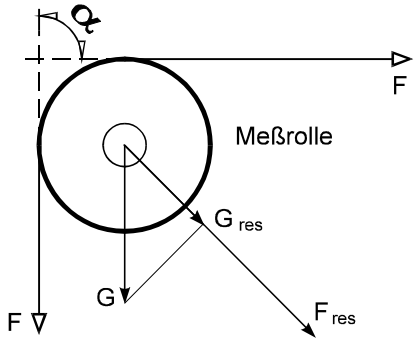
Radial Force Sensor Series M 1355 – NH and NH-2



α = angle of contact
F = tensile force of the material to be measured
Fres = resulting force which is measured
G = weight of the measuring roller
Gres = part of the -measuring roller weight- in sphere -direction of the sensor

Radial - Force - Sensors of series M 1355 NH are precise and reliable measuring systems, as well high overload-protected as high in long-time-stability.

For measuring tensile forces on running material, fit a ball-bearing-mounted roller on the journal-bearing. This measuring roller has to be mounted in a position, that the material which will be measured, will deviate in a defined angle. Here angle of contacts, of the material which is measured - around the measuring-roller, between 3° and 180° are possible. The resulting for ces, due to the deviation, are measured by the sensor. The radial force is proportional to the tensile force, in the material which is measured. Corresponding to this radial-force the nominal load of the sensor is to select.

Application:	measuring tensile forces on running or not running material p.e.: on wires, cables, tapes etc. p.e.: range of centrifugal-forces, in rotating stranding machines
Characteristics:	extreme space-saving and flat construction, easy mounting equipped with a standard - journal bearing of ∅ 10 mm realisation the measured data is independent of the width of the used roller
Nominal loads:	50 N, 100 N, 200 N, 300 N - others upon request
Measuring range:	by changing the angle of contact - around the measuring roller - the measuring range is variable
Measuring principle:	strain-gage, full-bridge, built in amplifier the sensor transforms the - on the measuring roller - active radial forces into a proportional electric signal
Mounting:	4 screws M 6
Connection:	Electrical connection by means of a fixed cable, length 3 m.
Accessories available:	Connection cable, amplifier with or without indication, rollers

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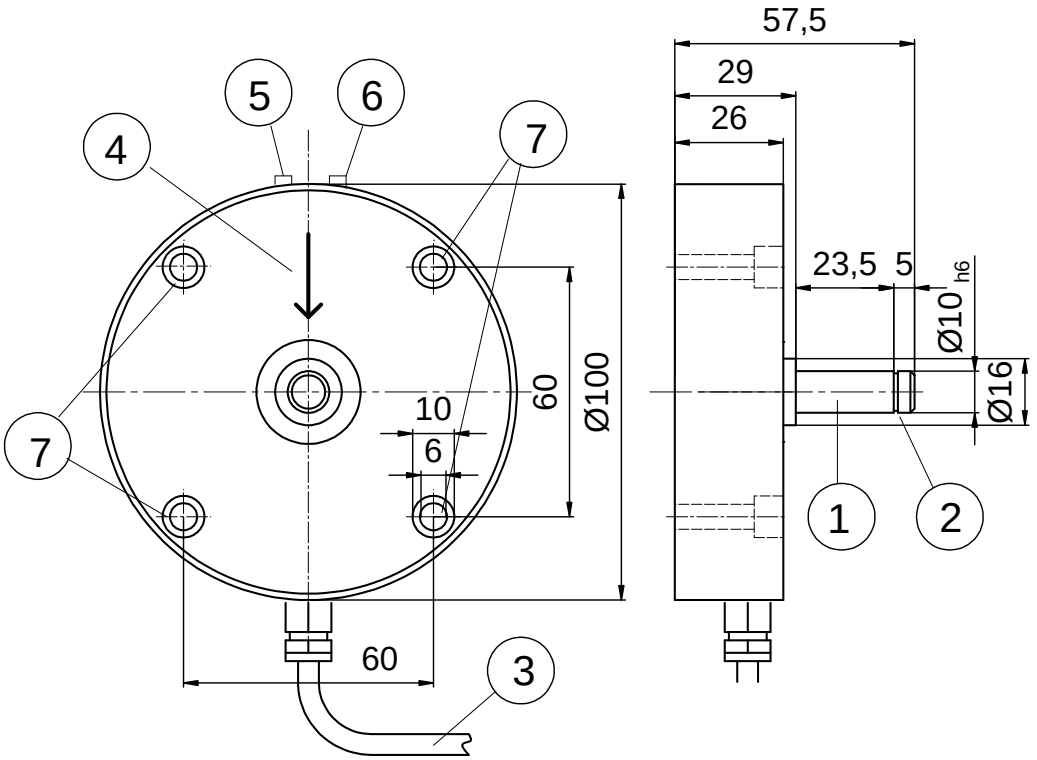
Technical data :

Radial Force Sensor Series M 1355-NH

Dimensions :



1 = Axle (journal-bearing)
2 = Seeger ring A10
3 = Connection cable
4 = Loading direction
5 = Potentiometer to adjust the electrical zero (Offset)
6 = Potentiometer to adjust the gain (Calibration)
7 = Holes to fix the sensor

Realization the measured data via strain-gages, amplifier is built in.
The desired service voltage must be indicated together with the order.

Nominal loads:	50N, 100 N, 300 N - others upon request		
Measuring principle:	strain-gage, full-bridge		
Measuring range:	1 % up to 115% the nom.load	*Coef. of temperature:*	
Value tolerance:	< ± 0, 2 %	- of the zero	< 0,035 % / ℃
Overload protection:	5- times up to 10- times depends on the nom.load	- of the meas. range	< 0,05 % / ℃
Service voltage:	5 V ± 10% < 90 mA	*Outputsignal:*	0 ... ± 10V
	12 V ± 10% < 70 mA	*Output current:*	max. 2 mA
	24 V ± 10% < 30 mA	option: Output current	4 - 20mA
	± 15 V ± 10% < +20 mA < -10 mA		
Protection:	IP 50	*Adjusting range zero:*	± 20% of the nom.load
Charact.of temperature:	+ 5℃ ... + 55℃	*Adjusting range gain:*	± 20% of the nom.load
Adjusting the zero	by means of a screw-driver		
Adjusting the gain	by means of a screw driver		
Connection cable:	length 3 m, fix connected		
Delivery:	Sensor with Seegerring A10, Instruction manual		

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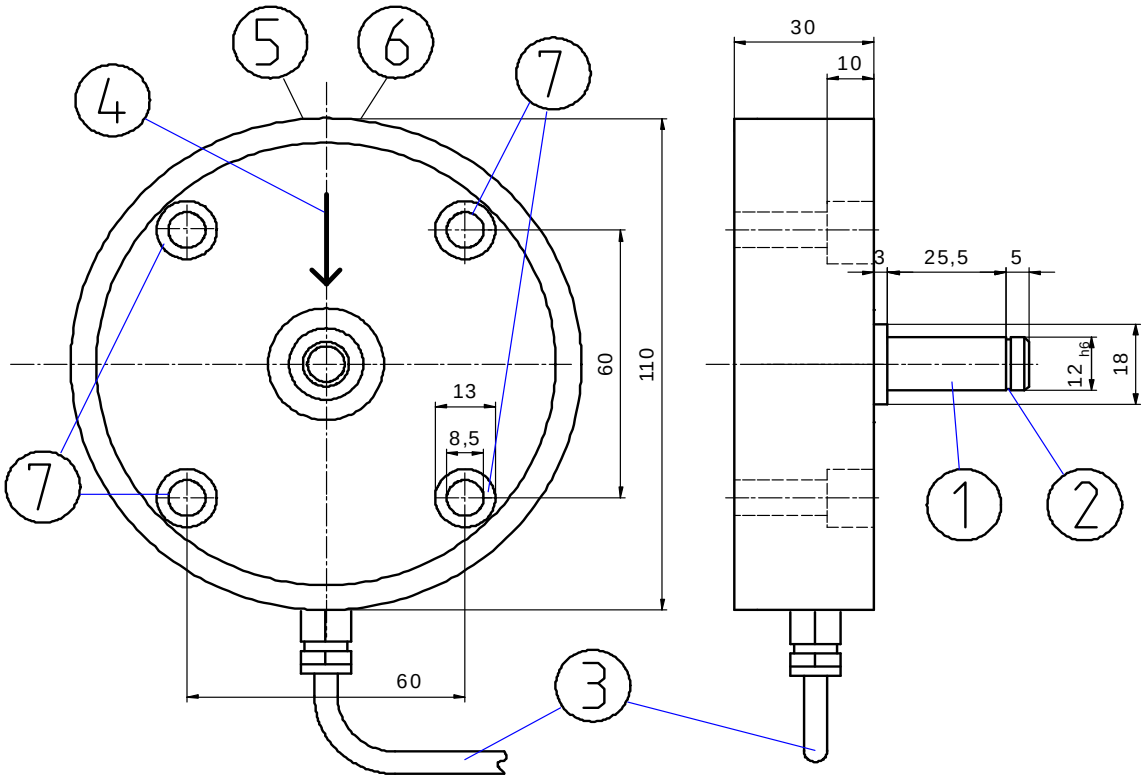
Technical data

Dimensions M 1355- NH-2 :



1 = journal bearing
2 = for Seegerring A12
3 = connection cable
4 = loading - direction
5 = Potentiometer to adjust the electrical zero
6 = Potentiometer to adjust the gain (calibration)
7 = bore-holes for fixing screws

Realisation the measured data via strain-gages, amplifier is built-in.
The desired service voltage has to be indicated together with the order.

Nominal loads	300 N, 500 N, 600N or 1000N -- others upon request		
Measuring principle	strain-gage, full-bridge		
Measuring range	1 % up to 115% of the nom.load	Coef. of temperature	
Max. Error in line.	< ± 0, 2 %	- of the zero	< 0,035 % / ℃
Overload protection	5 to 10 times Depending the nom.load	- of the meas. range	< 0, 05 % / ℃
Service voltage	5 V ± 10% < 100 mA 12 V ± 10% < 70 mA 24 V ± 10% < 40 mA	Output signal Output current option: Output current	0 ... ± 10V max. 2 mA 4 - 20mA
Protection	IP 50	Adjusting range zero	± 20% of the nom.load
Charact.range of temp.	+ 5℃ ... + 55℃	Adjusting range calibration	± 20% of the nom.load
Adjusting the zero	by means of a screw-driver		
Adjusting the gain	by means of a screw driver		
Connection cable:	length 5 m, fix connected		
Delivery:	Sensor with Seegerring A12, Instruction manual		

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