



TRANSDUCER LEADS



If ordering a static, annular or rotary transducer you will also require a corresponding lead (see list below).

To comply with the latest calibration standards, most new transducer leads will have a suffix to indicate the length in centimetres.

4	TRANSDUCER LEADS
60216.200	PRO-LOG, TST, TTT, T-Box XL & T-Box 2 to 10 Way Transducer for use with Norbar Rotary Transducers
60217.200	PRO-LOG, TST, TTT, T-Box XL & T-Box 2 to 6 Way Transducer for use with Norbar Static & Annular Transducers
60223.200	PRO-LOG, TST, TTT & T-Box XL to no connector
60224.200	10 Way Transducer to no connector
60225.200	6 Way Transducer to no connector
51067.225	ETS to Transducer (Pre 1994) + 5 way (60055)
60152.225	ETS to Transducer (Post 1994) + 5 way (60163)

4	TRANSDUCER LEADS
60308.400	PRO-LOG, TST, TTT, T-Box XL & T-Box 2 to Torque & Angle Annular Transducers
60308.600	PRO-LOG, TST, TTT, T-Box XL & T-Box 2 to Torque & Angle Annular Transducers
60308.1000	PRO-LOG, TST & TTT to Torque & Angle Annular Transducers

Other lengths can be ordered, contact Norbar for more information.

Note: The system should be calibrated with the increased length lead, as calibration may be affected.

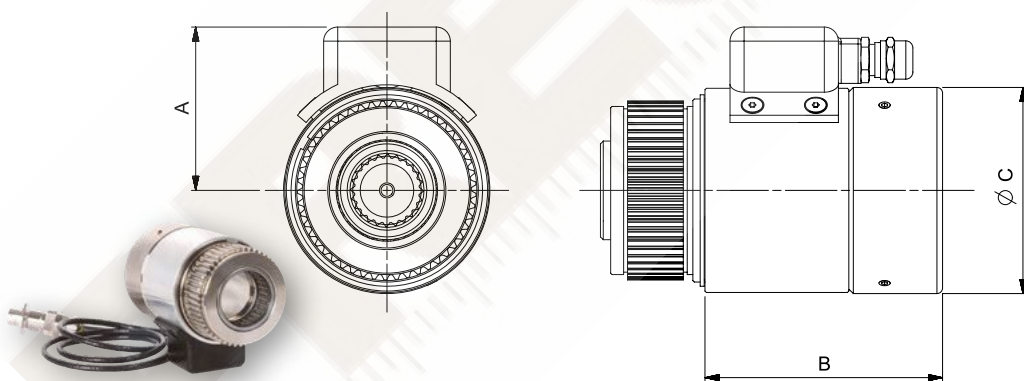
Note: The maximum permissible cable length is 15 m for TST, TTT or T-Box™ 2 and 7 m with a T-Box™ XL. Contact Norbar for further details.

ANNULAR TRANSDUCERS



4	ANNULAR TRANSDUCERS FOR 72 mm SERIES GEARBOX (PT tools only - not suitable for PTS/PTM tools)
Suitable for PT-72 mm Remote Series	
50666.xxx	100 - 1,000 N·m
50667.xxx	150 - 1,500 N·m
50668.xxx	200 - 2,000 N·m
Standard calibration is performed loading counter-clockwise only.	

4	ANNULAR TRANSDUCERS FOR PTS/PTM 72
Suitable for PTS/PTM-72 mm Series	
50840.xxx	100 - 1,000 N·m
50841.xxx	150 - 1,500 N·m
50842.xxx	200 - 2,000 N·m
50846.LOGA	100 - 1,000 N·m with Angle



Model	Annular Transducers for use with 72 mm Series Multipliers	Annular Transducers for use with 72 mm Series Multipliers
Part Number	50666.xxx 50667.xxx 50668.xxx 50840.xxx 50841.xxx 50842.xxx	50846.LOGA
Dimensions (mm)	A	58
	B	84
	∅C	72
Weight (kg)	1.5	3.1

Torque and Angle Annular Transducer Note:

- 5,000 N·m and above include dowels on both mounting faces
- Angle resolution < 1° when used with T-Box™ 2
- CW+CCW calibration is standard
- Use 60308.xxx series lead for direct connection to T-Box™ 2 for torque and angle/turns monitoring and storage
- PT square drive and other parts may require removal to fit transducer
- All the above are standard construction. Harsh Environment models are available on request
- '.INDA' versions are available on request

Note: PTS™ and reactions with dowel holes can be supplied at an extra cost on request. Request details on PneuTorque® Type '.XD'

12	ANNULAR TRANSDUCERS
SECCAL.CW	Secondary calibration in one direction on annular transducers for HT/PT9 & HT/PT11 to extend the range below 10% of the rated capacity, when ordered with new unit
SECCAL.CW+CCW	Secondary calibration in two directions on annular transducers for HT/PT9 & HT/PT11 to extend the range below 10% of the rated capacity, when ordered with new unit
ADDCALPOINTS.NEW	Additional calibration steps below 10% of rated capacity to 2% for transducers up to 7,000 N·m (5,000 lbf·ft) when ordered with new unit



ANNULAR TRANSDUCERS

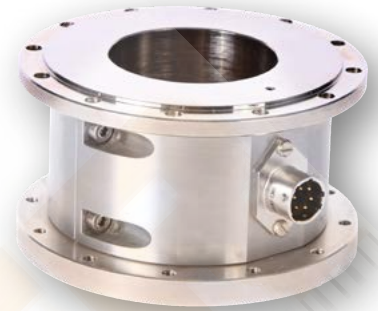


Calibration details



These Annular Transducers are designed to fit directly to Norbar torque multipliers and will accurately measure the torque output from the gearbox, via a display instrument (instrument supplied separately, see pages 84 - 85 & 87).

- Up to 6,000 N·m classified to BS7882:2017, typically better than Class 1 for the primary classification range ($\pm 0.5\%$ of reading from 20% to 100% of full scale)
- Robust heat treated alloy steel torsion tube design
- Designed to ignore non-torsional forces
- Smart transducers have a built in memory circuit which contains essential information about the transducer. This information can be read by Norbar's TST, TTT, TTL-HE & T-Box™ 2 instruments meaning that when the transducer is connected, it is immediately recognised and ready for use
- Smart transducers can also be used with many other instruments, however, these will operate as normal ratio calibrated (mV/V) transducers - the Smart data will not be read



4 ANNULAR TRANSDUCERS FOR STANDARD SERIES GEARBOX

Suitable for PT1, PT1A and PT2

50638.xxx	100 - 1,000 N·m ¾" sq. dr.
50648.xxx	100 - 1,000 lbf-ft ¾" sq. dr.

Suitable for heavy duty HT2, PT1, PT1A and PT2

50639.xxx	150 - 1,500 N·m 1" sq. dr.
50649.xxx	150 - 1,500 lbf-ft 1" sq. dr.

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TD2.CCW Alternative calibration direction for transducers up to 1,500 N·m / 1,000 lbf-ft when ordered with new unit

Suitable for HT5 and PT5

50640.xxx	250 - 2,500 N·m 1" sq. dr.
50650.xxx	250 - 2,500 lbf-ft 1" sq. dr.
50641.xxx	350 - 3,500 N·m 1" sq. dr.

Suitable for HT6 and PT6

50700.xxx	350 - 3,500 N·m 1½" sq.dr.
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Suitable for HT7 and PT7

50643.xxx	500 - 5,000 N·m 1½" sq. dr.
50652.xxx	500 - 5,000 lbf-ft 1½" sq. dr.

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TD5.CCW@ Alternative calibration direction for transducers from 1,501 - 7,000 N·m / 1,001 - 5,000 lbf-ft when ordered with new unit

4 ANNULAR TRANSDUCERS FOR STANDARD SERIES GEARBOX

Suitable for HT9 and PT9

50644.xxx	1,000 - 10,000 N·m 1½" sq. dr.
50653.xxx	700 - 7,000 lbf-ft 1½" sq. dr.

Suitable for HT11 and PT11

50645.xxx	2,000 - 20,000 N·m 2½" sq. dr.
50654.xxx	1,500 - 15,000 lbf-ft 2½" sq. dr.

Suitable for HT12 and PT12

50764.xxx	3,500 - 35,000 N·m 2½" sq. dr.
50765.xxx	2,500 - 25,000 lbf-ft 2½" sq. dr.

Suitable for HT13 and PT13

50646.xxx	5,000 - 50,000 N·m 2½" sq. dr.
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Suitable for PT14

50647.xxx	10,000 - 100,000 N·m 3½" sq. dr.
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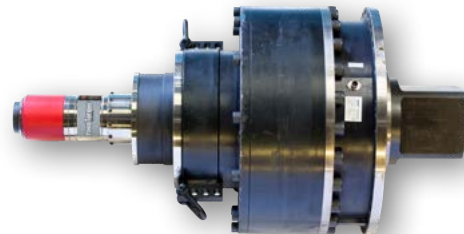
TD4.CCW Alternative calibration direction for transducers from 7,001 - 100,000 N·m / 5,001 - 75,000 lbf-ft when ordered with new unit

Suitable for PT18.MTS

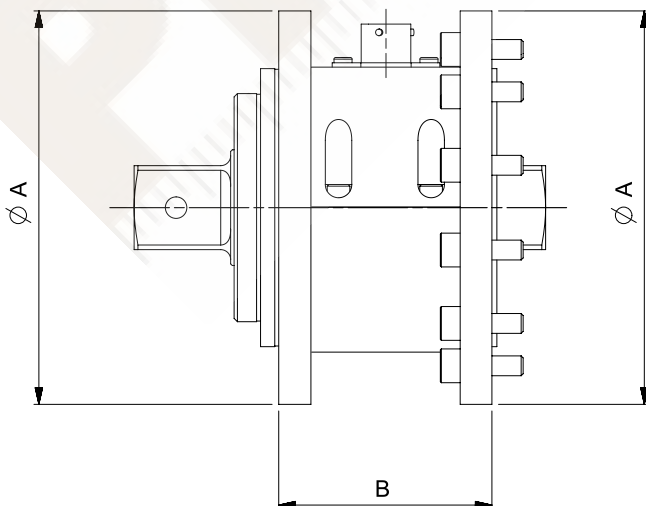
-	30,000 - 300,000 N·m
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Standard calibration is performed loading counter-clockwise only.

@ UKAS accredited calibration up to 6,000 N·m. A non-accredited value at 7,000 N·m is extrapolated and provided for reference only.



PT 18 fitted with 300,000 N·m Annular Transducer and square drive



Model	Annular Transducers for use with Standard Series Multipliers		
Part Number	50638.xxx 50648.xxx 50639.xxx 50649.xxx	50640.xxx 50650.xxx 50641.xxx 50700.xxx	50643.xxx 50652.xxx
Dimensions (mm)	ØA	108	144
	B	60	71
Weight (kg)	1.4	2.6	3.6



ANNULAR TRANSDUCERS



4 TORQUE & ANGLE ANNULAR TRANSDUCERS - FIXED CONNECTOR

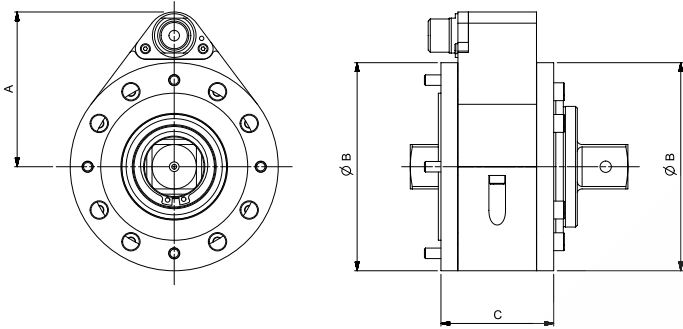
Suitable for heavy duty PT1, PT1A and PT2

50820.LOGA*	100 - 1,000 N·m ¾" sq. dr.
50821.LOGA**	150 - 1,500 N·m 1" sq. dr.

* Can only be used with remote/plain sleeve motors i.e. not a standard PT handle, due to cable interference.
 * Only fits to PT with HD final stage carrier having 1" female sq. dr.

Suitable for HT5 and PT5

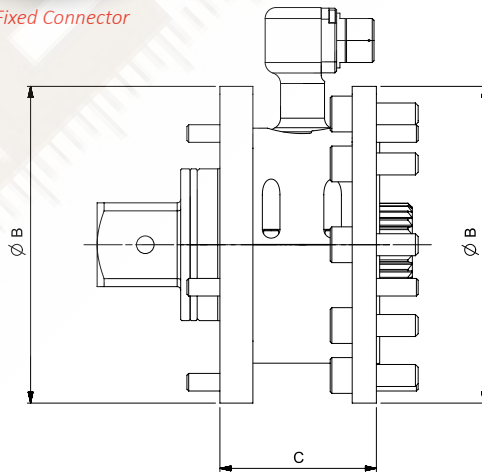
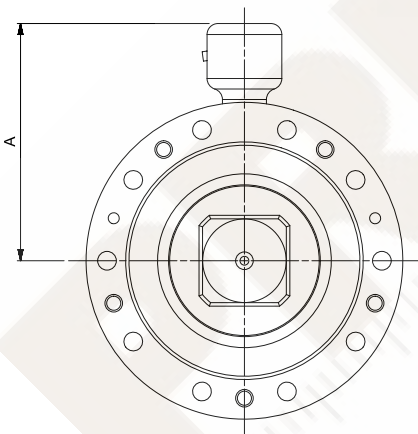
50822.LOGA	350 - 3,500 N·m 1" sq. dr.
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Model	Torque & Angle Annular Transducers with Fixed Connector	
Part Number	50820.LOGA 50821.LOGA 50822.LOGA	
Dimensions (mm)	A	89
	ØB	119
	C	65
Weight (kg)	1.4	



Fixed Connector



180° Swivel Connector

4 TORQUE & ANGLE ANNULAR TRANSDUCERS - 180° SWIVEL CONNECTOR

Suitable for HT7 and PT7

50834.LOGA	500 - 5,000 N·m 1½" sq. dr.
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Suitable for HT9 and PT9

50824.LOGA	1,000 - 10,000 N·m 1½" sq. dr.
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Suitable for HT11 and PT11

50825.LOGA	2,000 - 20,000 N·m 2½" sq. dr.
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Suitable for HT12 and PT12

50826.LOGA	3,500 - 35,000 N·m 2½" sq. dr.
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Suitable for HT13 and PT13

50827.LOGA	5,000 - 50,000 N·m 2½" sq. dr.
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Suitable for HT14 and PT14

50828.LOGA	10,000 - 100,000 N·m 3½" sq. dr.
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PT13 & PT14 require special front cover plate with added dowel clearance holes

Suitable for HT15 and PT15

50832.LOGA	15,000 - 150,000 N·m 4½" sq. dr.
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Suitable for HT16 and PT16

50829.LOGA	20,000 - 200,000 N·m 5" sq. dr.
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Suitable for HT17 and PT17

50830.LOGA	25,000 - 250,000 N·m 6" sq. dr.
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Suitable for HT18 and PT18

50831.LOGA	30,000 - 300,000 N·m 6" sq. dr.
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Model	Torque & Angle Annular Transducers with Swivel Connector										
	5,000 N·m	10,000 N·m	20,000 N·m	35,000 N·m	50,000 N·m	100,000 N·m	150,000 N·m	200,000 N·m	250,000 N·m	300,000 N·m	
Part Number	50834.LOGA	50824.LOGA	50825.LOGA	50826.LOGA	50827.LOGA	50828.LOGA	50832.LOGA	50829.LOGA	50830.LOGA	50831.LOGA	
Dimensions (mm)	A	108	120	140	151	186	186	*	*	*	289
	ØB	144	178	212	248	315	315	*	*	*	520
	C	144	184	212	240	315	315	*	*	*	520
Weight (kg)	7.0	10.0	15.0	29.3	43.5	46.6	*	*	*	149.5	

* Available on request