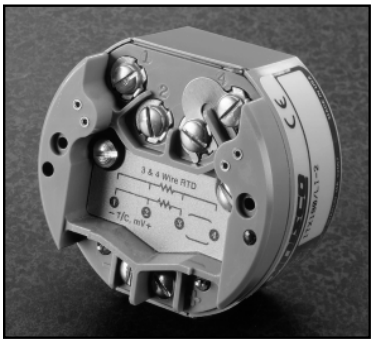
# DYNISCO MODEL ITX190
## *HART® Compliant Smart Temperature Transmitter*

### Description
The Dynisco ITX190 smart temperature transmitter is easy to use and moderately priced – like an analog transmitter. It's also versatile, linear, and based on microprocessor logic. The ITX190 is fully HART® compliant and can be used with any HART compliant device (such as the Rosemount 275 HART Communicator). The ITX190 can be mounted in explosion - proof and weatherproof enclosures, as well as on a DIN rail for panel mounting applications. Local indication can be added at any time by simply plugging in one of the two optional displays. One transmitter on the shelf can back up the needs of an entire facility. The exceptional versatility of the ITX190 not only lets you configure your transmitters exactly the way you want them, it also dramatically reduces back - up stock and spare parts.

### Features
- Automatic self - calibration
- Digital temperature compensation
- Accepts thermocouples B, C, E, J, K, L, N, R, S, T and U grounded or ungrounded or mV inputs
- 2, 3 or 4 - wire RTDs (DIN, SAMA, Cu and Ni)
- 22 point custom linearization curve for non - standard inputs or sensor matching
- One or two line display for local indication (optional)
- HART digital communications
- On - line or off - line setup in minutes
- Two - year calibration warranty
- Configure and display in English, Spanish, French or German (LI - 2 option)

### Benefits
- Repeatability and higher accuracy
- Long term stability
- Reduces spare inventory
- Greater versatility
- High accuracy on non-standard inputs
- Cost effective options
- Industry standard
- Easy and quick setup
- Lower life - cycle costs
- Greater flexibility




## Specifications

### Performance Characteristics
**Accuracy:** ±0.05% of reading, 100% of sensor range
**RFI/EMI:** Protection to 10 V/meter
**Ambient temperature stability:** Self - correcting over the operating temperature
**Dimensions:** 2.35" (6 cm) diameter, 1.55" (4 cm) height, 2.15" (5.5 cm) height with LI - 1 or LI - 2 installed
**Weight:** 4 oz. (electronics only)

**Dynamic response:**
*Turn on time:* Less than 5 seconds after power up
*Ambient temperature gradient:* Automatic compensation to 20˚C/hour change
*Update time:* 0.15 seconds
*Response to step input:* 0.25 seconds, 1 second typical
**Automatic diagnostics:** Every 3 seconds the ITX190 transmitter performs self - checks for zero, span, cold - junction temperature, open T/C, open RTD element, shorted RTD element, each open RTD lead and transmitter malfunction

### Temperature Characteristics
**Operating temperature range:**
*Electronics:* -40˚F to +185˚F (-40˚C to +85˚C)
*Display:* -4˚F to +158˚F (-20˚C to +70˚C)
**Storage temperature range:** -58˚F to +185˚F (-50˚C to +85˚C)

**Automatic self - calibration every 3 seconds**
**Cold junction compensation:** Self - correction to ±0.5˚C

### Electrical Characteristics
**Input voltage:** 12 to 42 Vdc
**Output:** 4 to 20 mA, 2 - wire
**Failsafe:** User settable from 3.6 mA to 23.0 mA, or OFF
**Interchangeability:** All units interchangeable without field calibration
**EMI/RFI immunity:** <0.5% of reading (SAMA PMC 33.1c test method) 20 KHz to 1000MHz, 10 V/meter
**Isolation:** 250 Vac rms or 800 Vdc

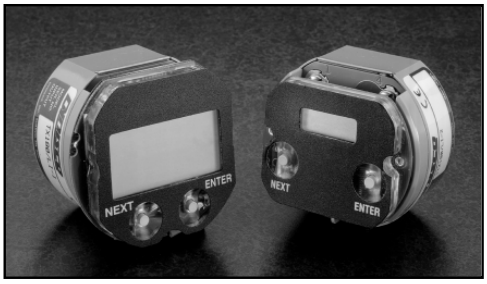
**Full 500 V isolation**
**Non - interlacing zero and full scale**
**Reverse polarity protection:** 42 Vdc applied with either polarity
**Power and load:**
*Supply voltage (no load resistance):*12 to 42 Vdc (30 Vdc for I/S version)
*Supply voltage (with load resistance):*
Vsupply = (12) + (Rload in Kohm x 23 mA)
*Supply voltage effect:* <±0.005% of span per volt

# DYNISCO MODEL ITX190

## *HART® Compliant Smart Temperature Transmitter*

### Enhanced Process Measurement

Automatic self - calibration every three seconds to on - board reference standards increases process measurement reliability and significantly reduces ongoing maintenance costs. Digital ambient temperature compensation completely characterizes each transmitter for performance in ambient environments from -40˚F to +185˚F (-40˚C to +85˚C), resulting in greatly reduced measurement drift. In direct comparisons, the ITX190 offers dramatically improved performance and outstanding value over competitive analog, programmable and smart transmitters. Its stability, accuracy, versatility, reliability and ease - of - use yield real benefits in process industry applications.




### Local Indication

**LI - 1:** One line display/keyboard. Plug - in display/keyboard for local indication and configuration, setup and re - ranging of ITX190 or TX180. One line numeric display with integral two button keyboard. 4 digit indication in engineering units

**LI - 2:** Two line display/keyboard. Plug - in display/keyboard for local indication and configuration, setup and re - ranging of ITX190 or TX180. 2 line numeric display with integral 5 digit upper line indication in engineering units. Bar graph shows percent loop output. Lower line has 7 programmable alphanumeric characters (via HART communication). Local indicators are interchangeable

### Approvals

FM/CSA Non - Incentive Rating; Intrinsic Safety - optional; CE approved

### Configuration/Setup Software

Dynisco's SmartLink is a Windows - based program for configuration and setup of the Dynisco TX180 and ITX190 temperature transmitters

## Ordering Guide

| Model | Options | | Accessories | |
|---|---|---|---|---|
| | Code | Description | Code | Description |
| | I/S | Intrinsic safety | PY - 2 | 2" pipe yoke for XP - F series housing |
| | LI - 1 | Local indicator with one line display and integral keyboard | DIN - KIT | DIN rail mounting adapter for ITX190 and TX180 series transmitters |
| | LI - 2 | Local Indicator with two line display and integral keyboard | SS - TAG | Stainless steel tag |
| | | | PS - TAG | Plastic tag |
| ITX190 | XP - FG | NEMA 7, explosion proof: NEMA 4x low dome housing with window | PS - 2412 | Power supply, 115/230 Vac to 24/28 Vdc regulated 1.2/0.8A |
| | XP - FN | NEMA 7, explosion proof: NEMA 4x low dome housing | PS - 2405 | AC adapter, 115 Vac to 24 Vdc, 0.5A, plug - in |
| | XP - HEAD | NEMA 7, explosion proof: raintight head mount housing | Smartlink - HART | Smartlink software with HART modem cable |
| | WP - HEAD | Weatherproof (IP 66) head mount housing | | |

*Ordering Example: ITX190 - LI - 2 - XP - FG - PY2 - PS - 2405*