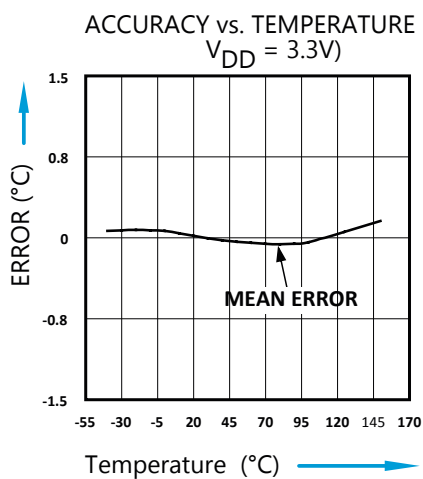# TDS

Digital Temperature Measuring Chain

The temperature sensors TDS (Temperature Digital Sensor) consist of a digital temperature sensor with integrated measured value adjustment and 16-bit A/D- converter. The communication is via I²C-bus und allows the extension to a digital temperature measuring chain with up to 32 addressable sensors.

Each chain includes a controller (DCT) so that numerous chains can be connected in a row. The measurement and data acquisition can be performed by an MCC.

The sensor housing is made of stainless steel with pressure-tight sealing.

ACCURACY vs. TEMPERATURE V_{DD} = 3.3V)

ERROR (°C)

MEAN ERROR

Temperature (°C)

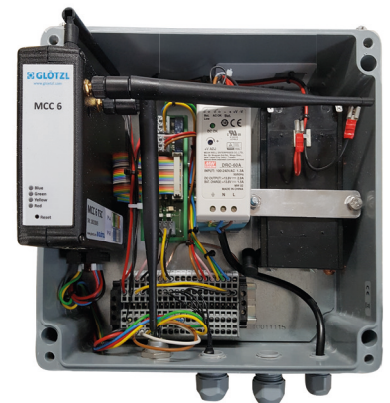| Technical Specifications	
Accuracy:	Type: ±0.1 °C, Max: +0.5 °C
Precision:	0.0625 °C
Temperature range:	-40 °C up to 105 °C
Extended Temperature range:	-55 °C up to +150 °C
Protection Class:	IP68

Fig.: Measurement Communication Control System MCC 6

SCHEMATIC LAYOUT
Digital Temperature Measuring Chain

| RS485 Bus GLÖTZL protocol | DCT | RS485 Bus GLÖTZL protocol | DCT | RS485 Bus GLÖTZL protocol | DCT |

‖ = Digital temperature sensor

I²C-Bus

GLÖTZL