

## Bi-directional Optical to TTL Converter 850 nm



### Features

- Converts fiber-optic signals to TTL, and TTL to fiber-optic
- Selectable polarity
- Compact package
- Low latency and jitter
- Square wave transmission up to 50 MHz
- DC operation

### Applications

- EMI-immune trigger and logic level signal delivery in distributed systems
- Long-range digital signal transmission
- Frequency transmission
- High voltage isolation
- General-purpose optical-TTL signal conversion

### Specifications

Fiber-optic input	Broadcom HFBR-1415Z receiver (ST bayonet), 850 nm light (near infra-red)
TTL output	47 ohm output series impedance driving TTL levels into $\geq 5$ kohm.  Polarity switch-selectable for the output to be the same or inverted relative to the fiber-optic input.
TTL input	TTL levels, input impedance 1 Mohm .
Fiber optic output	Broadcom AFBR-2418Z 50 MBd transmitter (ST bayonet) , 850 nm light (near infra-red)  Polarity switch-selectable for output to be the same or inverted relative to the TTL input.
Propagation delay	$\leq 15$ nsec optical to TTL $\leq 15$ nsec TTL to optical
Propagation jitter	$< 1$ nsec
Frequency range	DC to 50 MHz (50% duty cycle square wave)
Power input	+24 +/- VDC, 100 mA max. Fused 1.1 A.



**Connectors**

Fiber optics	ST bayonet. Recommended fiber 200/230 step index multimode, HCS.
TTL	BNC jacks 50 ohm, two. Signal on core.
24 VDC input	2.1 mm threaded jack. Mate with Switchcraft S761K or equivalent. Pin: +24 VDC; Shell: 0V
Ground	Case grounded via mounting flange

**Controls and indicators**

Polarity switches	Independent toggle switches for optical to TTL, and TTL to optical.
Indicators	Power on green LED

**Case**

Type	Stainless steel sheet with mounting flange, IP43.
Weight	0.20 kg (0.44 lb)

**Environment**

Operating environment	10 to 35C, < 80% humidity, non-condensing, vibration < 0.2 g all axes, 1 to 100Hz
Storage environment	0 to 50C, < 80% humidity, non-condensing, vibration < 2g all axes, 1 to 100Hz

**Ordering information**

X22-850	Bi-directional Optical to TTL converter, ST bayonet fiber optic connectors
MTG-DIN35-7662	DIN rail mounting adaptor
PSU24-25-1	Universal 24 VDC power supply, medical rated, 25 W, C8 line inlet, Switchcraft S761 threaded jack outlet.

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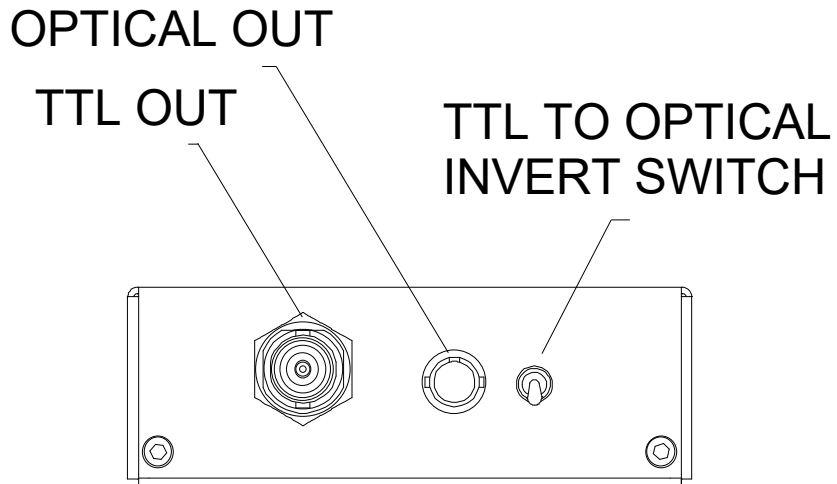
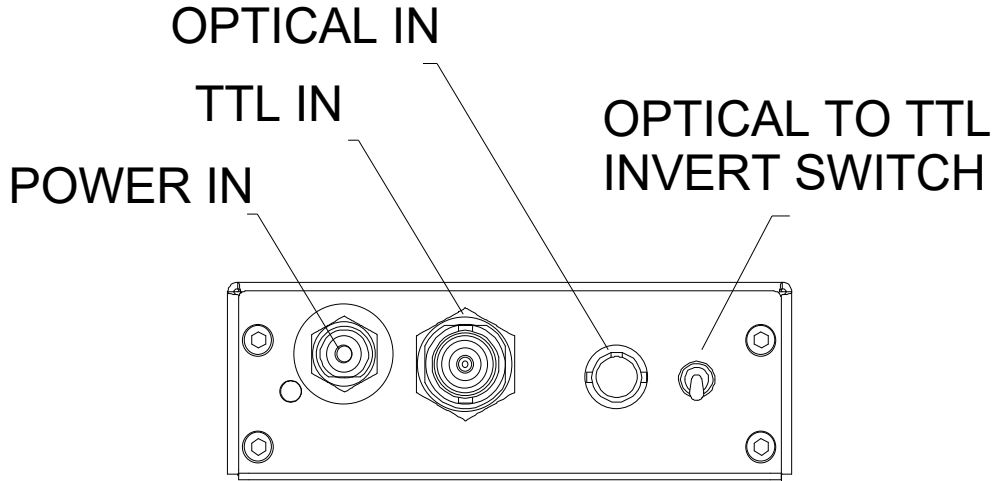
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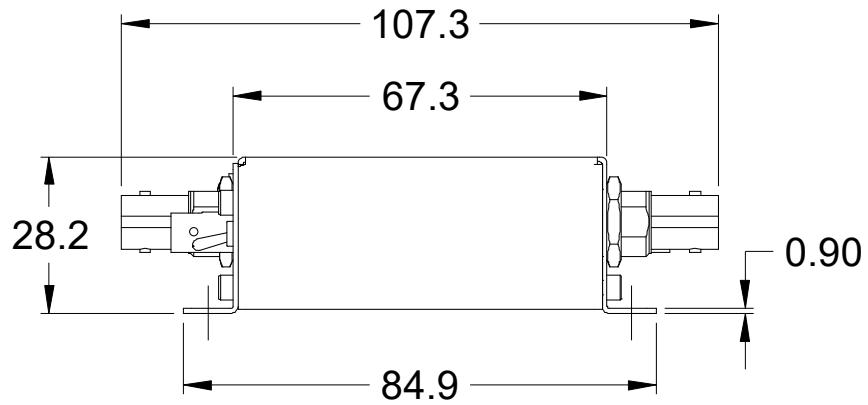
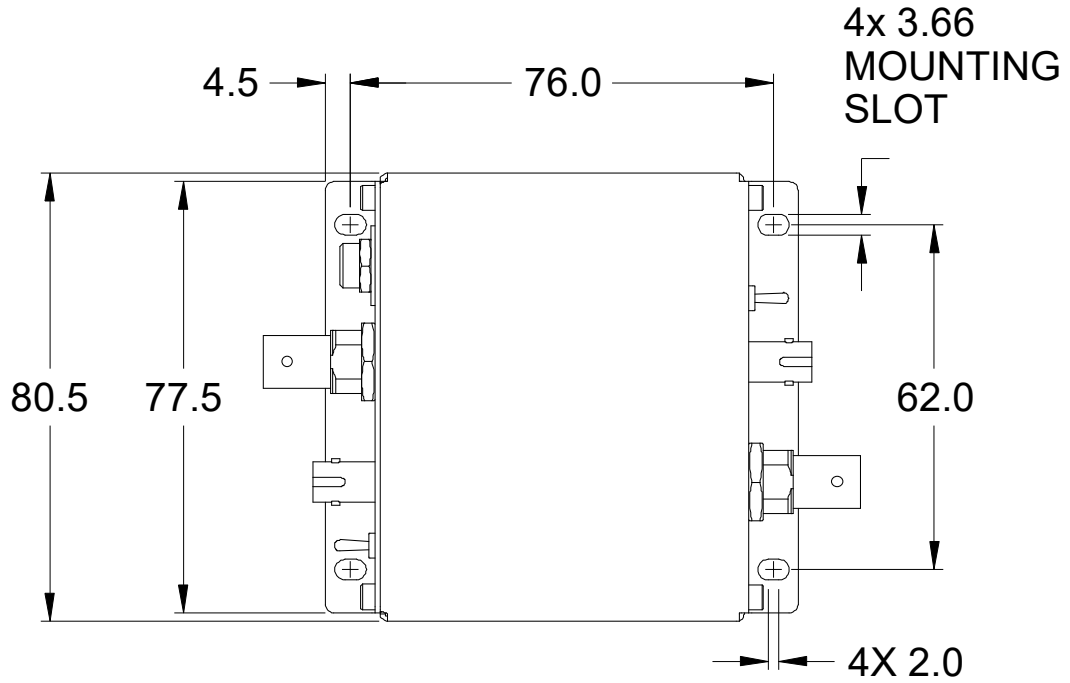
X22-ST



Dims mm



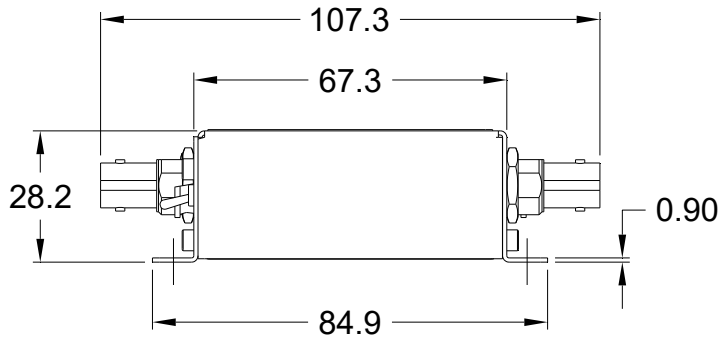
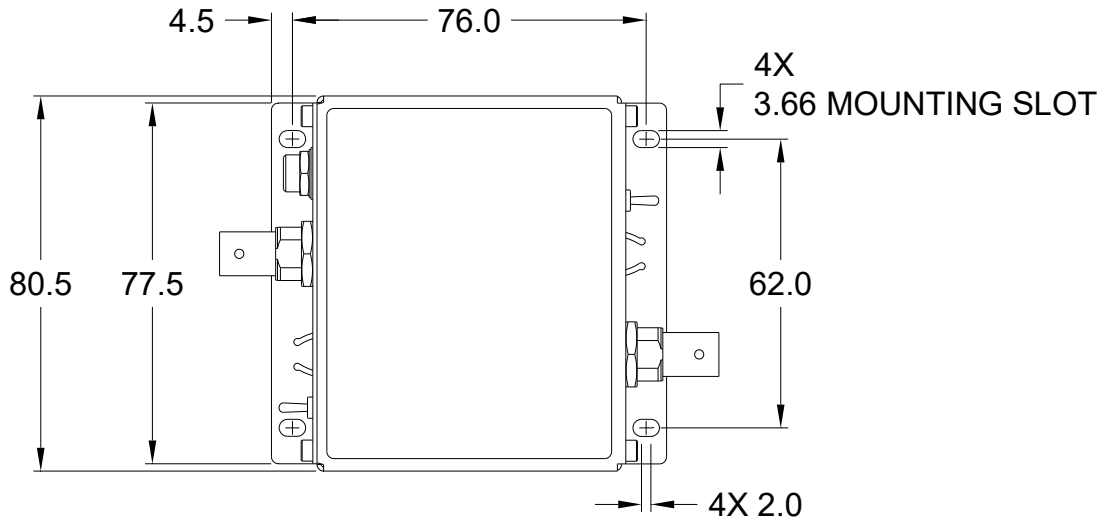
X22-ST



Dims mm



X22-VL



Dims mm

