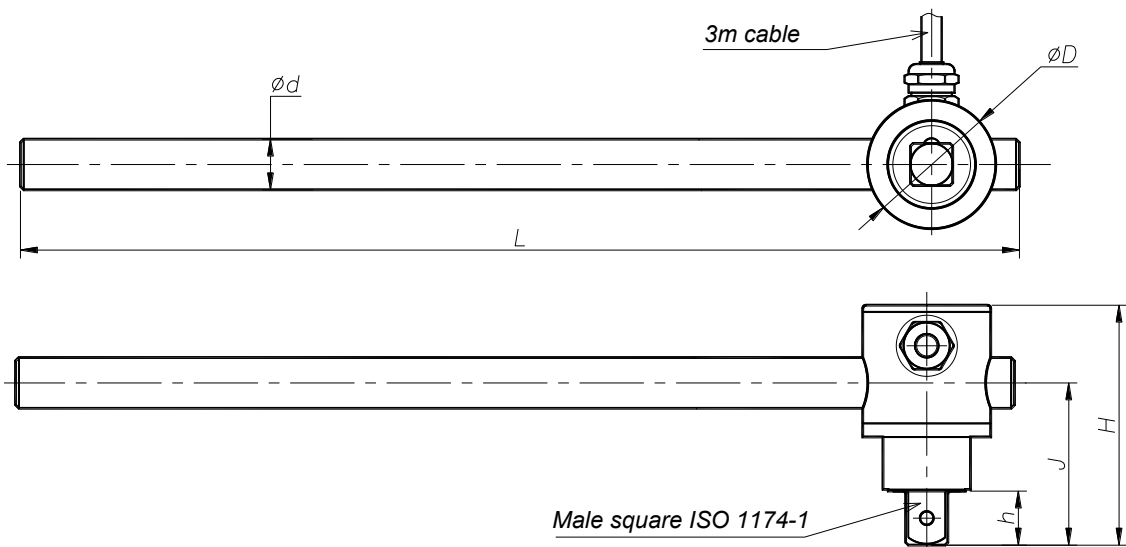


## M02 Torque Wrench

The M02 torque wrenches are used for accurate measurements of the bolt or nut wrenching torques. These torque wrenches are bi-directional that is why both tightening and breakaway torques can be measured. They operate on the strain gauge principle. The built-in amplifier provides a high level of the output signal.

### Special features:

- Operating on the strain gauge principle
- Built-in amplifier
- Insensitive to lateral and axial forces and to bending moment
- Accuracy class: 0.2
- Torque measurement of positive and negative polarity
- Analogue output signal:  $\pm 2$  V
- Digital output signal: USB, RS232
- The software in the scope of supply



### Dimensions, mm

Type	Nominal torque, Nm	Square	ØD	Ød	L	H	h	J
M02-20	20	3/8"	30	10	200	60	11	40
M02-50	50	3/8"	32	12	250	60	11	41
M02-100	100	1/2"	38	15	400	70	15	49
M02-200	200	1/2"	44	20	500	76	15	52
M02-500	500	3/4"	52	26	500 + 500	91	23	65
M02-1k	1 000	1"	62	30	500 + 600	104	28	75

# Technical data

## 1. Electrical and metrology parameters

Nominal output signal with positive (right-hand) nominal torque	V	+ 2
Nominal output signal with negative (left-hand) nominal torque	V	- 2
Output signal at torque = zero	V	0
Deviation of the actual output signal at the nominal torque from the nominal value	%	± 0.2
Accuracy class		0.2
Temperature effect on the output signal, related to the actual output value	%/10 °C	± 0.1
Temperature effect on the zero signal, related to the nominal output value	%/10 °C	± 0.1
Linearity deviation including hysteresis, related to the nominal output value	%	± 0.1
Limit load resistance	kΩ	10
Nominal excitation voltage	V (DC)	5 ... 12
Current consumption	mA	< 20

## 2. Parameters of resistance to environment and mechanical exposures

Nominal temperature range	°C	0 ... + 60
Storage temperature range	°C	- 10 ... + 70
Vibration resistance:		
Frequency range	Hz	10 ... 55
Duration	h	1
Acceleration	m/s <sup>2</sup>	40
Impact resistance:		
Number of impacts	n	1000
Duration	ms	10
Acceleration	m/s <sup>2</sup>	400
Degree of protection		IP40

## 3. Permissible load limits and mechanical values

Nominal torque M <sub>N</sub>	Nm	20	50	100	200	500	1000
Limit torque, related to M <sub>N</sub>	%	150					
Axial limit force on the rotor	kN	0.4	0.8	1	2	3	5
Lateral limit force on the rotor	N	0.2	0.4	0.8	1.6	2.5	5.0
Bending limit moment on the rotor	Nm	10	20	50	100	200	400
Weight	kg	0.4	0.5	0.8	1.7	3.7	6.8

## Scope of supply

M02 torque wrench	1
Connecting cable, 3 m long	1
Operating manual	1