

## Technical Brief

# Giga-tronics Power Sensor Cables and Adapters

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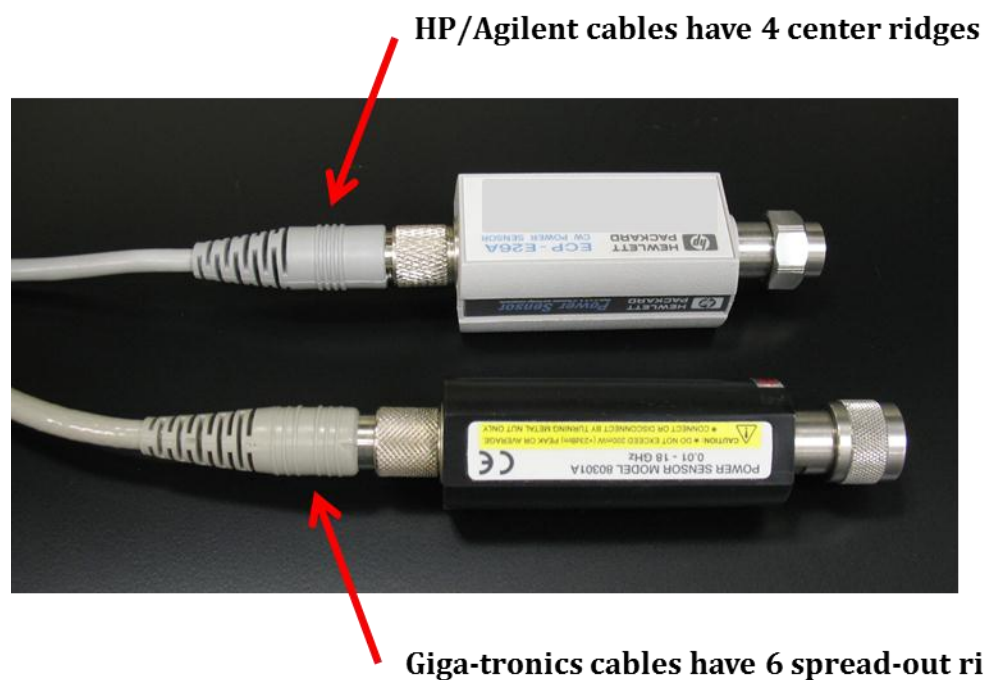
### Introduction

Giga-tronics power sensors and power sensor cables are unique to Giga-tronics power meters. They are not interchangeable with other manufacturer's power meters and visa-versa. This is because Giga-tronics' proprietary designs use unique voltages and control signals as well as unique calibration factors and routines stored in the Eprom in the sensors.

Giga-tronics provides high quality low-VSWR adapters for calibrating power sensors with the power meter power reference when the sensor has a connector other the type-N connector on the power meter. Care should be taken to keep these adapters clean and undamaged.

### Identifying Giga-tronics power sensor cables

Giga-tronics power sensor cables appear very similar to other manufacturer's power sensor cables, but can be identified by the unique number of ridges on the connector ends, as shown in the picture below:



While there are other differences in the cables, such as the pin configuration, the most obvious difference is the molded ridges on the cable ends: 4 centered ridges on the HP/Agilent power sensor cable versus the 6 wider spaced ridges on the Giga-tronics power sensor cable.

### Power meter Cal adapters

Giga-tronics provides several high quality low-VSWR adapters to be used with its power sensors with different connectors. The following is a list of the available adapters:

Type-N (m) to APC-7	Giga-tronics P/N JRXC-00200
Type-N (m) to SMA (f)	Giga-tronics P/N JRXC-00400
Type-N (m) to 2.4mm (f)	Giga-tronics P/N JRXC-01400

Note that SMA connectors are easily identifiable by their Teflon insert. Care should be taken not to confuse 2.9 mm (or K connectors) with 2.4 mm connectors. Both 2.9 mm (K) and 2.4mm connectors look very similar, but can be identified by the size of the center conductor, as shown in the picture below:

**2.9 mm (K) has a larger center conductor and is SMA compatible**

**2.4 mm has a small center conductor and is not SMA compatible**



All adapters must be kept clean and undamaged to maintain measurement accuracy. Adapters should be regularly cleaned, and damaged adapters replaced.