

## Data sheet

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Force transducer

**Series ZST**

(200 kN – 10000 kN)



### Benefits/Application

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- For static tensile forces
- High precision
- Insensitive against parasitic forces and moments
- Little weight
- Standardised connection dimensions

### Options/Accessories

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- Bending moment circuits
- Temperature measurement with PT 100

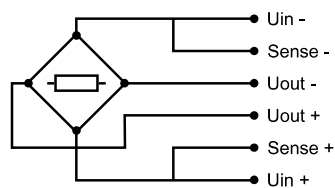
# Technical data




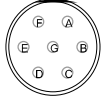
	Rated Force	$F_{nom}$	kN	200	500	600	1000	1200	2000	5000 6000	10000
Metrological Data	Classification			0,5 <sup>1)</sup>							
	Force measurment range		%	20 - 100							
	Interpolation error	$f_c$	%	0,045							
	Reversibility error	$v$	%	0,14							
	Repeatability error in unchanged mounting position	$b'$	%	0,045							
	Reproducibility error in different mounting positions	$b$	%	0,09							
	Zero error	$f_0$	%	0,02							
	Creep		%	0,03							
	Temperature effect on characteristic value per 10 K	$TK_C$	%/10 K	0,02							
	Temperature effect on zero signal per 10 K	$TK_0$	%/10 K	0,02							
Electrical Data	Rated characteristic value	$C_{nom}$	mV/V	2							
	Input resistance	$R_e$	$\Omega$	700 - 800							
	Output resistance	$R_a$	$\Omega$	600 - 750							
	Insulation resistance	$R_{is}$	$\Omega$	$> 10^9$							
	Operating range of excitation voltage	$B_{U, G}$	V	5 - 12							
	Protection (DIN EN 60529)			54							
Limits	Weight without ball cup		kg	2,4	9	10	16,5	19	43	188	<sup>2)</sup>
	Weight with ball cup		kg	3,5	12	13	25	27	66	212	<sup>2)</sup>
	Force limit		%	110							
	Breaking force		%	300							
	Rated temperature range	$B_{T, nom}$	°C	17 - 27							
	Operating temperature range	$B_{T, G}$	°C	10 - 35							

1) Classification according to ISO 376

2) Data on request

# Cable connection



		Connection pluggable <sup>1)2)</sup>	Connection pluggable <sup>1)3)4)</sup>
		7-pin LEMO Series 0 Female: - Male:	7-pin Amphenol Female: - Male:
			
			
Connection		Pin	Pin
Supply voltage (+)	U <sub>in+</sub>	3	C
Supply voltage (-)	U <sub>in-</sub>	2	B
Measurement signal (+)	U <sub>out+</sub>	1	A
Measurement signal (-)	U <sub>out-</sub>	4	D
Sense (+)	Sense+	5	F
Sense (-)	Sense-	6	G
Shielding		Housing	Housing

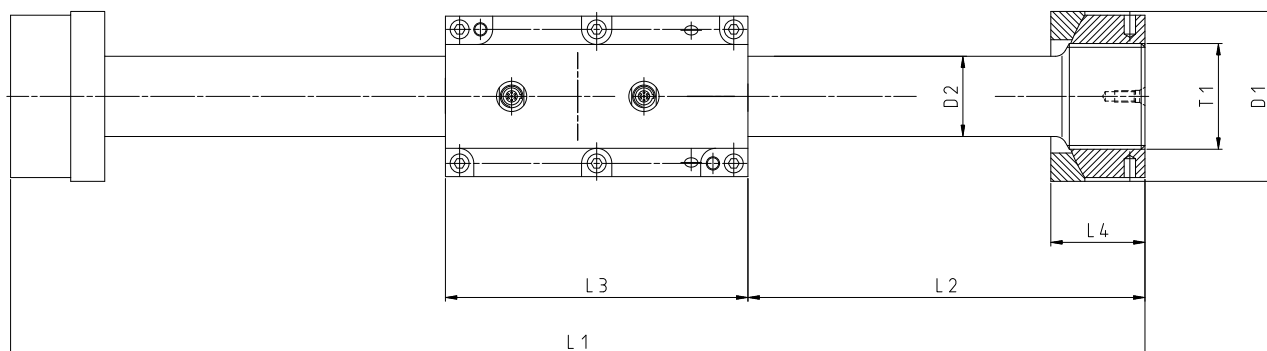
- 1) View too weldingside
- 2) Female LEMO S.A. Typ: EGG.1B.307.CLL; Male: FGG.1B.307.CLA.D72
- 3) Amphenol Series 97, Female Typ: MS3102A-16S-1SF; Maler Typ: MS3106A-16S-1P
- 4) Only available from size 500 kN

- Cable lenght 5m
- Other cable lengths on request
- Other connector types on cable end: D-Sub 9; D-Sub 15; M-S 7pol
- Configuration with customer defined connection is possible

# Option: Bending moment

- Transducer with bending moment circuits Mx and My on request available.

# Mating dimensions



Nominal force compression/tension	$\pm F_{nom}$	kN	200	500	600	1000	1200	2000	5000 6000	10000
Diameter	$\varnothing D_1$	mm	64 <sub>c11</sub>	90 <sub>c11</sub>		120 <sub>c11</sub>		165 <sub>c11</sub>	270 <sub>c11</sub>	<sup>1)</sup>
Diameter	$\varnothing D_2$	mm	26	42,5	46	58	63,5	83	148	<sup>1)</sup>
Lenght	$L_1$	mm	500	600	650		900		1300	<sup>1)</sup>
Lenght	$L_2$	mm	190	220	245		370		565	<sup>1)</sup>
Lenght	$L_3$	mm	120	160		170		170		<sup>1)</sup>
Lenght	$L_4$	mm	32	49,8		71,4		103,2	171	<sup>1)</sup>
Thread	$T_1$		M30x2	M56x4		M64x4		M90x4	M160x6	<sup>1)</sup>

1) Data on request

Änderungen vorbehalten. Alle Angaben beschreiben unsere Produkte in allgemeiner Form. Sie stellen keine vereinbarte Beschaffenheit im Sinne des § 434 Abs. 1 BGB dar.



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