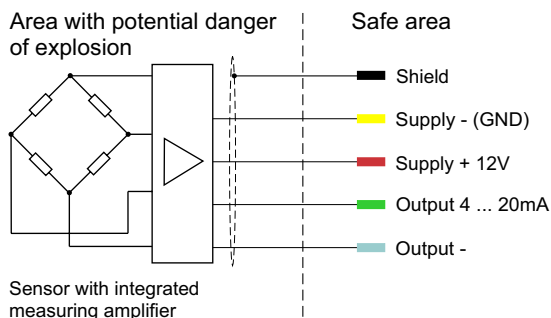




## Force transducers for ATEX-zones with integrated amplifier





Example: KAM-S-E-EX/10kN

***No additional safety barriers are necessary!***

Type-series		Application
<b>KAB-E-EX</b> Bending beam Force transducer/ load cell 10kg ... 1000kg		Scales Vessel weighing Mechanical engineering
<b>KAD-E-EX; KAD-S-E-EX; KAD-T-E-EX</b> Force transducer/ load cell 0.5t ... 5t; 0.5t ... 5t; 0.5t ... 2t		Scales Vessel weighing Filling measurement
<b>KAM-E-EX; KAM-B-E-EX</b> Force transducer compression 1kN ... 200kN; 1kN ... 10kN		Mechanical engineering Automation Press- and joining technology
<b>KAM-PR-E-EX</b> Force transducer compression 100kN ... 350kN		Vessel weighing Filling measurement
<b>KAM-S-E-EX</b> Force transducer compression 100N ... 20kN		Mechanical engineering Oil production facilities
<b>KAF-E-EX</b> Tension/ compression Force transducer 1kN ... 500kN		Material testing Mechanical engineering
<b>KAS-E-EX</b> Tension/ compression Force transducer/ load cell 200kg ... 5000kg		Scales Mechanical engineering
<b>KAL-E-EX</b> Load pin free dimensions 10kN ... 5000kN		Transp. and hoisting devices Oil production facilities Coal mining
<b>KAU-E-EX</b> Force transducer/ load cell 10t ... 30t		Scales Weighing container
<b>KAN-R-E-EX</b> Force transducer 200kN		Lifting devices Container cranes Lifts
<b>KAK-S-E-EX</b> Tension Force transducer 10kN ... 50kN		Assembly technique Guying technology Load measurements in ropes

## Classification according to EU-Type Examination Certificate TÜV 10 ATEX 555 391 X

						
	Category 1		Category 2		Category 3	
Application zone	Zone 0	Zone 20	Zone 1	Zone 21	Zone 2	Zone 22
Atmosphere	G	D	G	D	G	D
Safety level	very high		high		standard	
Sufficient safety	by 2 preventive measures in the case of 2 errors		by frequent equipment disturbances in the case of 1 error		by error free operation	
Approximate value for the time of reaction	> 1000 h/a		10 to 1000 h/a		< 10 h/a	
Intrinsic safety	ia		ib		ic	
Explosion group	Group [Ignition energy] IIC [20μJ]					
Temperature group (for gases)	Temperature Group [max. surface temperature] T4 [135 °C]					
Maximally permissible surface temperature	T200 °C (<Glowing temperature of coal dust)					
Ambient temperature range	-20 °C to +60 °C					
Intrinsically safe electric circuit	U <sub>I</sub> = 12V I <sub>I</sub> = 100mA P <sub>I</sub> = 0,65W					
Signal output	4 ... 20mA					

Type code	Labeling	Description
XKC 307	Zone 0	Gas: II 1G Ex ia IIC T4 -20°C < Ta < 60°C
XKC 310	Zone 20	Dust: II 1D Ex ia IIIC 20 T200°C -20°C < Ta < 60°C
XKC 308	Zone 1	Gas: II 2G Ex ib IIC T4 -20°C < Ta < 60°C
XKC 311	Zone 21	Dust: II 2D Ex ib IIIC T200°C -20°C < Ta < 60°C
XKC 309	Zone 2	Gas: II 3G Ex ic IIC T4 -20°C < Ta < 60°C
XKC 312	Zone 22	Dust: II 3D Ex ic IIIC T200°C -20°C < Ta < 60°C

### Hints:

1. In type of protection intrinsic safety EX ia IIC/ IIIC only for connection to certified intrinsically safe electric circuits.
2. Metallic process connection parts must be included in the local equipotential bonding.
3. The force transducer type KAM-S-E-EX must be installed in such a way that there is no risk of ignition due to impact or friction.
4. The intrinsically safe electric circuit is galvanically connected to the earth potential, potential equalisation must exist along the intrinsically safe electric circuit.