

Prior to Use Auto Switch Specifications

Precautions

Auto Switch Common Specifications

Auto switch style	Reed switch	Solid state switch
Current leakage	None	3 wire: 100 μ A or less, 2 wire: 1mA or less
Operating time	1.2ms	1ms or less ⁽³⁾
Shock resistance	300m/s ²	1000m/s ²
Insulation resistance	50 M Ω or more at 500MV DC (between lead wire and the case)	
Withstand voltage	1500V AC/min. (between lead wire and the case) ⁽¹⁾	1000V AC/min. (between lead wire and the case)
Ambient temperature	-10 to 60°C	
Protective construction	IEC529 Standard IP67, Waterproof construction (JISC0920) ⁽²⁾	

Note 1) Connector style (D-A73C/A80C/C73C/C80C) and D-9/9□A/A9/A9□V style: 1000V AC/min. (between lead wire and the case)

Note 2) IEC529 Standard IP63, Rainproof construction (JISC0920) for Terminal conduit style (D-A3/A3□A/A3□C/G39/G39A/G39C/K39/K39A/K39C) and DIN terminal style (D-A44/A44A/A44C).

Note 3) Except solid state switch with timer (D-M5□TL, G5NTL, F7NTL, F5NTL) and **Auto switch for strong magnetic field resistance (D-P5DWL)**.

D-J51: 5ms or less

Lead Wire Length

How to Order

Ex.)

D-A73 **L**

•Lead wire length

—	0.5m
L	3m
Z	5m
N*	None

* Applicable for the connector style (D- ** C) only

Note 1) Applicable auto switch with 5 meter lead wire ("Z")

Reed switch: D-B53/B54, D-C73 (C)/C80C,D-A73(C)(H)/A80C

D-A53/A54, D-Z73, D-90/97/90A/93A

Solid state switch: Manufactured upon receipt of order as standard
(Except D-M9/M9□V)

Note 2) The standard lead wire length of solid state switch with timer or with water resistant 2 colour indication is 3 meters. (Not available 0.5m)

Note 3) The standard lead wire length of strong magnetic field resistant solid state switch is 3 or 5 meters. (Not available 0.5m.)

Part No. of lead wire with connector

(Available for connector style only.)

Part No.	Lead wire length
D-LC05	0.5m
D-LC30	3m
D-LC50	5m

Change of Lead Wire Colour

Lead wire colours of SMC auto switches have been changed in order to meet Nippon Electric Control Equipment Industries Association Standard No. 402.

2 wire auto switch

	Old	New
Output (+)	Red	Brown
Output (-)	Black	Blue

Solid state auto switch with diagnostic output

	Old	New
Power supply	Red	Brown
GND	Black	Blue
Output	White	Black
Diagnostic output	Yellow	Orange

3 wire auto switch

	Old	New
Power supply	Red	Brown
GND	Black	Blue
Output	White	Black

Solid state auto switch with latching style diagnostic output

	Old	New
Power supply	Red	Brown
GND	Black	Blue
Output	White	Black
Latching style diagnostic output	Yellow	Orange

Solid State Switch/Direct Mounting

D-Y59^A_B/D-Y69^A_B/D-Y7P(V)

Grommet



Applicable Actuator Series

Series	Bore size (mm)
MGQ, MVGQ, MGP	ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100
CXS	ø6, ø10, ø15, ø20, ø25, ø32
MY1B	ø25, ø32, ø40, ø50, ø63, ø80, ø100
MY1C, MY1M, CY1R	ø25, ø32, ø40, ø50, ø63
MY1H, ML2B	ø25, ø32, ø40
MGF	ø40, ø63, ø100
CY1H	ø10, ø15, ø20, ø25, ø32
RSH	ø20, ø32, ø50, ø63, ø80

Specifications

PLC: Programmable Logic Controller

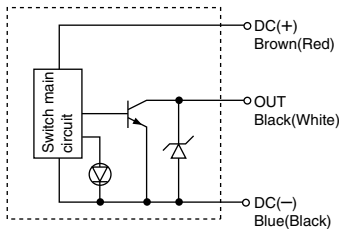
D-Y5/D-Y6/D-Y7P/D-Y7PV (With indicator light)						
Auto switch model number	D-Y59A	D-Y69A	D-Y7P	D-Y7PV	D-Y59B	D-Y69B
Electrical entry	In-line	Perpendicular	In-line	Perpendicular	In-line	Perpendicular
Wiring	3 wire				2 wire	
Output	NPN		PNP		—	
Application	IC circuit/Relay/PLC				24V DC Relay/PLC	
Power voltage	5/12/24V DC (4.5 to 28V DC)				—	
Current consumption	≤ 10mA				—	
Load voltage	≤ 28V DC		—		24V DC (10 to 28V DC)	
Load current	≤ 40mA		80mA or less		5 to 40mA	
Internal voltage drop	1.5V or less (0.8V or less at 10mA) of load current		0.8V or less		4V or less	
Current leakage	100μA or less at 24V DC				0.8mA or less at 24V DC	
Indicator light	ON: When red light emitting diode					

● Lead wire — Oilproof vinyl heavy insulation cable, ø3.4, 0.15mm², 3 cores (Brown, Black, Blue), 2 cores (Brown, Blue), 0.5m
 Note 1) Refer to common specifications on p.6-18.
 Note 2) Refer to p.6-18 for lead wire length.

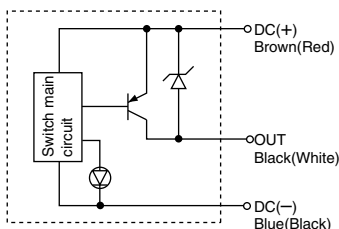
Internal Circuit

(): If not applicable for IEC Standard

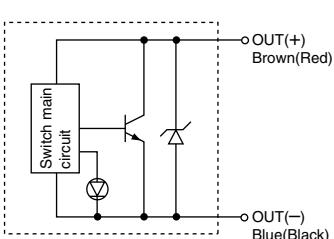
D-Y59A, D-Y69A



D-Y7P(V)

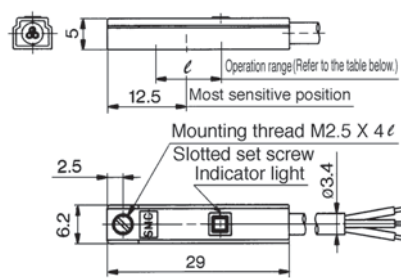


D-Y59B, D-Y69B

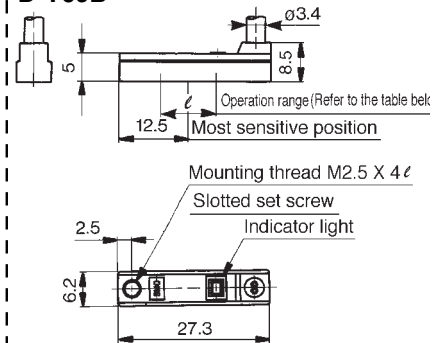


Dimensions

D-Y59A, D-Y7P, D-Y59B



D-Y69A, D-Y7PV, D-Y69B



Operation Range (ℓ Dimension)

(mm)

Actuator series	Bore size												
	6	10	12	15	16	20	25	32	40	50	63	80	100
MGQ, MVGQ	—	—	5	—	6	6	6.5	8.5	8.5	9	10	10	11.5
CXS	3	3	—	3.5	—	3.5	4	4.5	—	—	—	—	—
MGP	—	—	5.5	—	7.5	7.5	7	6.5	6	7	8	9.5	10
MY1B	—	—	—	—	—	—	6	9	10	3.5	3.5	3.5	3.5
MY1C, MY1M	—	—	—	—	—	—	5	5	5	5.5	5.5	—	—
MY1H	—	—	—	—	—	—	6	9	10	—	—	—	—
RSH	—	—	—	—	—	7.5	—	5	—	6.5	7.5	10	—
CY1R	—	—	—	—	—	—	7	6	6	7	6	—	—
CY1H	—	6	—	5	—	5	5	6	—	—	—	—	—
ML2B	—	—	—	—	—	—	6	6	6	—	—	—	—
MGF	—	—	—	—	—	—	—	—	9	—	5	—	7.5

Note) Average value at normal temperature including hysteresis. (Tolerance ±30%)

