

Hydraulic Compression Force Transducer Ultra Compact - Version

Forces from 100 N up to 36 kN

F1101 – ND 6

F1102 – ND 6



Description

Ultra compact hydraulic compression force transducer for applications with small mounting space to measure and display force in an easy way.

The force measurement utilizes the hydraulic principle: The force applied to a piston generates a hydraulic pressure, which is displayed with an indicating device. The scale of the indicating device can show various units e.g. N, kN, kg, t.

The very small dimension of the Ultra Compact-Version enables the installation also in applications with small mounting space. Therewith it is possible to use the advantages of hydraulic force measurement also in special applications.

Applications for the hydraulic force transducers can be found in apparatus engineering, mining, test and measurement equipment and special mechanical engineering.

The Leakproofness Guarantee is prolonged to five years*. In the unlikely event of a leakage the transducers will be repaired free of charge. Therewith we underline the quality of our products and the trust in our technology.

Features

- Stainless steel housing
- Piston out of stainless steel or plastic to measure force in welding guns
- Accuracy $\pm 0,5\%$ F.S. with digital pressure gauge P3962 or pressure sensor P3276
- Accuracy $\pm 1,0\%$ - $1,6\%$ F.S. with pressure gauge
- Operates without power supply
- Piston movement $\leq 0,5$ mm
- 5 Years Leak-Proofness Guarantee*

Measuring range

- 0 ... 100 N up to 0 ... 36 kN

Applications

- Apparatus engineering
- Test and measurement equipment
- Special mechanical engineering

*Precondition for the prolonged guarantee to five years is that the hydraulic force transducer is only used within the intended using conditions.

Model: F1101, F1102

Selection - Dimension - Sheet: Hydraulic Compression Force Transducer – Ultra Compact - Version

Model	F1101 / F1102		Options
Nominal diameter	ND 6 / ND 6		
Nominal load F_{nom}	0 ... 100 N up to 0 ... 36 kN		
Version	Analog Display	Digital Display	
Accuracy class	$\leq \pm 1,6\%$ F.S. at +21°C	$\leq \pm 0,5\%$ F.S. at +21°C	
Limit load	100% F_{nom} (dependent on measuring range)		
Breaking load	$> 130\%$ F_{nom} (dependent on measuring range)		
Piston movement	$< 0,5$ mm		
Nominal temperature range	$-10 \dots +50^\circ\text{C}$		
Protection type acc. EN60529/IEC529	IP 65		
Housing	Stainless steel		
Piston	Stainless steel (F1101) / plastic (F1102)		
Connection type	Adapter L = 50 mm		<ul style="list-style-type: none"> - direct - Adapter - Capillary tube - Measuring tube for "leak free separation"
Display	Pressure gauge P1515 (NG63)	Digital pressure gauge P3962	<ul style="list-style-type: none"> - Drag pointer - Pressure gauge P2032 (ND63) - Pressure gauge P2324 (ND100) optionally with contacts - Pressure sensor P3276
Filling liquid	Glycerin/Water 70%		
Mounting	threaded holes in the housing bottom		

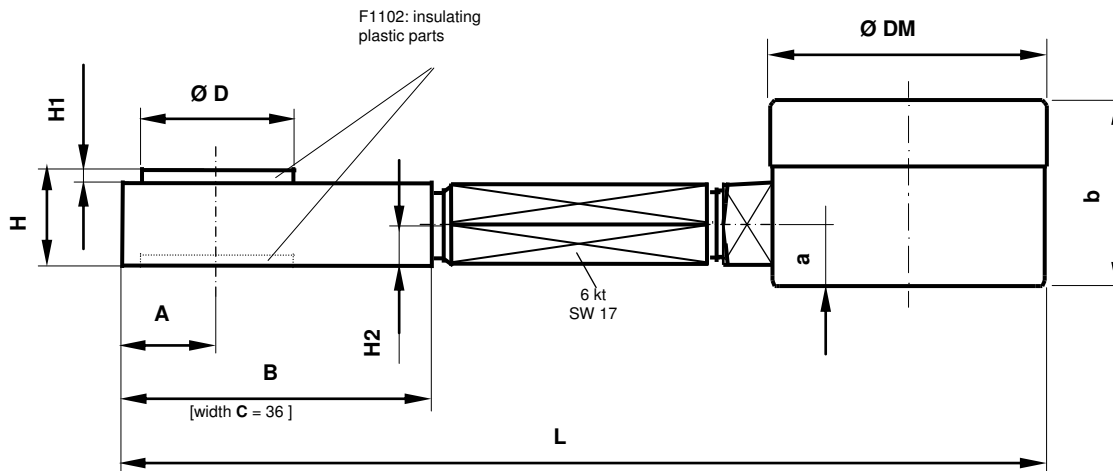
Version					Display		Options		Dimensions											
Model	ND [cm ²]	Nominal load	Resolution	bar	P1515	P3962	Meas. tube DN2 [max. L 1]	Capillary tube [max. L 1]	\varnothing D	A	B	C	H	H1	H2	DM	a	b	ca. L	Weight [ca. kg]
							[m]	[m]					[mm]	[mm]	[mm]					
F1101 / F1102	6	100 N	5 N	1,6	■	-	---	---	25	18	55	36	21	3	9	63	12,5	34	150	1,8
F1101 / F1102	6	160 N	5 N	2,5	■	-	---	---					(F1101)	(F1101)		(P1515)	(P1515)	(P1515)	(P1515)	(P1515)
F1101 / F1102	6	250 N	10 N	4	■	-	---	1,0												
F1101 / F1102	6	400 N	20 N	6	■	-	0,5	1,0					20	2		83,5	15,8	43,1	200	2,0
F1101 / F1102	6	600 N	20 N	10	■	-	1,0	2,0					(F1102)	(F1102)		(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1101 / F1102	6	1 kN	50 N	16	■	-	1,0	2,0												
F1101 / F1102	6	1,2 kN	-	20	-	■*	1,5	2,0												
F1101 / F1102	6	1,6 kN	50 N	25	■	-	1,5	2,0												
F1101 / F1102	6	2,5 kN	100 N	40	■	-	1,5	2,0												
F1101 / F1102	6	3,2 kN	-	50	-	■	2,0	2,0												
F1101 / F1102	6	4 kN	100 N	60	■	-	2,0	2,0												
F1101 / F1102	6	6 kN	200 N	100	■	■	2,0	2,0												
F1101 / F1102	6	10 kN	500 N	160	■	■	2,0	4,0												
F1101 / F1102	6	16 kN	500 N	250	■	■	3,2	4,0												
F1101 / F1102	6	20 kN	1 kN	315	■	-	3,2	4,0												
F1101 / F1102	6	25 kN	1 kN	400	■	■	3,2	6,0												
F1101 / F1102	6	36 kN	2 kN	600	■	■	3,2	6,0												

Other nominal loads and versions on request

*Accuracy class: $\leq \pm 1,0\%$ v.E.

Selection - Dimension - Sheet: Hydraulic Compression Force Transducer – Ultra Compact - Version

Model: F1101 / F1102



Remark: Couplings of the hydraulic force transducer must not be disconnected!
In case of violation there will be no guarantee and no measuring function.