



## PULSE LINKS

# OPL-4B OPTICAL FIBER PULSE LINK

## DESCRIPTION

The OPL-4B optical fiber pulse link system is a transmitter/receiver pair designed to send four multiplexed channels of metering pulses over long distances. The OPL-4B can receive and transmit pulses over distances up to 9 miles using multi-mode fiber, or up to 68 miles using single-mode fiber. Transmission distances vary depending on the quality of the fiber.



The OPL-4B system makes it possible to quickly implement a 4-channel optical pulse link with minimal effort. The system includes the power supplies, wetting voltage, isolation relays, and terminal block connectors making it possible to have a multichannel optical link up and running in minutes. The OPL-4B utilizes standard "ST" twist lock connectors and makes connections reliable, quick and easy. The fiber optic cable is not included.

Each OPL system consists of an OPT-4B transmitter and an OPR-4B receiver. The transmitter and receiver are mounted on 5.5"x9.5" panels for assembly in another control enclosure or into an optional NEMA 4X raintight enclosure. The OPT-4B transmitter is designed to receive pulses from electric meters' KYZ pulse initiators. Pulses are conditioned, multiplexed, and sent by fiber to an OPR-4B receiver where the pulse information is validated, de-multiplexed, and implemented into the correct pulse state. Each input can be configured as either Form A (2-wire) or Form C (3-wire). The OPT-4B transmitter requires an OPR-4B receiver of the same fiber type.

Bright red and green LEDs monitor the input status to the OPT-4B transmitter and provide easy & immediate visual system checking without additional test equipment. An incorrect sequence of input pulses will not be recognized and only the first valid pulse of the sequence will be transmitted. While the OPT-4B transmitter is primarily designed for the transmission of metering pulses, it is capable of transmitting any desired Form A or C contact closures such as a relay, switch, breaker status, etc. to an OPR-4B receiver.

The OPR-4B receiver also includes bright red and green LEDs to monitor the KYZ output status. The OPR-4B features a solid-state Form C Contact relay (SPDT) for a no-bounce contact with internal transient suppression circuitry to eliminate contact wear and noise.

### MODEL OPTIONS

- OPT-4B-1 Transmitter, OPR-4B-1 Receiver, ordered separately, multi-mode fiber, 0-2.5 miles
- OPT-4B-2 Transmitter, OPR-4B-2 Receiver, ordered separately, multi-mode fiber, 1-9 miles
- OPT-4B-3 Transmitter, OPR-4B-3 Receiver, ordered separately, single-mode fiber, 0-14 miles
- OPT-4B-4 Transmitter, OPR-4B-4 Receiver, ordered separately, single-mode fiber, 10-50 miles
- OPT-4B-5 Transmitter, OPR-4B-5 Receiver, ordered separately, single-mode fiber, 10-68 miles

# OPL-4B

### FUNCTIONAL SUMMARY

	IN	OUT
#	4	4
TYPE	2 or 3 Wire	3 Wire
FORM	A or C	C



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## SPECIFICATIONS

### ELECTRICAL

Power Input (OPT and OPR):	120, 208-277 VAC. Burden: 4 VA
OPT-4B Signal Input:	Four Form A or C (KYZ & KY) or inputs from the sending device's dry-contact output (electric meters' KYZ outputs)
OPT-4B Output:	Optical Fiber Output to OPR-4B Receiver
OPR-4B Signal Input:	Optical Fiber Input from OPT-4B Transmitter
OPR-4B Output:	Four Form C (3-Wire) Solid State dry-contact outputs rated at 750mA at 250V, 100VA maximum, fused at .5A
Maximum Pulse Rate:	>10 Pulses per second (Form C), 5 pulses per second (Form A)
OPT-4B Input Debounce Time:	20ms
Sense Voltage:	+13VDC provided to the sending device(s)
Transmission Distance:	Approx. 3 to 9 miles using multi-mode fiber; 14 to 68 miles using single-mode fiber, depending on exact model

### MECHANICAL

Mounting:	Any position. Mounted on aluminum base plate with mounting tabs and keyhole mounting slots.
Size:	5.5" wide, 9.5" high, 3.5" deep
Weight:	2 pounds

### TEMPERATURE

Temperature Range:	-38° C to +70° C, -36.4° F to +158° F
Humidity:	0 to 98% non-condensing

### AVAILABLE OPTIONS

Input Voltages:	Contact Factory
Enclosure:	NEMA 4X raintight and dustproof enclosure available. 12.0" high, 10.0" wide, 6.0" deep

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