



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

#### 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 12/16 bit

#### Linearity

± 0.5% FS

#### Repeatability

± 0.1% FS

#### Working temperature

-40°C...+85°C

#### Vibrations

20g between 10 Hz ... 2000 Hz EN 60068-2-6

#### Shock

Pulse on 3 axes; 50g 11 ms EN 60068-2-27

#### Electromagnetic compatibility

According to Directive 2004/108/CE

#### Life

250,000 cycles (strokes up to 5300 mm), otherwise 2000 km routes; typical speed 1m / s, max 1g acceleration

#### IP Protection Level

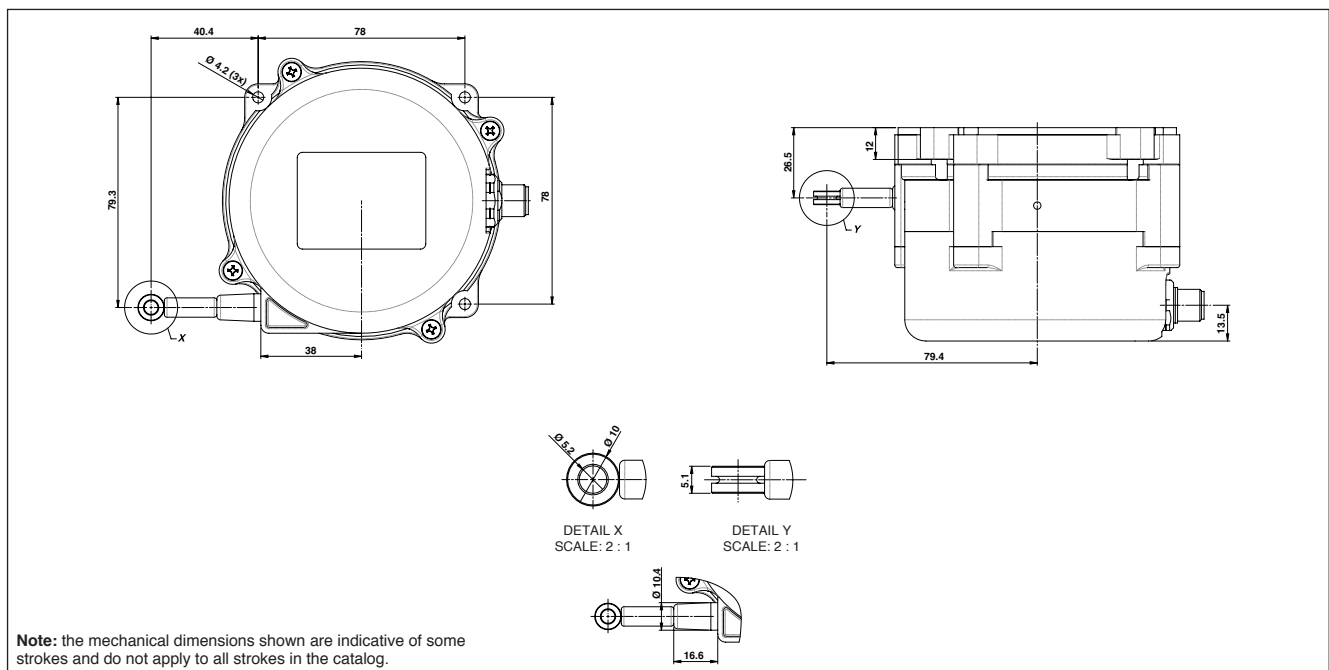
M12 connector (IP67)

#### Constructive material of transducer body and wire

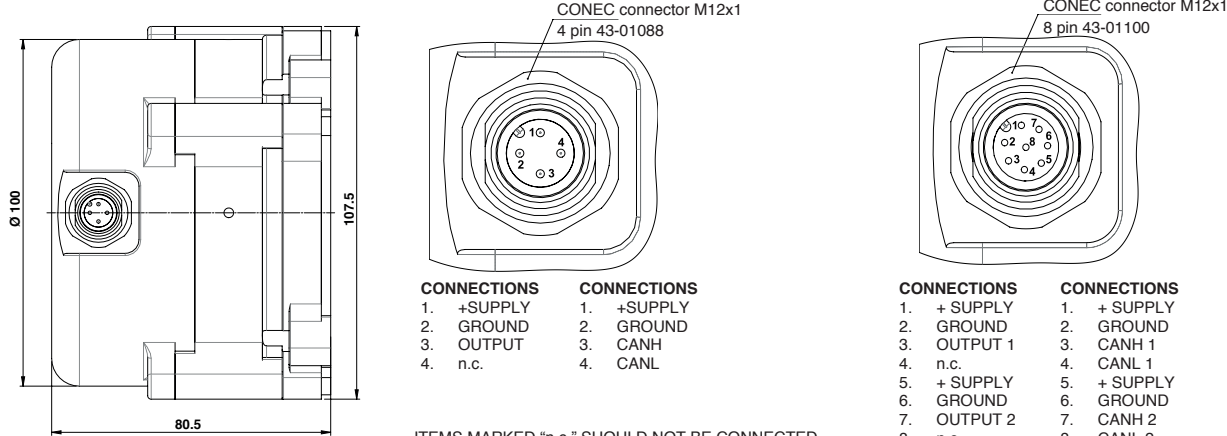
Transducer: PBT

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

### MECHANICAL DIMENSIONS



## ELECTRICAL CONNECTIONS



Dimensions:  $\varnothing 100$ , 107.5, 80.5

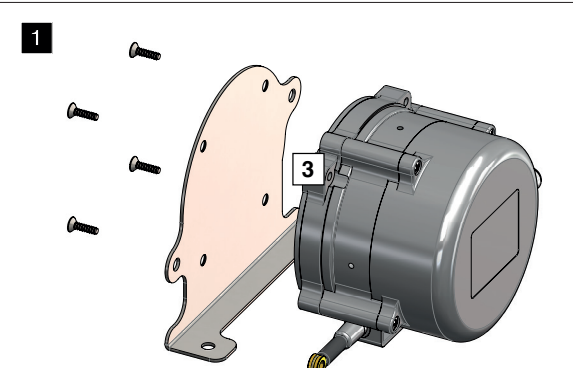
CONEC connector M12x1 4 pin 43-01088

CONEC connector M12x1 8 pin 43-01100

CONNECTIONS		CONNECTIONS		CONNECTIONS		CONNECTIONS	
1.	+SUPPLY	1.	+SUPPLY	1.	+ SUPPLY	1.	+ SUPPLY
2.	GROUND	2.	GROUND	2.	GROUND	2.	GROUND
3.	OUTPUT	3.	CANH	3.	OUTPUT 1	3.	CANH 1
4.	n.c.	4.	CANL	4.	n.c.	4.	CANL 1
				5.	+ SUPPLY	5.	+ SUPPLY
				6.	GROUND	6.	GROUND
				7.	OUTPUT 2	7.	CANH 2
				8.	n.c.	8.	CANL 2

ITEMS MARKED "n.c." SHOULD NOT BE CONNECTED

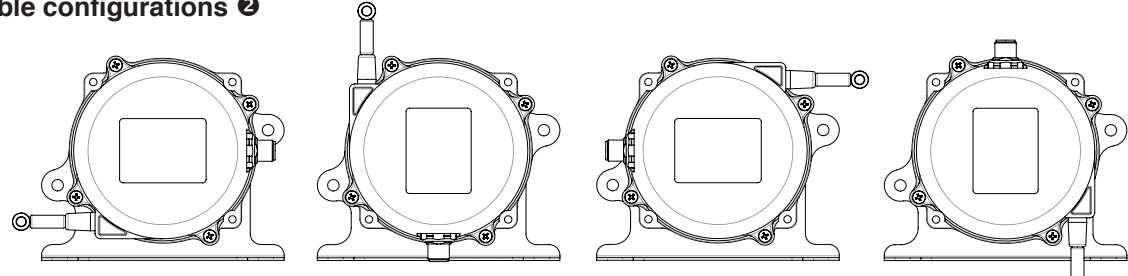
## HOW TO CHANGE THE MEASUREMENT WIRE OUTPUT



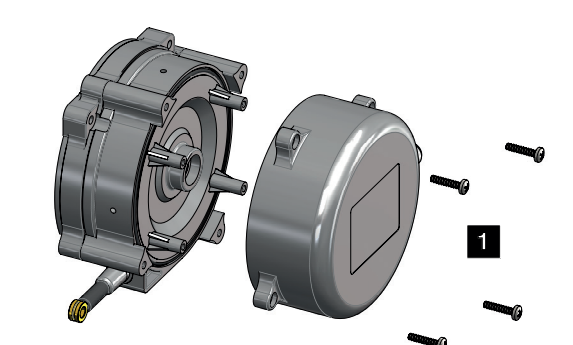
- Carefully remove the 4 fixing screws from the flange shown in point 1
- Rotate the sensor to the required position (4 possible configurations) 2

**⚠ Attention!!** For safety reasons, never open the rear body of the transducer shown in point 3

**Possible configurations 2**



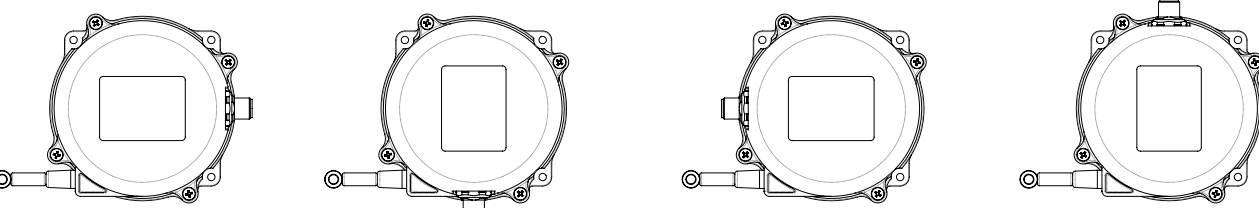
## HOW TO CHANGE THE DIRECTION OF THE CONNECTOR



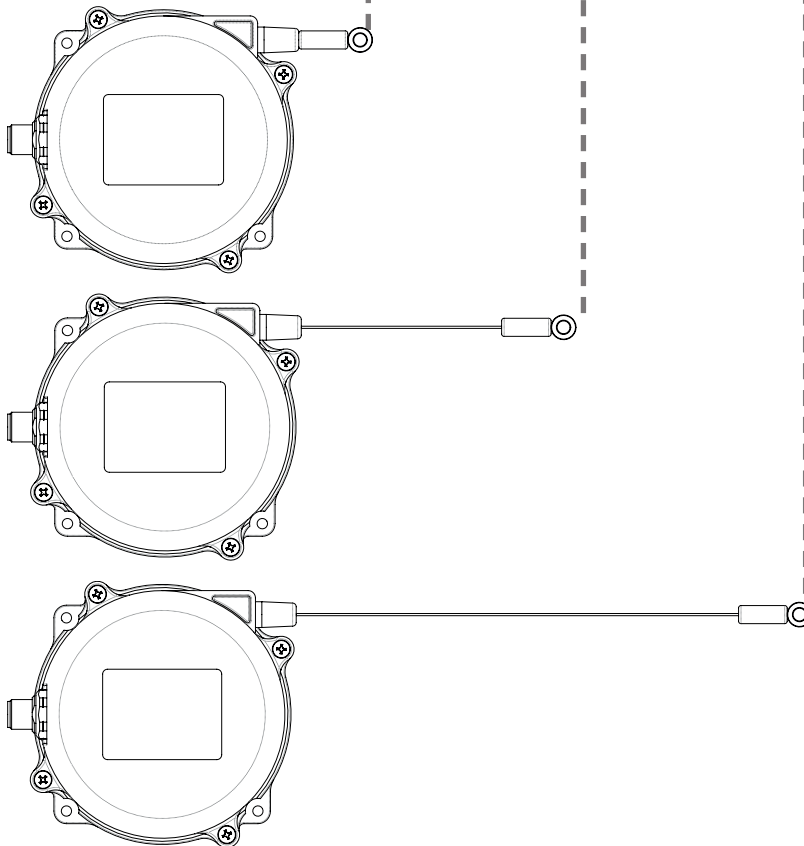
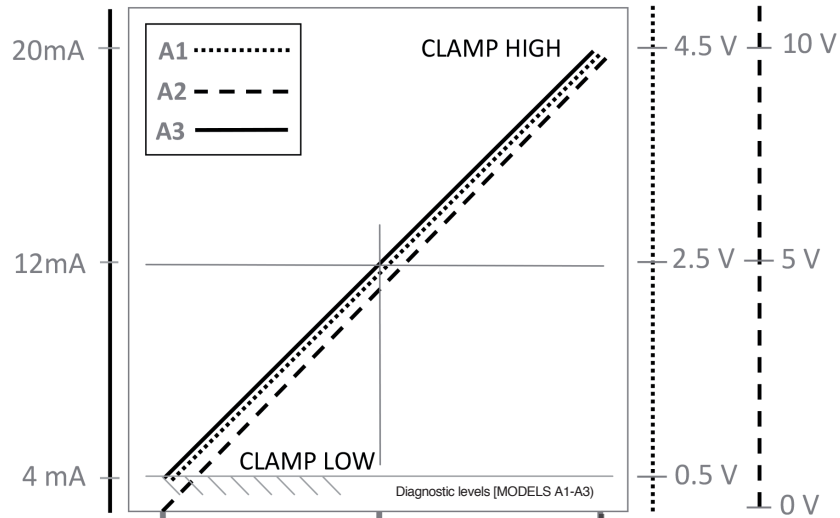
- Carefully remove the 4 fixing screws from the closing cover shown in point 1
- Rotate the closing cover to the required position (4 possible configurations) 2

**⚠ Attention!!** When closing the cover, be careful not to twist and/or crush the connector wires.

**Possible configurations 2**



## 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

TRANSDUCER TYPE	
Wire transducer	<b>S</b>

ELECTRICAL CONNECTIONS	
M12 connector output	<b>M</b>

CIRCUIT TYPE	
Single	<b>S</b>
Redundant	<b>R</b>

MEASUREMENT RANGE	
measurement range (specify)	<b>XXX</b>
available stroke: 1.800mm-2.300mm- 3.300mm-4.300mm 4.800mm-5.300mm- 6.300mm-7.300mm-8.000mm-8.300mm	

SUPPLY VOLTAGE	
+10..30 Vdc (potentiometric - voltage divider- output)	<b>L</b>
+10..36 Vdc (other output - see output signal for right supply voltage)	<b>H</b>

OUTPUT TYPE	
Potentiometric - voltage divider- output	<b>A0</b>
0.5...4.5Vdc (powered at +10..36Vdc)	<b>A1</b>
0...10Vdc (powered at +11..36Vdc)	<b>A2</b>
4...20mA output (powered at +10..36Vdc)	<b>A3</b>
CANopen output (powered at +10..36Vdc)	<b>C1</b>

CERTIFICATES	
<b>0</b>	No certificate enclosed
<b>L</b>	Linearity curve enclosed

ACCESSORIES	
<b>X</b>	No accessory enclosed

#### Example of description

<b>GSF</b>	<b>S</b>	<b>M</b>	<b>S</b>	<b>8000</b>	<b>XXX</b>	<b>H</b>	<b>A3</b>	<b>0</b>	<b>0</b>	<b>000</b>	<b>X</b>	<b>00</b>
Sfilo		M12 connector	Single	8000mm		+10..30Vdc	4..20mA output		No certificate required	Special execution	No accessories	ND

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

# GEFRAN

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