SENSEL MEASUREMENT
CAPTEURS, ELECTRONIQUES & ACQUISITION DE DONNEES

SM-RX	STATIC TORQUE METER FROM 50 TO 5000 NM

RX *series torque meter has been designed to perform torque measurements both in clockwise and anticlockwise direction with a high precision.*
Main fields of application vary from the industrial one on test benches and materials test machines to the most strictly metrological sectors such as first line samples for test and calibration laboratories, research bodies etc. ..
Used also as transfer samples for evaluating the uncertainty of direct weights test benches or for comparison among the different reference National Institutes.
Manufactured in two main accuracy classes ***0.05*** *or* ***0.1*** *according to* ***EURAMET cg-14*** *norm with a yearly drift lower than 0.003%*
Measurement stability is ensured even in wet and hard environments thanks to a high protection grade realized though LASER welding which guarantee the tightness.
The monolithic body, entirely made in stainless steel, guarantees a high resistance to dynamic stress which can occur in both measurement directions.
Torque meter is manufactured in 3 specific structures in order to cover a very wide range up to ***5000 N • m****.*

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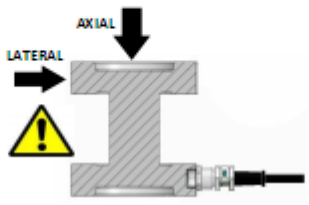
Tél. : 01 56 88 25 78 - www.sensel-measurement.fr - contact@sensel-measurement.com
S.A.R.L au capital de 7500 Euros - SIRET 502 277 908 00013 - APE 7490 - N° TVA : FR40502277908

Accuracy class: ***EURAMET cg-14***	**0.05**		**0.1**
STATIC *NOMINAL TORQUE*	50 – 100 N·m 200 – 500 N·m 1 - 2 – 3 - 5 kN·m		
RELATIVE ERROR (at reading) *a) repeatability 0°-120°-240° (b)* *b) interpolation (fa)* *c) hysteresis (h)* *d) zero (fo)*	 ≤ ±0.050%(1) ≤ ±0.025%(1) ≤ ±0.063%(1) ≤ ±0.012% F.S.		 ≤ ±0.100%(1) ≤ ±0.050%(1) ≤ ±0.125%(1) ≤ ±0.025% F.S.
LINEARITY *HYSTERESIS*	≤ ±0.03% F.S. ≤ ±0.03% F.S.		
TEMPERATURE EFFECT (10°C) *a) on zero* *b) on sensitivity*	 ≤ ±0.020% F.S. ≤ ±0.010% F.S.		
NOMINAL SENSITIVITY *SENSIVITY TOLERANCE*	**1 mV/V** ≤ ±0.1% F.S.		
INPUT RESISTANCE *OUTPUT RESISTANCE* *INSULATION RESISTANCE* *ZERO BALANCE* *RECOMMENDED SUPPLY VOLTAGE* *NOMINAL SUPPLY VOLTAGE RANGE* *MAXIMUM SUPPLY VOLTAGE*	700±2Ω 705±2Ω > 5 GΩ ≤ ±0.5 % F.S. 10 V 1-15 V 18 V		
MECHANICAL LIMIT VALUES : *a) service load* *b) max permissible load* *c) breaking load* *d) max transverse load* *e) max permissible dynamic load*	 120% F.S. 150% F.S. >300% F.S. 50% F.S. 75% F.S.		
REFERENCE TEMPERATURE *TEMPERATURE NOMINAL RANGE* *SERVICE TEMPERATURE RANGE* *STORAGE TEMPERATURE RANGE*	+23°C 0/+60 °C -10/+70 °C -20/+80 °C		
PROTECTION CLASS (EN 60529) *EXECUTION MATERIAL* *CABLE LENGTH*	IP67 Acciaio Inox / *Stainless Steel* 5m		
NOMINAL TORQUE	50 N·m 100 N·m	from 200 N·m to 2 kN·m	3 kN·m 5 kN·m
WEIGHT *FIXING SCREWS* *a) diameter* *b) resistance class* *c) tightening torque*	~ 2.5 kg M8 12.9 40 N·m	~ 3.5 kg M12 12.9 140 N·m	~ 4.5 kg M16 12.9 368 N·m

NOMINAL TORQUE	50 N·m	100 N·m	200 N·m	500 N·m	1 kN·m	2 kN·m	3 kN·m	5 kN·m
Max axial permissible load	19 kN	19 kN	31 kN	56 kN	83 kN	124 kN	124 kN	124 kN
Max lateral permissible load	1.8 kN	1.8 kN	4 kN	8 kN	15 kN	20 kN	20 kN	20 kN

For correct measurement both axial and transverse forces and bending moment should be absent.
In case of presence, they must not be greater than values indicated below, to be reduced in simultaneous presence of more solicitations.



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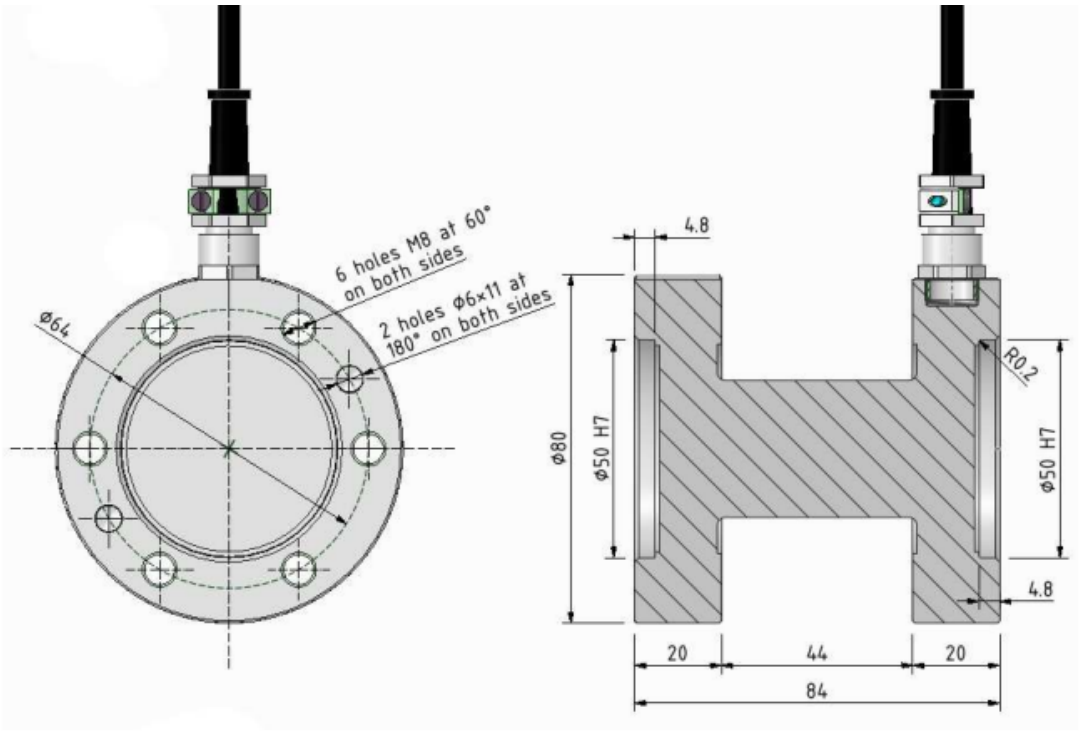
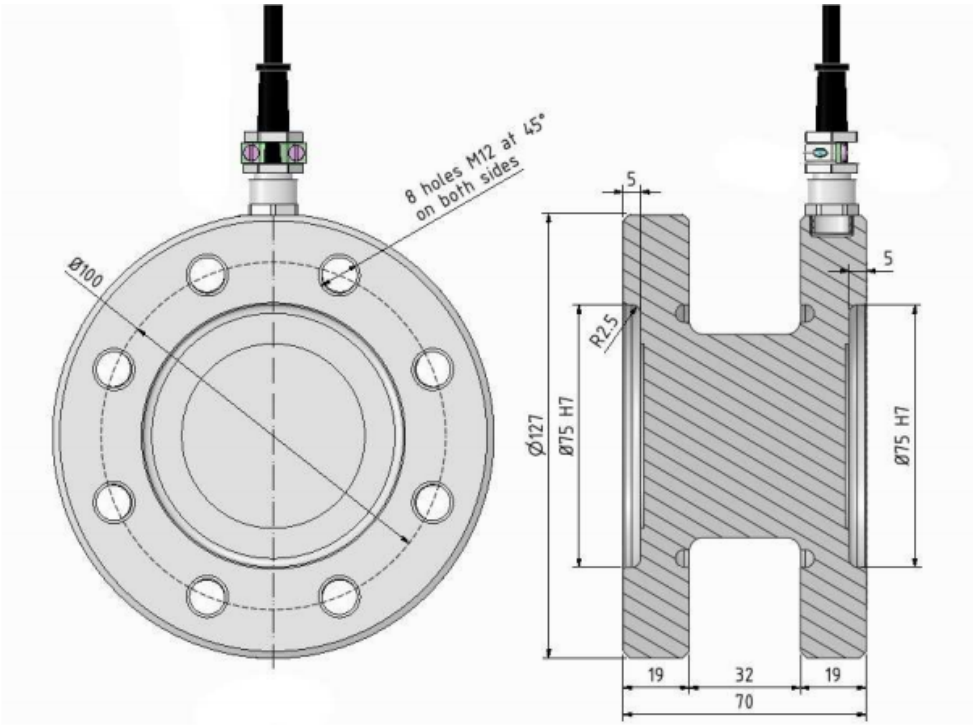


CODE (Class 0,05)	CODE (Class 0,1)	TORQUE
RX50NM005	RX50NM01	50 N·m
RX100NM005	RX100NM01	100 N·m



CODE (Class 0,05)	CODE (Class 0,1)	TORQUE
RX200NM005	RX200NM01	200 N·m
RX500NM005	RX500NM01	500 N·m
RX1KNM005	RX1KNM01	1 kN·m
RX2KNM005	RX2KNM01	2 kN·m

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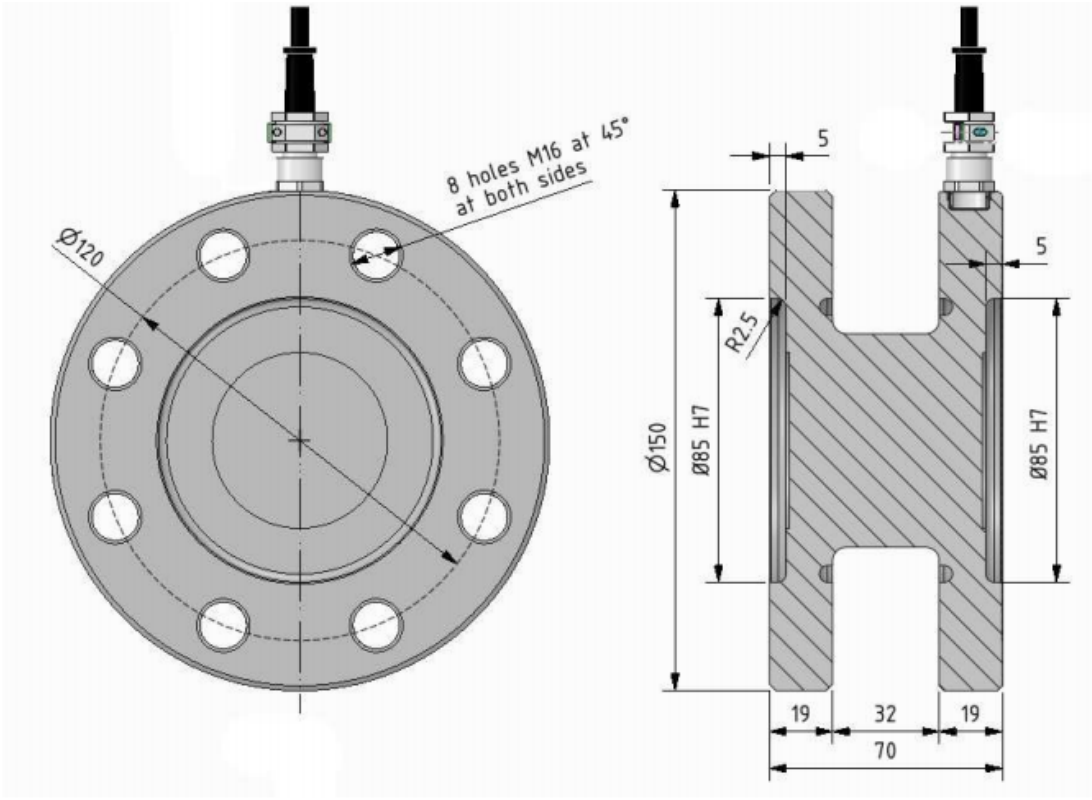
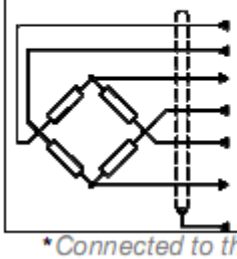


CODE (Class 0,05)	CODE (Class 0,1)	TORQUE
(1) RX3KNM005	(1) RX3KNM01	3 kN·m
(1) RX5KNM005	(1) RX5KNM01	5 kN·m

(1) *ACCREDIA certification can NOT be performed by LAT n°93 Laboratory, on request it can be ordered to other Accredited Laboratories.*

PVC 80°C shielded cable, Ø 5.2mm with 6 tinned Ø 0. 25mm² conductors.

TRANSDUCERS	OUTPUT	CABLE	MIL7M (*optional*)
	EXCITATION+	*Red*	C
	SENSE+	*Orange*	F
	OUTPUT+	*White*	A
	EXCITATION -	*Black*	B
	SENSE-	*Blue*	G
	OUTPUT-	*Yellow*	D
	----------	*Shield**	E

**Connected to the body of the torque transducer.*

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