

MODULAR LIQUID COOLED SERIES

TX-MODULAR LIQUID COOLED

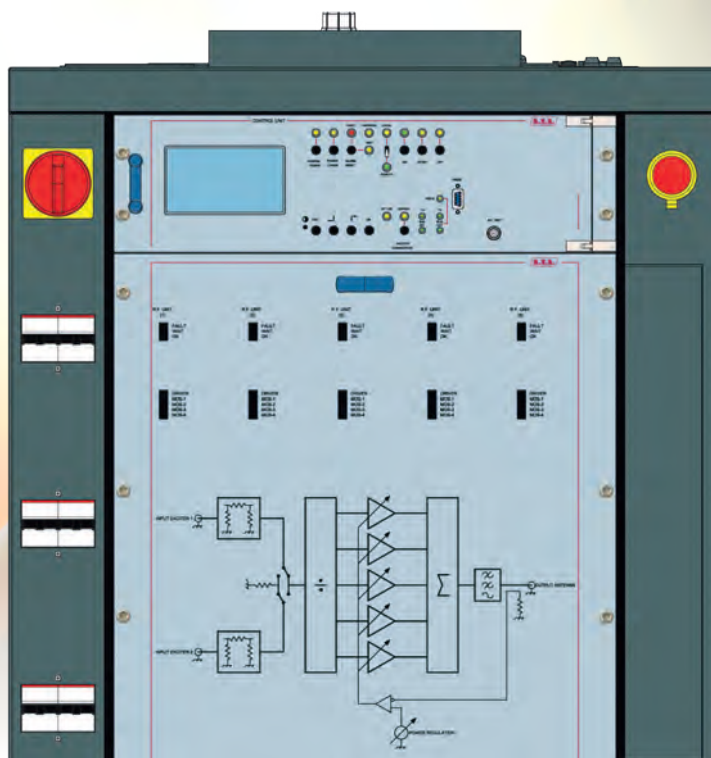
With the family of RVR's liquid transmitters based on the U-KLC series, is possible to realize compact equipments up to 50.000W, with high energy savings thanks to the use of high efficiency pumps and no forcing ventilation. The Cooling system is with low pressure circuit and double pump in automatic switching and diagnostics.

MODELS

TX10K-KLC
TX25K-KLC
TX50K-KLC

TX15K-KLC
TX30K-KLC

TX20K-KLC
TX40K-KLC



- **Scalable Solution from 10.000W to 50.000W.**
- **Best transmission quality, at the best market place.**
- **The most flexible combinations available for high reliability and redundancy.**
- **N+1 Configuration available for 24/7 business continuity.**
- **Tunable over the entire FM band 87.5 - 108 MHz, without tuning. Other bands on request.**
- **WEB, SNMP2, GSM, Serial remote controls (option).**
- **Full compliance with EC, FCC and CCIR standards.**

Amplifiers:

- **Single amplifier's units: from 10.000W to 50.000W.**
- **High-gain with very low input drive power requirement.**
- **Adjustable power output from 10 to 100 %.**
- **Exclusive "Long Life FET" technology for mosfet life extension.**

Exciters:

- **BLUES, TEX, PTX Series depending on client's requirements and budget.**
- **Single and Dual Drive with automatic or manual changeover.**
- **Fold-back control for effective "VSRW" protection.**
- **Including IAMLC: Intelligent Automatic Modulation Level Control.**



TX20K-KLC

20.000W Liquid cooled system.



TX40K-KLC

40.000W Liquid cooled system.



TX50K-KLC

50.000W Liquid cooled system.



TX20K-KLC

| Parameters | U.M. | Value | Notes |
|---|------|---|-------|
| GENERALS | | | |
| RF Output power | kW | 20 | |
| Frequency range | | 87.5 – 108 MHz programmable in 1,10 or 1000 KHz steps | |
| Frequency stability | ppm | ±1 | |
| Nominal frequency deviation | | ±75 KHz (peak) | |
| Maximum frequency deviation | | ±100 KHz (peak) | |
| Class of emission | | 180KF8E | |
| Stereo transmission | | Acc. To ITU-R / Rec. 450 (Pilot tone) | |
| RF output impedance | | 50 Ω, Unbalanced | |
| RF output connector | | 3-1/8" EIA Flange | |
| VSWR | | 1.41:1 with automatic fold-back at higher VSWR | |
| Frequency control | | Synthesizer μ processor control | |
| Modulation capability | | ±150 KHz | |
| Modulation mode | | Mono, Stereo, Multiplex, SCA, RDS, DARC, Aux | |
| Pre-emphasis Mode | | 0/50 (CCIR) μ s, 75 (FCC) μ s | |
| Asynchronous AM S/N Ratio | | ≥ 70 dB unweight, referred to 100% AM modulation at 400 Hz Pre-emphasis and without FM modulation | |
| Synchronous AM S/N Ratio | | ≥ 55 dB, reference to 100% AM modulation at 400 Hz, 50 μ s Pre-emphasis with FM modulation at 75 KHz of deviation | |
| Harmonics suppression and Spurious | dB | Typically 85 | |
| Overall efficiency | % | Typically 70/72 | |
| RF Harmonics | | Exceeds ETSI/CCIR/FCC requirements | |
| RF Spurious | | Exceeds ETSI/CCIR/FCC requirements | |
| Max Frequency Tolerance | | As per ITU (R) | |
| Analogue Input Level ±75 KHz (peak) deviation | | -6 dBu - +6 dBu at 1 KHz, 0 dBu | |
| Digital Input Level ±75 KHz (peak) deviation | | -20.0 dBFS – 0 dBFS (adjustable) at 1 KHz | |
| MONO OPERATION | | | |
| S/N ratio | | > 90dB (typical 92dB), 75KHz deviation (30 Hz to 15 KHz base band) rms, unweighted | |
| Total Harmonic Distortion + Noise | % | Better than 0.15 | |
| Inter Modulation Distortion SMPTE | | Better than 0.20% (60 Hz / 7 KHz, 4:1, +4 | |
| Frequency Response | | ±0.2dB (30Hz – 15KHz) | |
| Audio Input Impedance | | 600 Ω balanced or 10 kΩ unbalanced | |
| MPX OPERATION | | | |
| S/N ratio | | >90 dB, 75 KHz deviation rmd, unweight | |
| Total Harmonic Distortion + Noise | % | <0.02 | |
| Inter Modulation Distortion SMPTE | | <0.02% 60 hz / 7 khz, 4:1, +4dbu | |
| Frequency Response | | ±0.3dB, 30 Hz to 100 KHz | |
| Audio Input Impedance | | 0.03%, 2.96 KHz square wav end 14 KHz sine wave | |
| STEREO OPERATION | | | |
| Audio Input Impedance | | 2 K ohm or more | |
| Stereo FM S/N Ratio unweighted | | >84 dB, 30 Hz to 15 KHz deviation (L or R), rms | |
| Stereo Separation [(Sine wave)] | | ≥ 60 dB (30 Hz – 15 KHz) | |
| Linear Cross Talk | | Better than 50 dB, referred to 100% modulation (30 Hz to 15 KHz) | |
| Non-linear Cross Talk | | Better than 50 dB, referred to 100% modulation | |
| Total Harmonic Distortion + Noise (L or R) | | <0.02%, 60 Hz / 7 KHz, 4:1, +4dBu | |
| Inter Modulation Distortion SMPTE (L or R) | | ±0,2 dB, 30 Hz – 15 KHz | |
| Digital Input Impedance | | 110 Ω | |

All pictures are RVR's property and they are only indicative and not binding. The pictures can be modified without notice. These are general specifications. They show typical values and are subject to change without notice.



TX40K-KLC

| Parameters | U.M. | Value | Notes |
|---|------|---|-------|
| GENERALS | | | |
| RF Output power | kW | 40 | |
| Frequency range | | 87.5 – 108 MHz programmable in 1,10 or 1000 KHz steps | |
| Frequency stability | ppm | ±1 | |
| Nominal frequency deviation | | ±75 KHz (peak) | |
| Maximum frequency deviation | | ±100 KHz (peak) | |
| Class of emission | | 180KF8E | |
| Stereo transmission | | Acc. To ITU-R / Rec. 450 (Pilot tone) | |
| RF output impedance | | 50 Ω, Unbalanced | |
| RF output connector | | 4-1/2" EIA Flange | |
| VSWR | | 1.41:1 with automatic fold-back at higher VSWR | |
| Frequency control | | Synthesizer μ processor control | |
| Modulation capability | | ±150 KHz | |
| Modulation mode | | Mono, Stereo, Multiplex, SCA, RDS, DARC, Aux | |
| Pre-emphasis Mode | | 0/50 (CCIR) μ s, 75 (FCC) μ s | |
| Asynchronous AM S/N Ratio | | ≥ 70 dB unweight, referred to 100% AM modulation at 400 Hz Pre-emphasis and without FM modulation | |
| Synchronous AM S/N Ratio | | ≥ 55 dB, reference to 100% AM modulation at 400 Hz, 50 μ s Pre-emphasis with FM modulation at 75 KHz of deviation | |
| Harmonics suppression and Spurious | dB | Typically 85 | |
| Overall efficiency | % | Typically 70/72 | |
| RF Harmonics | | Exceeds ETSI/CCIR/FCC requirements | |
| RF Spurious | | Exceeds ETSI/CCIR/FCC requirements | |
| Max Frequency Tolerance | | As per ITU (R) | |
| Analogue Input Level ±75 KHz (peak) deviation | | -6 dBu - +6 dBu at 1 KHz, 0 dBu | |
| Digital Input Level ±75 KHz (peak) deviation | | -20.0 dBFS – 0 dBFS (adjustable) at 1 KHz | |
| MONO OPERATION | | | |
| S/N ratio | | > 90dB (typical 92dB), 75KHz deviation (30 Hz to 15 KHz base band) rms, unweighted | |
| Total Harmonic Distortion + Noise | % | Better than 0.15 | |
| Inter Modulation Distortion SMPTE | | Better than 0.20% (60 Hz / 7 KHz, 4:1, +4 | |
| Frequency Response | | ±0.2dB (30Hz – 15KHz) | |
| Audio Input Impedance | | 600 Ω balanced or 10 kΩ unbalanced | |
| MPX OPERATION | | | |
| S/N ratio | | >90 dB, 75 KHz deviation rmd, unweight | |
| Total Harmonic Distortion + Noise | % | <0.02% | |
| Inter Modulation Distortion SMPTE | | <0.02% 60 hz / 7 khz, 4:1, +4dbu | |
| Frequency Response | | ±0.3dB, 30 Hz to 100 KHz | |
| Audio Input Impedance | | 0.03%, 2.96 KHz square wav end 14 KHz sine wave | |
| STEREO OPERATION | | | |
| Audio Input Impedance | | 2 K ohm or more | |
| Stereo FM S/N Ratio unweighted | | >84 dB, 30 Hz to 15 KHz deviation (L or R), rms | |
| Stereo Separation [(Sine wave)] | | ≥ 60 dB (30 Hz – 15 KHz) | |
| Linear Cross Talk | | Better than 50 dB, referred to 100% modulation (30 Hz to 15 KHz) | |
| Non-linear Cross Talk | | Better than 50 dB, referred to 100% modulation | |
| Total Harmonic Distortion + Noise (L or R) | | <0.02% | |

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TX50K-KLC

| Parameters | U.M. | Value | Notes |
|---|------|---|-------|
| GENERALS | | | |
| RF Output power | kW | 40 | |
| Frequency range | | 87.5 – 108 MHz programmable in 1,10 or 1000 KHz steps | |
| Frequency stability | ppm | ±1 | |
| Nominal frequency deviation | | ±75 KHz (peak) | |
| Maximum frequency deviation | | ±100 KHz (peak) | |
| Class of emission | | 180KF8E | |
| Stereo transmission | | Acc. To ITU-R / Rec. 450 (Pilot tone) | |
| RF output impedance | | 50 Ω, Unbalanced | |
| RF output connector | | 4-1/2" EIA Flange | |
| VSWR | | 1.41:1 with automatic fold-back at higher VSWR | |
| Frequency control | | Synthesizer μ processor control | |
| Modulation capability | | ±150 KHz | |
| Modulation mode | | Mono, Stereo, Multiplex, SCA, RDS, DARC, Aux | |
| Pre-emphasis Mode | | 0/50 (CCIR) μ s, 75 (FCC) μ s | |
| Asynchronous AM S/N Ratio | | ≥ 70 dB unweight, referred to 100% AM modulation at 400 Hz Pre-emphasis and without FM modulation | |
| Synchronous AM S/N Ratio | | ≥ 55 dB, reference to 100% AM modulation at 400 Hz, 50 μ s Pre-emphasis with FM modulation at 75 KHz of deviation | |
| Harmonics suppression and Spurious | dB | Typically 85 | |
| Overall efficiency | % | Typically 70/72 | |
| RF Harmonics | | Exceeds ETSI/CCIR/FCC requirements | |
| RF Spurious | | Exceeds ETSI/CCIR/FCC requirements | |
| Max Frequency Tolerance | | As per ITU (R) | |
| Analogue Input Level ±75 KHz (peak) deviation | | -6 dBu - +6 dBu at 1 KHz, 0 dBu | |
| Digital Input Level ±75 KHz (peak) deviation | | -20.0 dBFS – 0 dBFS (adjustable) at 1 KHz | |
| MONO OPERATION | | | |
| S/N ratio | | > 90dB (typical 92dB), 75KHz deviation (30 Hz to 15 KHz base band) rms, unweighted | |
| Total Harmonic Distortion + Noise | % | Better than 0.15 | |
| Inter Modulation Distortion SMPTE | | Better than 0.20% (60 Hz / 7 KHz, 4:1, +4 | |
| Frequency Response | | ±0.2dB (30Hz – 15KHz) | |
| Audio Input Impedance | | 600 Ω balanced or 10 kΩ unbalanced | |
| MPX OPERATION | | | |
| S/N ratio | | >90 dB, 75 KHz deviation rmd, unweight | |
| Total Harmonic Distortion + Noise | % | <0.02% | |
| Inter Modulation Distortion SMPTE | | <0.02% 60 hz / 7 khz, 4:1, +4dbu | |
| Frequency Response | | ±0.3dB, 30 Hz to 100 KHz | |
| Audio Input Impedance | | 0.03%, 2.96 KHz square wav end 14 KHz sine wave | |
| STEREO OPERATION | | | |
| Audio Input Impedance | | 2 K ohm or more | |
| Stereo FM S/N Ratio unweighted | | >84 dB, 30 Hz to 15 KHz deviation (L or R), rms | |
| Stereo Separation [(Sine wave)] | | ≥ 60 dB (30 Hz – 15 KHz) | |
| Linear Cross Talk | | Better than 50 dB, referred to 100% modulation (30 Hz to 15 KHz) | |
| Non-linear Cross Talk | | Better than 50 dB, referred to 100% modulation | |
| Total Harmonic Distortion + Noise (L or R) | | <0.02% | |
| Frequency response (L or R) | | <0.02%, 60 hz / 7 khz, 4:1, +4 dbu | |
| Frequency response (L or R) | | ±0.2 dB, 30 Hz – 15 KHz | |
| Digital Input Impedance | | 110Ω | |

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R.V.R. Elettronica S.r.l.
Via del Fonditore, 2/2c
40138 Bologna Italy

Phone +39 0516010506
Fax +39 0516011104
sales@rvr.it - www.rvr.it



ORDERING INFORMATION

| Model | Description |
|-------------------------|--|
| TX10KSS/60D212J | Modular transmitter, 10kW (composed of HC-CCU + 2x PJ5000U-KLC + 2x PTX30DDS). |
| TX15KSS/60D213J | Modular transmitter, 15kW (composed of HC-CCU + 3x PJ5000U-KLC + 2x PTX30DDS). |
| TX20KSS/60D214J | Modular transmitter, 20kW (composed of HC-CCU + 4x PJ5000U-KLC + 2x PTX30DDS). |
| TX25KSS-60D215J | Modular transmitter, 25kW (composed of HC-CCU + 5x PJ5000U-KLC + 2x PTX30DDS). |
| TX30KSS-60D216J | Modular transmitter, 30kW (composed of HC-CCU + 6x PJ5000U-KLC + 2x PTX30DDS). |
| TX40KSS/60D218J | Modular transmitter, 40kW (composed of MAX-CCU + 2x HC-CCU + 8x PJ5000U-KLC + 2x PTX30DDS). |
| TX50KSS/60D2112J | Modular transmitter, 50kW (composed of MAX-CCU + 3x HC-CCU + 12x PJ5000U-KLC + 2x PTX30DDS). |
| TX10KSS/60S212J | Modular transmitter, 10kW (composed of HC-CCU + 2x PJ5000U-KLC + PTX30DDS). |
| TX15KSS/60S213J | Modular transmitter, 15kW (composed of HC-CCU + 3x PJ5000U-KLC + PTX30DDS). |
| TX20KSS/60S214J | Modular transmitter, 20kW (composed of HC-CCU + 4x PJ5000U-KLC + PTX30DDS). |
| TX25KSS-60S215J | Modular transmitter, 25kW (composed of HC-CCU + 5x PJ5000U-KLC + PTX30DDS). |
| TX30KSS-60S216J | Modular transmitter, 30kW (composed of HC-CCU + 6x PJ5000U-KLC + PTX30DDS). |
| TX40KSS/60S218J | Modular transmitter, 40kW (composed of MAX-CCU + 2x HC-CCU + 8x PJ5000U-KLC + PTX30DDS). |
| TX50KSS/60S2112J | Modular transmitter, 50kW (composed of MAX-CCU + 3x HC-CCU + 12x PJ5000U-KLC + PTX30DDS). |

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40138 Bologna - Italy
Phone +39 0516010506
sales@rvr.it

www.rvr.it