



Time & Frequency Distribution

TFD-100 series

The TFD-100 series is a 1U, rack 19" mount, modular time and frequency distributor unit. It provides the precise distribution of any:

- frequency from 1PPS up to 10MHz
- time code signals IRIG, AFNOR, NASA
- decoded signals GNSS, DCF77, TDF, WWVB

... and many others

This including most popular standards:
1PPS, 10MHz, IRIG-B AM, IRIG-DCLS



Time code and frequency

- 1PPS, PP5S, PPM, PPQH, PPHH, PPH, PPD
- 10MHz, 5MHz, 2.048MHz, 1.544MHz
- IRIG-B and A/C/D/E/F/G/H AM&DCLS
- NASA 20/28/36, AFNOR, STANAG4430
- XR3/2137 25 1PPS 1-Second Time Code
- Bi-level 5-rate slow Code Symmetricom
- GNSS NMEA183 + 1PPS Code ELPROMA

... and custom design signals



Features

- 1 to 36* signal splitter
- Conversion to/from IEEE1344
- Clock recovery from IEEE1588 (LAN)
- Clock disciplined to GNSS
- TTL, RS422/RS485, Sine support
- High precision and low noise
- Modular construction
- 3 Year Warranty

* depends on number of output modules

The TFD-100 series is a 1U, rack mount, modular time and frequency distributor. It provides the precise distribution of any frequency from 1PPS up to 10MHz include most popular standards: 1PPS (TTL), IRIG-DCLS (TTL/RS-422), 10MHz (TTL and Sine).

You can order the following base modules that differ in power supply:

- TFD-101 – single 85-265VAC/100-370VDC power supply
- TFD-102 – dual, redundant 85-265VAC/100-370VDC power supplies
- TFD-110 – single 48V DC power supply
- TFD-120 – dual, redundant 48V DC power supplies
- TFD-111 – dual, redundant 85-265VAC/100-370VDC and 48VDC power supplies

Available input modules:

- TFM-1012 – two digital inputs (level TTL/50Ω) for 1PPS and 10MHz. Input sockets: BNC or SMA.
- TFM-1022 – two switched, analog 10MHz (min. 300mV p-p) inputs for frequency distribution. Input sockets: BNC or SMA.
- TFM-1032 – two switched, digital, differential (standard RS422/RS485@100Ω) inputs for IRIG-DCLS. Input sockets: Terminal Block (3.5 mm)
- TFM-1042 – two switched, digital fiber-optics inputs for 1PPS, IRIG-DCLS, 10MHz signals. Transmission over a distance up to 2.5 km. Input sockets: ST, SC or FC.
- TFM-2000 – GPS/GLONAS/Beidou disciplined TCXO precise time and frequency source. It provides 1PPS, 10MHz TTL signals and ToD (NMEA serial).
- TFM-2010 – GPS/GLONAS/Beidou network time server (NTP, PTP). Includes high quality OCXO 10MHz frequency source synchronized to GPS.
- TFM-2020 – PTP Slave, high precise time/frequency source module.

Available output modules:

- TFM-1114 – four digital outputs module (TTL @50Ω) for 1PPS, IRIG-DCLS, 10MHz. Output sockets: BNC or SMA
- TFM-1124 – four analog 10MHz sinus (3V p-p @ 50Ω) outputs module. Output sockets: BNC or SMA
- TFM-1134 – four digital (RS422/RS485 standard) outputs module for IRIG-DCLS. Output sockets: Terminal Block 3.5 mm
- TFM-1144 – four digital fiber-optics outputs module for 1PPS, IRIG-DCLS, 10MHz. Transmission over a distance up to 2.5 km. Output sockets: ST, SC or FC.

Technical data

Model	TFD-100, Modular Time & Frequency distributor
Inputs	1PPS (TTL), 10 MHz (Sin), 10MHz (TTL), IRIG-DCLS (TTL), IRIG-DCLS (RS422/RS485), FO fiber optic
Outputs	1PPS (TTL), 10 MHz (Sin), 10MHz (TTL), IRIG-DCLS (TTL), IRIG-DCLS (RS422/RS485), FO fiber optic
Frequency	0 up to 10 Mhz *
Input/Output impedance	50 Ω or 100 Ω *
Input/output connectors	BNC or SMA, Terminal Block 3.5 mm (depends on module version)
Rise time	2 - 20 ns*
Fall time	2 - 20 ns*
Ambient temperature	0°C to 50°C
Humidity	0-95% non-condensed
Power supply	Single or redundant, 85...264V AC, 100...370V DC or 48VDC (36-72VDC) or mixed
Dimensions	483 mm (W) x 45mm (H) x 330 mm (B) - 1U - 19 inch rack mount
Weight	3 - 3.5 kg (depends on number of modules)
Safety	IEC61010-1:2010, IEC61850
Warranty	Three-Year Warranty
Technical support	Elproma offers free lifetime technical support via email or phone.

*it depends on type of module