TECH NOTE

TN-107 – Threaded Joint Assembly Torque

ERECTA SWITCH accessories are manufactured from engineering thermoplastics (Polypropylene, Acetal, Kynar PVDF). These materials offer excellent chemical resistance but have lower strength than metal. Over-torquing threaded plastic joints is a common cause of field failures.

For 1/8 NPT threaded connections, hand-tight plus 1 to 2 turns is generally sufficient to engage the O-ring face seal and achieve a leak-tight assembly. The O-ring seal does the sealing work — the threads provide clamping force only.

Do not apply wrench torque to plastic bodies or fittings unless specifically required. When a wrench must be used, apply torque to the hex flats only, never to round bodies or sensor stems. Support the mating part to prevent transmitting torque to the sensor stem or switch element.

For 10-700-N8 single-thread nut torque limits on Series 10 sensor products, see Tech Note 116. The limiting factor in those assemblies is the shear strength of the molded plastic threads.

Key Rule

Let the O-ring do the sealing. Finger-tight plus 1–2 turns is sufficient for most ERECTA SWITCH NPT connections. Over-torquing will crack plastic fittings and bodies.