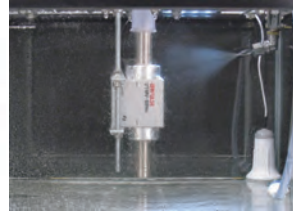


UTMV

DRIP & RUST PROOF TYPE ROTATING TORQUE METER



Drip-proof type with high safe overload rating for use in harsh conditions



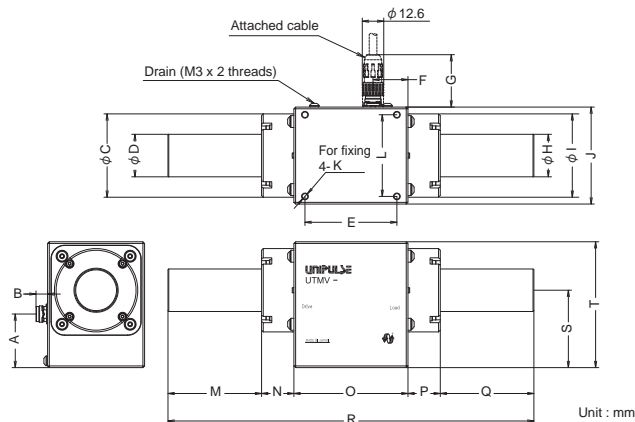
- Degree of protection: equivalent to IP65
- Made of rust-resistant stainless steel
- Labyrinth seal
With the protection against rain and seawater, it can be used outside for wind and water turbine and so on.
- Key groove: option (K)



Specifications

Measurement range	±0.1 N m	±0.5 N m	±1 N m	±5 N m	±10 N m	±50 N m	±100 N m	±500 N m	±1000 N m	±5000 N m
Power supply	DC 24 V±15%									
Consumption current	100 mA or less					150 mA or less			160 mA or less	
Output range	±5 V Load resistance must be more than 2 kΩ									
Responsivity	1 kHz									
Rotation signal	4 pulses per 1 rotation Open collector Max. ratings 30 V, 10 mA									
Safe overload	500% FS									
Non-linearity	0.03% FS or less									
Hysteresis	0.03% FS or less									
Repeatability	0.03% FS or less									
Operation temperature	-10 to +50°C									
Temperature effect on zero	0.01% FS/°C or below									
Temperature effect on span	0.01% FS/°C or below									
Maximum rotation speed (rpm)	10000			9000		5700	4800			4000
Torsional springconstant (N m/rad)	11.13	89.5	172	897	1400	6887	16.4×10 ³	93.6×10 ³	326×10 ³	1418×10 ³
Maximum torsional angle (rad)	8.99×10 ⁻³ (0.515°)	5.59×10 ⁻³ (0.320°)	5.83×10 ⁻³ (0.334°)	5.58×10 ⁻³ (0.320°)	7.14×10 ⁻³ (0.409°)	7.26×10 ⁻³ (0.416°)	6.11×10 ⁻³ (0.350°)	5.34×10 ⁻³ (0.306°)	3.07×10 ⁻³ (0.176°)	3.53×10 ⁻³ (0.202°)
Inertia moment (kg m ²)	1.15×10 ⁻⁶	2.19×10 ⁻⁶	2.22×10 ⁻⁶	5.60×10 ⁻⁶	5.70×10 ⁻⁶	4.21×10 ⁻⁵	9.6×10 ⁻⁵	6.2×10 ⁻⁴	3.56×10 ⁻³	2.38×10 ⁻²
Approx. weight	390 g	430 g		580 g		1.6 kg	2.1 kg	4.0 kg	11 kg	28 kg
Attached cable	6-conductor flexible cable (2 m) Cable end: 7 wires → Cable length is switchable to 5 m (Option: UTM II -L5)									
Accessories	CATM51: 6-conductor flexible cable (5 m) Cable end: 7 wires CATM12: 6-conductor flexible cable (10 m) Cable end: 7 wires									
CE marking certification	2011/65/EU+(EU)2015/863, 2014/30/EU(EN61326-1, EN61326-2-3)									

External dimension



Model
UTMV-0.1Nm
UTMV-0.5Nm
UTMV-1Nm
UTMV-5Nm
UTMV-5Nm(K)
UTMV-10Nm
UTMV-10Nm(K)
UTMV-50Nm
UTMV-50Nm(K)
UTMV-100Nm
UTMV-100Nm(K)
UTMV-500Nm
UTMV-500Nm(K)
UTMV-1000Nm
UTMV-1000Nm(K)
UTMV-5000Nm
UTMV-5000Nm(K)

Measurement range	A	B	φC	φD	E	F	G	φH	φI	J	K	L	M	N	O	P	Q	R	S	T
0.1 N m	25	8.3	24	5h7	45	18	32.3	5h7	24	40	M3 Depth 6	32	10	11.5	54	11.5	10	97	33	50
0.5 N m	25	8.3	26	8h7	45	18	32.3	8h7	26	40	M3 Depth 6	32	15	11.5	54	11.5	15	107	33	50
1 N m	25	8.3	26	8h7	45	18	32.3	8h7	26	40	M3 Depth 6	32	15	11.5	54	11.5	15	107	33	50
5 N m	25	8.3	30.5	12h7	45	19.5	32.3	12h7	30.5	40	M3 Depth 6	34	20	12	57	12	20	121	35.5	55
10 N m	25	8.3	30.5	12h7	45	19.5	32.3	12h7	30.5	40	M3 Depth 6	34	20	12	57	12	20	121	35.5	55
50 N m	31.5	6.8	43.4	20h7	58	20.5	30.8	20h7	43.4	51	M3 Depth 6	43	50	18.5	70	18.5	50	207	42.5	68
100 N m	31.5	6.8	49	25h7	54	20.5	30.8	25h7	49	57	M4 Depth 8	48	55	19	67	19	55	215	45.5	74
500 N m	21.5	6.8	64.2	40h7	52	20.5	30.8	40h7	64.2	72	M4 Depth 8	64	75	20	67	20	75	257	43	79
1000 N m	25	5.3	86.6	60h7	66	28.5	29.3	60h7	86.6	98	M5 Depth 10	86	100	20	86	20	100	326	54	103
5000 N m	25	4.8	124.6	90h7	72	28.5	28.8	90h7	124.6	137	M6 Depth 12	124	145	23	97	23	145	433	72.5	141