

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

