

# KTC

## LINEAR MOTION POSITION SENSORS

□ 33 Section, STANDARD 50-1250mm

### Pulling Rod Type



KTC standard linear transducers are designed for direct absolute measurement and are available in different stroke lengths up to 1250mm.

The sensors give exceptional resolution with repeatability of  $\pm 0.01\text{mm}$  and outstanding linearity of  $\pm 0.05\%$  maximum.

The sensors can be directly mounted into the mechanical system eliminating the use of racks and pinions or similar devices.

The KTC series has a solid stainless steel shaft with long bearings in the housing for a robust and smooth operation with long life. The slider has a ball coupling which reduces the effects of misalignment with the actuating part.

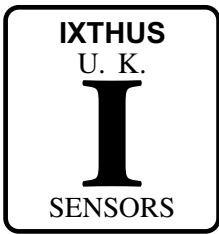
An improved technique for making connection to resistance track (Double Trimming Technique) ensures the higher degrees of reliability and linearity, while multi-fingers wipers stabilize output signals, even in the most adverse working conditions.

The fixing feet are adjustable to the desired positions.

### Unique Features

- Durable bearing and slider
- Anodized Aluminium Housing
- Smooth Low Noise Output from Conductive Plastic Track
- Very Long Life
  - >100 x 10<sup>6</sup> Cycles
  - >25 x 10<sup>6</sup> m
- Stroke : 50-1250mm
- Outstanding Linearity :  $\pm 0.05\%$
- High Resolution : Infinite
- Excellent Repeatability :  $\pm 0.01\text{mm}$
- Max operating speed : 10m/s max.
- DIN 43650 ISO 4400 Connector
- Fuse Protected optional
- Operating temperature : -30 ~100°C
- Storage Temperature : -50 ~120°C

Technical Specifications	
Sealing - KTC	IP60
Sealing - KTC-P	IP65
Current	$\leq 10\text{mA}$
Resistance	$\leq 1\text{mA}$
Wiper	$\leq 2\text{N}$ (KTC)
Operating Force	$\leq 10\text{N}$ (KTC-P)
Power Consumption	3W-10W
Output Smoothness	$< \pm 0.1\%$ against input voltage
Input Voltage	60 V Max
Insulation Voltage	500V-1 min Residue $< 5 \mu\text{A}$
Vibration	IEC 68-2-6:1982 10g
Shock	IEC 68-2-29:1968 40g

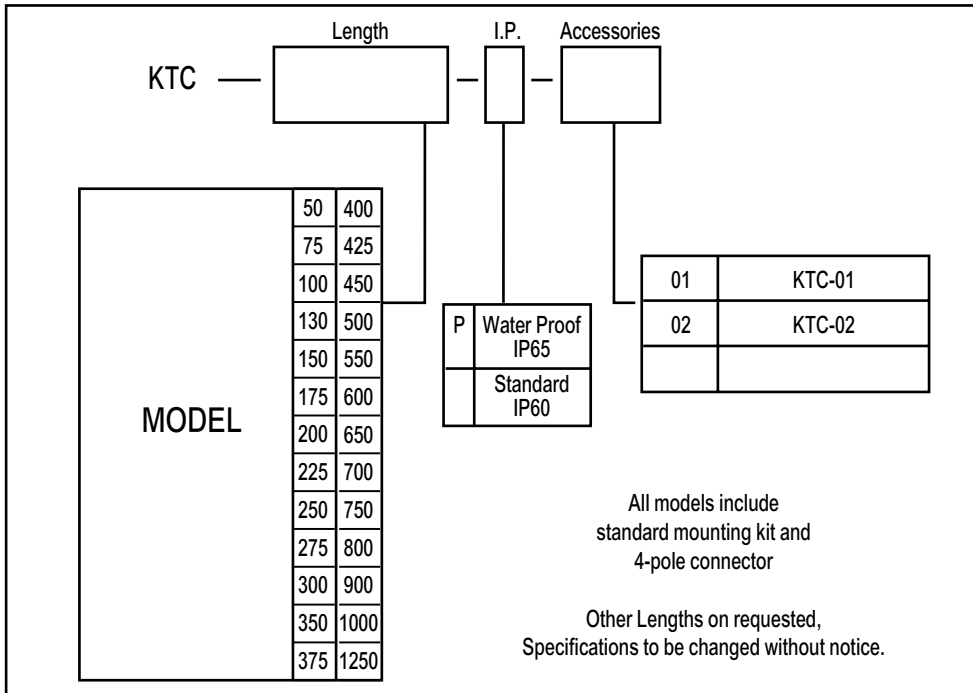


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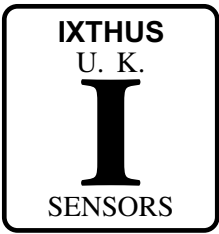
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### ORDER CODE



KTC series		50	75	100	130	150	175	200	225	250	275	300	350	375	400	425	450	500	550	600	650	700	750	800	900	1000	1250
Total Electrical Travel(T.E)	mm	53	78	103	133	153	178	204	229	254	279	304	354	380	406	432	457	508	558	609	659	710	762	812	914	1017	1271
Active Electrical Travel (A.E)	mm	51	76	101	131	151	176	202	227	252	277	302	352	378	404	430	455	506	556	607	657	708	760	810	912	1015	1269
Resistance ±20%	kΩ	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	10	10	10	10	10	20
Independent Linearity	±%	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Mechanical Travel (M.T)	mm	59	84	109	139	159	184	210	235	260	285	310	360	386	412	437	463	518	568	619	669	720	772	822	924	1027	1281
Resolution		infinite																									
Recommended Cursor Current	μA	< 1																									
Temperature Range	°C	-30 to +100																									
Dimensions (A)	mm	114	139	164	195	215	241	266	291	316	341	367	417	444	469	494	520	570	623	672	726	776	825	879	977	1086	1341

\* Dimensions for reference only

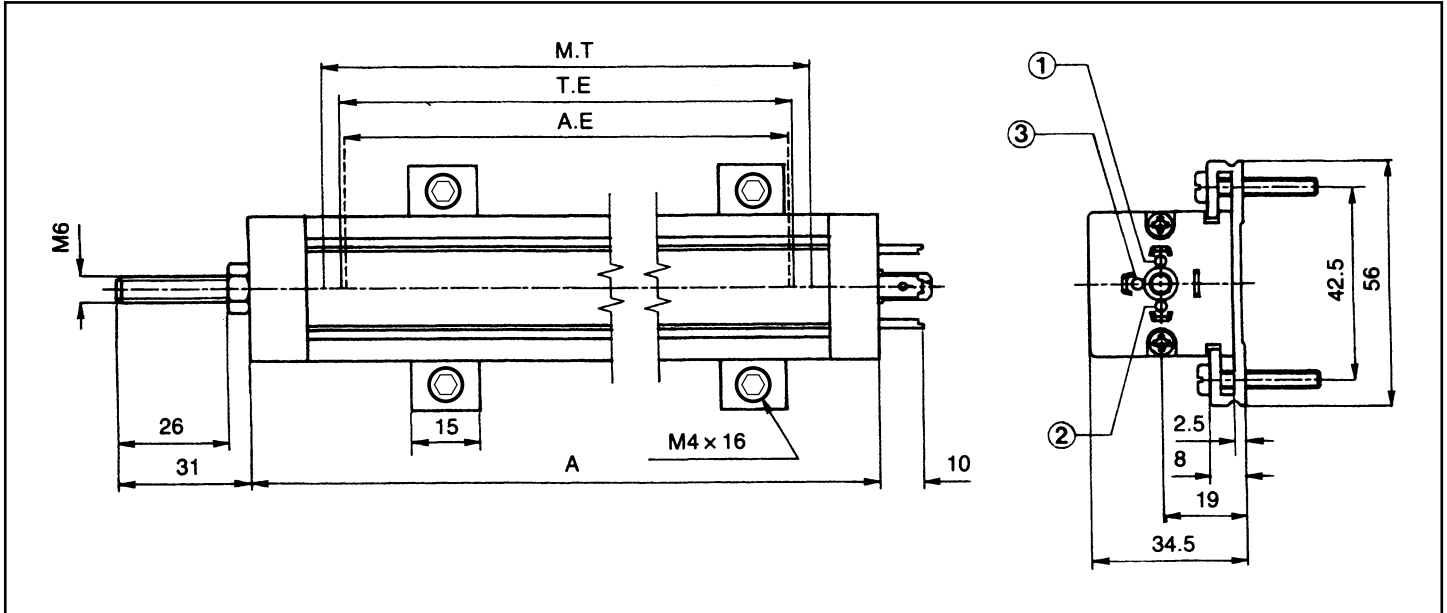


# KTC

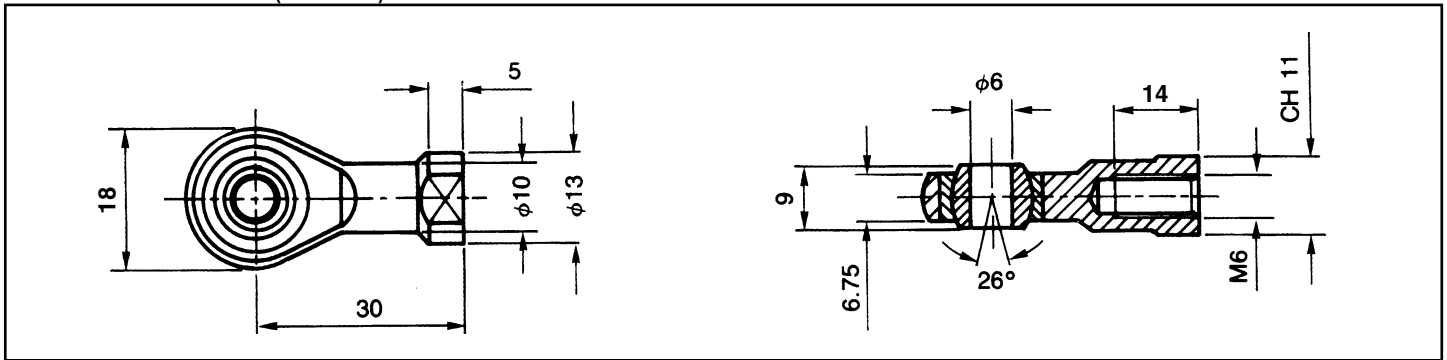
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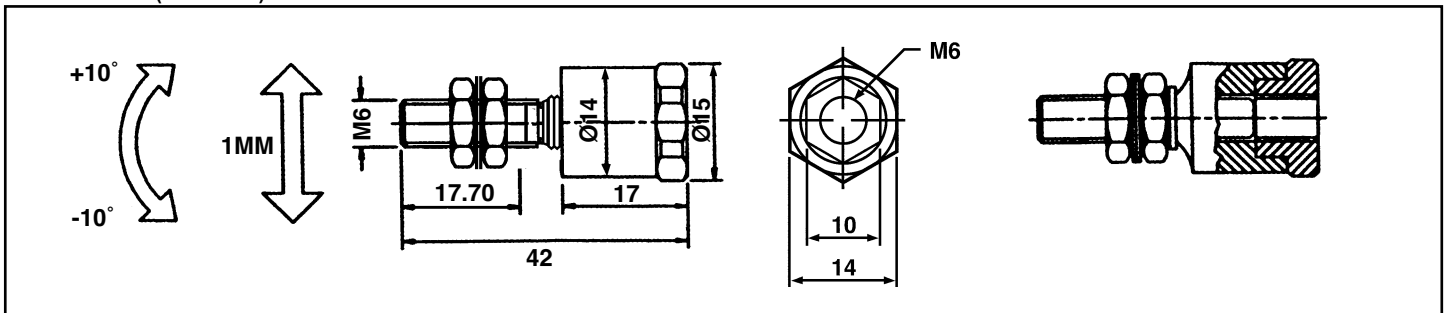
### MECHANICAL DIMENSIONS KTC



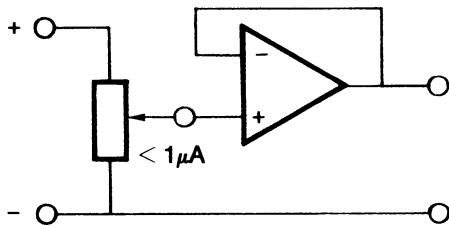
### ROD END BEARING (KTC-01)



### LINK BALL (KTC-02)



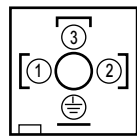
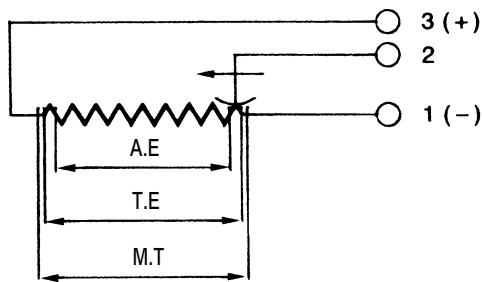
### RECOMMENDED MEASUREMENT CIRCUIT



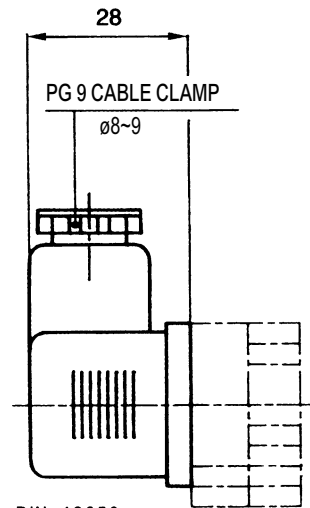
**Important:**

The published technical data are applicable only when the transducer is used correctly, and in accordance with the user manual / instructions. The KTC linear Position transducers must be used as voltage dividers with a maximum current in the wiper contact of  $1\mu A$ ; should the system downstream require more current, further circuitry will be required.

### ELECTRICAL CONNECTIONS



Connector Plug  
Pin Assignment



DIN 43650  
IP65-ISO4400