AST Gruppe
Angewandte System Technik

KAU
Force Transducer

Applications

- Measuring of pressure forces in machinery and systems - also in mining
- Wheel-load-measurement
- Automation technology
- Container- and silo-weighing, „guided“ force measurement in mechanics

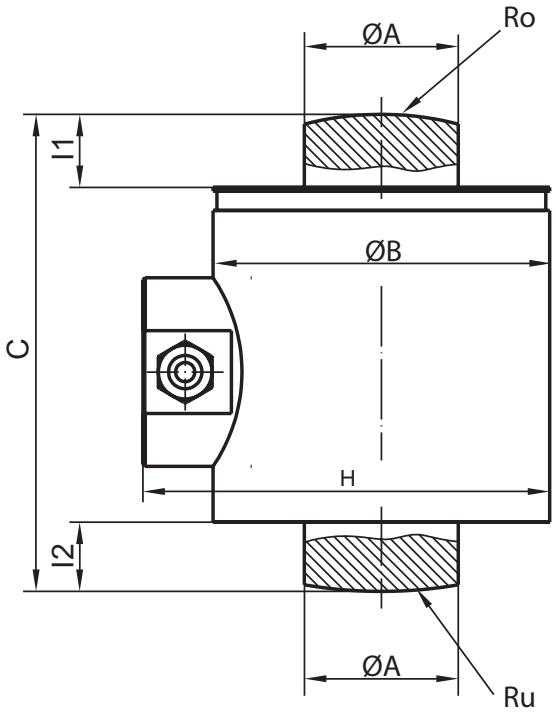
Features

- 100kN up to 5MN
- Accuracy class 0.1%
- Made from stainless steel
- Environmental protection IP 67
- Self oscillating assembly sets
- Installation set with lifting and tipping locks

Options

- integrated amplifier with standard signal
- CANopen interface
- ATEX-Certificate

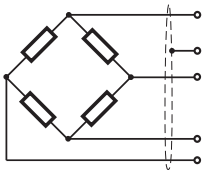
Dimensions (mm)



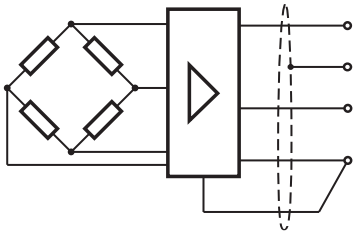
Rated Load in kN	A	B	C	H	I1	I2	Ro	Ru	Weight
100 up to 400	40	87.5	124	106	18	18	80	120	ca. 4.0 kg
600	58	87.5	124	106	18	18	100	200	ca. 4.5 kg
1000	76	112.5	190	132	27	27	200	400	ca. 9.3 kg
2000	100	150	200	172.5	40	40	180	300	ca. 16 kg
5000	152	220	300	245	80	81.5	600	600	ca. 62 kg

Wiring Code

Cable length 1,5m



excitation voltage +	(+EX)	brown
shield	(SHI)	black
signal +	(+SI)	green
excitation voltage -	(-EX)	yellow
signal -	(-SI)	white



supply voltage +	(UB)	brown
shield	(SHI)	black
signal +	(OUT)	green
ground / signal -	(0V)	yellow
programming interface	(PRG)	white

with integrated amplifier
(0V and PRG to be connected by the customer)

Specifications

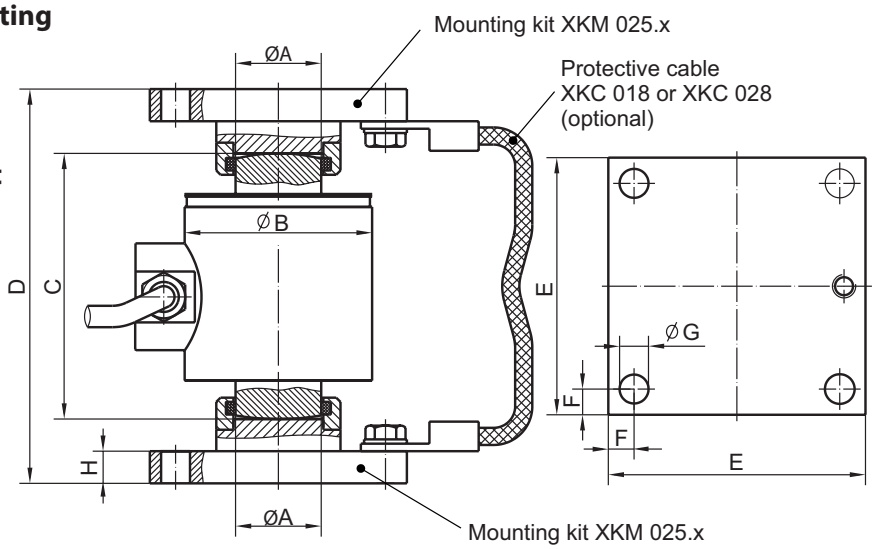
Accuracy lass	**% F_{nom}**	**0,1**	**0,2** **with integrated amplifier**
Rated load (F_{nom})	kN	100/200/300/400/600	100/200/300/400/600
	MN	1/ 2/ 5	1/ 2/ 5
Maximum operating load (F_G)	% F_{nom}	150	150
Breaking load (F_B)	% F_{nom}	> 500	> 500
Transverse load limit (F_Q)	% F_{nom}	25	25
Rated characteristic value (C_{nom})	mV/V	2.000 ± 0.002	
Relative deviation of zero signal	%	≤ 1	
Reference excitation voltage (U_{ref})	VDC	10	
Input resistance (R_e)	Ω	380 ± 30	
Output resistance (R_a)	Ω	352 ± 1.5	
Insulation resistance (R_{IS})	Ω	> 5 x 10^9	
Combined error (d_{lin})	%	≤ 0.030	0,05
Changeability (v)	%	≤ 0.030	
Temperature effect on zero signal (TK_0)	%/10K	≤ 0.025	0,10
Temperature effect on characteristic value (TK_C)	%/10K	≤ 0.017	0,10
Relative creep over 30 minutes ($d_{cr, F+E}$)	%	≤ 0.049	0,2
Reference temperature (T_{ref})	°C	+23	
Rated temperature range ($B_{T, nom}$)	°C	-10 ... +40	
Operating temperature range ($B_{T, G}$)	°C	-30 ... +70	
Storage temperature range ($B_{T, S}$)	°C	-40 ... +70	
Environmental protection (EN 60529)		IP 67	
Supply voltage	VDC		10 ... 30
Input current	mA		35 (at 24V)
Output singal for compression force (0...F_N)			
- Current output (max. resistance)	mA		4 ... 20 (300Ω)

All data according to VDI/VDE/DKD 2638

Appliances for Installation and Mounting

Dimensions (mm)

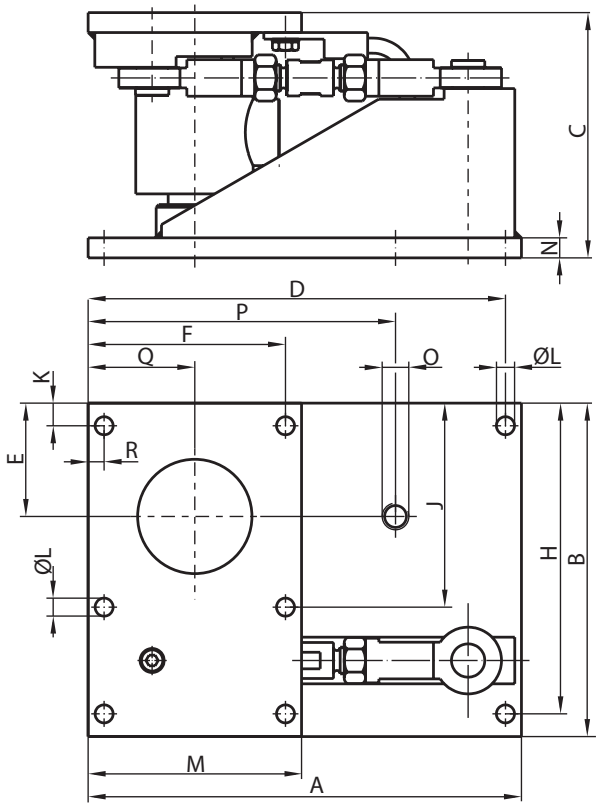
KAU 100kN ... 2MN with Mounting kit
XKM 025.x (XKM 025.01/02/03/04)



KAU with mounting kit XKM 025.x and protectiv cable XKC.x tilting plates with self restoring force)

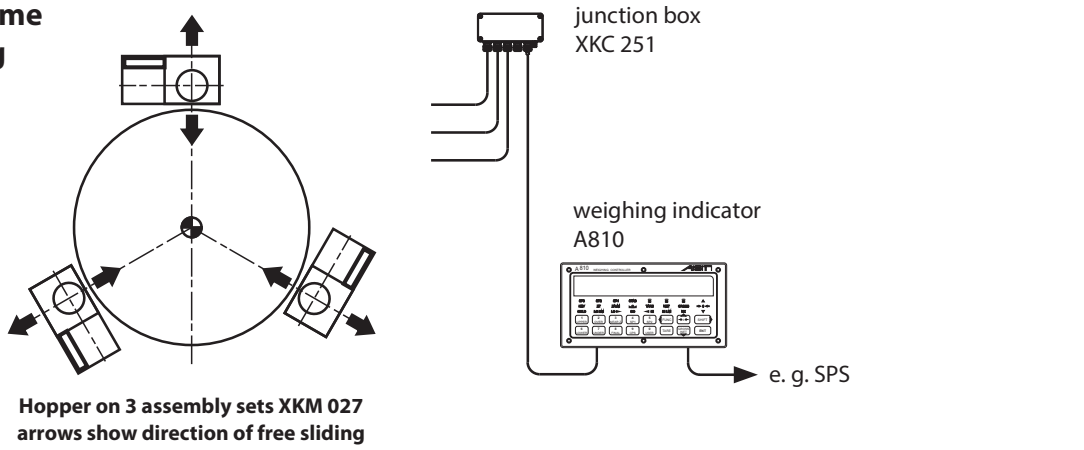
XKM	Rated Load in kN	A	B	C	D	E	F	G	H
025.01	100 up to 400	40	87.5	124	184	120	12	13.5	15
025.02	600	58	87.5	124	184	120	12	13.5	15
025.03	1000	76	112.5	190	270	160	14	14	15
025.04	2000	100	150	200	290	180	15	17	30

KAU 100kN to 1MN with assambly set
XKM 027.x (XKM 027.02/03/04)

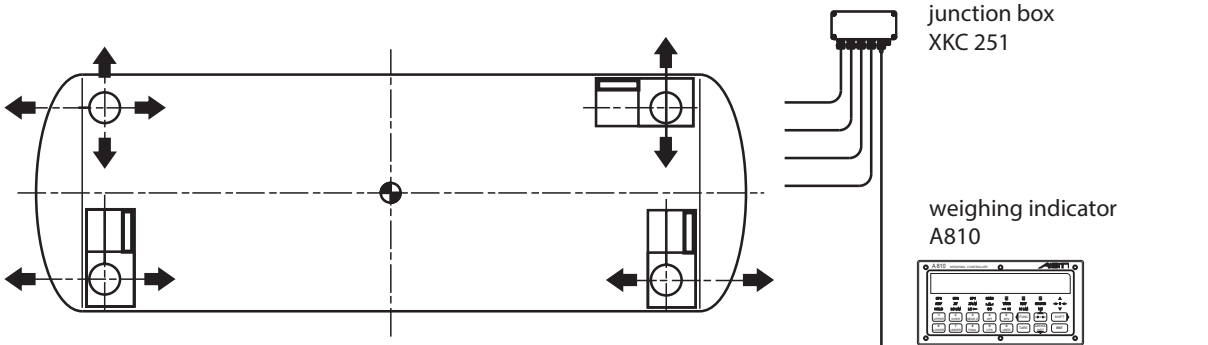


XKM	KAU with assembly kit	A	B	C	D	E	F	H	J	K	L	M	N	O	P	Q	R
027.02	100kN - 400kN	325	250	184	313	85	148	233	153	17	13.5	160	15	M20	230.5	80	12
027.03	600kN	325	250	194	312	85	142	232	152	18	18	160	20	M24	230.5	80	18
027.04	1MN	445	280	270	427	85.5	182	262	153	18	22	200	20	M30	300	100	18

Application Scheme Hopper weighing



Hopper on 3 assembly sets XKM 027
arrows show direction of free sliding



Hopper on 3 assembly sets XKM 027
and 1 x XKM 025 arrows show direction of free sliding

Order Example

Type Code	Description
KAU-E/100kN/0,2/24V/4-20mA	Force Transducer 100kN with 0.2 accuracy and integrated amplifier Output signal Supply voltage Accuracy class Rated load E = Integrated amplifier Model

Accessoires/ Options

	Type Code	Description
Mounting kit	XKM 025.01 XKM 025.02 XKM 025.03 XKM 025.04	for KAU 100kN up to 400kN for KAU 600kN for KAU 1MN for KAU 2MN
Assembly set	XKM 027.02 XKM 027.03 XKM 027.04	for KAU 100kN up to 400kN max. transverse force < 50kN for KAU 600kN for KAU 1MN max. transverse force < 100kN
Fixed bearing	XKM 027.12	for assembly set XKM 027.xx max. rated load: 200kN, max. transverse force < 20kN
Protective cable	XKC 028 XKC 018	for KAU 100kN up to 600kN for KAU 1MN, 2MNt
ATEX-Certification	KAU-EX	for KAU 100kN, 200kN, 300kN. Please see ATEX data sheet.
CANopen interface	KAU-DI	für KAU 100kN bis 5000kN. Please note data sheet „Force Transducer with CANopen Interface“!