## **Product Profile** Intrinsically Safe Explosion-proof System 5 Port Solenoid Valve

# Series 51-SY

#### Compliant to International Standard (IEC 79)

51-SY series (system which combines a pilot valve and SMC specific barrier (safety retainer)) is certified to have explosion-proof performance of ExiaIIBT4, which is compliant with the "New Technical Standard" which was established based on the international standard (IEC 79).

#### ■ Can be selected from 3 types of connectors

- L plug connector (L)
- L plug connector with a cover (LL)
- Terminal block (TT)

#### ■ Can be selected from 5 barriers



### **Specifications**

**Body Ported** 

S	eries	51-SY5000	51-SY7000	51-SY9000		
Fluid		Air				
Internal pilot operating pressure range (MPa)	2 position single	0.15 to 0.7				
	2 position double	0.1 to 0.7				
	3 position	0.2 to 0.7				
Ambient and fluid temperature (°C)		-10 to 50 (No freezing)				
Max. operating frequency (Hz)	2 position single, double	5				
	3 position	3				
Manual override (M	anual operation)	Non-locking push type, Push-turn locking slotted type, Push-turn locking lever type				
Pilot exhaust method		Common exhaust type for main and pilot valve				
Lubrication		Not required				
Mounting orientation	on	Unrestricted				
Impact/Vibration re	sistance (m/s²) Note)	150/30				
Enclosure		IP30 (L-type), IP40 (LL-type), IP65 (TT-type)				

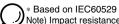
Based on IEC60529

Note) Impact resistance: No malfunction occurred when it is tested in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Values at the initial period)

Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)

#### **Base Mounted**

Series			51-SY5000	51-SY7000	51-SY9000		
Fluid				Air			
Internal pilot operating pressure range (MPa)		2 position single	0.15 to 0.7				
		2 position double	0.1 to 0.7				
		3 position	0.2 to 0.7				
External pilot	Operating pressure range		-100 kPa to 0.7				
operating pressure range (MPa)	Pile	ot	2 position single	0.25 to 0.7			
	pre	essure	2 position double	0.25 to 0.7			
	ranç	ige	3 position		0.25 to 0.7		
Ambient and fluid temperature (°C)			-10 to 50 (No freezing)				
Max. operating 2 pos		2 posi	tion single, double	5			
frequency (Hz)		3 position		3			
Manual override (Manual operation)				Non-locking push type, Push-turn locking slotted type, Push-turn locking lever type			
Pilot exhaust method		Internal pilot	Common exhaust type for main and pilot valv				
		External pilot	Pilot va	Pilot valve individual exhaust			
Lubrication				Not required			
Mounting orientation				Unrestricted			
Impact/Vibration resistance (m/s²) Note)				150/30			
Enclosure				IP30 (L-type), IP40 (LL-type), IP65 (TT-type)			



Note) Impact resistance: No malfunction occurred when it is tested in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Values at the initial period)

Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)



Refer to a separate catalog, CAT.ES11-90 for the detailed specifications.





