

# TEMPERATURE

## 1000 OHM 375 PLATINUM RTD RANGEABLE TRANSMITTER T91H, T91L, T91U SERIES



### DESCRIPTION

The **Kele T91U 1000Ω RTD rangeable transmitter** is a range selectable, two-wire 4-20 mA RTD transmitter used with Type 91 1000Ω platinum RTD sensors. The transmitter is available in six standard ranges, or it can be set for any range between -30° to 280°F (-34° to 138°C) with a minimum span of 40°F (22°C).

To adjust the **T91U**, set the DIP switches to match the desired range, and use the zero and span pots to fine tune. A high accuracy digital ohmmeter and decade box are required.

The **T91U** has a special 20 mA loop calibration test signal to provide easy system verification. Simply move the bottle plug jumper from norm to 20, and the transmitter will output a constant 20 mA. The loop-up LED provides power indication for the 4-20 mA output.

The **T91H** and **T91L** are specialty units for very high temperature and very low temperatures respectively. Both units are rangeable within their specialty limits.



T91U

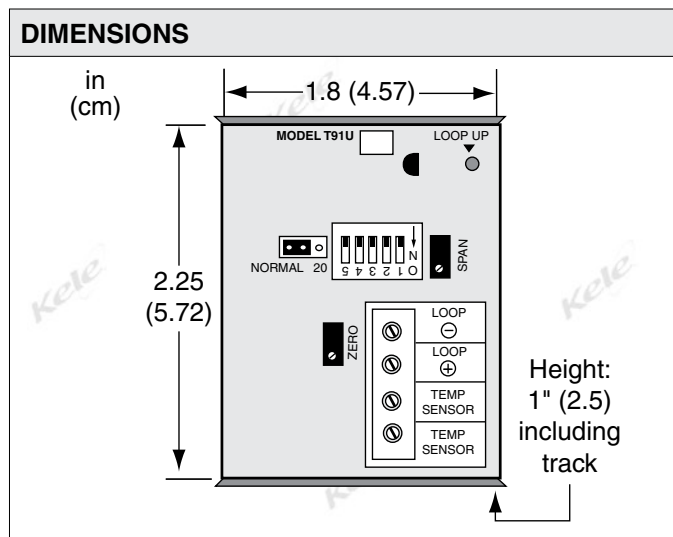


T91U-13-WE-XTD



### FEATURES

- **DIP switch rangeable**
- **Loop-calibration test signal**
- **Low cost**
- **Snap-track mounting**
- **Loop-powered LED indication**
- **Fits into card slot of ST-U91 housing**
- **Very high-range and low-range models available CE approved (commercial and industrial)**
- **Conformal coated**



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### SPECIFICATIONS

<b>Supply Voltage</b>	10.5-45 VDC
<b>Accuracy</b>	0.1°F or 0.2% of span
<b>Signal Output</b>	4-20 mA @ 675Ω, two wire loop-powered, except display @ 375Ω
<b>Sensor Element</b>	1000Ω platinum TCR 0.00375 Ω/Ω/°C RTD
<b>Rangeability</b>	
<b>T91U</b>	
<b>Zero</b>	-30° to 210°F (-34° to 98.9°C)
<b>Minimum Span</b>	40°F (22°C)
<b>Usable range</b>	-30° to 250°F (-34.4° to 121.1°C)
<b>T91H</b>	
<b>Zero</b>	200° to 960°F (93° to 515°C)
<b>Minimum Span</b>	40°F (4.4°C)
<b>Usable range</b>	200° to 1000°F (93.3° to 573.8°C)

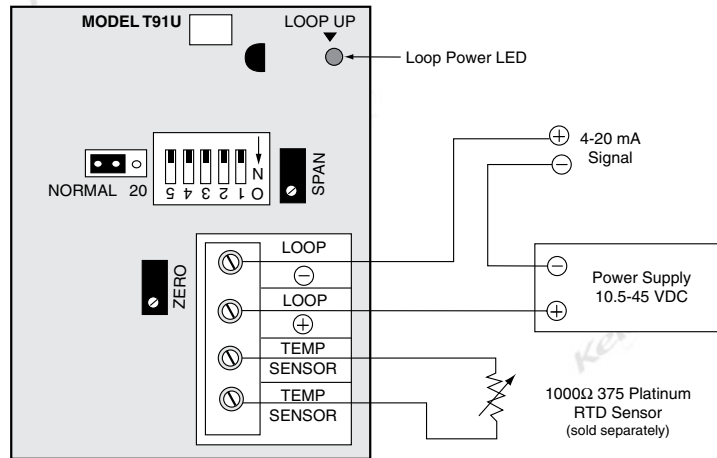
<b>T91L</b>	
<b>Zero</b>	-300° to -8°F (-184° to -22°C)
<b>Minimum Span</b>	40°F (4.4°C)
<b>Usable range</b>	-300° to 32°F (-184.4° to 0°C)
<b>Display</b>	Display option (XTD) 3-1/2 digit LCD, NEMA 4 (IP65)
<b>Operating Temperature</b>	0° to 140°F (-18° to 60°F)
<b>Operating Humidity</b>	0% to 95% non-condensing
<b>Dimensions</b>	1"H x 1.8"W x 2.25"L (2.5 x 4.6 x 5.7 cm)
<b>Weight</b>	0.16 lb (0.07 Kg) w/o options
<b>Approvals</b>	CE (EN50081-1, EN50082-1) Optional CE (EN50081-2, EN50082-2) Industrial RF/EM Hardened
<b>Warranty</b>	1 year



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### WIRING



### ORDERING INFORMATION

MODEL	DESCRIPTION
T91U	4-20 mA RTD transmitter standard rangeability
T91H	4-20 mA RTD transmitter high temperature rangeability (XR range only)
T91L	4-20 mA RTD transmitter low temperature rangeability (XR range only)
<b>CE CERTIFICATION</b>	
-	Commercial CE (EN50081-1 and EN50082-1)
EMC	Industrial CE, RF/EM hardened (EN50081-2 and EN50082-2)(Add <b>-S</b> to end of model number)
<b>RANGE</b>	
2	-20° to 140°F (-29° to 60°C) (T91U only)
3	0° to 100°F (-18° to 38°C) (T91U only)
4	30° to 240°F (-1° to 116°C) (T91U only)
12	-22° to 113°F (-30° to 45°C) (T91U only)
13	32° to 212°F (0° to 100°C) (T91U only)
14	32° to 122°F (0° to 50°C) (T91U only)
XR†	Special Range (See previous page for rangeability limits)
<b>SENSOR TYPE</b>	
-	Transmitter only
D	ST-D91-XW duct sensor*
O	ST-O91 outside air sensor*
W	ST-W91-XW immersion sensor* with brass well
WE	ST-W91-E-XW immersion sensor* without well
WS	ST-W91-S-XW immersion sensor* with stainless steel well
AV	ST-AV91H averaging sensor*
XTD	Digital display option for (D) duct or (W) immersion sensors
XWM	Single gang weather resistant box (Mounted without sensor)

T91U - [ ] - 2 - D

**Example:** T91U-2-D Transmitter with range of -20° to 140°F (-29° to 60°C) mounted and wired in duct sensor enclosure

† Indicate at time of order

\* Includes sensor mounted and wired. Check temperature limits in the catalog for each probe.

### RELATED PRODUCTS

AS2PW055P000XX1	Low temperature probe, limited to -50°F (-46°C)
DCP-1.5-W	Power supply, 24 VAC IN to 24 VDC OUT
DCPA-1.2	Power supply, 120 VAC IN to 24 VAC/24 VDC OUT
S241HC	High temperature probe, limited to 932°F (500°C)