

# AFL-160

## Contact Closure Fiber Optic Link



The AFL-160 was primarily designed for industrial and control applications. The product is sampling the 16 digital TTL inputs at a rate of 93 KHz. simultaneously and transmit all control signals to 6 digital outputs. Those outputs are available as 16 TTL compatible outputs (0-5V) or 16 relay dry contacts (Normally Open, Common and Normally closed per channel). A "LINK" led and relay contacts enable the user to know if the link was disconnected and take any precautions needed to halt the system. Input sampling and output update may be synchronised to external circuits or controllers for precise timing (using the "sample" outputs).

### FEATURES:

- \* Excellent Signal isolation
- \* Prevents ground loops and computer spikes
- \* Transfer digital control signals to a distance of up to 2 Km (50 Km with Single Mode fiber - optional).
- \* Input Signal: 0-5V @ DC-20 KHz.
- \* Very small size: TX: 75 x 60 x 23 mm, RX: 115 x 90 x 23 mm
- \* Low cost: From \$850 per pair (RX and Tx units, TTL I/O)
- \* Relay on-off timing: Hold - 2 mSec, Release - 0.9 mSec Avg.
- \* TTL output On/Off time: 50 nSec (Rise or fall time)
- \* TTL output update rate: 93 KHz.



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[www.lab-systems.com](http://www.lab-systems.com)

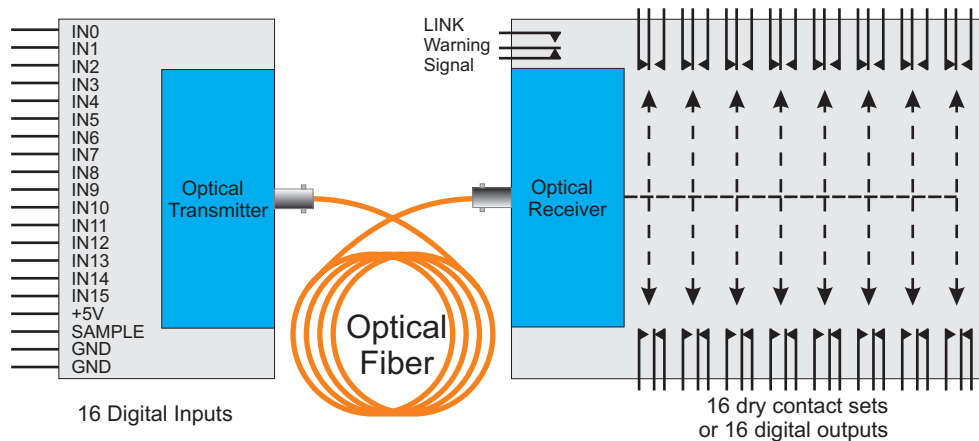
Head office: 33 Hayetzira st. Ramat-Gan 52521, ISRAEL, Tel:972-3-5756327/8 Fax:972-3-5756326

U.S.A office: 9 Blossom Drive, Kennett Square, PA19348, Tel:(302)478-2881 Fax:(610)444-5544

## Advantages:

- \* Low noise transfer of digital data, particularly beneficial in electrically noisy environments and for transmission over long distance.
- \* For medical testing: The patient is isolated from control system and any high voltage instrumentation.
- \* Resolve all "ground loops" problems when connecting between systems with different line inputs and grounding.
- \* Total protection of computer/controller from lightnings, high Voltage spikes. Used for controlling high voltage experiments.
- \* Replaces bulky multi-wire cables with compact fibewr optic cable - especially important when wiring existing ducts.

## AFL-160 Block Diagram



## TECHNICAL SPECIFICATIONS:

Input Range: 0-5V related to TX common GND.

Output contacts: Normally Open, Common, Normally Closed.

Each relay is isolated from the others.

Contacts rating: 30VDC@1A, 125VAC@0.5A, 60VDC@0.3A

Frequency Response: DC to 20 KHz.

Timing Jitter: 10.5 Microseconds maximum.

Supply Voltage: 9-14Vdc regulated, Floating.

Optical Fiber: Glass, 62.5/125um standard (up to 2 Km.) ST connector- Standard

Single mode fiber 9/125 micron, ST optional (up to 50 Km).

Voltage Isolation:

Input to Output - infinite isolation

Input/Output to mains: 800V Standard, 2500V optional.

Battery operated - Infinite isolation Voltage.

Isolation between different channel contacts: 800V

Slots for wall mounting.

