KFZ motion transducer

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Motion transducer MT.../e KFZ-RS with tube

Motion transducer with Peiseler Mounting Plate fitted to a car wheel

Helical spring and fender clamp

Tube with three suction cups attachment (RS)

Tube with holder magnet (RM)

Tube with double holder magnet (RM2)

FK: Helical spring and fender clamp
RS: Tube with suction cups attachment
RM: Tube with holder magnet

Art-No.	name of the item
25 pulses/rotation	
1265 FK	Motion transducer MT 25/e KFZ FK
1266 RS	Motion transducer MT 25/e KFZ RS
1266 RM	Motion transducer MT 25/e KFZ RM
40 pulses/rotation	
1268 RS	Motion transducer MT 40/e KFZ RS
1268 RM	Motion transducer MT 40/e KFZ RM
100 pulses/rotation	
1280 FK	Motion transducer MT 100/e KFZ FK
1281 RS	Motion transducer MT 100/e KFZ RS
1281 RM	Motion transducer MT 100/e KFZ RM
360 pulses/rotation	
1291 RM	Motion transducer MT 360/e KFZ RM
1291 RS	Motion transducer MT 360/e KFZ RS
500 pulses/rotation	
1282 FK	Motion transducer MT 500/e KFZ FK
1283 RS	Motion transducer MT 500/e KFZ RS
1283 RM	Motion transducer MT 500/e KFZ RM
1000 pulses/rotation	
1285 RS	Motion transducer MT 1000/e KFZ RS
1285 RM	Motion transducer MT 1000/e KFZ RM
2000 pulses/rotation	
1289 RS	Motion transducer MT 2000/e KFZ RS
1289 RM	Motion transducer MT 2000/e KFZ RM
4000 pulses/rotation	
1290 RS	Motion transducer MT 4000/e KFZ RS
1290 RM	Motion transducer MT 4000/e KFZ RM

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Motion transducers MT .../e KFZ

The MT .../e KFZ series transducers are designed specially for collecting data on rotational speed of (car) wheels. These transducers are mainly used for acceleration and slip measurements, prolonged testing as well as for track distance measurements and crash tests. Custom designed test systems also use this type of pulse generators. Main features of Peiseler MT .../e KFZ motion transducers: high precision, robust metal casing, largely unaffected by weather and environmental conditions, short time needed for mounting onto car wheels.
For decades, these pulse generators have been used worldwide for vehicle test purposes.

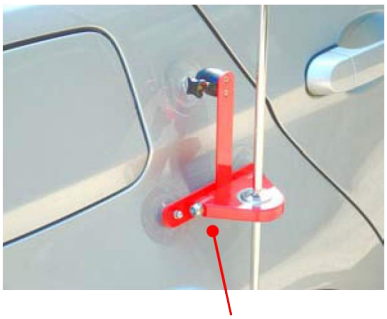
MT100/e KFZ-RS with PEISELER MOUNTING PLATE fitted to a car whee

Operating principle:

The car motion to be measured is transferred to a dented disc rotating inside the transducer's casing. Resolution of measurement is determined by the number of slots of this disc. A light beam from a LED light source is directed toward a spot on the slotted disc. The pulses of light passing through the slots are received by a light-sensitive photo-transitor behind the disc and are converted into electrical signals. Upon further conversion, these signals are available, on two channels, as square wave pulses.

Wheel speed sensor MT ... KFZ-RK with tube and clamp

Wheel speed sensor MT...KFZ-RS with tube and suckers



Tube with three suction cup attachment (RS)

Tube with holder magnet (RM)

Wheel speed sensor MT...KFZ-FK with helical spring and fender clamp

Installation:

A „Peiseler plate assembly" is fitted to the lug nuts of a car wheel and serves as a carrier for the motion transducer. The fender is used as a fixed point to which the transducer is linked by either - a helical spring with fender clamp (-FK type) or by -a tube with ball joint type tube-holder fastened with suckers (-RS type).
The transducer supplies n pulses per wheel revolution on two channels as well as a signal for identification of the sense of rotation.

The relationship between the number of pulses and the distance travelled is to be deter minate distance in meters circum-ference of wheel in meters mined by having the car run over a track of known length - or it can be calculated by using the following formula:

$$s = \frac{i * u}{n}$$

s:distance in meters
i :number of pulses measured
n:"nominal" number of pulses per rev.
u:circumference of wheel in meters

One permanently fixed cable is used for both feeding the supply voltage and for transferring the output pulses.

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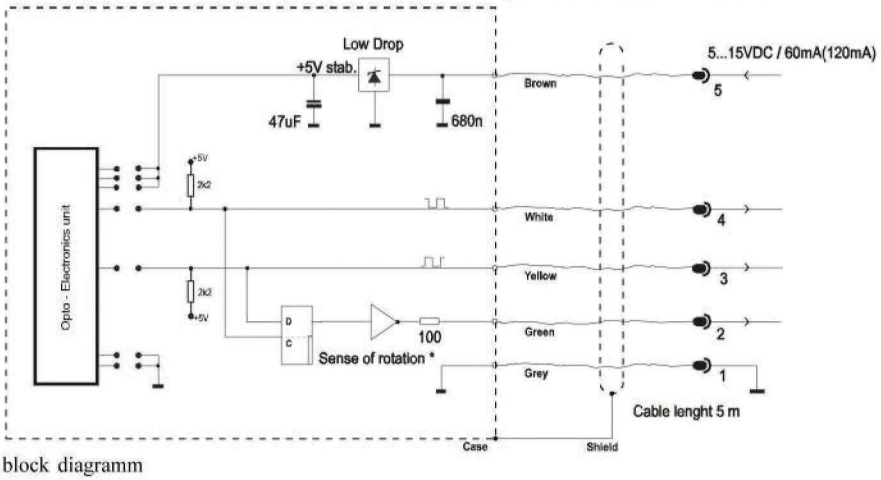
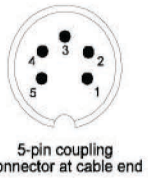
Technical specifications

Casing:	eloxadized aluminium with double ball
Protection:	IP 67
Maximum speed:	type - FK (cable within spring): 160 km/h type - RS, RK, RM: 300 km/h
Life:	> 100 000 km
Power supply:	5...15VDC
Reverse Polarity:	max. 15VDC
Current consump.:	max. 60mA (MT1000/e max. 120mA)
Number of pulses:	standard versions: 100, 500,1000 ppr, *
Temerature range:	-25 °C bis +65°C
Pulse output:	two channels with *n* pulses/rev., phase shifted by 90°
Signal for sense of rotation:	square wave signal, polarity depending on mounting direction, protective series resistance 100 Ohms
Pulse ratio:	50 % ± 5 %
Output voltage:	5V square wave pulses
Connection:	cable permanently connected, at end of cable 5-pin plug
Pin assignment:	1: ground 2: signal for sense of rotation 3: pulse channel 1 4: pulse channel 2 (the one that is processed by Peiseler testers) 5: 5...15VDC
Max cable length:	20 m
Dimensions:	diameter 69 mm, height 62 mm
Weight:	approx. 1.1kg
Length of guiding tube:	approx. 69 cm

* other pulse numbers on spezial request e.g. 10,40,75 pulses/rev.



block diagramm



5-pin coupling connector at cable end

view onto the pins

Part no.	Description	Part no.	Description
1280	MT 100/e KFZ-FK (cable guided by helical spring)	1421	Peiseler-Plate for 3-4-5 chucks (incl.centering part)
1281	MT 100/e KFZ-RS (cable guided by tube)	1425	Centering part for 3 chucks
1286	MT 100/e KFZ-RK (cable guided by tube and clamp)	1426	Centering part for 4 chucks
		1427	Centering part for 5 chucks
1282	MT 500/e KFZ-FK	1430	Chuck for lug nuts of 17mm width
1283	MT 500/e KFZ-RS	1431	Chuck for lug nuts of 19mm width
1285	MT 1000/e KFZ-RS	1432	Chuck for lug nuts of 21mm width
1291	MT 360/e KFZ-RK	1440	*Chuck of special sizes upon request*

! Other pulse rates and plug connections upon request

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