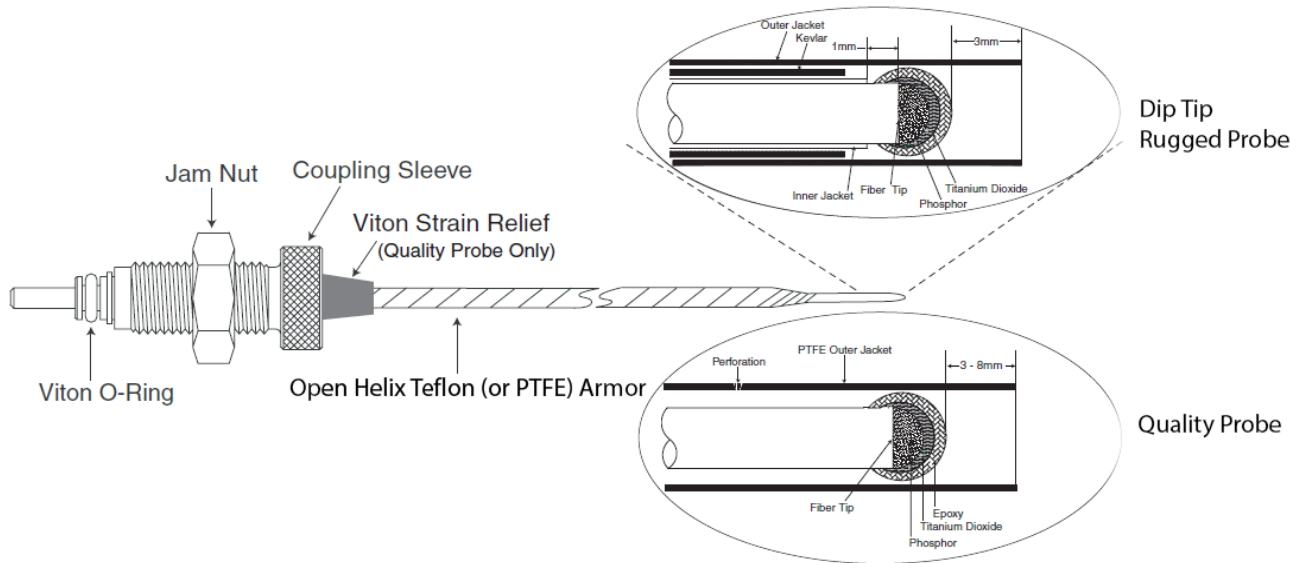


# FIBER OPTIC UTILITY PROBES

## TRANSFORMER TEMPERATURE PROBES



### PN 00-13392-XX (Dip Tip Rugged Probe)

For permanent installation in oil-filled power transformer. Outer jacket is perforated to allow complete oil filling. Probe is Kevlar® cabled and has open Helix white Teflon® armor.

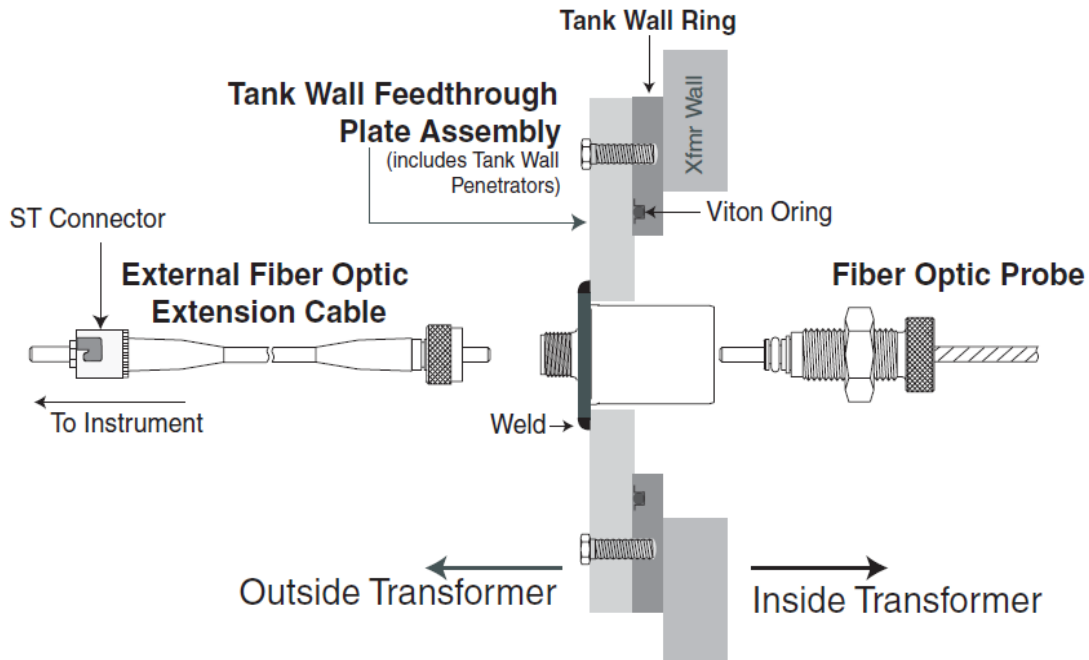
Temperature Range	-30 to 200°C
Fiber Type	200 µm all silica, double Teflon jacketed, Kevlar cabled fiber
Available Lengths	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 m
Response Time	0.7 seconds in stirred liquid
Connector Type	Stainless steel with stainless steel jam nut and Viton O-ring seal. Can be used with Tank Wall Feedthrough Plate (PN 00-14098-XX).

### PN 00-14710-XX (Quality Probe)

For high electrical stress duty and permanent installation in oil-filled power transformer. Outer jacket is perforated to allow complete oil filling. Probe has Open Helix Blue PTFE armor.

Temperature Range	-30 to 200°C
Fiber Type	200 µm all silica
Available Lengths	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 m
Response Time	0.7 seconds in stirred liquid
Connector Type	Stainless steel with stainless steel jam nut and Viton O-ring seal. Can be used with Tank Wall Feedthrough Plate (PN 00-14098-XX).

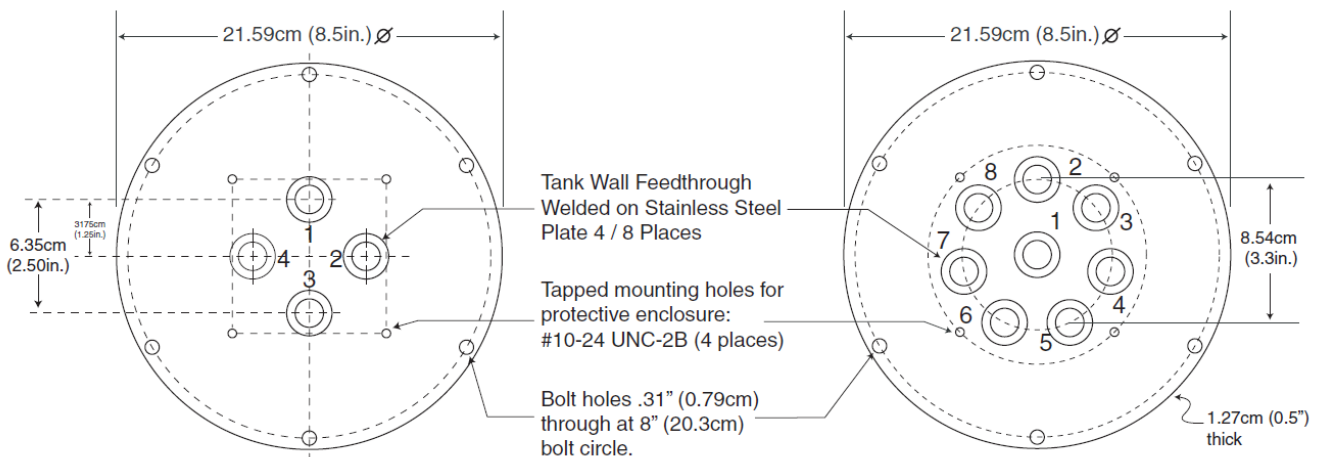
TRANSFORMER PROBES FOR USE WITH BOLT-ON PLATE



**Bolt-on Removable Transformer Tank Wall Feedthrough Plate (TWFP)**

Bolt-on style feedthrough plate includes 21.59 cm (8.5 in) diameter stainless steel plate with choice of 4, 6, or 8 welded-on tank wall penetrators and threaded blind plugs for unused feedthrough holes. A 253 mm (9.97 in) diameter stainless steel plate with 12 or 16 tank wall penetrators is also available.

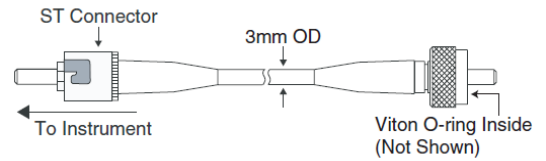
- PN 00-14098-04 (4 Probes)
- PN 00-14098-06 (6 Probes)
- PN 00-14098-08 (8 Probes)



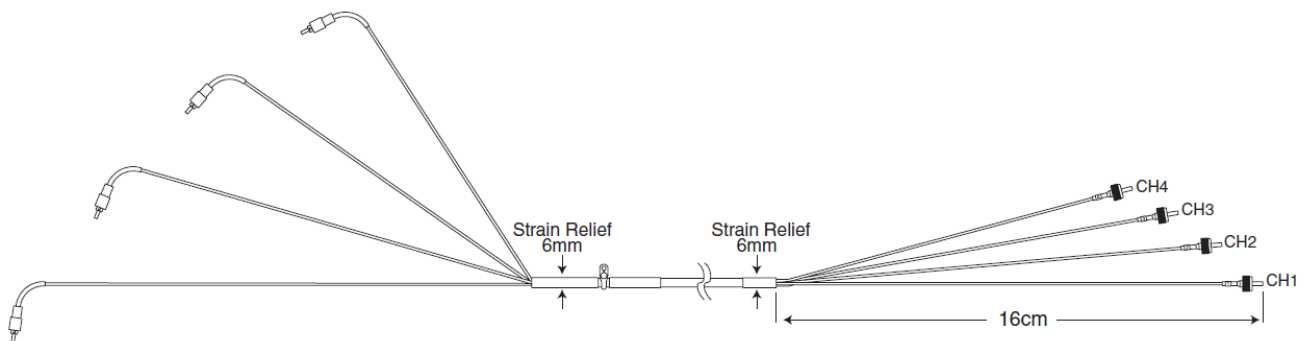
### Fiber Optic Extensions

Fiber optic extensions are used to connect the probes from the tank wall penetrator to the instrument. These extensions are typically routed through standard electrical conduit.

PN 00-12873-XX (Single Fiber Extension)	
Environmental Rating	-28 to 105°C (-50 to 75°C also available on request)
Fiber Type	400 μm HCS, PVC jacketed and Kevlar®
Available Lengths	1, 2, 3, 4, ... 20, 25, 30, 35, 40, 45, 50 m
Connection to TWP	Advanced Energy's proprietary Viton O-ring connector
Connection to WTS	Current: m924 Utility, ThermAsset 2
	Legacy: WTS-12, ThermAsset, LumaSmart, m600 Utility



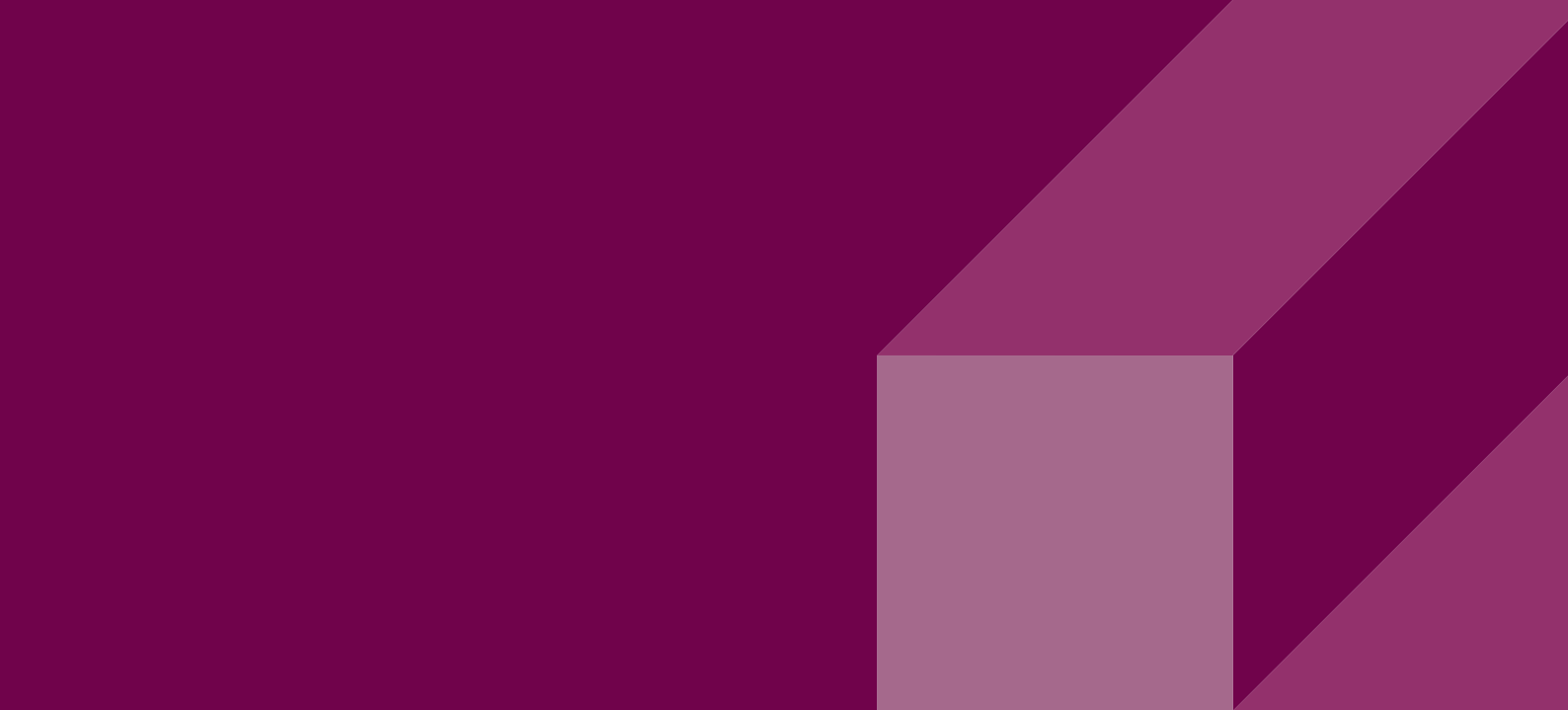
PN 00-14242-XX (Four-Fiber Extension)	
Environmental Rating	-28 to 105°C (-50 to 75°C also available on request)
Fiber Type	4 fiber cable: black PVC outer jacket over 4 subunits and central Kevlar® strength member. Subunits: black Hytrel® and Kevlar® over 400μm HCS fiber.
Standard Lengths	1, 2, 3, 4, ... 20, 25, 30, 35, 40, 45, 50 m
Connection to TWP	Advanced Energy's proprietary Viton O-ring connector
Connection to WTS	Current: m924 Utility, ThermAsset 2
	Legacy: WTS-11, WTS-12, ThermAsset, LumaSmart, m600 Utility



### Applicable Products

This product note describes products and accessories available for use with the following products.

Applicable Products	
Current	m924 Utility, ThermAsset 2
Legacy	WTS-12, ThermAsset, LumaSmart, m600 Utility



## **ABOUT ADVANCED ENERGY**

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

AE's power solutions enable customer innovation in complex semiconductor and industrial thin film plasma manufacturing processes, demanding high and low voltage applications, and temperature-critical thermal processes.

With deep applications know-how and responsive service and support across the globe, AE builds collaborative partnerships to meet rapid technological developments, propel growth for its customers and power the future of technology.

**PRECISION | POWER | PERFORMANCE**

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