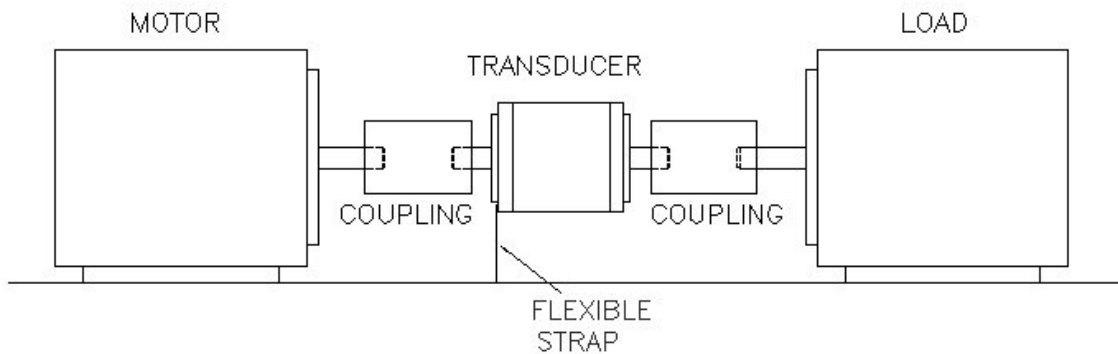


Rotary Torque Transducer Installation Guide

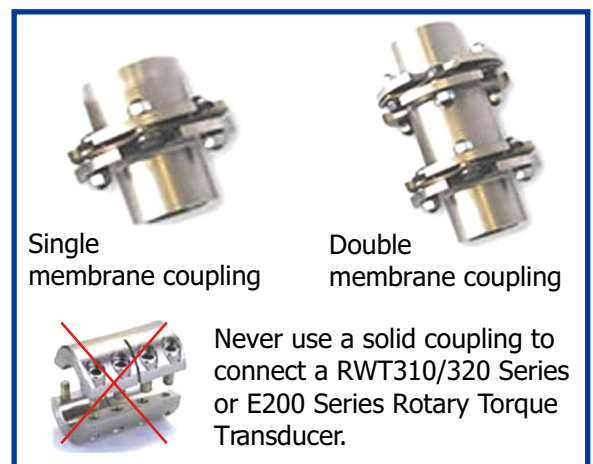
To get the best from your RWT310/320 Series or E200 Series Rotary Torque Transducer it is essential that it is correctly installed.

To avoid damaging the transducer during installation it is highly recommended that it is electrically connected and working during this process so that any torque overloads due to handling can be monitored.

For rotary torque transducers **with torque ranges more than 1Nm (10lbf.in.)** it is recommended that the body of the transducer is not rigidly mounted but restrained from rotation using a strap or straps connected to the tapped holes in the end plates. Couplings should be used to allow for angular misalignment while the transducer shaft takes up any parallel misalignment. Care should be taken not to induce any end loads or bending moments to the shaft, as these may induce inaccuracies to the torque measurement and in extreme cases damage the transducer.

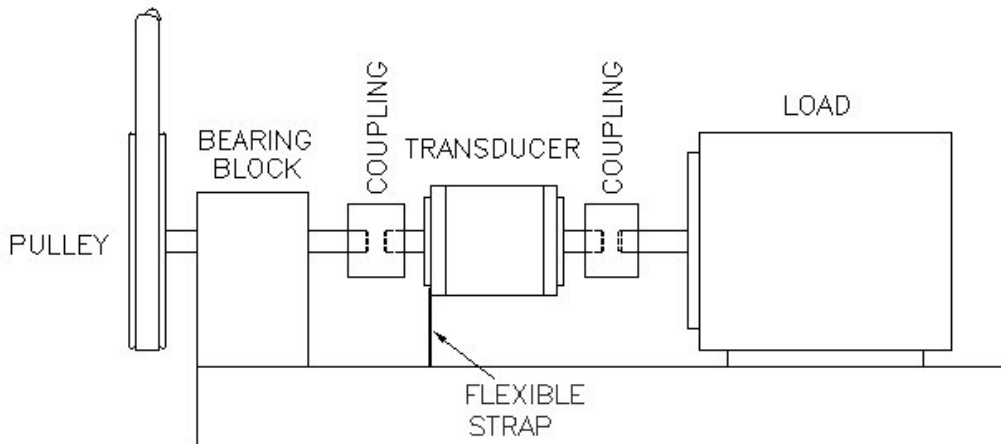


Should rapid variations in torque need to be measured in detail e.g. torque fluctuations in gearboxes or multi vane pumps then it is recommended using torsionally rigid couplings fitted at both ends of the transducer shaft such as single membrane couplings and that these are correctly selected for the transducer rating and speed. An undersized coupling will not transmit the torque while the high inertia of an oversized coupling can result in instantaneous peak torques far in excess of the measured torque. Alternatively, for lower bandwidth applications, where it is more important to measure the 'average' torque rather than fast torque fluctuations, then couplings with a degree of compliance would be more appropriate.



For rotary torque transducers with **torque ranges less than 1Nm (10lbf.in.)**, or rigidly mounted torque transducers, it is recommended that double couplings should be used at each end to compensate for any misalignment of the input/output shafts. The system should be designed to eliminate any end loads on the transducer shaft. For applications where end loads cannot be avoided please consult our Sales Department for advice prior to ordering.

When using a pulley or pulleys it is recommended a bearing block or blocks should be used to ensure bending loads are not transmitted to the transducer.



Whilst the transducer is resistant to EMC interference (BS EN 55011), the sensible routing of cables is important to avoid possible EMC interference. Avoid running the transducer cables close, and/or parallel, to high voltage cables, solenoid valves, generators or inverters etc. If the cables must follow the same route as interfering cables then additional screening such as metal conduit should be used to provide isolation. If using an E200 Series or E300 Series rotary transducer with an E Series Display Interface do not attempt to lengthen, shorten or modify the cable between the transducer and the Display Interface. Contact our Sales Department if a longer cable is required.

To avoid damaging the transducer during installation it is highly recommended that it is electrically connected and working during this process so that any torque overloads due to handling can be monitored.

If in doubt, please ask for advice on the installation of your Rotary Torque Transducer via our Sales Department.

Tel: +44(0)1869 238400
Email: info@sensors.co.uk