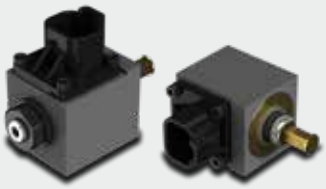


Hall effect spool position sensors

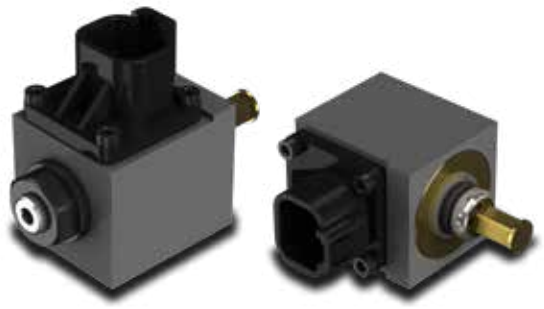
- SPSD type
- SPSL type

Spool position sensors
Accuracy, reliability and repeatability are the main features of Walvoil position sensors.
Converts the spool movements into an electric digital signal or into a voltage linear signal.

Working conditions	SPSD	SPSD-S	SPSL	SPSL-S
Voltage supply	from 9 to 32 VDC		from 9 to 32 VDC or 5 VDC	
Current absorption	< 10 mA (no load)		< 10 mA (no load)	
Mechanical life	$3x10^6$		$3x10^6$	
Connector type	DT04-4P Deutsch		DT04-4P Deutsch	
Weather protection	IP67 / IPX9K		IP67 / IPX9K	
Working temperature	from -40°C to 105°C *(from -40°F to 221°F)*		from -40°C to 105°C *(from -40°F to 221°F)*	
Working pressure	350 bar *(5100 psi)*		350 bar *(5100 psi)*	
Max. electrical stroke	±10 mm *(±0.39 in)*	±5.5 mm *(±0.22 in)*	±10 mm *(±0.39 in)*	±5.5 mm *(±0.22 in)*
Max. mechanical stroke	±10 mm *(±0.39 in)*	±5.5 mm *(±0.22 in)*	±10 mm *(±0.39 in)*	±5.5 mm *(±0.22 in)*
EMC compatibility	ISO 13766 / ISO 14982		ISO 13766 / ISO 14982	
Mechanical vibrations, shock, bumps	IEC 68-2-6,-27,-29		IEC 68-2-6,-27,-29	
Output signal type	PNP		/	
max. current	6 mA		/	
range	/		from 0.5 to 4.5 V	
linearity	/		± 5%	
spool in neutral	/		2.5 ± 0.2 V	
max. current	/		1 mA	

Hall effect spool position sensors

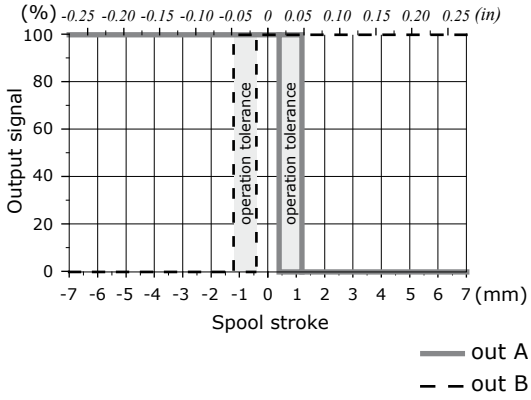
SPSD type



The SPSD position sensor converts the spool movements into an electric digital signal.
Main features are:
- contactless technology guarantees a long mechanichal life;
- available for the complete range of valves.

Typical applications:
- cranes
- telehandlers
- aerial platforms
- front-end loaders (mid-mount)

Output signal (SPSD example) vs. spool stroke

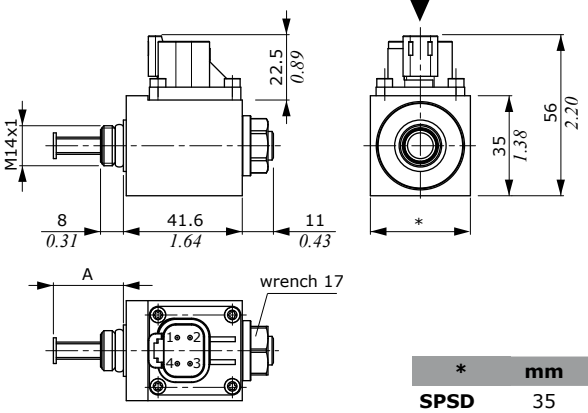


SPSL ordering codes

Code	Description	Electrical stroke	Mechanical stroke	Supply
5SE210021D01	SPSD/M1021/PNP/D4P/v1.0	±10 mm *(±0.39 in)*	±10 mm *(±0.39 in)*	from 8 to 32 V
5SE310021D01	SPSD-S/M1021/PNP/D4P/V1.0	±10 mm *(±0.39 in)*	±10 mm *(±0.39 in)*	from 8 to 32 V

Mating connector

Code	Type
5CON140072	DT06-4S Deutsch



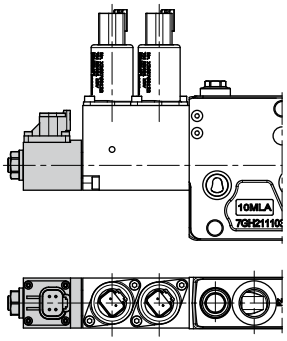
A = feeler neutral position.
As for the sensor model, the dimension can be 16 or 21.5 mm *(0.63 or 0.85 in)*

*	mm	*in*
SPSD	35	*1.38*
SPSD-S	31	*1.22*

Connector PIN-OUT

Pin	Functions
1	Out A
2	GND
3	VB+
4	Out B

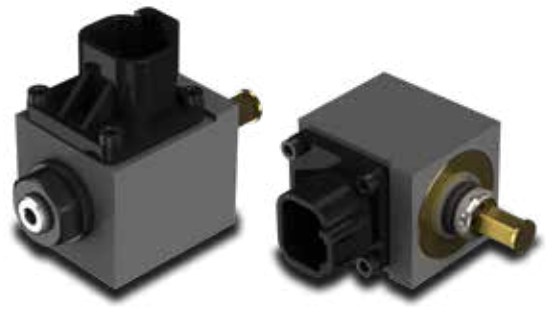
Example of sensor in 8EZ control with DPX100 working section



IMPORTANT: It is suggested to order the sensors through the controls assembled on the monoblock and sectional valves.
These controls, in different configurations, are available on the full range of Walvoil directional valves.

Hall effect spool position sensors

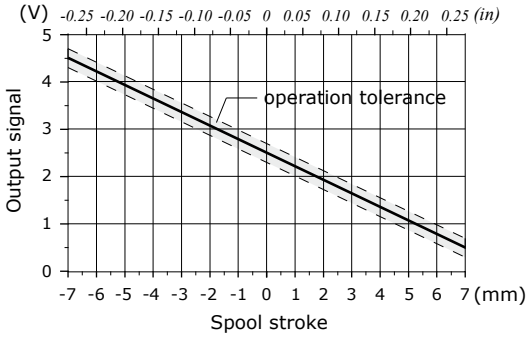
SPSL type



The SPSL position sensor converts the spool movements into a linear voltage signal.
Main features are:
- contactless technology guarantees a long mechanichal life;
- available for the complete range of valves.

Typical applications:
- cranes
- telehandlers
- aerial platforms
- front-end loaders (mid-mount)

Output signal (SPSL example) vs. spool stroke

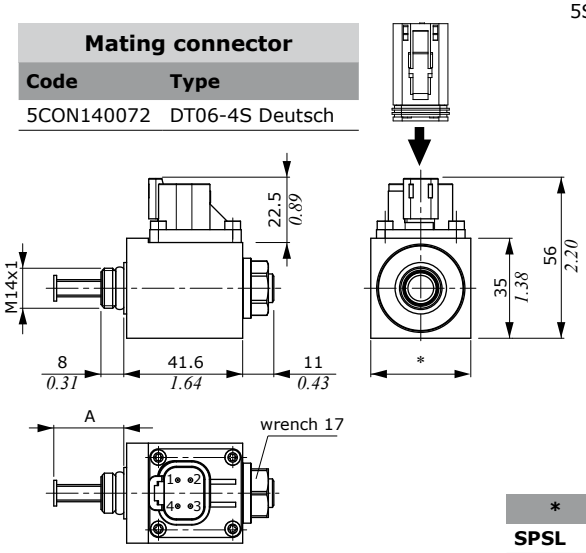


SPSL ordering codes

Code	Description	Electrical stroke	Mechanical stroke	Supply
5SE221021D01	SPSL/0.5(OUT)-4.5(IN)-CR10	±10 mm *(±0.39 in)*	±10 mm *(±0.39 in)*	5 V
5SE225516D01	SPSL/0.5(OUT)-4.5(IN)-CR5.5	±5.5 mm *(±0.22 in)*	±10 mm *(±0.39 in)*	5 V
5SE226516D01	SPSL/0.5(OUT)-4.5(IN)-CR6.5	±6.5 mm *(±0.26 in)*	±6.5 mm *(±0.26 in)*	5 V
5SE227021D01	SPSL/0.5(OUT)-4.5(IN)-CR7	±7 mm *(±0.27 in)*	±10 mm *(±0.39 in)*	5 V
5SE228021D01	SPSL/0.5(OUT)-4.5(IN)-CR8	±8 mm *(±0.31 in)*	±10 mm *(±0.39 in)*	5 V
5SE236521D01	SPSL/8-32V/0.5(OUT)-4.5(IN)	±6.5 mm *(±0.26 in)*	±10 mm *(±0.39 in)*	from 8 to 32 V
5SE325521D01	SPSL-S/0.5(OUT)-4.5(IN)-CR5.5	±5.5 mm *(±0.22 in)*	±10 mm *(±0.39 in)*	5 V

Mating connector

Code	Type
5CON140072	DT06-4S Deutsch



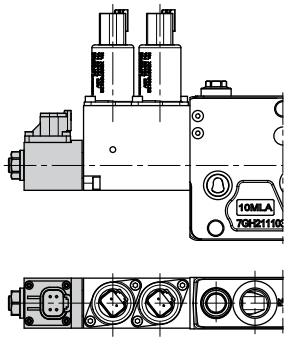
A = feeler neutral position.
As for the sensor model, the dimension can be 16 or 21.5 mm *(0.63 or 0.85 in)*

*	mm	*in*
SPSL	35	*1.38*
SPSL-S	31	*1.22*

Connector PIN-OUT

Pin	Functions	
	5V supply	8-32V supply
1	+ 5V	signal OUT
2	not connected	GND
3	GND	VB+
4	signal OUT	not connected

Example of sensor in 8EZ control with DPX100 working section



IMPORTANT: It is suggested to order the sensors through the controls assembled on the monoblock and sectional valves.
These controls, in different configurations, are available on the full range of Walvoil directional valves.