

DATA SHEET

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Optical USB Extension Cable

- Point-to-point fibre cables -

Description

Opticis optical extension cables link the USB signal up to 130feet (40 meters) without any repeater. They provide the simplest way to link the USB device far from the host. Owing to the advanced VCSEL and PD, USB protocol could be maintained over such a long-distance connection with cost effective. The modules have a pair of an optical-to-electrical and an electrical-to-optical converters at each end, connected by fiber-optic cables.

Opticis optical extension cables provide A plug-in to A receptacle (M2-100). In addition, hybrid fiber cables running electrical wire along are used instead only optical cables. This offers convenient extension where there is no AC power supply, adjacent at the end of devices to be supplied to USB devices and Opticis downstream modules.

Features

- ◆ Extend the USB signal up to 130feet (40 meters)
- ◆ No software to install: Easy to use; plug and play.
- ◆ Compatible with USB 1.1(12Mbps, 1.5Mbps)
- ◆ Cables are light-weight, almost zero EMI/RFI emissions, no spark hazard and data secure
- ◆ Wide variety models: DC power supply along cable to Rx module and Integral hub for multiple ports to be designed in by customer's inquiry

Applications

- ◆ PC link of peripherals in factory & office
- ◆ USB camera interfaces for surveillance system
- ◆ USB interface of automatic motion controls
- ◆ PC interface of digital audio systems

Absolute Maximum Ratings

| Parameter | Symbol | Min. | Max. | Units |
|---------------------|--------|-------|-------|-------|
| Storage Temperature | Tstg | - 30 | + 70 | °C |
| Supply Voltage | VCC | - 0.3 | + 6.0 | V |
| Input Voltage | Vin | - 0.3 | VCC | V |
| Storage Humidity | RHsh | 10 | 85 | % |

Recommended Operating Conditions

| Parameter | Symbol | Min. | Typ. | Max. | Units | Note |
|--------------------------------|--------|------|------|------|-------|--------|
| Ambient Operating Temperature | TA | 0 | | +50 | °C | M2-1xx |
| | | 0 | | +50 | °C | M2-2xx |
| Power Supply Rejection (Note1) | PSR | | 50 | | mVpp | *1 |
| Supply Voltage | VCC | +4.5 | +5 | +5.5 | V | |
| Full Speed Mode Data Rate | FS | | 12 | | Mbps | |
| Low Speed Mode Data Rate | LS | | 1.5 | | Mbps | |

***Note1** Tested with a 50mVp-p sinusoidal signal in the frequency range from 500Hz to 500 MHz on the VCC supply with the recommended power supply filter in place. Typically less than a 0.25 dB change in sensitivity is experienced.

Power Adapter

1) M2-100 / 10S

| Parameter | Symbol | Min. | Typical | Max. | Units |
|----------------|--------|------|---------|------|-------|
| Power Input | Vccp | 100 | 110 | 120 | V |
| Power output | Vcc | 4.5 | 5 | 5.5 | V |
| Supply Current | ITcc | - | - | 2600 | mA |

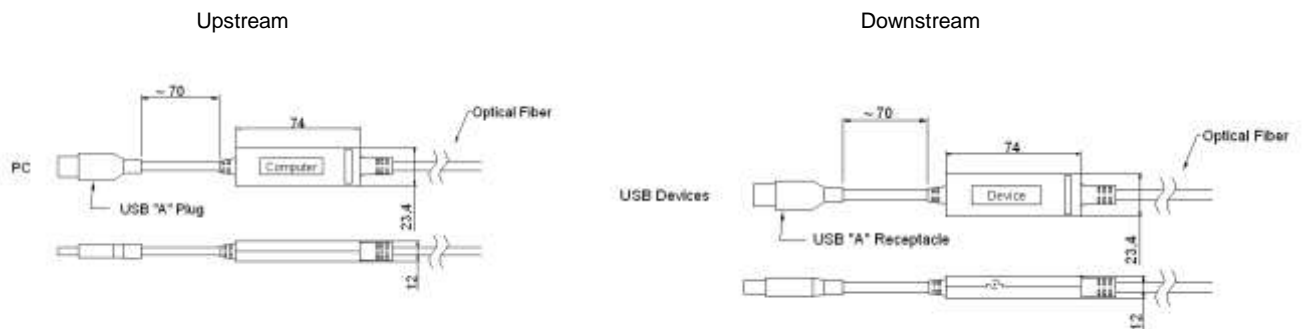
Specification of Fibres

| Parameter | M2-100/110 / 10S |
|--------------|----------------------|
| Fiber type | MMF 62.5um/ 4 fibres |
| Out Diameter | ∅ 5.7mm |
| Use | Indoor & Outdoor |
| Flame | Retardant |
| Jacketing | PVC |

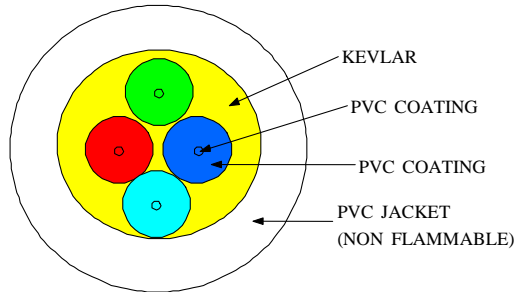
Drawing

Dimension [mm]

Model name: M2-100 / 10S (A-Ā)



Optical Cables for M2-100 / 10S



Ordering Information

Model Name: M2-XYZ-xx

X=1: use optical cable and plug DC power adapter in the downstream module.

Y=0: A plug-in in the upstream module to A receptacle in the downstream module

Y=1: A plug-in to B plug-in

Z=0: Window/Mac

Z=S: Solaris SUN

ZZ: the length of fiber cable in meter being available every 10 meters. For instance, 10 for 10 meters (32.8feet) and 30 for 30 meters (97.6feet)

Caution

Multiple Optical USB Extension Module connected in a row to a USB device may result in the device not working properly, user should verify that adding cables or devices do not affect the operation of the USB devices. Also note that only one hub can be connected with Optical USB Extension Module and more extension cable or repeater connection will make encounter improper work.