

# TU3105



## Temperature transmitter

TU-025CLEM14-A-ZVG/US



### Product characteristics

|                              |                                           |              |
|------------------------------|-------------------------------------------|--------------|
| Number of inputs and outputs | Number of analog outputs: 1               |              |
| Measuring range              | -50...150 °C                              | -58...302 °F |
| Process connection           | threaded connection G 1/4 external thread |              |
| Installation length EL [mm]  | 25                                        |              |

### Application

|                       |                                         |  |
|-----------------------|-----------------------------------------|--|
| Measuring element     | 1 x Pt 1000; (to DIN EN 60751, class A) |  |
| Media                 | liquids and gases                       |  |
| Pressure rating [bar] | 400                                     |  |

### Electrical data

|                             |                                              |  |
|-----------------------------|----------------------------------------------|--|
| Operating voltage [V]       | 8...32 DC; (cULus - Class 2 source required) |  |
| Current consumption [mA]    | < 30                                         |  |
| Protection class            | III                                          |  |
| Reverse polarity protection | yes                                          |  |

### Inputs / outputs

|                              |                             |  |
|------------------------------|-----------------------------|--|
| Number of inputs and outputs | Number of analog outputs: 1 |  |
|------------------------------|-----------------------------|--|

### Outputs

|                           |               |  |
|---------------------------|---------------|--|
| Total number of outputs   | 1             |  |
| Output signal             | analog signal |  |
| Number of analog outputs  | 1             |  |
| Analog voltage output [V] | 0.5...4.5     |  |
| Min. load resistance [Ω]  | 2000          |  |
| Short-circuit protection  | yes           |  |
| Overload protection       | yes           |  |

### Measuring/setting range

|                                 |              |              |
|---------------------------------|--------------|--------------|
| Probe length L [mm]             | 13           |              |
| Measuring range                 | -50...150 °C | -58...302 °F |
| Resolution                      |              |              |
| Resolution of analog output [K] | 0.1          |              |

### Accuracy / deviations

|                             |                      |  |
|-----------------------------|----------------------|--|
| Precision analog output [K] | ± 0,3 + (± 0,1 % MS) |  |
|-----------------------------|----------------------|--|

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|                                                   |                                                                                               |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Temperature coefficient<br>[% of the span / 10 K] | 0,1; (In case of deviation from the reference condition $25 \pm 5 \text{ }^{\circ}\text{C}$ ) |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------|

### Reaction times

|                                |                                    |
|--------------------------------|------------------------------------|
| Dynamic response T05 / T09 [s] | 1 / 3; (according to DIN EN 60751) |
|--------------------------------|------------------------------------|

### Operating conditions

|                          |               |
|--------------------------|---------------|
| Ambient temperature [°C] | -40...100     |
| Storage temperature [°C] | -40...100     |
| Protection               | IP 68; IP 69K |

### Tests / approvals

|                      |                    |                     |
|----------------------|--------------------|---------------------|
| EMC                  | DIN EN 61000-6-2   |                     |
|                      | DIN EN 61000-6-3   |                     |
| Shock resistance     | DIN EN 60068-2-27  | 50 g (11 ms)        |
| Vibration resistance | DIN EN 60068-2-6   | 20 g (10...2000 Hz) |
| MTTF [years]         |                    | 849                 |
| UL approval          | UL approval number | K008                |

### Mechanical data

|                             |                                           |
|-----------------------------|-------------------------------------------|
| Weight [g]                  | 89.5                                      |
| Housing                     | tubular                                   |
| Dimensions [mm]             | Ø 18.8 / L = 80.3                         |
| Material                    | stainless steel (1.4404 / 316L); PEI; FKM |
| Materials (wetted parts)    | stainless steel (1.4404 / 316L); FKM      |
| Process connection          | threaded connection G 1/4 external thread |
| Probe diameter [mm]         | 6                                         |
| Installation length EL [mm] | 25                                        |

### Remarks

|               |                                                                                                                                                                                                                                 |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Remarks       | The values for accuracy apply to flowing water.<br>referring to UL: for use on a low voltage circuit with overcurrent protection<br>in accordance with UL873 tab. 28.1 or $I_{max} = 100/U_b$ ( $U_b$ = voltage of the circuit) |
| Pack quantity | 1 pcs.                                                                                                                                                                                                                          |

### Electrical connection

Connector: 1 x M12; coding: A



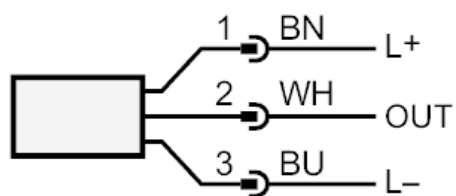
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### Connection



OUT: analog output  
Colors to DIN EN 60947-5-2