
ZF-S Series Force Transducers

NOTE: Not available in U.S.

FEATURES

- 100N to 10kN
- High precision
- Low assembly dimensions
- For tensile or pressure forces
- Enclosure protection IP 42



DESCRIPTION

The force transducers of the ZF-S series have been designed for the measurement of static and dynamic tensile and pressure forces; they are characterised by their low assembly height at a high measuring accuracy. The force is introduced on one side through a central tapped hole, the other side of the force transducer has to be fixed to a sufficiently rigid plane surface by means of 8 high-strength hexagonal socket-head bolts to be tightened with a defined torque of 18 N·m. A strain gauge

bridge converts the elastic deformation of the sensing element into an electrical signal that can be evaluated. Compensation and adjustment elements are used to set the required technical data. The 100N and 200N transducers are made of high-strength and low-hysteresis aluminium alloy. The 500N to 10kN transducers are made of a special stainless steel. As a standard, the transducers are equipped with a 3 m connection cable, which has free ends on the other side.

Accuracy class		0.2	0.1
Nominal force (=F _N)	kN	0.1 / 0.2 / 0.5 / 1 / 2 / 5 / 10	0.1 / 0.2 / 0.5 / 1 / 2
Max. permissible force	%F _N		150
Ultimate overload	%F _N		>500
Max. transverse force	%F _N		10
Reference temperature	°C		+23
Nominal temperature range	°C		-20 to +50
Storage temperature range	°C		-30 to +70
Enclosure protection (DIN 40050)			IP 42
Nominal sensitivity (=S)	mV/V		2.000 ±0.005
Zero tolerance band	%S		≤3
Max. supply voltage	V		10
Input resistance	Ω	380 ±30	760 ±60
Output resistance	Ω	352 ±3	704 ±6
Insulation resistance	Ω		>5 × 10 ⁹
Combined error ¹⁾	%S	0.2	0.1
Linearity error *	%S	0.2	0.1
Width of backlash *	%S	0.2	0.1
TC of zero per 10 K	%S	0.2	0.1
TC of sensitivity per 10 K	%S	0.2	0.1
Creepage error (30 min)	%S	0.2	0.1

* According to VDI 2637

PIN CONNECTIONS

Pin	To DIN
Supply voltage (+)	brown
Supply voltage (-)	yellow
Measuring voltage (+)	green
Measuring voltage (-)	white
Shield	black
Cable length	3 m

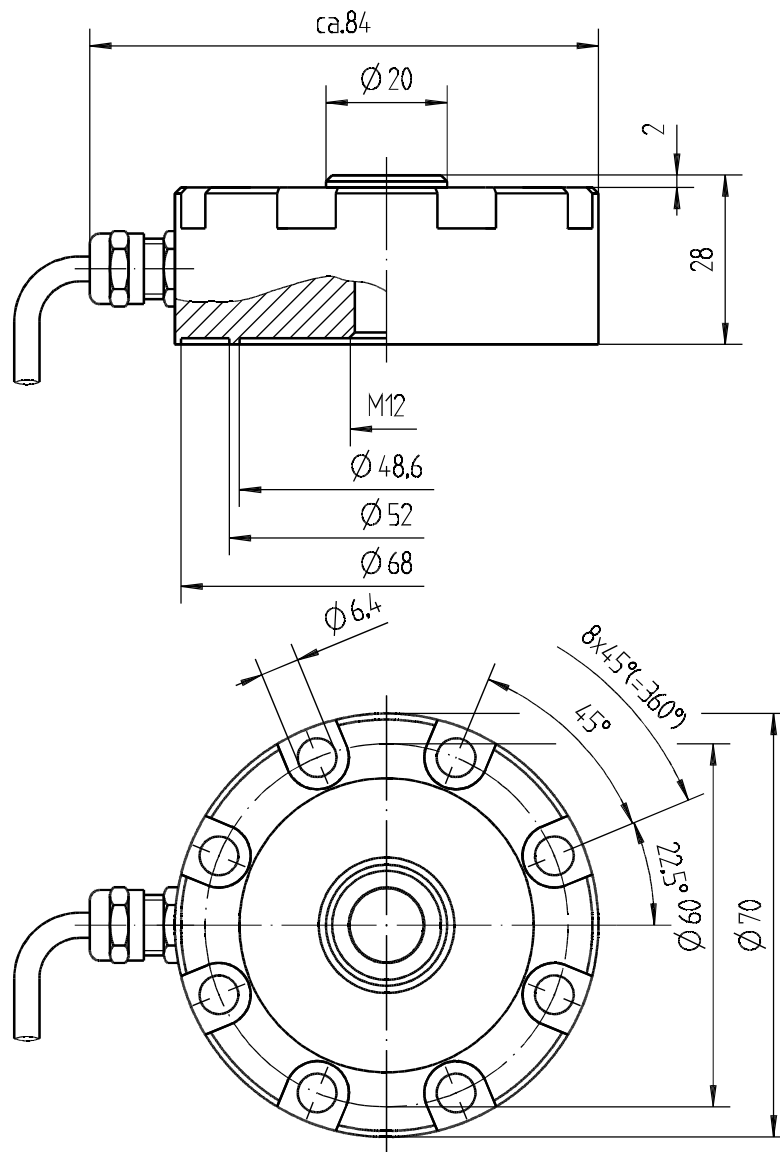
ZF-S 100 N to 10 kN

MODELS

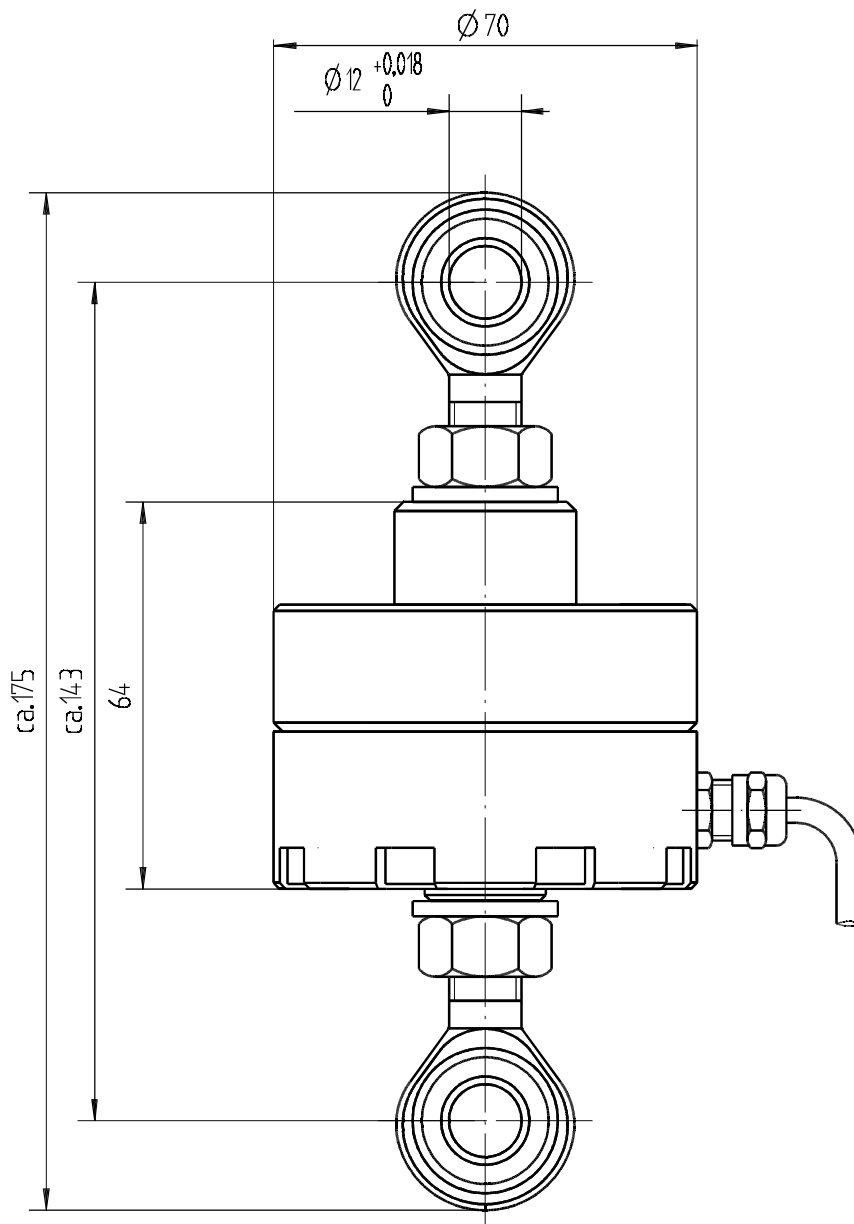
Nominal force

- 100 N
- 200 N
- 500 N
- 1 kN
- 2 kN
- 5 kN
- 10 kN

Weight: 0.2 kg



ZF-S with counter plate AM 033 and flexible head AA 12



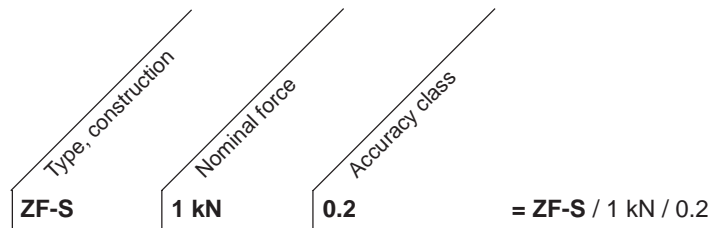
ORDERING INFORMATION FOR MECHANICAL ACCESSORIES

ZF-S 100 N to 10 kN

- AM 019 Force introduction calotte A 12-50
for ZF-S 100 N to 10 kN
- AM 033 Counter plate for ZF-S 100 N to 10 kN
- AA 12 Flexible head (external screw thread) with counter
nut for ZF-S 100 N to 10 kN

ORDERING INFORMATION
**Explanation of Type Code
(Ordering Example)**

for Force Transducers


SYSTEM OPTIONS

Model No.	Product Description	Ordering Number
LMU 112	Load monitoring unit containing 2 level detectors, 1 current and 1 voltage O/Ps	224-112-000-XXX
LMU 116	Load monitoring unit containing 4 level detectors, taring and 4 summer functions	224-116-000-XXX
LMU 117	Dual channel load monitoring unit (2 x LMU 112)	224-117-000-XXX
AN 2000 C	Digital process monitor for strain gauge transducers	AN 2000 C /X/X/XX/XX/X

Due to the continual development of our products, we reserve the right to modify specifications without forewarning.


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