Refer to the circuit diagram no. on page 803.

Note 1) Refer to page 800 for reed auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

Note 3) Under 5 mA, the strength of the indicator light is poor. In some cases, visibility of the indicator light will not be possible where the output signal is less than 2.5 mA. However, there is no problem in terms of contact output, when an output signal exceeds 1 mA or

Note 4) The auto switches can operate at 12 VDC, but consider the internal voltage drop of the auto switch described in Reed Auto Switch Precautions on page 374.

Weight (g)

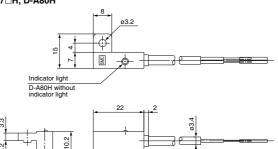
Auto swit	tch model	D-A72H	D-A73H	D-A76H	D-A80H
	0.5 m (NiI)	10	10	11	10
Lead wire length	3 m (L)	47	47	52	47
	5 m (Z)	_	77	_	_

Dimensions

Standard

(mm)

D-A7 H, D-A80H



Most sensitive position

Reed Auto Switch Rail Mounting Type D-A73C/D-A80C

((

Connector



Precautions

- Confirm that the connector is appropriately tightened. If tightened insufficiently, the waterproof performance will deteriorate.
- Refer to Best Pneumatics No. 2-1 for the details.

Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

	PLC: Programmable Logic Controller
D-A73C (With indicator	r light)
Auto switch model	D-A73C
Applicable load	Relay, PLC
Load voltage	24 VDC (5)
Load current range (4)	5 to 40 mA
Circuit diagram*	3
Contact protection circuit	None
Internal voltage drop	2.4 V or less
Indicator light	Red LED illuminates when turned ON.
Standard	CE marking
D-A80C (Without indica	ator light)
Auto switch model	D-A80C
Applicable load	Relay, IC circuit, PLC
Load voltage	24 V AC
Maximum load current	50 mA
Circuit diagram*	4
Contact protection circuit	None
Internal resistance	1 Ω or less (Including lead wire length of 3 m)
Standard	CE marking

* Refer to the circuit diagram no. on page 803.

Note 1) Refer to page 800 for reed auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

Note 3) Lead wire with connector may be shipped with the auto switch.

Note 4) Under 5 mA, the strength of the indicator light is poor. In some cases, visibility of the indicator light will not be possible where the output signal is less than 2.5 mA. However, there is no problem in terms of contact output, when an output signal exceeds 1 mA or more.

Note 5) The auto switches can operate at 12 VDC, but consider the internal voltage drop of the auto switch described in Reed Auto Switch Precautions on page 374.

Weight

(g)

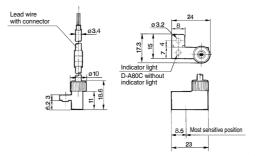
Auto swit	ch model	D-A73C	D-A80C
	0.5 m (Nil)	12	12
Lead wire length	3 m (L)	54	54
	5 m (Z)	84	84

Lead wires with a connector indication

Part No. of Lead Wires with Connectors (Applicable only for connector type)

Model	Lead wire length
D-LC05	0.5 m
D-LC30	3 m
D-LC50	5 m

Dimensions





Reed Auto Switch Tie-rod Mounting Type D-A5□/**D-A6**□

Grommet



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

PLC: Programmable Logic Controller

D-A5 (With indicator light)					
Auto switch model	D-A53	D-A54			D-A56
Applicable load	PLC	Relay, PLC			IC circuit
Load voltage	24 VDC (4)	24 VDC (4)	100 VAC	200 VAC	4 to 8 VDC
Maximum load (3)	5 to 50 mA	5 to 50 mA	5 to 25 mA	5 to 12.5 mA	20 mA
current and range	0 10 00 1131	0 10 00 11#1	0 10 20 1181	0 10 12.0 11.7	20 1151
Circuit diagram*	3		1)		(5)
Contact protection circuit	None	Built-in None			None
Internal voltage drop	2.4 V or less	s 2.4 V or less (Up to 20 mA)/3.5 V or less (Up to 50 mA) 0.8 V or les			0.8 V or less
Indicator light	Red LED illuminates when turned ON.				
Standard	CE marking				
D. A.S. (Without indicator light)					

D-A6 (Without indicator light)				
Auto switch model	D-A64			D-A67
Applicable load	Relay, PLC			PLC/IC circuit
Load voltage	24 V AC or less	100 VAC	200 VAC	Max. 24 VDC
Maximum load current	50 mA	25 mA	12.5 mA	30 mA
Circuit diagram*	2			4
Contact protection circuit	Built-in			None
Internal resistance	25 Ω or less		1 Ω or less (Including lead wire length of 3 m)	
Standard	CE marking			

Oilproof Heavy-duty Lead Wire Specifications

Auto	switch model	D-A53/A54 D-A56		D-A64/A67	
Sheath	Outside diameter [mm]	ø4			
Insulator	Number of cores	2 cores (Brown/Blue)	3 cores (Brown/Blue/Black)	2 cores (Brown/Blue)	
insulator	Outside diameter [mm]	ø1.22			
Conductor	Effective area [mm ²]	0.3	0.2	0.3	
Conductor	Strand diameter [mm]				
Lead wire minimum bending radius [mm] (Reference values)			24		

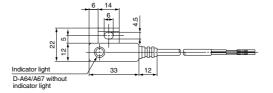
Weight

	9/

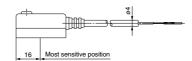
(a)

Auto swit	ch model	D-A53	D-A54	D-A56	D-A64	D-A67
	0.5 m (NiI)	2-	4	24	24	1
Lead wire length	3 m (L)	4	В	48	48	3
	5 m (Z)	9	6	_	_	-

Dimensions









^{*} Refer to the circuit diagram no. on page 803.

Note 1) Refer to page 800 for reed auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

Note 3) Under 5 mA, the strength of the indicator light is poor. In some cases, visibility of the indicator light will not be possible where the output signal is less than 2.5 mA. However, there is no problem in terms of

not be possible where the output sight an esses that 20 min. I however, where is no problem in terms or contact output, when an output sight acceeds 1 mil or more.

Note 4) The auto switches can operate at 12 VDC, but consider the internal voltage drop of the auto switch described in Reed Auto Switch Prescautions on page 374.

2-Color Indicator Reed Auto Switch **Rail Mounting Type D-A79W**

Grommet

The proper operating range can be determined by the color of the light.

 $(Red \rightarrow Green \leftarrow Red)$



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards.

	PLC: Programmable Logic Controller		
D-A79W (With indicator light)			
Auto switch model	D-A79W		
Applicable load	Relay, PLC		
Load voltage	24 VDC		
Load current range (3)	5 to 40 mA		
Circuit diagram*	•		
Contact protection circuit	None		
Internal voltage drop	4 V or less		
Indicator light	Operating range ········ Red LED illuminates. Proper operating range ······ Green LED illuminates.		
Standard	CE marking		

Oilproof Heavy-duty Lead Wire Specifications

Auto switch model		D-A79W
Sheath	Outside diameter [mm]	ø3.4
	Number of cores	2 cores (Brown/Blue)
Insulator	Outside diameter [mm]	ø1.1
Conductor	Effective area [mm²]	0.2
	Strand diameter [mm]	ø0.08
Lead wire minimum bending radius [mm] (Reference values)		21

* Refer to the circuit diagram no. on page 803.

Note 1) Refer to page 800 for reed auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

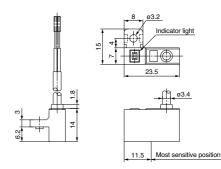
Note 3) Under 5 mA, the strength of the indicator light is poor. In some cases, visibility of the indicator light will not be possible where the output signal is less than 2.5 mA. However, there is no problem in terms of contact output, when an output signal exceeds 1 mA or more.

Weight

(g)

Auto switch model		D-A79W
Landerine laneath	0.5 m (Nil)	11
Lead wire length	3 m (L)	53

Dimensions







2-Color Indicator Reed Auto Switch Tie-rod Mounting Type

D-A59W

Grommet

The proper operating range can be determined by the color of the light.

 $(Red \rightarrow Green \leftarrow Red)$



Auto Switch Specifications

Refer to SMC website for the details of the products conforming to the international standards. PLC: Programmable Logic Controller

	FLC. Flogrammable Logic Controller	
D-A59W (With indicator light)		
Auto switch model	D-A59W	
Applicable load	Relay, PLC	
Load voltage	24 VDC	
Load current range(3)	5 to 40 mA	
Circuit diagram*	6	
Contact protection circuit	Built-in	
Internal voltage drop	4 V or less	
Indicator light	Operating range ········· Red LED illuminates. Proper operating range ······· Green LED illuminates.	
Standard	CE marking	

Oilproof Heavy-duty Lead Wire Specifications

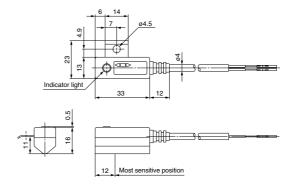
Auto switch model		D-A59W
Sheath	Outside diameter [mm]	ø4
Insulator	Number of cores	2 cores (Brown/Blue)
	Outside diameter [mm]	ø1.22
Conductor	Effective area [mm ²]	0.3
	Strand diameter [mm]	ø0.08
Lead wire minimum bending radius [mm] (Reference values)		24

Weight

(g)

	Auto switch model		D-A59W
Lead wire length	Landonio Investo	0.5 m (Nil)	25
	3 m (L)	80	

Dimensions



^{*} Refer to the circuit diagram no. on page 803. Note 1) Refer to page 800 for reed auto switch common specifications.

Note 2) Refer to page 800 for lead wire lengths.

Note 3) Under 5 mA, the strength of the indicator light is poor. In some cases, visibility of the indicator light will not be possible where the output signal is less than 2.5 mA. However, there is no problem in terms of contact output, when an output signal exceeds 1 mA or more.