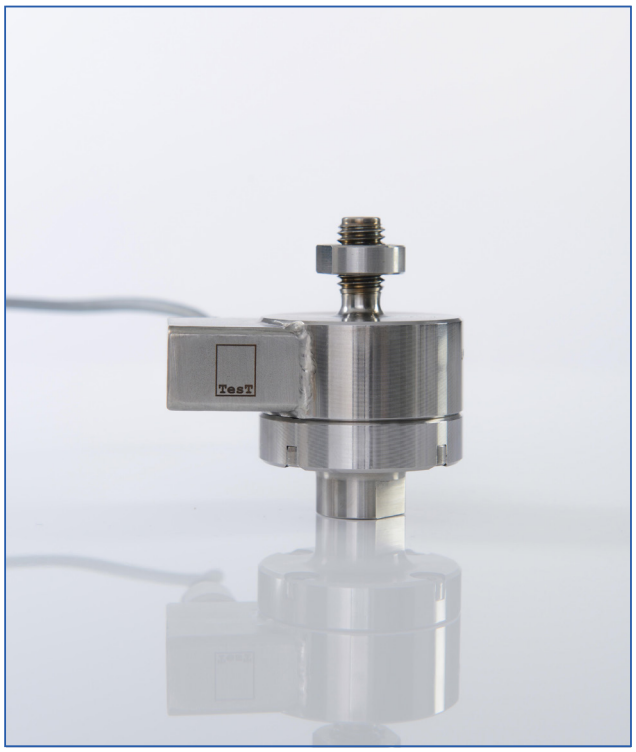
Electrical Force Transducers – Model 303



- Capacities: 1kN to 10kN
- For compression and tension
- Stainless steel
- Small dimensions
- Sensitivity: 2mV/V
- High accuracy
- For dynamic applications
- TEDS Module possible 1)

The electrical force transducers of the model series 303 are excellently suitable for cramped space conditions because of their small dimensions. Due to their low measuring uncertainty they meet also under ambitious requirements. The force transducers, made of stainless steel, are used for compressive forces as well as for tensile forces. The integration of a TEDS module inside the plug is also available on demand.

Model 303			
>> Technical data according to VDI / VDE directive 2638	Symbol	Unit	Standard
Zero signal when removed	S_o	mV/V	0,02
Rated characteristic value	C_{nom}	mV/V	2
Relative error of characteristic value	d_C	%	≤ ± 0,1
Relative linearity error	d_{lin}	%	≤ ± 0,06
Relative repeatability error in unchanged mounting position	b_{rg}	%	≤ ± 0,02
Combined error	F_{comb}	%	≤ ± 0,1
Reference temperature	T_{ref}	°C	21
Rated temperature range	$B_{T, nom}$	°C	-10...+40
Operating temperature range	$B_{T, G}$	°C	-15...+60
Storage temperature range	$B_{T, S}$	°C	-20...+70
Relative creep after 30 min	$K_{0,5}$	%	≤ ± 0,06
Relative creep after 8 h	K_8	%	≤ ± 0,018
Temperature effect on characteristic value per 10K	TK_C	%	≤ ± 0,05
Temperature effect on zero signal per 10K	TK_o	%	≤ ± 0,05
Input resistance	R_e	Ω	750 ± 25
Output resistance	R_a	Ω	700 ± 2
Insulation resistance	R_{is}	GΩ	> 5
Max. excitation voltage	U	V	15
Rated range of excitation voltage	$B_{U, nom}$	V	5...10
Limit force	F_L	%	≤ 150
Breaking force	F_B	%	≥ 300
Max. permissable dynamic load 2)	L_{dy}	%	≤ 75
Degree of protection acc. to DIN 60529			IP67

1) TEDS = Transducer Electronic Data Sheet acc. to IEEE 1451.4

2) Oscillation amplitude acc. to DIN 50100

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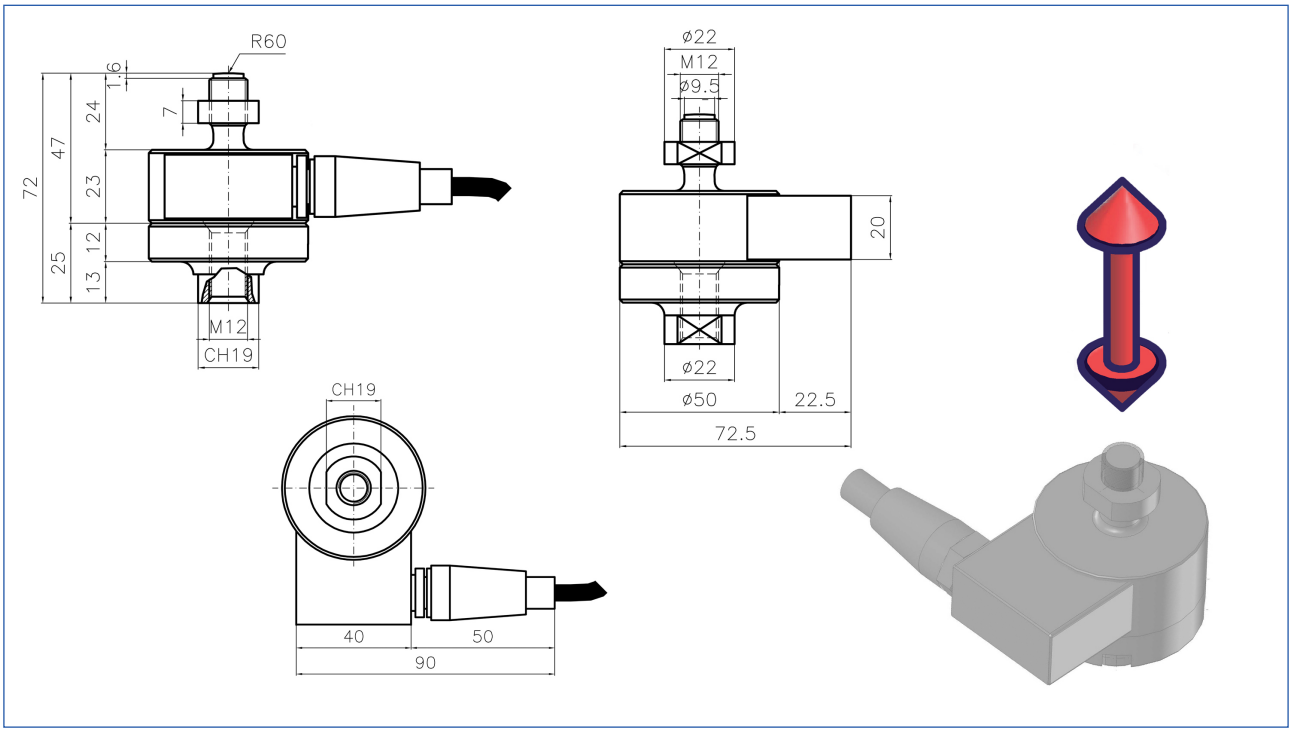
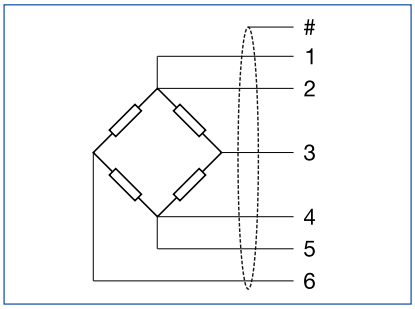


Capacities				
Model 303				
	1kN	2kN	5kN	10kN

Advice for tensile force measurements:
For force transmission please pay attention to an installation that is free of lateral forces, if neccessary use rotating intermediate parts or joint heads with shackles.
For safety reasons you should use arresting cables, straps or chains when other mechanical protection is not existing.



Connection Drawing		
1	white	Sense +
2	red	Excitation +
3	yellow	Output +
4	blue	Excitation -
5	black	Sense -
6	green	Output -
#		Shield

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