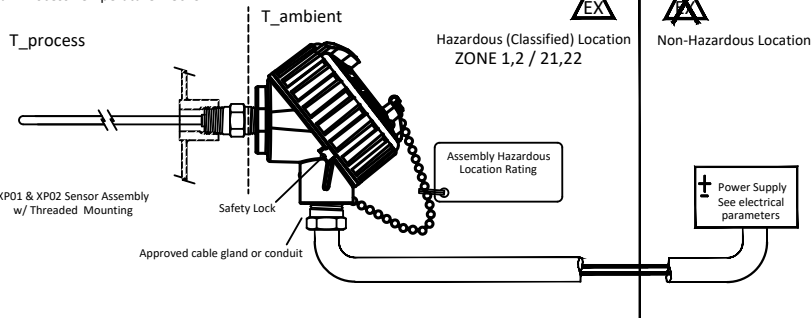


Max. Process Temperature: 180°C

Note: Ambient temperature ratings are a function of enclosure & termination options, see T\_Ambient table



RTD PART NUMBER LAYOUT



TC PART NUMBER LAYOUT



| APPROVAL |                             |
|----------|-----------------------------|
| CODE     | DESCRIPTION                 |
| HLO6     | ATEX / IECEx - Ex db, Ex tb |

RTD ELEMENT OPTIONS

|                        |
|------------------------|
| 1st and 2nd characters |
| R1 (Grade B)           |
| R3 (Class AA)          |
| RS (1/5 IEC Class B)   |
| RA (Class A)           |
| RB (Class B)           |
| RC (Class C)           |
| RD (Class D)           |

|                |
|----------------|
| 3rd character  |
| T (thin film)  |
| F (wire wound) |

|                    |
|--------------------|
| 4th character      |
| 1 (single element) |
| 2 (dual element)   |

|                       |
|-----------------------|
| 5th and 6th character |
| 10 (10 Ω Cu)          |
| 12 (120 Ω Ni)         |
| 25 (200 Ω Pt)         |
| 55 (500 Ω Pt)         |
| 85 (100 Ω Pt)         |
| 92 (100 Ω Pt)         |
| 95 (1000 Ω Pt)        |

|   |
|---|
| 7th digit character                             |
| L, K, M: (metallic sheath w/ refractory powder) |
| H (mineral insulated sheath)                    |

| Element Connection |             |
|--------------------|-------------|
| Code               | Description |
| 2                  | 2 Wires     |
| 3                  | 3 Wires     |
| 4                  | 4 Wires     |

TC ELEMENT OPTIONS

| Thermocouple Type |  |
|-------------------|--|
| E, EE, EEE        | Single (E), Double (EE), Triple (EEE) Thermocouple |
| J, JJ, JJJ        | Single (J), Double (JJ), Triple (JJJ) Thermocouple |
| K, KK, KKK        | Single (K), Double (KK), Triple (KKK) Thermocouple |
| T, TT, TTT        | Single (T), Double (TT), Triple (TTT) Thermocouple |
| N, NN, NNN        | Single (N), Double (NN), Triple (NNN) Thermocouple |

| Measuring Junction |   |
|--------------------|---|
| U                  | Ungrounded                              |
| UM                 | Ungrounded, Special Limits Thermocouple |

| Sheath Diameter and Material (first digits are diameter, ending digits are material) | Enclosure Mounting Fitting  |
|--|---|
| 2 8  | 1/2 X 1/2 NPT steel hex nipple (see list of other material codes) |
| 3 8  | 1/2 X 1/2 NPT stainless steel hex nipple                          |
| (236) 8  | 1/2 NPT stainless steel bushing                                   |
| 4 8  | 3/4 X 1/2 stainless steel reducing bushing                        |
| 5 8  | 8RND  |
| 6 8  |   |
| 8 8  |   |
| 88R4 8   |   |
| 68R3 8   |   |
| 48R2 8   |   |

| Sheath Length   | Sheath Mounting Fittings |
|---|--------------------------|
| Three digit sheath length w/ fraction in parenthesis (in) | 00 No fitting            |
| 2521 = Shin-Etsu sensor potting                           |                          |
| 2187 = flat tip   |                          |
| 2371 = 20 Gauge sensor lead-wire                          |                          |

| Enclosure Termination |  |
|-----------------------|--|
| 75T142E-T             | (4 to 20) mA HART Field transmitter with aluminum housing, without display - see Note            |
| 75T142E-D             | (4 to 20) mA HART Field transmitter with aluminum housing, with display - see Note               |
| 76T71-D10             | (4 to 20) mA isolated Programmable transmitter with display and aluminum housing - See Note      |
| 76T71C-D10            | (4 to 20) mA isolated Programmable HART transmitter with display and aluminum housing - See Note |
| 76T72-D10             | (4 to 20) mA isolated Programmable HART transmitter with display and aluminum housing - See Note |
| 76T72C-D10            | (4 to 20) mA dual input HART transmitter with display and aluminum housing - See Note            |
| 93                    | Aluminum field wiring enclosure  |
| 93,AD                 | Anodized aluminum field wiring enclosure   |
| 94                    | 316L Stainless Steel field wiring enclosure  |

| Termination Options (one or more, separated by comma or dash) |   |
|---|---|
| SB  | 3/8" NPT conduit reducer bushing  |
| I   | Stainless Steel tag   |
| M2  | M20x1.5 conduit reducer bushing, Nickel plated Brass  |
| M5  | M25x1.5 conduit reducer bushing, Nickel plated Brass  |
| (blank)   | Terminal Block - provided when there is no transmitter  |
| T71-00  | (4 to 20) mA isolated head-mounted transmitter - see Note   |
| T71C-00   | (4 to 20) mA HART isolated head-mounted transmitter - see Note  |
| T72-00  | (4 to 20) mA dual input, isolated HART head-mounted transmitter - see Note  |
| T72C-00   | (4 to 20) mA dual input, isolated HART head-mounted transmitter - see Note  |
| T82-00  | (4 to 20) mA dual input, isolated HART head-mounted transmitter - see Note  |
| Z   | Does not affect safety or this Certification. Specific customer requirements not impacting this certification (i.e. special testing) may be followed by additional text or descriptive information. |

EXAMPLE RTD PART NUMBER:  
HLO6-R5T185L483-010(1/2)-00-9HP93,1,T82-00-31-85-00-A-U-S(0-100)C

EXAMPLE TC PART NUMBER:  
HLO6-KK63U-010(1/8)-00-6HN94,M2,T82-00-TT-K-K-D-D-S(40-300)F

Installation Notes for configuration codes XP01 and XP02

- WARNING - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR APPROVED CLASSIFICATION
- WARNING - DO NOT OPEN WHEN ENERGIZED
- WARNING - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
- Approved Apparatus must be installed in accordance with these manufacturer instructions and per relevant codes, standards and regulations (i.e. IEC 60079-0, IEC 60079-1, IEC 60079-14, IEC 60079-31)
- Keep enclosure cover closed tightly and safety lock engaged when circuits are powered and an explosive atmosphere is present. Enclosures 93, 93,AD & 94 require 1/16" hexagonal wrench, enclosures 75 and 76 require a 3mm hexagonal wrench.
- T-Code is determined by maximum measured process temperature T\_process.
- Seal all unused entries with appropriate blanking element approved for area and protection type. Sensor assemblies are supplied without blanking elements, conduit seals, or cable glands. Installer should select appropriate blanking elements, conduit seals or cable glands that are suitable for the area protection type. Follow relevant codes, standards and regulations (i.e IEC 60079-0, IEC 60079-1, IEC 60079-14, IEC 60079-31).
- Cable glands and wiring must be rated 5°C higher than Ta:
- Enclosure must be attached to potential matching line.
- Keep all connections and covers tight when circuits are alive. Do not open/remove covers unless area is known to be safe. Covers must be screwed tight and secured; safety catch must be fastened before putting into service.
- All sensor pipe and conduit threaded connections to be made wrench tight.
- Hazardous (Classified) Locations:

CE 2813 II 2 GD Sira 18ATEX 1250X  
Ex db IIC T6...T4 Gb Tamb=(See Table)  
Ex tb IIIC T60°C...T110°C Db Tamb=(See Table)  
IP66  
IECEx SIR 18.0065X  
Ex db IIC T6...T4 Gb Tamb=(See Table)  
Ex tb IIIC T60°C...T110°C Db Tamb=(See Table)  
IP66

Specific Conditions of Use:

- The XP joints are not field repairable, contact manufacturer if dimensional information is needed.
- Field connections to XP sensors shall be appropriately certified for the location and installed in accordance with wiring method requirements of the local electrical code as applicable.
- Heat transfer from the process must not cause the XP sensor enclosure to exceed T-code (gas) or Surface Temperature (dust) rating of the sensor assembly. Therefore, it is the end-user's responsibility to ensure that the ambient temperature around the XP sensor enclosure does not exceed the permitted ambient. Prevention measures include installing suitable insulation or an assembly with suitable length sheath or lagging.
- When the process temperature range exceeds the service temperature range it shall be verified by on-site temperature measurements, taking the worst case conditions into account that the service temperature does not exceed the temperature range of the assembly enclosure.
- The ranges of stopping plugs shall not be used in conjunction with any other cable entry device.
- Reducers shall not be used for the direct inter-connection of enclosures.
- Any un-used enclosure entry must be filled with a properly certified Ex db, tb, IP66 stopping plug/blanking element.
- For Class III (dust), enclosures 93 w/ option AD, electrostatic charging of external surfaces shall be avoided.

| Enclosure    | *Device  | Electric Rating  | Ambient Temp Range (Ta)                                   |
|--------------|--|------------------|---|
| 93 and 93,AD | T71-00, T71C-00, T72-00, T72C-00, T82-00 w/o display | 11-30 Vdc, 25 mA | Ta: -20 TO +55/70/85°C<br>T6/T5/T4 Gb, T65/T80/T95°C Db   |
|              | Terminal Block                                       | N/A              | Ta: -20 TO +80/95°C<br>T6/T5 Gb, T80/T95°C Db             |
| 94           | T71-00, T71C-00, T72-00, T72C-00, T82-00 w/o display | 11-30 Vdc, 25 mA | Ta: -40 TO +55/70/85°C<br>T6/T5/T4 Gb, T65/T80/T95°C Db   |
|              | Terminal Block                                       | N/A              | Ta: -40 TO +80/95°C<br>T6/T5 Gb, T80/T95°C Db             |
| 76           | T71-D10, T71C-D10, T72-D10, T72C-D10 w/ display      | 11-36 Vdc, 23 mA | Ta: -40 TO +65/80/85°C<br>T6/T5/T4 Gb, T85/T100/T105°C Db |
|              | T82-D10 w/ display                                   | 11-42 Vdc, 23 mA | Ta: -40 TO +65/80/85°C<br>T6/T5/T4 Gb, T85/T100/T105°C Db |
| 75           | T142-T w/o display                                   | 11-36 Vdc, 23 mA | Ta: -40 TO +55/70/80°C<br>T6/T5/T4 Gb, T110°C Db          |
|              | T142-D w/display                                     | 11-36 Vdc, 23 mA | Ta: -40 TO +55/70/80°C<br>T6/T5/T4 Gb, T110°C Db          |

| Enclosure    | Conduit Entries | Thread Size |
|--------------|-----------------|-------------|
| 93 and 93,AD | 1               | 3/4"-14 NPT |
| 94           | 1               | 3/4"-14 NPT |
| 76           | 1               | 3/4"-14 NPT |
| 75           | 2               | 1/2"-14 NPT |

\*For assemblies with transmitter terminations refer to the appropriate transmitter instruction manual for additional instructions

|  |                         |                              |
|--|-------------------------|------------------------------|
| TITLE:<br>Installation Instruction ATEX / IECEx db, tb HLO6, XP01 & XP02 Assembly, T71, T72, T82, T142 | PART NUMBER:<br>H093701 | REVISION DATE:<br>04/20/2023 |
| SIZE:<br>A   | DRAWING NO:<br>H093701  | REV:<br>—                    |
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