



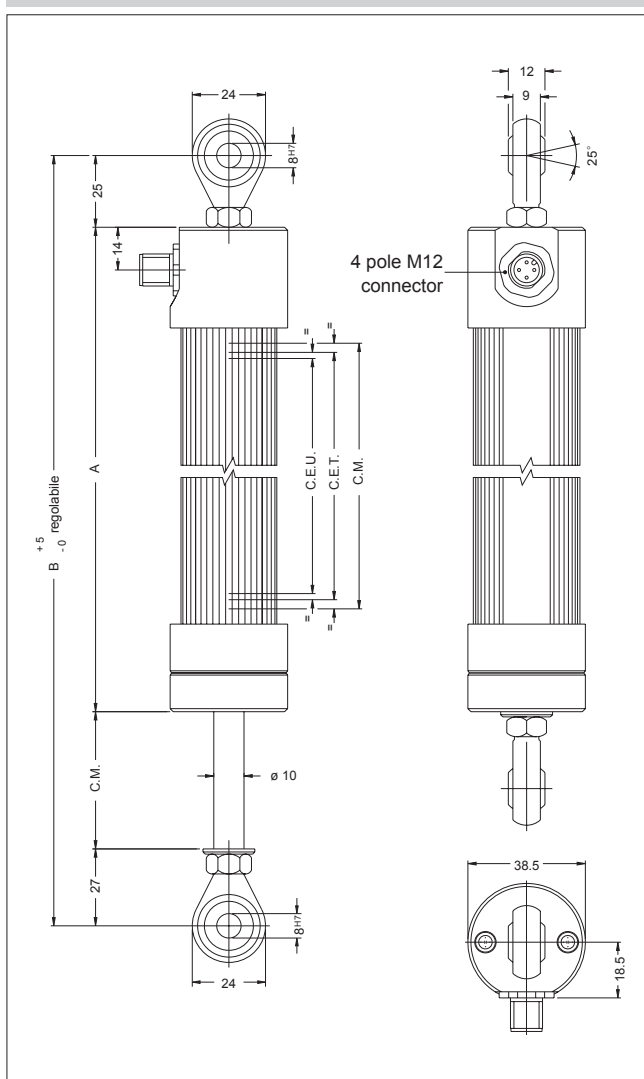
Applicative characteristics

- The PC67 displacement transducer was developed to guarantee a high protection level (IP67) in applications under harsh conditions and outdoors, where it may be necessary to work in the presence of dust, dirt, or liquids (not in prolonged immersion).
- The robust structure of the PC series has been improved thanks to a sealing system (patent pending) that makes it extremely reliable.
- Ideal for mobile hydraulic applications, on agricultural machines, earth-moving equipment and utility vehicles.

TECHNICAL DATA

Useful electrical stroke (C.E.U.)	50/100/130/150/175/200/225/275/300/360/375/400/450/500/600/750
Independent linearity (within C.E.U.)	$\pm 0,05\%$ $\pm 0,075\%$ for stroke $\leq 150\text{mm}$
Resolution	Infinite
Repeatability	0,01 mm
Electrical connection	4 pole M12 connector
Protection	IP67 (use M12 4-pin female connector with IP67 protection level or higher)
Life (NOT for prolonged immersion)	$> 25 \times 10^6$ m strokes, or $> 100 \times 10^6$ maneuvers, whichever is less (within C.E.U.)
Displacement speed	Standard ≤ 3 m/s max ≤ 5 m/s
Displacement force	≤ 30 N
Vibrations	5...2000Hz, $A_{max} = 0,75$ mm $a_{max} = 20$ g
Shock	50 g, 11ms.
Tolerance on resistance	$\pm 20\%$
Recommended cursor current	$< 0,1$ μA
Maximum cursor current	10mA
Maximum applicable voltage	60V
Electrical isolation	$> 100\text{M}\Omega$ at 500V~, 1bar, 2s
Dielectric strength	$< 100\mu\text{A}$ at 500V~, 50Hz, 2s, 1bar
Dissipation at 40°C (0W at 120°C)	3W
Temperature Coefficient of the resistance	-200...+200 ppm/°C typic
Actual Temperature Coefficient of the output voltage	≤ 5 ppm/°C typic
Working temperature	-30...+100°C
Storage temperature	-50...+120°C
Case material	Anodised aluminium
Control rod material	C45 steel, chromium plated 20 μm
Mounting method	2 selfloading and selfaligning ball-joints

MECHANICAL DIMENSIONS



Important: all the data reported in the catalogue (linearity, lifetime, temperature coefficient) are valid for a sensor utilization as a ratiometric device with a max current across the cursor $I_c \leq 0.1 \mu\text{A}$.

MECHANICAL / ELECTRICAL DATA

MODEL		50	100	130	150	175	200	225	275	300	360	375	400	450	500	600	750
Useful electrical stroke (C.E.U.) $+3/-0$	mm	50	100	130	150	175	200	225	275	300	360	375	400	450	500	600	750
Theoretical electrical stroke (C.E.T.) ± 1	mm	C.E.U. + 3					C.E.U. + 4				365	380	406	457	508	609	762
Resistance (C.E.T.)	k Ω	5															
Mechanical stroke (C.M.)	mm	C.E.U. + 9					C.E.U. + 10					386	412	463	518	619	772
Case length (A)	mm	C.E.U. + 143					C.E.U. + 144				510	526	552	603	678	779	932
Min. distance between ball-joints	mm	C.E.U. + 195					C.E.U. + 196				562	578	604	655	730	831	984

Note: It is recommended to keep the sliding parts lubricated, at least every 6 months.

ELECTRICAL CONNECTIONS

The diagram illustrates the electrical connections on both sides of the displacement transducer. On the left, the physical connector output is shown with terminals labeled 1, 2, 3, and 4. Terminal 1 is the negative output (-), terminal 3 is the positive output (+), and terminals 2 and 4 are non-connected (nc). On the right, the internal connection side shows a zigzag resistor element with markings for Useful Electrical Stroke (C.E.U.), Theoretical Electrical Stroke (C.E.T.), and Mechanical Stroke (C.M.).

INSTALLATION INSTRUCTIONS

- Respect the indicated electrical connections (DO NOT use the transducer as a variable resistance)
- When calibrating the transducer, be careful to set the stroke so that the output does not drop below 1% or rise beyond 99% of the supply voltage.

ORDER CODE

Displacement transducer **P C 6 7** □ □ □ □ □ 0 0 0 X 0 0 0 X 0 0

Model	
No certificate enclosed	0
Linearity curve to be enclosed	L

Example.: PC67-0300 0000X000X00
 Displacement transducer model PC67, 4 pole M12 connector output, useful electrical stroke (C.E.U.) 300mm.

ACCESSORIES (to order separately)

4 pole M12 female connector axial, IP67-IEC48B, wire clamp for $\phi 6$ - $\phi 8$ mm wire	CON293
4 pole M12 female connector radial 90°, IP67	CON050

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