

35 mm, 75 mm and 225 mm Linear Configurations

Table 1. Specifications

Characteristic	Component	Parameter			
		35 mm	75 mm	225 mm	
		analog (SPS-L035-LATS)	analog (SPS-L075-HALS)	analog (SPS-L075-HALS)	digital (SPS-L225-HDLS)
Sensing range	sensor only	0 mm to 35 mm [0 in to 1.38 in]	0 mm to 75 mm [0 in to 2.95 in]	0 mm to 225 mm [0 in to 8.86 in]	
Resolution		0,04 mm [0.0016 in]	0,05 mm [0.002 in]	0,14 mm [0.0055 in]	0,0035 mm [0.000137 in]
Supply voltage		4.75 Vdc to 5.25 Vdc	6 Vdc to 24 Vdc		
Output		0.55 Vdc to 4.15 Vdc	0 Vdc to 5 Vdc		RS 232-type digital
Supply current		20 mA max.	32 mA max.	34 mA max.	88 mA max.
Linearity ¹		±1.0% full scale output	±0.4% full scale output		
Reverse polarity		-5 V	26.4 V at 125 °C [257 °F]		
Sensitivity		103 mV/mm typ.	50 mV/mm typ.	17.78 mV/mm typ.	282.16 counts/mm typ.
Update rate		476 µs	400 µs		3200 µs
Baud rate			-		57.6 kbits/s
Initial startup time			5 ms	30 ms	
Termination			TYCO Super Seal 282087-1 integral connector	flying leads	
Cable bend radius			-	40 mm [1.6 in] min.	
Operating temperature		sensor and magnet actuator	-40 °C to 125 °C [-40 °F to 257 °F]		
Storage temperature	-40 °C to 150 °C [-40 °F to 302 °F]				
Air gap	8,5 ±1,0 mm [0.334 ±0.039 in]		3,0 ±2,5 mm [0.118 ±0.098 in]		
Sealing	IP67, IP69K				
Radiated immunity	100 V/m per ISO 11452-2		-		
Conducted immunity	100 mA BCI per ISO 11452-4		-		
Shock	50 G half sine wave with 11 ms duration				
Vibration	20 G from 10 Hz to 2000 Hz		10 G from 10 Hz to 2000 Hz		
Housing material	thermoplastic				
Approvals	CE				
Mounting: screws recommended torque	¼-20 or M6 6 N m to 10 N m [53.1 in lb to 88.5 in lb]				
Material	magnet ac- tuator only		neodymium iron boron		
Strength			13,500 Gauss	10,000 Gauss	

Note:

1. Percent linearity is the quotient of the measured output deviation from the best fit line at the measured temperature to the full scale output span.

NOTICE

Ferrous metal within a 100 mm [3.9 in] radius of the magnet actuator may affect sensor performance.

SMART Position Sensor

Figure 1. SPS-L035-LATS Dimensional Drawing (for reference only: mm) and Sensor Output Performance Graph

