



# CERTIFICATE

## Environmental Testing

According to EN 50155:2017

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**Applicants name** JUMO GmbH & Co. KG  
**Address** Moritz-Juchheim-Straße 1, 36039 Fulda, Germany

**Manufacturer** JUMO GmbH & Co. KG  
**Address** Moritz-Juchheim-Straße 1, 36039 Fulda, Germany

**Test Laboratory** JUMO TestLab – Prüflabor  
 Moritz-Juchheim-Straße 1, 36039 Fulda, Germany

**Product description** Temperature transmitter with output signal 4...20 mA  
**Trademark** Type 707030/881-003-005/000,950  
**Model and/or type list** JUMO  
 Railway application

**Applied tests to JUMO dTRANS T03J (Type 707030 with extra code 950)**

Test	Standard	Result
1 Damp heat cyclic 10 °C / 85 °C, 95 % r.H., 10 cycles a 24h	EN 60068-2-30:2005	Passed
2 Dry heat 85 °C, 23h	EN 60068-2-2:2007	Passed
3 Cold -50 °C, 168h	EN 60068-2-1:2007	Passed

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Test	Standard	Result
<b>4</b> EMC	EN 50121-3-2:2016	
Electrical fast transient burst +/- 4 KV, 5/50 ns, 5 kHz	EN 61000-4-4:2012	Passed
RF conducted disturbances 10 V RMS, 0.15 to 80 MHz, 80 % AM 1 kHz	EN 61000-4-6:2014	Passed
Electrostatic discharge +/- 6 KV contact, +/- 8 KV air	EN 61000-4-2:2009	Passed
RF radiated disturbances 20 V/m, 80 to 1000 MHz, 80 % AM 1 kHz 10 V/m, 1 to 2.7 GHz, 80 % AM 1 kHz 3 V/m, 5.1 to 6 GHz, 80 % AM 1 kHz	EN 61000-4-3:2006 +A1:2008+A2:2010	Passed
RF emissions 30 to 230 MHz; 40 dB (µV/m) 230 MHz to 1 GHz; 47 dB (µV/m)	EN 55011:2016 +A1:2017	Passed
<b>SURGE</b> +/- 2 KV (42 ohm), line to earth +/- 1 KV (42 ohm), line to line	EN 61000-4-5:2014 +A1:2017	Passed
<b>5</b> Dielectric test AC 750 V / 50 Hz / 1 minute	-	Passed
<b>6</b> Vibration and shock test	EN 61373:2010	
Half sine pulse Acceleration 30 m/s <sup>2</sup> , 24 ms, 6 shocks (3 each positive and negative in the corresponding direction)	EN 61373:2010 Cat. 1B	Passed
Simulated lifetime test RMS acceleration 5.72 m/s <sup>2</sup> , frequency range 5 Hz ≤ f ≤ 150 Hz, 5 hours per orientation	EN 61373:2010 Cat. 1B	Passed
Broadband noise RMS acceleration 1.0 m/s <sup>2</sup> , frequency range 5 Hz ≤ f ≤ 150 Hz, approx. 10 minutes per orientation	EN 61373:2010 Cat. 1B	Passed

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Test	Standard	Result
<b>7</b> Variations of voltage supply Un = 24 V DC Minimum voltage = 0.7*Un Rated voltage = 1.15*Un Maximum voltage = 1.25*Un Additional: Un = 30 V DC Maximum voltage = 1.4*Un = 42 V	EN 50155:2017	Passed
<b>8</b> Interruptions of voltage supply Interruptions = 10 ms Class S2	EN 50155:2017	Passed

**JUMO GmbH & Co. KG**  
Moritz-Juchheim-Straße 1, Fulda, Germany

April 15, 2020

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PM Strategisch Ltg.