Number :	**ZTDL0021.DOC**	**Technical Data Sheet**	FISCHER 3360 Herzogenbuchsee
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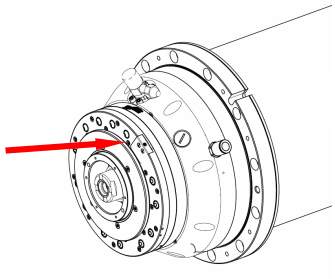
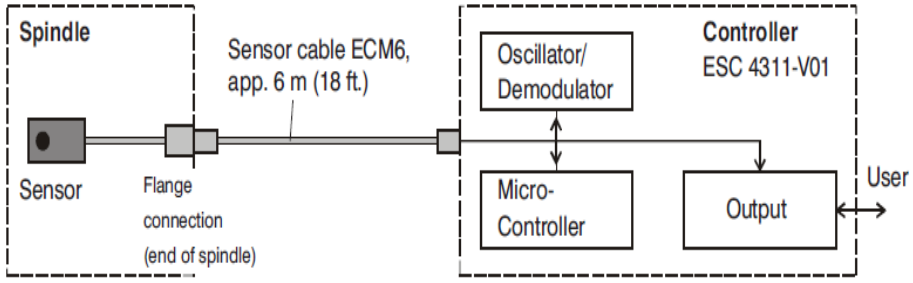
DMD extension sensor (SGS – Spindle Growth System)

The DMD (displacement measuring device) or spindle extension system SGS (Spindle Growth System) is used to measure the extension of high frequency milling spindles. It enables the machine's CNC controller to compensate for axial extension of the milling spindle.

The DMD/SGS measuring system works on the eddy current principle. The sensor is integrated in the tool spindle. The data from the sensor is processed by external electronics (DMD/SGS measuring system controller). All of the sensor-specific data is saved in an EPROM which is integrated in the sensor. This means that the DMD/SGS measuring system is ready for use again immediately after the spindle has been changed.

Installation position of the DMD (SGS) in the spindle





Integrated DMD version

Important:
The sensor cable (ECM6) and the electronics (ESC4311-V01) are treated as an individually matched unit. Always ensure that the serial number is identical.

German	English
Werkzeugspindel	Tool spindle
Flansch bzw. Kupplungsdose am Spindelende	Flange or connector at the end of the spindle
Sensorkabel ECM6, ca.6 m	Sensor cable ECM6, approx.6 m
Ausgang	Output
Anwender	User

Effective range		400 µm
Linearity (over the entire range)		±5 µm
Resolution		1 µm
Temperature stability	Sensor	±0.01 % o.r./℃
	Controller	±0.05 % o.r./℃
Temperature range	Sensor	0 – +70℃
	Controller	10 – 50℃
Sensitivity	Distance	20 mV/µm
	Temperature	0.1 V/℃
Output signal		0.2 – 10 VDC
Temperature output		0.2 – 10 V
Power supply		+24 VDC stabilized
Controller protection rating		IP 67
Cable length, total		Approx. 7 m

o.r. = of the range

Changes:	
Index:	Change: