

# 4120 Multi-Element Temperature Transmitter

**Highly accurate and effective  
transmission of temperature data**



## Applications

The 4120 Multi-Element Temperature Transmitter (METT) is designed to be used with either a single Averaging Temperature Bulb or, optionally, up to 10 Spot RTDs. The METT can convert the resistance values to engineering units, perform calculations and transmit the information to the host system.

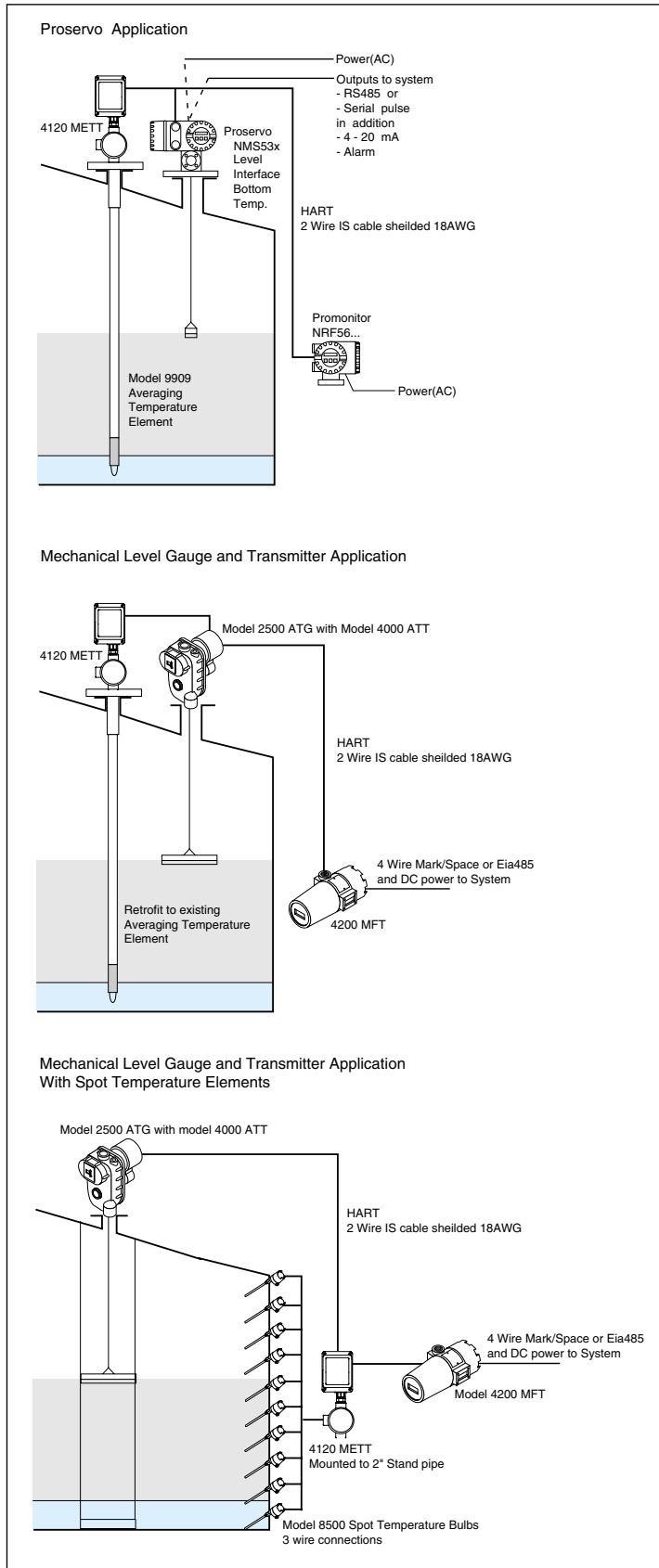
## Features

- Mounts on averaging temperature bulb and selects values from the longest submerged element or all elements
- Averages input from up to 10 spot RTDs
- Communicates over HART® Bus
- Intrinsically safe NEMA 4X enclosure
- Approved to most Industry standards

# Measuring System

## The Multi-Element Temperature Transmitter

The 4120 Multi-Element Temperature Transmitter (METT) is designed to be used with a standard single Averaging Temperature Bulb or up to 10 Spot RTDs, three or four wire elements are supported for both options. The 4120 METT can be integrated into an inventory management system via:



- Any Endress+Hauser tank gauge with HART® communication capabilities, such as the Proservo NMS 53x
- The Endress+Hauser model 4200 Multifunction Transmitter for tankside integration
- The Endress+Hauser model 4000 Advanced Technology Transmitter connected to a mechanical float gauge
- Any other manufacturers inventory management instrumentation or host system with HART® communication capabilities

The 4120 METT meets FM, CSA and CENELEC intrinsically safe approvals, and is housed in a NEMA 4X enclosure.

### Averaging Temperature

When provided with the tank level by the host, the METT selects the input from the longest submerged element. Alternately it will report the readings from all elements.

### Spot Temperature

When used with multiple spot RTDs the METT can average the inputs or report the readings of all elements to the host.

Typical 4120 installations

# Installation

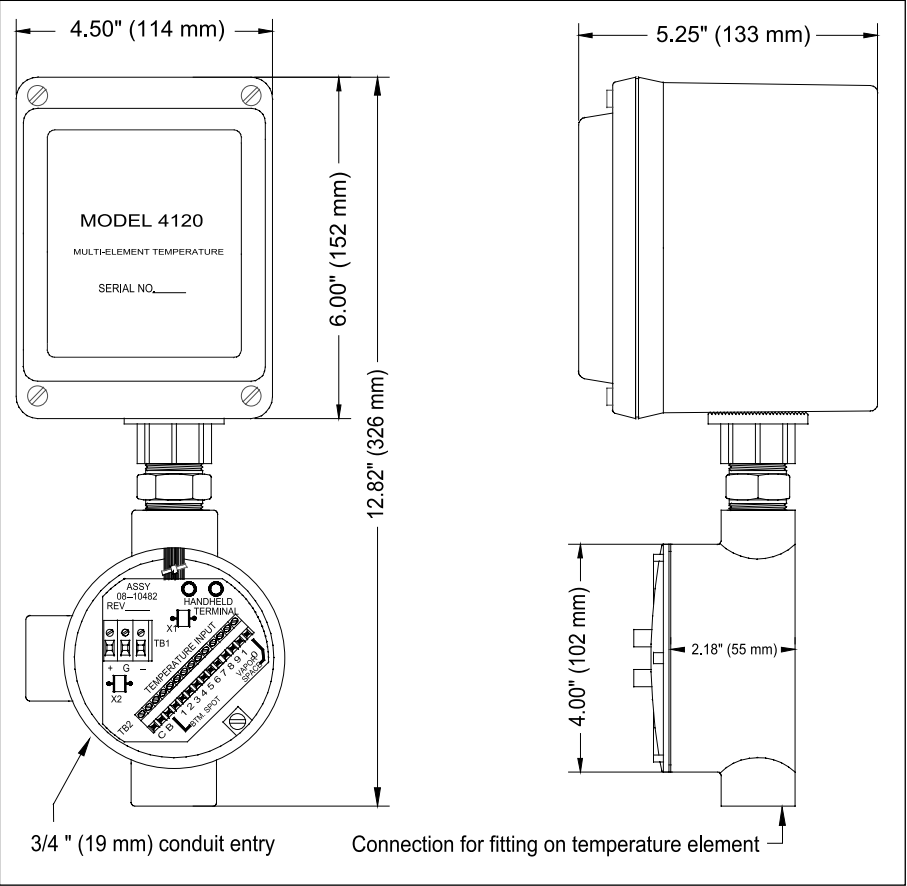
## Averaging Temperature

The 4120 METT will mount directly to a standard (API 2543) Averaging Temperature Bulb usually located on the tank roof.

## Spot Temperature

The 4120 METT can be mounted on a standpipe at the tankside for ease of maintenance or at another location depending on your existing field wiring.

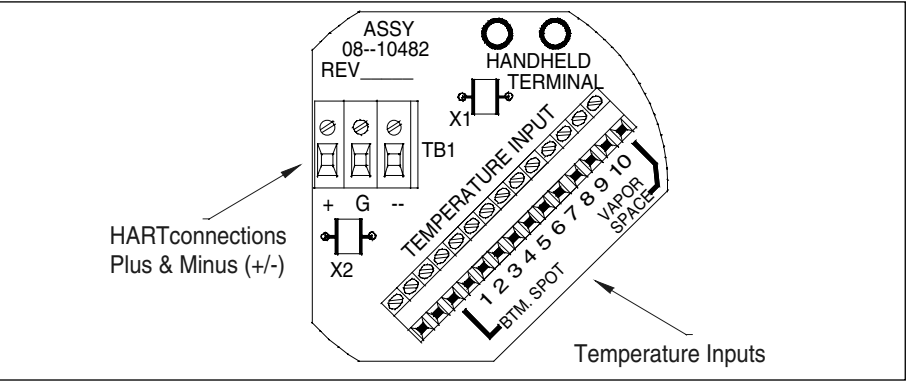
The 4120 METT dimensions



# Configuration

The 4120 METT is configured with the Handheld Interface or via the host system (FuelsManager). The user assigns the address of the unit and configures each element. An element can also be configured "not present", 100 Ohm Copper or 100 Ohm DIN platinum. Three or four wire elements are supported, calibration, zero and span adjustments are not supported.

4120 METT terminal board connections



# Technical Data

## Environmental

Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C)
Storage Temperature	-40 °F to +185 °F (-40 °C to +85 °C)
Humidity	0 to 100 %
Enclosure	NEMA 4X, Fiber Reinforced Resin
Transient and Lighting Protection	per IEEC C62.1

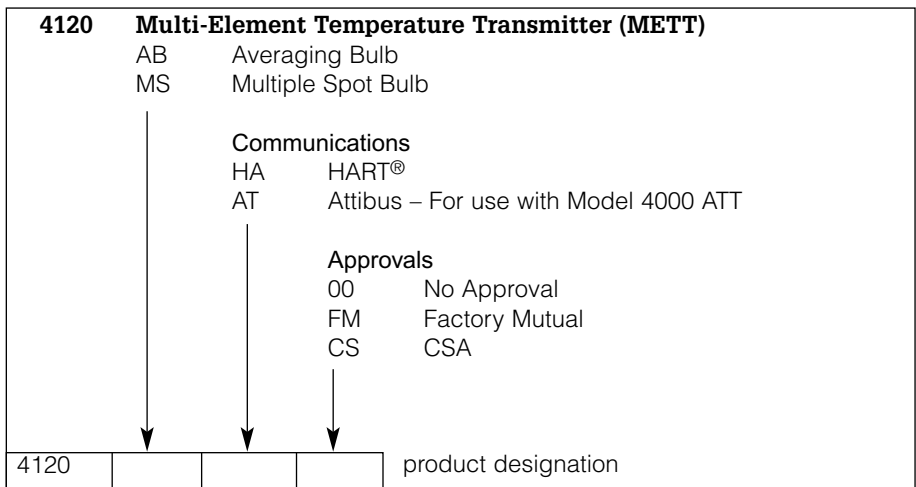
## Physical

Shipping Weight	6 lbs (3 kg)
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## Functional

Input Voltage	15 to 65 V <sub>dc</sub>
Operating Current	4 mA Constant Current
Accuracy	+/- 0.5 °F (+/- 0.25 °C)
Hazardous Location Approvals	Designed to meet FM and CSA Intrinsically safe approvals for Class I, Div. 1 Groups B&C Consult factory for approval status

# Product Structure



# Supplementary Documentation

- ❑ 4120 Multi-Element Temperature Transmitter System Information Si 027G/03/ae
- ❑ 4120 Multi-Element Temperature Transmitter Instruction Manual

Locations			Systems & Gauging Headquarters
Endress+Hauser Systems & Gauging Ltd. Heighington Lane Newton Aycliffe Co Durham DL5 6XZ United Kingdom Tel: +44 (0)1325 321111 Fax: +44 (0)1325 300840	Endress+Hauser Systems & Gauging S.A. Rue de Bitche 62100 Calais France Tel: +33 (0)3 21-96-49-93 Fax: +33 (0)3 21-34-36-12	Sakura Endress Co., Ltd. 862-1 Mitsukunugi Sakaigawa-mura Higashi-Yatsushiro-Gun Yamanashi Prefecture 406-0846 Japan Tel: +81 (0)552-66-4964 Fax: +81 (0)552-66-4969	Endress+Hauser Systems & Gauging, Inc. 5834 Peachtree Corners East Norcross (Atlanta), GA 30092 USA Tel: +1 (770) 447-9202 Fax: +1 (770) 662-8939 <a href="http://www.systems.endress.com">http://www.systems.endress.com</a>
Endress+Hauser Systems & Gauging, Inc 2901 W. Sam Houston Parkway North Houston, TX 77043 USA Tel: +1 (832) 590-6200 Fax: +1 (832) 590-6201	Endress+Hauser Systems & Gauging, Inc. 1800 Diagonal Road Suite 300 Alexandria, VA 22314 USA Tel: +1 (703) 837-9202 Fax: +1 (703) 837-9209		

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