



gSENS LWG / gSENS LG

Length / angle sensor



Length/angle sensors from the series gSENS LWG can be used on all kinds of equipment where a precise capture of the data relating to the length and angle of the telescopic boom is necessary.

The LWG consists of a housing, a spring-loaded cable drum with measuring cable and mounting equipment for installation on the boom. There are a length sensor, an angle sensor, a slip ring, and an circuit board in the housing. The cable is mounted to the tip of the boom. The number of turns and the diameter of the cable drum define the length of the uncoiled cable. Thus, the telescopic length is fixed. The angle measurement is effected by means of the capacitive angle sensor, gSENS LWG.

Along with the length/angle sensors, length sensors from the gSENS LG range are available, which are used exclusively for length data capture. Length measurement is effected by use of the gSENS LWG

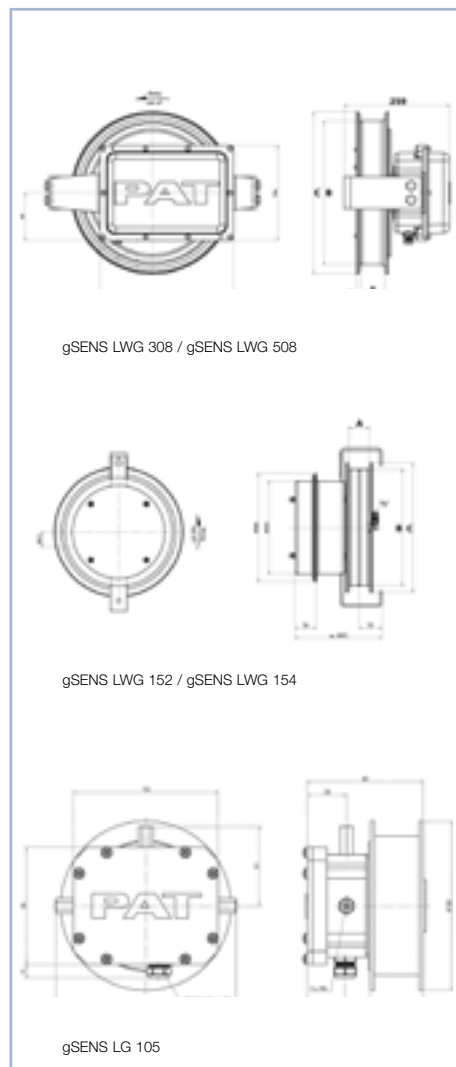
Length/angle sensors of the type gSENS LWG and length sensors of the type gSENS LG are distinguished by offering:

- ▶ Telescopic lengths greater than 50 metres
- ▶ Output signals, 4 – 20 mA and CANopen
- ▶ Compact construction
- ▶ Simple installation
- ▶ Exact measurement of the boom
- ▶ Signal transmission of additional sensors via the length sensor cable
- ▶ Angle data capture via capacitive gSENS WGC
- ▶ Redundant options available on request



TECHNICAL DATA

	gSENS LWG	gSENS LG	
General	Operating temperature	-25°C to +75°C	-25°C to +75°C
	Storage temperature	-40°C to +80°C	-40°C to +80°C
	Protection class	IP 65	IP 65
	Weight	ca. 25 kg (dep. on type)	ca. 25 kg (dep. on type)
Installed gSENS WGC	Angle range	0 - 90°	-
	Measurement range (Signal)	selectable	-
	Linearity	< ±0.2°	-
	Resolution	< ±0.1°	-
	Hysteresis	< ±0.1°	-
	Temperature drift	±0.002°/K	-
	Transversal sensitivity	0.01°/1° transversal slope	-
	Dimensions	Ø 89 x 46mm	-
Housing	aluminium	-	
Length Sensor	Transmission ratio	1:3 bzw. 1:3.75	1:3 bzw. 1:3.75
	Max. revolutions of pot	10 corresponding 3600°	10 corresponding 3600°
	Resistance of pot	10 kOhm	10 kOhm
	Temperature coefficient	70 ppm/K	70 ppm/K
	Service life	10 ⁶ revolutions	10 ⁶ revolutions
	Slip ring current	10 A max.	10 A max.
	Contact resistance	< 20 mOhm	< 20 mOhm



Dimensions

Description / Type	A (mm)	B (mm)	D (mm)	Telescoping length (m)	Signal Output	Angle
Length and angle sensor LWG 152	50	280	310	max. 16 m	4-20mA/CAN	0...97°
Length and angle sensor LWG 154 ¹	50	280	340	max. 32 m	4-20mA/CAN	0...97°
Length and angle sensor LWG 308/LWG 508	30-120	350-470	400-530	max. 50 m	4-20mA/CAN	0...97°
Length sensor LG 105	40	106	130	max. 16 m	4-20mA	-

¹ also available as length sensor unit.