

# UNDERGROUND ELECTRICAL RESISTANCE (ER) PROBES

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Model 620HD/650



620HD Probe



650 Probe

## Features

- **Operation - Grounding Lead Option for Use with Cathodically Protected Structures**
- **Probe Construction - Injection Molded/Epoxy (620HD), All Welded Element (650) Both include Measure/Reference & Check Element**
- **Cable Connection - Heavy Duty Length as Required (620HD)  
Heavy Duty, Length as Required with Bonded Heat Shrink Sleeve onto Element (650)**
- **Max. Temp = 160F (70°C)**

The Cosasco Model 620HD and 650 Electrical Resistance (ER) probes are designed for underground and structural monitoring of pipelines, vessels, above and below ground storage tanks and structures-- whether cathodically protected or not. The Model 620HD ER probe is a heavy duty assembly with a check element which is suited to the "construction site" environment. The Model 650 ER probe is economical and durable. Its slim profile is convenient for locations with restricted access such as concrete bridge structures and other infrastructure applications. Both probes provide good sealing to the reference element, and the check element provides confidence in the continued performance of the corrosion sensor. Either probe can be connected (or not connected) to a cathodically protected structure. When electrically

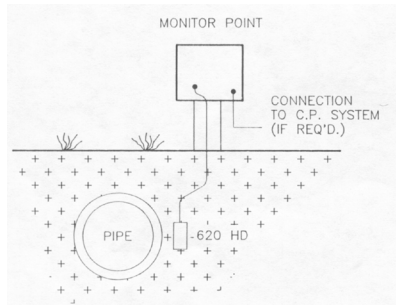
connected, the probe provides a continuous record on the effectiveness of the Cathodic Protection (C.P.) system under all the operating conditions.

When the probe is not connected to the structure, it monitors the corrosivity of the soil or environment around the structure. In some cases, it may be beneficial to monitor both C.P. System and the environment, which would entail the use of two probes. The probes may be ordered with or without a grounding lead for C.P. system. The lead may be installed at the probe or connector end, whichever is most convenient. In most cases, a lead at the monitoring connector end is preferred, with a separate lead running to the structure or C.P. System. This enables connection to the C.P. System to be made as required, even after probe installation.

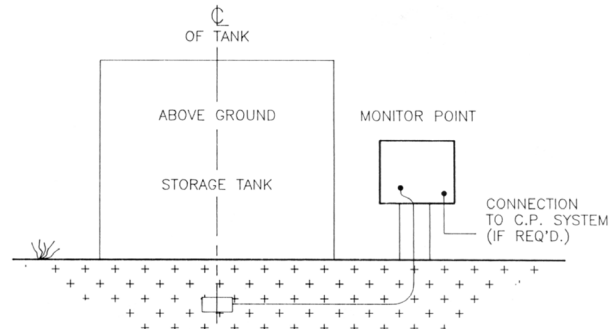
**COSASCO®**

## Typical Installations

**Underground Pipeline Monitoring**



**Above Ground Storage Tank Monitoring**



\*It is recommended that the probe be bonded (electrically connected) directly to the protected structure, not at the rectifier or galvanic anode.

## Element Availability

UNS Number	ALLOY	S10	S20	S40	T10	T20	T50
K03005	Pipe Grade Carbon Steel	□	□	□	●	●	●
	Useful Range (Inches)	.005	.010	.020	.005	.010	.025
	Useful Range (mm)	.127	.254	.508	.127	.254	.635

**Note:**

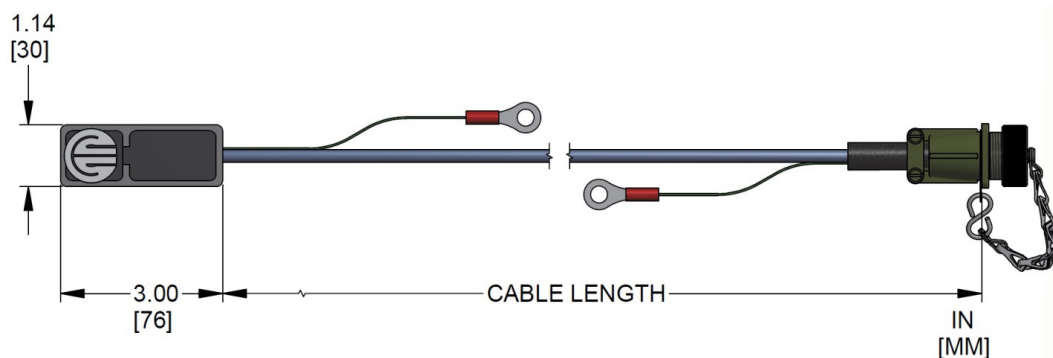
- Denotes availability for Model 620HD
- Denotes availability for Model 650

620HD Probe Type: Flush (B)

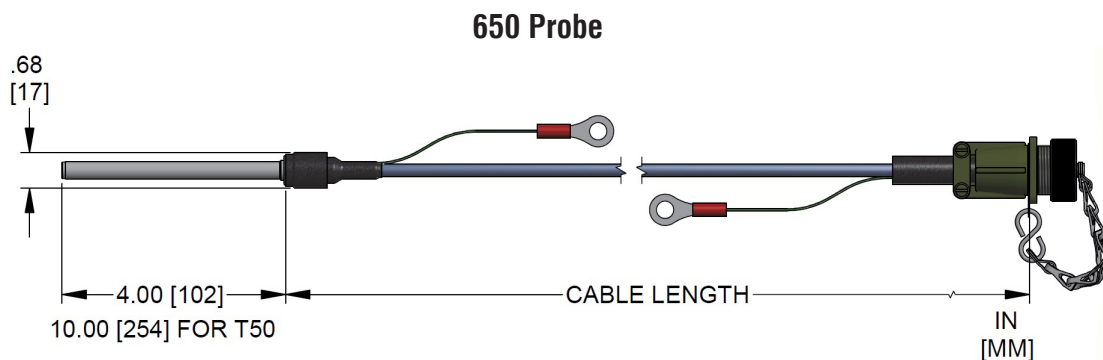
650 Probe Type: Special (D)

## Dimensions

### 620HD Probe



# MODEL 620HD/650



## Ordering Information

Model	Underground ER Probes			
620HD	Heavy Duty, Service ER Probe Assembly			
650	Heavy Duty, Cylindrical Service ER Probe Assembly			
<div></div>	<b>Code</b>	<b>Grounding Connection</b>		
	1	Grounding Lead at Connector End		
	2	Grounding Lead at Probe End		
	<b>Code</b>	<b>Cable Order Length</b>		
	S10	Model 620HD Only - Flush Strip Element, 10 mil thickness (5 mil useful probe life)		
	S20	Model 620HD Only - Flush Strip Element, 20 mil thickness (10 mil useful probe life)		
	S40	Model 620HD Only - Flush Strip Element, 40 mil thickness (20 mil use probe life)		
	T10	Model 650 Only - 10 mil thickness (5 mil useful probe life)		
	T20	Model 650 Only - 20 mil thickness (10 mil useful probe life)		
	T50	Model 650 Only - 50 mil thickness (25 mil useful probe life)		
<div></div>	<b>Code</b>	<b>Element Alloy</b>		
	K03005	Carbon Steel		
	YYYYYY	Other UNS Number (Specify)		
<div></div>	<b>Code</b>	<b>Cable Order Length</b>		
	LL	Cable Length in Feet		
620HD — 2 — S10 — K03005 — 100 ← Example				

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620HD-DS rev-D  
 Rev. Date 02/21/2019



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