Break-Over Torque Wrenches

## Introduction

Break-Over Torque Wrenches, CAT-RF-TRQ-XX were designed to torque RF connectors to specified torque ranges.

Adhering to specified torque ranges can help control the of electrical performance of the interconnects, maximize useful life and avoid damage to mating connector parts or equipment.

Samtec offers the following versions of these torque wrenches, designed for different connector applications:

| Part Number | Head Size | Nominal Torque | Tolerance | Application |
| :---: | :--- | :--- | :---: | :--- |
| CAT-RF-TRQ-01 | $5 / 16$ inch | 8 in-lbs (0.9 N-m) | $\pm 4 \%$ | SMA (Steel), $3.5 \mathrm{~mm}, 2.92 \mathrm{~mm}$, <br> $2.4 \mathrm{~mm}, 1.85 \mathrm{~mm}, 1.35 \mathrm{~mm}$ |
| CAT-RF-TRQ-02 | $5 / 16$ inch | 4 in-lbs (0.45 N-m) | $\pm 4 \%$ | SMA (Brass) |
| CAT-RF-TRQ-03 | 6 mm | 4 in-lbs (0.45 N-m) | $\pm 4 \%$ | 1.0 mm |
| CAT-RF-TRQ-04 | $9 / 16$ inch | 20 in-lbs (2.26 N-m) | $\pm 4 \%$ | TNCA |
| CAT-RF-TRQ-05 | $3 / 4$ inch | 20 in-lbs (2.26 N-m) | $\pm 4 \%$ | NTPE or Type-N (Steel) |

## Calibration Certificate

Each torque wrench is packaged with a calibration certificate. If the end-user's organization maintains a calibration system or database, this certificate should be forwarded to the cognizant System Administrator for that system.

Samtec provides the following guidance for assigning calibration intervals for the torque wrenches.
Laboratory Use, occasional: 1 year
Laboratory Use, daily: 6 Months
Production Use: 3 Months


Calibration
Administrator

## Torque Wrench Adjustment

Adjustments to the wrench are not required or recommended by the end-user(s). If there are concerns about the validity of the torque value, the wrench should be submitted to a Calibration Laboratory or a trained Calibration Technician. Trained personnel can verify the torque setting and adjust, as required by removing the plastic access cap on the end of the wrench.

## Torquing Procedure

1. Engage the head of the wrench onto the coupling nut flats. If the mating connector also has wrench flats, it is good practice to simultaneously grip those flats with a back-up wrench. This can avoid unwanted wear on the mating interfaces.
2. A dotted ( $\bullet \bullet \bullet \bullet \bullet \bullet$ ) line on the wrench handle indicates the load point. The wrench should be gripped with thumb and finger(s) in this area to ensure that the calibrated range of torque is applied.

3. Care should be taken to maintain an orthogonal alignment (90-degree) between the wrench axis and the axis of the threaded coupling.
4. Apply a firm, but steady pull on the wrench until the wrench handle "breaks" on its built-in cam. Stop bulling when the break angle is approximately 45 -degrees.

