UTD-MC-157

- Optical converter dedicated for electrical to optical conversion of unbalanced electrical signal **IRIG DCLS**
- Signal distribution to eigth optical ports with ST/PC connectors
- 3U 19” rack mount chassis Up to 100kbit (100k PPS) rate of conversion
- Up to 100kbit (100k PPS) rate of conversion
- Multi-mode (820/850nm or 1310nm) high efficient and low delay transmitters
- Up to 2km link distance over OM2 or OM3 multimode fiber with **UTD-MC-57** receiver
- -40 to +70°C operating temperature,
- Port status LED signalization
- Wide range of power supply **80 – 350** ***V DC, 70 – 250 V AC***

Description of the device

Application

UTD-MC-157 optical distributor has been designed for conversion of unbalanced electrical signal **IRIG-B DCLS** to eigth optical interfaces. Optical interface is realized by built-in 820/850nm or optional 1310nm multi-mode optical transmitters with ST/PC connectors. Electrical TTL interface is realized by built-in BNC connector. The **UTD-MC-157** transmitter in pair with **UTD-MC-57** receiver devices are suitable to spread signals like IRIG DCLS, PPS over distances up to 2km with using multimode OM2 or OM3 multimode fiber optic.

The **UTD-MC-157** is supplied with direct current source, with rated voltage value within the range of 80 to 300V DC or from 70 – 250 V AC power supply unit. Device can be mounted directly in 3U , 19” rack compliant with IEC 60297-3-101 (Eurocard).

Environmental limits

UTD-MC-157 was designed to operate in temperature
range from -40 to 70° C.

Solid **IP-30** metal enclosures ensures stable operation in heavy environment.

Technical specifications

Transmission

- **Bit rate:** From 1PPS to 100k PPS (pulse per second)
- **Rise/Fall Time**: < 50ns,
- **Input Impedance:** Unbalanced – 600 Ohm
- **Output signal levels:** Low (0-0,8V), High (3-5V)
- **Delay:** <40ns,

Optical interface

- **Operating Wavelenghts:** 820, 850 or 1310nm
- **Minimum power level:** > -12dBm@50um
- **Fiber type: OM2/OM3:** 50 / 125um, 62,5 / 125um
- **Optical connectors:** ST/PC

Connectors

FIBRAIN Fiber Optic Solutions

- **Unbalanced signal connector:** BNC
- **Power supply connector:** Screw terminals

Others

- **Power supply range:** 80 – 350 V DC, 70 – 250 V AC
- **Power consumption:** < 6W
- **Mounting:** Eurocard 3U, 19” rack
- **Mechanical dimensions:** See pictures below
- **MTBF:** > 200 000 hours
- **Warranty:** 5 years

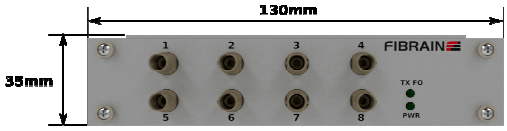
Environment

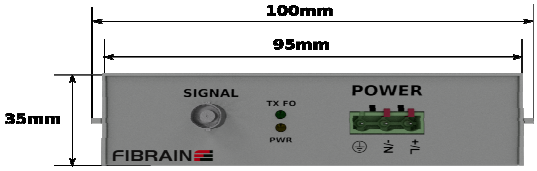
- **Operating temperature**: -30 to 70°C,
- **Operating humidity (non condensing)**: 5%-95%.

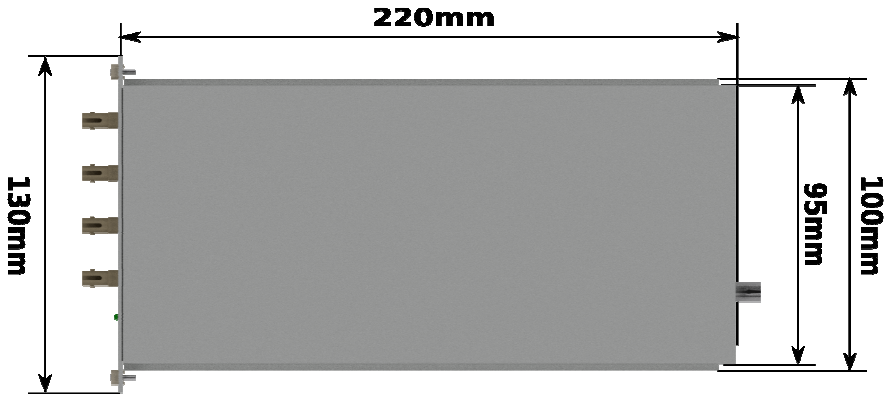
Supported standards, recommendations and directives EMC

- EN 55011:2012
- EN 55024:2011/A1:2015-08
- EN 60950-1:2007/A2:2014-05
- IEC 61000-4-2 Electromagnetic compatibility (EMC)- Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test
- IEC 61000-4-3 Electromagnetic compatibility (EMC)- Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test
- IEC 61000-4-4 Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test
- IEC 61000-4-5 Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test
- IEC 61000-4-6 Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields

Mechanical drawing

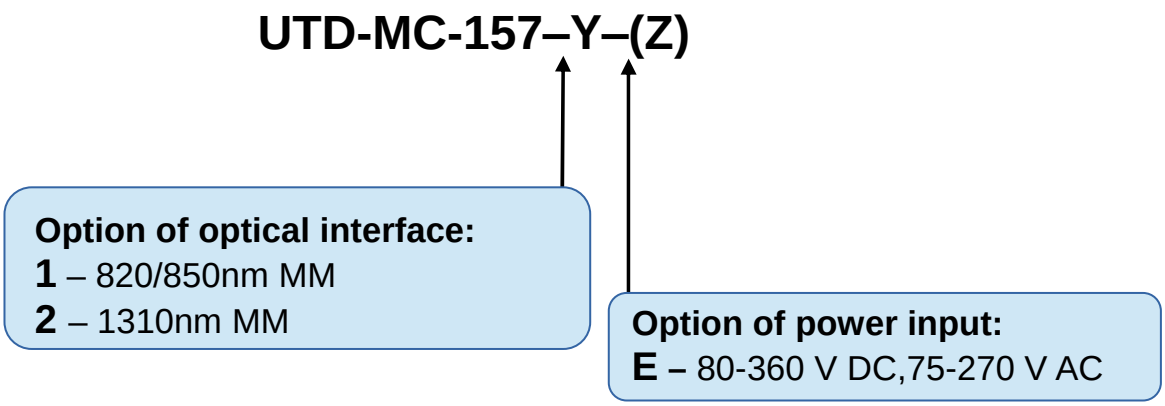






- list of supported standards may vary with the development of the device

Code


UTD-MC-157–Y–(Z)
Option of optical interface:
1 – 820/850nm MM
2 – 1310nm MM
Option of power input:
E – 80-360 V DC,75-270 V AC