





Linear transducer with wire potentiometer technology.

Excellent repeatability, high IP rating, resistance to shock and vibrations, and high electromagnetic compatibility make this transducer suitable for mobile hydraulic applications.

Developed to guarantee a robust, high-performance solution for applications such as agricultural vehicles, earth-moving machines, and hoisting equipment.

# **TECHNICAL SPECIFICATIONS**

### Measurement Range

Stroke 1.800mm - 2.300mm - 3.300mm - 4.300mm - 4.800mm - 5.300mm - 6.300mm - 7.300mm - 8.000mm - 8.300mm (for lower or middle strokes please refer to the dedicated ZERO/SPAN manual)

# Supply voltage

+10..30 Vdc (potentiometric - voltage divider- output)

+10..36 Vdc (other output - see output signal for right supply voltage) Output signal

Potentiometric - voltage divider- output; 0.5...4.5V; 0...10V; 4...20mA; CANopen output

#### **Electrical connections**

M12 connector output

#### Resolution

Virtually infinite for potentiometric - voltage divider- output; analog output 0.5...4.5V, 0...10V, 4...20mA 12 bit; CANopen output 14 bit

# Linearity

± 0.25% FS (1800mm to 4300mm); ± 0.5% FS (4800mm to 8300mm).

#### Repeatability ± 0.1% FS

## Working temperature

-40°C...+85°C

#### Vibrations

20g between 10 Hz ... 2000 Hz according to IEC 60068-2-6

### Shock

Pulse on 3 axes; 50g 11 ms according to IEC 60068-2-27

#### Electromagnetic compatibility

2014/30/EU Electromagnetic Compatibility (EMC)

### Life

250,000 cycles (strokes up to 5300 mm), otherwise 2000 km routes;

typical speed 1m/s, typical acceleration 1g

## **IP Protection Level**

IP67 with female mating connector (see accessories)

Constructive material of transducer body and wire

#### Transducer: PBT

Wire: AISI316 stainless steel, Ø0.85mm nylon coating

# **MECHANICAL DIMENSIONS**



# **ELECTRICAL CONNECTIONS**



# HOW TO CHANGE THE DIRECTION OF THE CONNECTOR



# FIXING FLANGES (optional accessories to order)







If the sensor is installed with a flange (A or B version) is it possible to modify the measurement wire output following these steps



Possible configurations **O** 

- 1 Carefully remove the 4 fixing screws from the flange shown in point **①**.
- 2 Rotate the sensor to the required position: possible configurations are indicated at point **2**.



# FIXING FLANGES (optional accessories to order)

### ATTENTION !!!

For safety reasons, never screw off the 8 screws of the rear body shown in the drawing with the "X"



FIXING FLANGE MODEL B - FLA034 (optional)







# **OPERATING SPECIFICATIONS: OUTPUT SIGNAL GRAPHS**



## LOAD CONDITIONS

+0.5Vdc...+4.5Vdc output (powered at +10..36VDC) and 0..10VDC output (powered at +11..36VDC) : apply a load resistance >100Kohm

+0.5Vdc...+4.5Vdc output (powered at +5VDC): apply a load resistance > 10Kohm

- 4..20mA output (powered at < + 15..36VDC): maximum allowed load resistance is 200 ohm
- 4..20mA output (powered at > + 15..36VDC): maximum allowed load resistance is 500 ohm

## **ORDERING CODE**

### **GSF - WIRE POTENTIOMETER TRANSDUCER**

TRANSI	DUCER T	YPE
Wire tra	nsducer	S

**ELECTRICAL CONNECTIONS** 

M12 connector output M

CIRCUIT TYPE	
Single	S
Redundant	R

### MEASUREMENT RANGE

measurement range (specify)	ххх
available stroke: 1.800mm-2.300mm-	
3.300mm-4.300mm 4.800mm-5.300mm-	
6.300mm-7.300mm-8.000mm-8.300mm	

SUPPLY VOLTAGE	
L	up to +30VDC (only for A0 output)
Н	+1036 Vdc (for A1-A2-A3-C1 output)

OUTPUT TYPE	
Potentiometric - voltage divider- output	A0
0.54.5Vdc (powered at +1036Vdc)	A1
010Vdc (powered at +1136Vdc)	A2
420mA output (powered at +1036Vdc)	A3
CANopen output (powered at +1036Vdc)	C1

#### CERTIFICATES 0 No certificate enclosed L Linearity curve enclosed ACCESSORIES Х No accessory enclosed FLA033: fixing flange, A version Α в FLA034: fixing flange, B version CON202nooto

C	M12x1; IP67 protection degree
D	CON469: 8-pin female mating connector
U	M12x1; IP67 protection degree

#### Example of description: GSFSMS8000HA1 0000X00



GEFRAN spa reserves the right to make any kind of design or functional modification at any moment without prior notice.



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