



## RETROFITTING TRANSFORMERS FOR REMOTE MONITORING

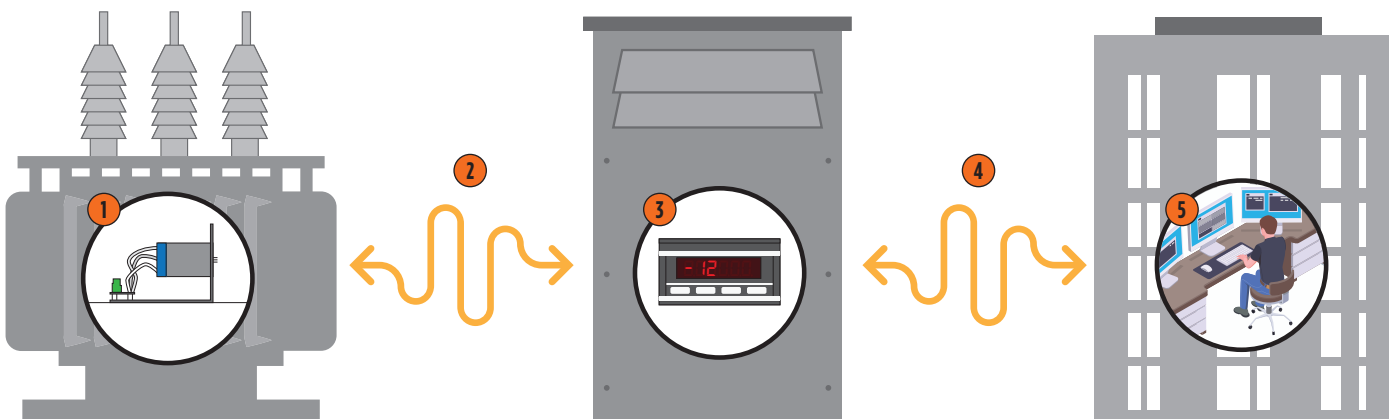
Transformers are the heart of the electric utility system. They are a utility's most expensive asset and controlling and managing them accurately is of vital importance to ensuring grid uptime and managing costs. The Load Tap Changers (LTCs) inside transformers provide the critical task of allowing the output voltage to be adjusted up or down, depending upon the demand for power. Utilities armed with the position information of these LTCs are empowered with data to run their transformers as efficiently as possible.

**Installing INCON® LTC Position Monitoring in an existing transformer is easy regardless of make, model, or setup.**



### HOW IT WORKS:

- 1 The 5-wire Synchro Transmitter is mechanically coupled directly to the transformer's LTC drive mechanism.
- 2 Vital LTC position data is transmitted via AC signal to the LTC Position Monitor. The AC signal is 0-90 VAC and in-phase with the surrounding AC systems making it immune to noise.
- 3 Inside the substation control room, the signal from the Synchro Transmitter is interpreted by the LTC Position Monitor as an angle, which is precisely converted to a tap position by firmware.
- 4 The LTC position is fed to a central dispatch center via analog output signal through a Remote Terminal Unit (RTU).
- 5 Signals from a network of LTC Position Monitors can be fed into a utility's SCADA system, providing remote LTC position information for an entire network of transformers.

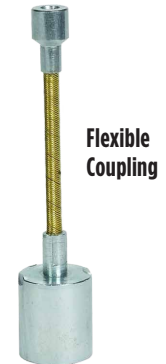




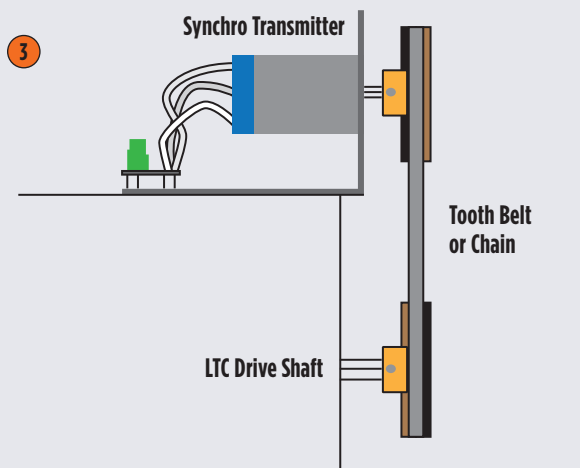
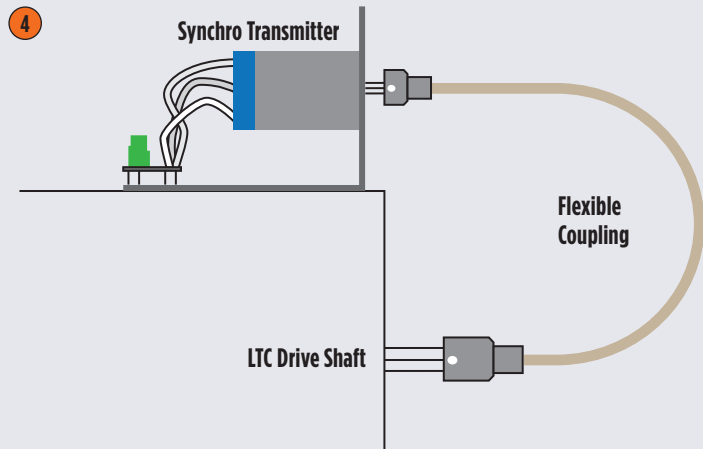
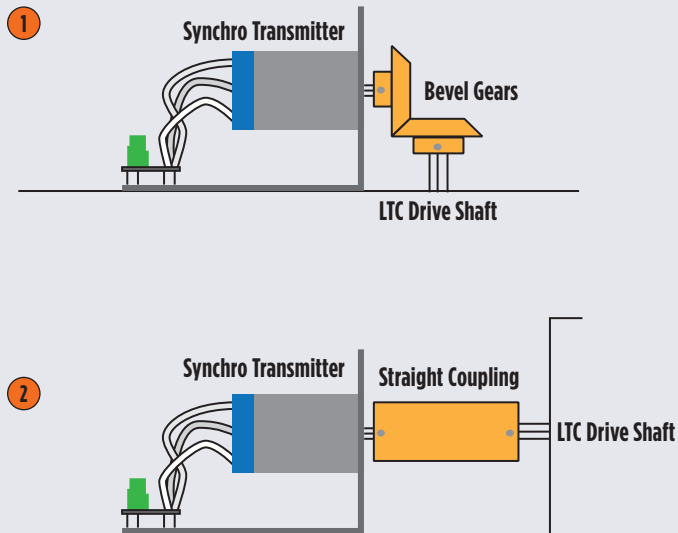
# FLEXIBLE INSTALLATION

Synchro Transmitters can be mechanically coupled to the LTC's drive mechanism by straight coupling, gears, chain sprockets, or, for the most flexible installation, with INCON® Flexible Couplings.

The "Quick Connect" Flexible Coupling is designed for unique mounting and connecting applications. It makes retrofits to older equipment easy with standard lengths and coupling diameters to fit most LTC applications.



## SYNCHRO TRANSMITTER INSTALLATION OPTIONS:



## LTC POSITION MONITOR WIRING:

