



# Kraus Messtechnik GmbH

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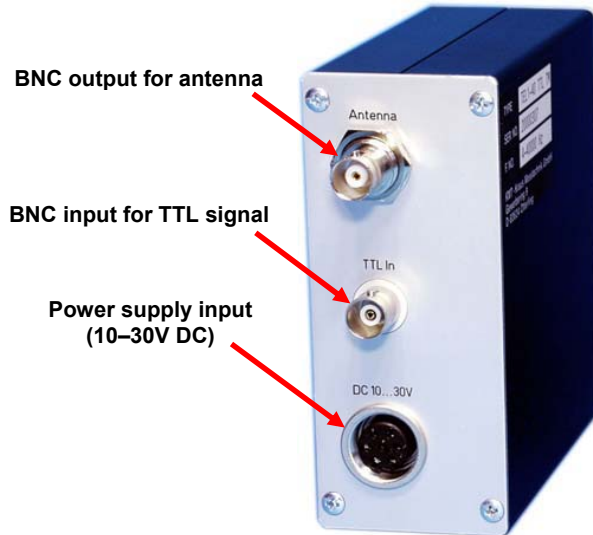
## TEL1-40kTTL

Telemetry transmission of TTL pulses in the range from 40Hz to 40kHz  
Range 300-500m

### Transmitter



Front side view



Rear side view



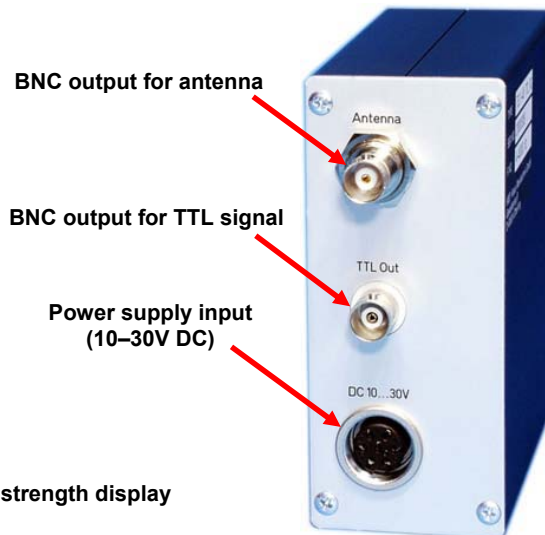
0dB

Antenna

### Receiver



Front side view



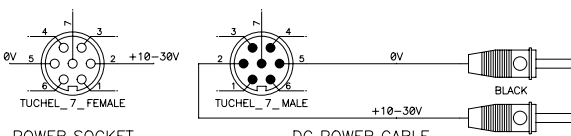
Rear side view



+4dB

Antenna

## Specifications

<p><b>Transmitter</b></p> <p>Power supply voltage: 10 - 30V DC          Power consumption: 0.5W          Input signal level: TTL          Tolerated duty cycle: 20-80% (will only transmitted up to 1kHz – then moved to 50% on receiver side)</p> <p>Connector type: BNC          Weight: 435g          Dimensions: 105 x 105 x 45 (without connectors)</p>	<p><b>Receiver</b></p> <p>Power supply voltage: 10 - 30V DC          Power consumption: 1.35W          Output signal level: TTL (0V, 5V)          Output impedance: 2kΩ          Connector type: BNC          Weight: 490g          Dimensions: 105 x 105 x 45 (without connectors)</p>																										
<p><b>Transmitter antenna</b></p> <p>Cable: RG 058-PE (length 4m)          Gain: 0dB (rel. to λ/4 antenna)          Frequency range: 410-470MHz          Mounting: Magnetic socket (∅73mm, adhesive force 100N, min. area 0.5m<sup>2</sup>)          Length: 180mm          Max. power: 50W          Connector type: BNC          Weight: 300g (without cable)</p>	<p><b>Receiver antenna</b></p> <p>Cable: RG 058-PE (length 4m)          Gain: +4dB (rel. to λ/2 antenna)          Frequency range: 410-470MHz          Mounting: Magnetic socket (∅73mm, adhesive force 100N, min. area 0.5m<sup>2</sup>)          Length: 400mm          Max. power: 50W          Connector type: BNC          Weight: 600g (without cable)</p>																										
<p><b>Transmission</b></p> <p>Transmission range: up to 500m (line-of-sight connection)          Transmission power: 10mW (with European license)          Transmission delay: 35μs (constant)          Carrier frequencies: 433.3, 433.7, 434.1 or 434.5 (simultaneous operation of up to 4 systems possible)</p> <p>Accuracy for interference-free connection:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th rowspan="2">Frequency [Hz]</th> <th colspan="2">Max. rel. frequency error for one period [%]</th> </tr> <tr> <th>Duty cycle 50%</th> <th>Duty cycle 20%</th> </tr> </thead> <tbody> <tr><td>40</td><td>0.005</td><td>0.175</td></tr> <tr><td>100</td><td>0.075</td><td>0.175</td></tr> <tr><td>1000</td><td>0.10</td><td>0.175</td></tr> <tr><td>10000</td><td>0.25</td><td>0.50</td></tr> <tr><td>20000</td><td>0.50</td><td>0.85</td></tr> <tr><td>30000</td><td>1.25</td><td>1.75</td></tr> <tr><td>40000</td><td>1.75</td><td>3.75</td></tr> </tbody> </table>	Frequency [Hz]	Max. rel. frequency error for one period [%]		Duty cycle 50%	Duty cycle 20%	40	0.005	0.175	100	0.075	0.175	1000	0.10	0.175	10000	0.25	0.50	20000	0.50	0.85	30000	1.25	1.75	40000	1.75	3.75	<p><b>Environmental</b></p> <p>Operating temperature: 0 - 70°C          Storage temperature: -20 - 70°C          Humidity: 20 - 80% (non-condensing)          Vibration: 5g (Mil Standard 810C, Curve C)          Shock: 100g (in any direction)</p>
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Specifications are subject to change without notice!

### Note

Avoid any contact of the magnetic socket of the antennas with the transmitter or receiver, because the ferrite cores of the internal band filters will be premagnetized and change their center frequency. For transportation put every time an iron plate on the magnetic socket area to absorb the magnetic field strength.

