## **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 (Manual 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)				

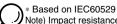
Based on IEC60529

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 (MPa)	Operating pressure range		-100 kPa to 0.7				
	Pilot		2 position single	0.25 to 0.7			
	pre	ssure	2 position double	0.25 to 0.7			
	range		3 position	0.25 to 0.7			
Ambient and fluid temperature (°C)			-10 to 50 (No freezing)				
Max. operating		2 position 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 val				
		External pilot	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.

