

Ring Cell/Force Transducer

MKR(L)-15...100 / 0.1...20 t



Purpose

Weighing, Force measuring

Operation

Strain gauges measure the deformation of a ring-diaphragm caused by an axial load

Advantages

- Compact, tight, price-worthy
- High overload
- Suitable for pressing force, moreover – owing to its ring design – for tensile force of bolts or ropes.
- Diameters fit to usual rocker bearings
- Model "L" includes a rocker bearing

Application

Scales, e.g. crane scales, platforms. Overload protection with our LMS-System, e.g. for cranes at the fixed end of rope.

Construction

The load cell is a S-profiled ring made by an unique piece of high-strength light metal or special steel. Top side can accept a rocker bearing, e.g. model GE . . AX or AW. Model "L" is furnished with this bearing mounted by a centering ring.

The medium part is a horizontal ring-diaphragm, loaded at the inner side and supposed at the outer side. Diaphragm is applied with min. 4 radial strain gauges being connected with adjusting elements to a full bridge and to the measuring cable induced by a cable inlet.

Measuring areas are protected by tubes with tightening O-rings. Lower side diameters of the ring cell are symmetrical to the top diameters.

Electrical Data

Resistance, nominal.....4 x 350 Ω or more
 " actual value.....see test certificate

Exciting voltage (350 Ω)...10...15 V
 " " (700 Ω)...20...30 V

Outp.signal (full load).....1 mV/V nominal
 Tolerance (+20°C).....1%; Option 0,25%
 Lead colours.....- white; + green
 Combined error.....0.25% f.s.

ZERO signal (+20°C).....< 1% f.s.
 = Output signal at.....ZERO load
 " Temp.-drift/10K...< 0.3%; Opt.0.1%
 Output " ".....< 0.3%; Opt.0.1%

Nominal temp.-Range.....- 20°C...+ 70°C
 Tolerated Range.....- 50°C...+120°C
with special cable

Mechanical Data

Working load MKR.....2 x nom. load
 Limiting load MKR.....2.5 x nom. load
 Breaking load MKR.....> 5 x nom. load
 Values for MKRL.....see data of
bearing

Dimensions(mm) Model MKR-d1

p = minimal nominal load (t)

P = maximal nominal load (t)

d1	15	25	35	45	60	80	100
d'	17	27	40	52	70	90	110
D	55	75	110	125	175	200	230
h	30	37	47	53	65	70	81
H	45	60	75	90	110	120	140
pAl				0,2	0,4	0,6	1
PAI				1	2	3	6
pSt	0,1	0,2	0,4	0,6	1,2	2	4
PSt	0,5	1	2	3	6	10	20

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