Code:	8719 E
Manufacturer:	burster
Delivery:	4 weeks
Warranty:	24 months

Potentiometric displacement sensors
Model 8719

8719-E

- **Measurement ranges: 0 ... 50 mm to 0 ... 900 mm**
- **Non-Linearity: up to 0.05 % full scale**
- **Life duration:10 ^{8} operations**
- **Displacement speed 10 m/s**
- **Resolution:0,01mm**
- **Protection class IP 60, IP65 and IP67.**
- **Integrated cable or mating connector**

Application

These displacement sensors are used for direct measurement, testing and monitoring of mechanical displacements. The high resolution power allows measures even in large measurement range to be accurately sized. Conversions of rotary in translational motion by direct measurement are not required. A prerequisite for a very long life duration of the devices is a parallel alignment of the direction of motion of the measurement object with the control rod.

Areas of application are:

- Displacement on electromagnets, hydraulic cylinders,switches and buttons.
- Measurements of deformation, bending, indentation.
- Extension measurement on machine, test benches, production plants

Description

Based on their technology, potentiometric displacement sensors consistently make use of sliding components.
A potentiometric displacement sensors has a resistive element of constant cross-section, resulting in a device where the resistance between the contact (wiper) and one end terminal is proportional to the distance between them.
The resistance track is trimmed in special process to minimize friction and stick-slip for long stability and
measuring quality,

The vibration reduced slider on the model 8719 allows a clear signal output even by slight shocks or high operating speeds up to 10 m/s.

The M6 thread enable an easily coupling with the measurement object.

Any lateral forces acting on the rod should be avoided, using the coupling ball-joint

Technical specifications:

Table: **Model 8719**

Measurement range	50	100	130	150	175	200	225	275	300	375	400	450	500	600	750	900
Housinglength	112	162	192	212	237	263	288	338	363	439	465	516	571	672	825	977
Max. Mech length	59	109	139	159	184	210	235	285	310	386	412	463	518	619	772	924
Slider Weight [g]	50	50	50	50	50	50	100	100	100	200	200	250	250	300	350	400
Weight [g]	300	350	400	500	500	500	600	600	650	700	800	900	1000	1200	1400	1600
Order code 8719-	5050	5100	5130	5150	5175	5200	5225	5275	5300	5375	5400	5450	5500	5600	5750	5900

Electrical ratings

Resistance	50-600mm 5kΩ 750-900 10kΩ
Tolerance on resistance:	± 20 %
Recommended operating current in the slider circuit:	< 0.1 pA
Maximum current in the slider circuit:	10 mA
Maxmuum power at 40°C (0W at 120°C)	3W
Maximum operating voltage:	50 V
Insulation resistance:	>100 *MΩ* at 500 V=, 2 s
Voltage resistance:	< 100 µA at 500 Vms, 50 Hz, 2 s

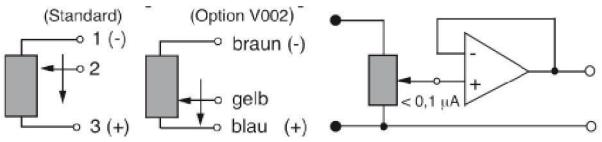
Environmental conditions

Working temperature range:	- 30 °C ... 100 °C
Storage temperature range:	- 50 °C ... 120 °C
Temperature coefficient:	
of the connection resistor	max. -200 ± 200 ppm/K
of the voltage divider	< 1.5 ppm/K

Mechanical values

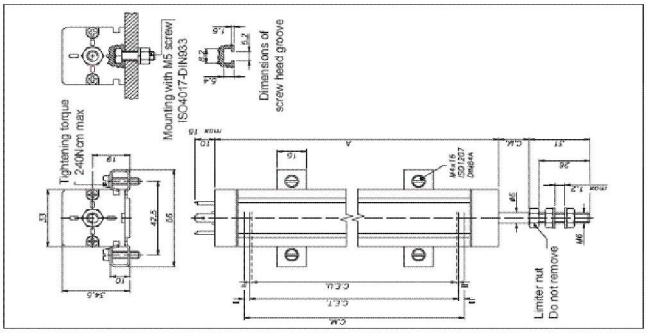
Linearity	± 0,05%v.E
Resolution:	0.01 mm
Service life (overtravel):	> 25X10 ^{6} resp. 10^{8} cycle (< 0.1 µA slider current)

Displacement force, horizontal: <2N for IP 60 res. < 10 N for IP 65
Displacement speed: Standart 10 m/s
Vibration resistance: 5 ... 2000 Hz, Amax = 0.75 mm, amax = 20 g
Impact resistance: 50 g, 11 ms
Protection: in compliance with EN 60529 IP 60 (Option IP65, IP67)
Material: Housing Aluminium, anodised
Control rod High-grade steel AISI 303
Fixing: Brackets with variable longitudinal distance



Note:
The excellent characteristics of the sensors are particularly evident when the slider load in the voltage divider < 0.1 µA. If the measuring chain requires higher currents, it is advisable to use an operational amplifier connected as a voltage follower (I < 0.1 µA).

Dimensions



Code	Description
V001	Protection class IP 65
V002	Cable 1m
V004	V001 and V002
V005	V002 and V003
V007	Protection class IP 67

Order Code

Potentiometric displacement sensor with ball tip
Measuring range 300 mm **model 8719-5300**

Accessories

Coupling ball-joint **Model 8705**
Mounting Set (brackets and screws) included on Sensor delivery **Model 8719-Z001**
Mating connector, 5-pole (1 unit included) **model 9991**
Mating connector, 5-pole 90-degre cable output **model 9900-V590**
Mating connector, 5-pole (for Option IP 65) **model 9900-V554**
Cable, length 3 m one end mating connector of sensor, other end free **model 99130**
Cable for burster desktop devices, length 3 m **model 99132**
Cable for DIGIFORCE® 9310, length 3 m **model 99209-591A-0090030**
Mounting of mating connector to conductor cable **99004**
Electronic devices for connecting these sensors **Refer to section 9 of the catalog.**

Mounting Recommandation

The bracket allows the Sensor to be fine adjust in the mounting position. It is better to assemble the sensor , With the following coupling joint (See the scale drawing.

Option WKS: Factory calibration 6 points, 20 % increment.