

TL1000 Series Twist Lock Mounting for Durafet® II pH Electrode

Specification

Overview

The TL1000 Series, Twist Lock Mounting, provides an easy way to install/remove Durafet® II pH electrodes from pipelines and tees. A quick 1/4 turn is all that is required for installation/removal. This quick 1/4 turn does not twist cables as you attempt to install or remove an electrode from the process during calibration, maintenance, and replacement. The threaded mounting bushing is available in two sizes (3/4" or 1" male NPT) and three materials of construction (316 SS, Kynar, and CPVC), for use in a wide variety of applications and instrumentation, including the APT Series DirectLine® Sensor Modules and 9782 Series Analyzers.

Description

The TL1000 Series of pH electrode mountings is specifically designed to adapt the Durafet® II pH electrode into a Twist Lock process mounting. The Twist Lock Mounting provides a quick and easy way to interface the Durafet® II pH electrode for process pH measurement. A 1/4 turn is all that is needed to lock the electrode into a mounting bushing for safe and fast installation.

Easy Installation/Removal

The Durafet® II electrode already has a time saving connector that eliminates having to pull cable when replacing an electrode. The TL1000 provides additional time savings by eliminating the need for wrenches and time to thread and unthread the electrode.

The TL1000 consists of a mounting bushing that is threaded into the process and a Durafet® II pH Twist Lock adapter that locks into the

mounting bushing. The mounting bushing has slots that align with pins on the Durafet® II pH adapter. A simple 1/4 turn of the Durafet® II pH adapter positions the pins into the locked location in the mounting bushing. The locking pins are visible through an opening 90° from the mounting slots so that you are ensured of correct installation.

"No Hassle" Calibration and Maintenance

During calibration of a Durafet® II electrode you want to keep the cable connected when removing the electrode so power is maintained to the Durafet® sensor. If power is interrupted then you have to wait up to 15 minutes for the Durafet® sensor to "warm up" to get a stable pH reading.

The TL1000 mounting eliminates cables from twisting when trying to install or remove an electrode for calibration or maintenance. For most threaded mountings you have to thread or unthread the electrode when installing or removing it. While turning the electrode in these conventional threaded mountings the electrode's cable becomes a twisted mess and breakage of conductors inside the cable is possible. The Twist Lock mounting only requires a quick 1/4 turn and this does not twist up the cable.

Safe Operation

The TL1000 design uses a simple locking procedure to ensure that the electrode is securely positioned into the mounting bushing and will be able to withstand pressures of up to 150 psi. The locking pins on the electrode adapter can be seen through an opening on the mounting bushing so that you are sure that the electrode is positioned correctly to withstand the process pressure. Dual external O-rings on the Durafet® II pH adapter and an internal O-ring are made of

EPDM. This O-ring design seals the electrode and the adapter from process leakage.

Durafet® II pH Electrode Performance

The TL1000 mounting is for interfacing the Durafet® II pH electrode to a process where a threaded mounting is used. The Durafet® II pH electrode is the only industrial, non-glass pH electrode available. The solid state, ISFET (Ion Sensitive Field Effect Transistor) sensor is very durable and can withstand the harsh industrial environments that pH electrodes are usually subjected to in process applications. The Durafet® II pH electrode is a fast responding, stable electrode that provides accurate pH measurement with reduced calibration and maintenance costs.

Features and Benefits

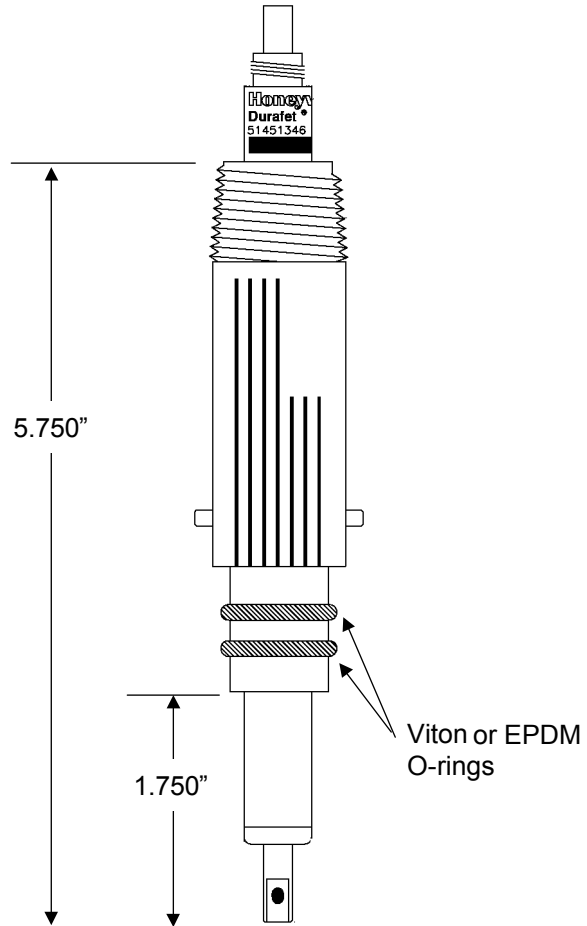
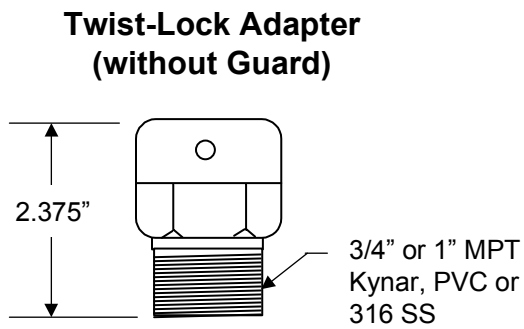
- Quick 1/4 Turn Installation Removal – Fast and Easy Calibration and Maintenance
- No Electrode Threading – No Twisted Cable Problems
- Easy Locking Design – Safe Process Mounting Under Pressure
- 3/4" or 1" Process Threads – Wide Variety of Mounting Options
- 316 SS, Kynar, or CPVC Mounting Bushing – Suitable for Wide Range of Applications
- Dual External EPDM Seals – Prevents Process Leakage
- Durafet® II pH Electrode – Reliable and Accurate pH Measurement

Specifications

pH Operating Range	0-14 pH		
Pressure Rating	150 psi @ 80 °C		
Temperature Range (Durafet® II Electrode)	-10 °C to 110 °C (14 °F to 230 °F)		
Process Connection	3/4" and 1" MNPT		
Mounting Bushing Materials of Construction	316 Stainless Steel, Kynar, and CPVC		
Electrode Adapter Materials of Construction			
Durafet® Electrode Adapter	Ryton body, Viton or EPDM seal, silicon ISFET, ceramic reference junction		
Adapter	Ryton body, 316 SS locking pins, Viton or EPDM O-rings		
Conduit Connection	3/4" MNPT		
Weight			
Mounting Bushing	316: 0.80 lb. (363 g)	<i>Kynar</i> : 0.16 lb. (73 g)	<i>CPVC</i> : 0.14 lb. (64 g)
Electrode Adapter	0.25 lb (113.5 g)		

Dimensions

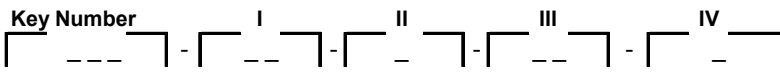
Durafet® II Twist-Lock Electrode



Model Selection Guide

Instructions

- Select the desired key number. The arrow to the right marks the selection available.
- Make one selection per table, using the column below the proper arrow. A dot denotes unrestricted availability. A letter denotes restricted availability.



KEY NUMBER

Description	Selection	Availability
Twist Lock Electrode Mounting for Durafet II Electrodes	TL1	↓

TABLE I - Mounting Thread Size, Material, Tip Guard - (Note 1)

Thread Size	Material of Construction	Tip Guard	Selection	Availability
3/4 " NPT	316 Stainless Steel	No	01	•
	Kynar	No	02	•
	CPVC	No	03	•
1" NPT	316 Stainless Steel	No	04	•
	316 Stainless Steel	Yes	05	•
	Kynar	No	06	•
	Kynar	Yes	07	•
	CPVC	No	08	•
	CPVC	Yes	09	•

TABLE II - Reference Electrode Type, Temperature Sensor, Electrode Part Number

Reference Electrode/ Seal Material	Temperature Sensor	Part Number (Note 2)	Selection	Availability
Single Junction/Viton	8550 Ohm Thermistor	51451346-001	A	•
	100 Ohm RTD	51451346-002	B	•
	1000 Ohm RTD	51451346-003	C	•
Single Junction/EPDM	8550 Ohm Thermistor	51451346-007	G	c

TABLE III - Cable Type, Length

Cable Type	Cable Length	Selection	Availability
None		00	•
With Cap Adapter (Direct Input to 9782/APT)	4 feet (1,22 meters)	01	•
	8 feet (2,44 meters)	02	•
	12 feet (3,66 meters)	03	•
	20 feet (6,10 meters)	04	•
	50 feet (15,24 meters)	05	•
Without Cap Adapter (Preamp Required)	4 feet (1,22 meters)	11	•
	8 feet (2,44 meters)	12	•
	12 feet (3,66 meters)	13	•
	20 feet (6,10 meters)	14	•
	50 feet (15,24 meters)	15	•

TABLE IV - OPTIONS

Tagging	Linen Customer I.D. Tag - (limit to 3 lines, 22 spaces per line)	L	•
	Stainless Steel Customer I.D. Tag - (limit to 3 lines, 22 spaces per line)	S	•

Notes:

1. For Pipe Mounting Adapter only, determine P/N from Accessories Table below and obtain price from order entry system.
2. For Replacement Electrode specify associated part number and price from Table II.

RESTRICTIONS

Restriction Letter	Table	Available Only With Selection
c	I	01
	III	00 or 04

Accessories and Replacement Parts

Description	Part Number
pH Buffer Solutions - one pint	
4.01	31103001
6.86	31103002
9.18	31103003
Pipe Mounting Adapter	
3/4" NPT Thread	
316 SS without guard	51451355-001
Kynar without guard	51451355-002
CPVC without guard	51451355-003
1" NPT Thread	
316 SS without guard	51451355-004
316 SS with guard	51451355-005
Kynar without guard	51451355-006
Kynar with guard	51451355-007
CPVC without guard	51451355-008
CPVC with guard	51451355-009


Warranty/Remedy

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace without charge those items it finds defective. The foregoing is Buyer's sole remedy and is **in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose.** Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

For more information, contact Honeywell sales at (800) 343-0228.

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