



## PRODUCT

The new excitors, Falcon series, are realized with technology ICEFET, that allows drastic decrease of the temperature to a sensitive reduction of the consumptions and this family is a system of total quality thanks to a diagnostic remote, fast and capillary assistance, low consumptions, duration in the time and it is easy to use.

Ultra-compact and ultra-light (only 4 kg). Aluminium chassis, in 1 rack unit only.

Universal 80-260 V multi-voltage power supply enables operation without preselect voltage. Pressure encoder provides great accessibility for user/device interaction, resulting in extreme of use. Configuration software offers a simple, intuitive interface.

The ALC (Automatic Level Control) and Foldback protection ensures enhanced business continuity under any operating conditions.

## COMPONENTS

All components of the series shared the same characteristics to the RF module, power supply, logics of control, systems of protection, derating, facility of installation and simplicity of setup.

## ADVANTAGES

The advantages of the module systems are as follows:

- All technological improvement on the basic product is directly transferred on the apparatuses of the series.
- Automatic diffusion of the knowledge and maintenance
- Interchangeability and independence of the each module base
- Common parts of exchange on the whole series

## POWER

The system of the power supply switching by PFC, high efficiency, logic proportional protection without interruption of the operation, predisposition for telemetry.

The new line of FM transmitters launched by Quark, "Simply Fet", are characterized of an important efficiency refinement; in fact, with regard to RFpart, it passes 83% and the entire performance of the transmitter is 76%.

These products also involves a low environmental impact and it is aimed at high energy saving.

For example, it is possible to liken the new 2 Kw "Simply Fet" to a classic valve with the same power, which medium efficiency is 50%.

## OPTIONALS

ASE/EBU: digital audio input (XLR)

TCP/IP: remote control

## TECHNICAL FEATURES

|                              |                                                          |
|------------------------------|----------------------------------------------------------|
| Frequency range              | 87.5 - 108 MHz                                           |
| Low-pass filter              | Band 87.5 MHz - 108 MHz                                  |
| Corrosion                    | All the mechanical parts are in aluminium                |
| Measure point                | Monitor RF                                               |
| Visualized parameters        | More than 50 visualized parameters on display LCD        |
| Setting parameters operation | From the frontal panel through encoders and LCD          |
| CPU                          | yes                                                      |
| Redundant power supply       | yes                                                      |
| Redundant fans               | yes                                                      |
| Transistors                  | ICEFET                                                   |
| Type of transistors          | @30W AFT05MP075NR1 - @300W MRF6VP6300 - @500W MRF6VP5600 |

## CONNECTORS

|                         |            |
|-------------------------|------------|
| Output RF connectors    | N          |
| Audio monitor           | BNC female |
| Audio input channel L/R | XLR female |
| Input connector MPX     | BNC female |
| Connector SCA           | BNC female |

## RF BLOCK

|                                       |                   |
|---------------------------------------|-------------------|
| General stability of the output power | +/-0,1 dB         |
| Output impedance                      | 50 ohm            |
| Armonich suppression                  | > 70 dB           |
| Spurie suppression                    | > 80 dB           |
| Input impedance                       | 50 ohm            |
| Gain                                  | 18 dB             |
| Threshold of ROS Software             | 11 % output power |
| Threshold of ROS fast hardware        | 11 %              |
| AM residual asincrona                 | 0,10%             |
| AM residual sincrona                  | 0,20%             |
| Efficiency                            | 78% tip.          |

## AUDIO TECH. FEATURES

|                                    |                                                                                        |
|------------------------------------|----------------------------------------------------------------------------------------|
| Modulation                         | FM, 75 KHz peak deviation                                                              |
| Step frequency                     | 10 / 100 KHz                                                                           |
| Frequency error                    | < 200 Hz                                                                               |
| Frequency deviation                | < 250 Hz in the temperature range < 100 Hz year                                        |
| Input audio/MPX level              | 3,5 up to +12.5 dBm @ +/- 75 KHz deviation                                             |
| Impedance audio/MPX input          | 10 Kohm / 600 Ohm balance and unbalance                                                |
| Common mode rejection              | >50 dB, >60 dB, typ. (20 / 15.000 Hz)                                                  |
| Input audio connector              | XLR Female                                                                             |
| Input level of the aux channel     | -12.5 / +3.5 dBm at +/- 7.5 KHz dev. -24 / -8 dBm at +/- 7.5 KHz dev.                  |
| Input impedance of aux channel     | 10 Kohm                                                                                |
| Input MPX and AUX connector        | BNC                                                                                    |
| Output MPX level                   | 0 / +10 dBm @ 75KHz dev.                                                               |
| Pre-enfasi setting                 | 0 / 50 / 75 uS +/- 2%                                                                  |
| S/N ratio Mono                     | < 78 dB, 86 typ. (30 - 20.000 Hz) < 75 dB, 81 typ. (CCIR)                              |
| S/N ratio Stereo                   | > 72 dB, 77 typ. (30 - 20.000 Hz) < 68 dB, 72 typ. (CCIR)                              |
| Modulation distortion              | < 0.05% 0.02% typ. @ 75 KHz dev. <0.02% 0.05% typ. @ 75 KHz dev. with limiter >150 KHz |
| Frequency band width audio channel | 20 Hz - 15 KHz +/- 0.1 dB                                                              |
| Out range audio attenuation        | > 50 dB @ F>= 19 KHz                                                                   |
| Limiter deviation                  | Setting from 0 and <+7 dB                                                              |
| Input MPX frequency band width     | 10 - 100 KHz +/- 0.2 dB                                                                |

## COOLING SYSTEM

|                                                         |            |
|---------------------------------------------------------|------------|
| Different temperature of the air in entrance / gone out | 15 °C      |
| Type of cooling                                         | Forced air |

## ENVIRONMENTAL CONDITIONS

|                           |                 |
|---------------------------|-----------------|
| Temperature (working)     | - 20° + 45 °C   |
| Temperature (not working) | - 20° - + 70 °C |
| Umidity (working)         | 95% a 40 °C     |
| Umidity (not working)     | 90% a 65 °C     |
| Altitude (working)        | > 4.600 meters  |
| Altitude (not working)    | > 15.000 meters |

