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Datasheet

Torque Sensor

DRFS + DRFS-I-w

DRFS: 7 torque ranges from 1 Nm up to 20 Nm
DRFS-I-w: 6 torque ranges from 0,5 Nm up to 20 Nm



Hexagonal drive

**suitable for motor vehicle,
test bench and assembly technology**

suitable for pulse tool

optional angle function

Features DRFS

- No service needed because of contactless data acquisition
- High accuracy due to frequency modulation
  and strain gage technology
- Single power supply
- High noise immunity due to amplified active signal
- integrated sensor-detection chip
  for use with GMV2 analyzer

Measuring Range

DRFS (± 0 - ... Nm)	Overload (%)
| 1 | 2 | 5 | 10 | 12 |	100
| 15 |	70
| 20 |	30

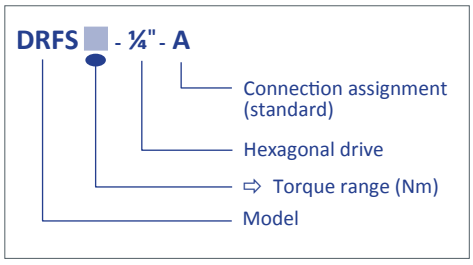
DRFS-I-w (± 0 - ... Nm, with angle function)	Overload (%)
| 0,5 | 1 | 2 | 5 |	100
| 10 |	80
| 20 |	10

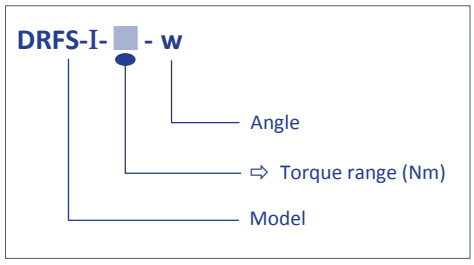
Electrical Specifications

Supply voltage:	12 V DC ± 10 %
Current consumtion:	< 200 mA
Rise time 10-90 %:	1 ms (1 kHz)
Voltage output:	0 to ± 5 V
Internal resistance:	100 Ω
Ripple:	< 100 mVpp
Nonlinearity:	< 0,15 %
Hysteresis:	< 0,1 %
Deviation at zero point:	≤ ± 100 mV
Operating temperature:	0 - 60 °C
Compensated temperature range:	5 - 45 °C
Temperature error Zero point: Sensitivity:	 0,02 / K 0,01 / K
max rev. (DRFS):	10.000 min^{-1}
Internal protection:	IP40
Connection:	12pin-connector (circular connector series 680)
Calibration: Works certificate with 25% steps cw. Other calibrations on request.	

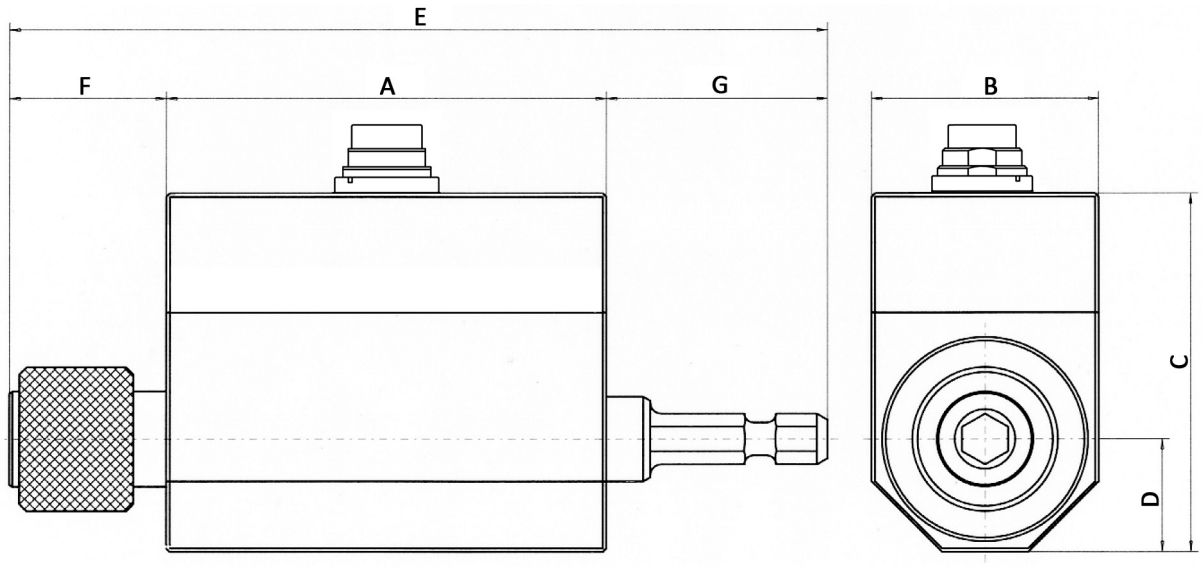
Angle / DRFS-I-w	
max rev.:	3000 min^{-1}
Output:	open-collector
Internal pull up:	10 kΩ (5 V Pegel)
External pull up:	24 V max.
I_{max}:	20 mA
Pulses / rev.:	360
Resolution:	1°
Detection of direction of rotation:	2 pulses 90° phase shift Channel A leading for clockwise rotation of drive end

Ordering Code





Mechanical Dimensions



1/4“ Hexagonal drive DIN 3126 (ISO standard 1973-1975) Size E / F with quick-coupling

Mechanical Values

Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	Weight approx (g)
DRFS	62	32	51	16	115	22	31	300
With angle function								
DRFS-I-w	66	32	51	16	114	17	30	280

General tolerances DIN 2768-m

Available Accessories

Supply and display unit: ValueMaster$_{base}$
GMV2
ValueView

Cables