PROFLINE

SFY Digital Stereo Encoder + RDS Encoder
for professional radio broadcasters

Features:

- 32 bit digital signal processing technology
- Digital (AES/EBU) and analogue audio inputs
- Digital RDS encoder according to UECP V6.01 (including TCM & ODA support)
- Expandable with agile FM modulator
- RDS data from ancillary data according to German IRT format
- Integrated signal supervisor, alarming and logging functionality
- Advanced measurement of audio, MPX and RDS
- Front panel control and remote controllable over TCP/IP or RS485/232
- Complete digital solution in a compact 1U/19 inch housing

For over 25 years PROFline has been developing and providing a wide variety of broadcasting products for the professional broadcast market.

The PROFline SFY was based on most sophisticated 32 bit Digital Signal Processing technologies offering uncompromised digital processing of both digital/analogue audio and RDS data.

PROFlines advanced "Optimum MPX Processor" technology controls the MPX deviation and also automatically adjusts the MPX output power to the desired optimum. This combination of technology makes the PROFline SFY the perfect companion for professional broadcasters.

PROFline's long and extensive experience in broadcast and cable head-end networks was utilized for the evelopment of t he SFY and resulted in a full digital MPX generator, RDS encoder and MPX processor based on 32 bit DSP technology.

The basic SFY has an advanced MPX deviation limiter on board preventing over-deviation by external causes.

RDS

The basic SFY has a static RDS encoder onboard supporting PS name, DI (decoder information) and M/S (music/speech) fulfilling the basic needs for many CATV operators. The optional advanced RDS encoder has a full implementation of the UECP Version 6.01 protocol and is accessible both over serial RS-

232 port and front side keypad and display. The onboard memory preserves the RDS settings even after a signal and/or power loss.

Remote control

All settings of the PROFline SFY, including the advanced RDS settings are accessible over the front using the keypad and the display or optionally remotely controlled by TCP/IP. Please contact PROFline for detailed information on remote control.
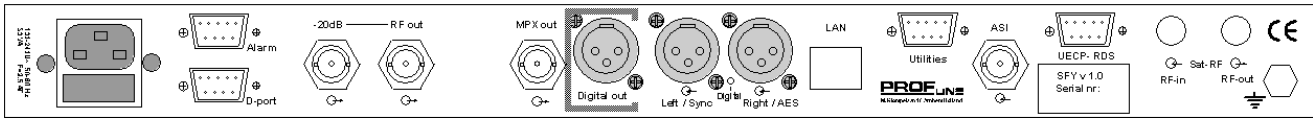
Specifications

Digital input
Digital input reference level	-8 dBFS (RMS)
Digital gain adjust	-20 to +12 dB in steps of 0.5 dB

Analogue input
Analogue audio input	XLR 600 Ohm balanced
Analogue audio output	sub-D9, 600 Ohm unbalanced
Audio frequency	30 Hz – 15 kHz, $\pm$ 0,25 dB
Analogue input reference level	6 dBu
Analogue gain adjust	-20 to +12 dB in steps of 0.5 dB

Digital MPX generator
L/R separation	>60 dB (typical >72 dB)
Pre-emphases	0-50-75uS (CCIR Rec.450-1)
38 kHz suppression	>75 dB (CCIR Rec.450-1)
Distortion	>74 dB (0.02%)
S/N	>80 dB (CCIR rRec.468-4 unw.)
Hum modulation	>80 dB
Audio deviation	Selectable to 40 to 75 kHz
Pilot deviation	1 to 15 kHz in 0,1 kHz steps *
Pilot frequency stability	100 ppm
Pilot phase	-10 to +10° in steps of 0,01°
Pilot 19 kHz deviation	1 to 15 kHz in 0,1 kHz steps*
MPX peak protection	40 – 50 kHz in o,1 kHz steps*
MPX-output level	-9 to +9 dBu in 0,5 dB steps
MPX output connector	BNC, 75 Ohm

Data, alarm & ancillary ports
Remote communication ports	RS485/sub-D9 connector male
Alarm connection 3 relays	Sub-D9 connector female
Connections encoder Sub D9	19 KHz/audio left/right
RDS input connector	RS 232 / 1K2 – 38K4 Baud

Option: RDS
RDS deviation	0,1 to 7,5 kHz in 0,1 steps*
RDS protocol	according to Cenelec 50067
Communications input	UECP V6.01 supported
ARI settings	traffic area/ traffic announcement
ARI deviation	1 to 15 kHz in 0,1 steps*

Option: IP Port
Port type	RJ45 LAN Ethernet
Data rate	TCP/IP 10/100 Mbps
Protocol	SNMP (traps)

Option: FM Modulator
Frequency output	87.5 – 108 MHz in 10 kHz steps
RF carrier stability	<1 KHz 0 - 50°
RF output level	100 to 120 dBuV in 0.5 dB steps
RF level stability	AGC controlled <0.5 dB/0 to 50°C
Spurious suppression	>75 dB, 10 to 1000 MHz typical >80 dB
RF output connectors	BNC, 75 Ohm
Return loss	>20 dB

Available SFY models
SFY	Digital stereo encoder, static RDS (PS name) & MPX processor
Option: IP	IP/Ethernet accessibility
Option: RDS	RDS endocer according to UECP V5.1 & ARI encoder
Option: FM modulator	FM modulator board agile output 87,5 – 108 MHz

*Units in kHz or dBr

General
Main power	100 to 240 VAC, 50/60 Hz Maximum 45 Watt
Power connection	IEC panel-mount plug filter with fuse 2.5 AT
Safety and EMC	in accordance with CE regulations
Operation and ambient temperature	5 to 45°C (storage -5 to 65°C)
Housing dimensions	19 inch x 1u x 300mm (depth)
Weight	5kg