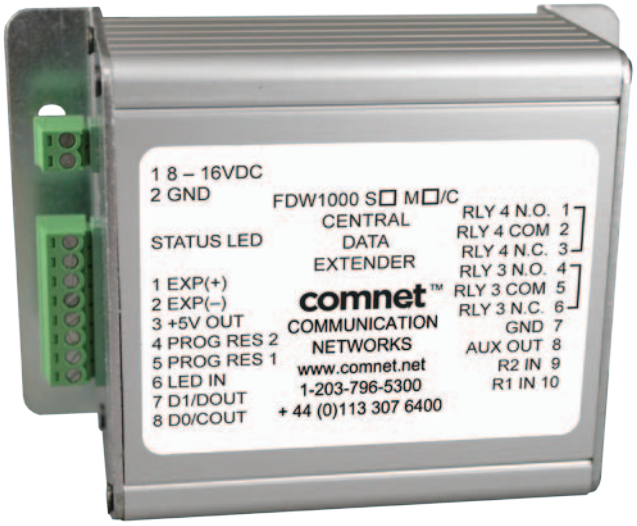
comnet
Communication Networks

Optical Wiegand, MagStripe & F/2F Data Extender

FDW1000(M,S) Series

APPEARANCE



DESCRIPTION

The ComNet™ FDW1000 data extenders provide optical connectivity between one card reader and its associated door or gate locking hardware, to any Wiegand, MagStripe, or F/2F-based control panel. The connection is completely supervised and secure, and a pair of these units will support a single locking gate or door and its associated reader using two multimode or singlemode optical fibers. When used with the ComNet EXP-100 Expansion Module, up to 7 gates or doors and readers may be integrated onto the same network. A service mode provides easy and fast set-up and configuration when the EXP-100 is used, and user selection of the reader formats via DIP-switch setting is included. An auxiliary I/O (input/output) interface is available for determining door, gate, and control panel status and signaling, and a relay interface provides the door strike or gate activation functions. These extenders are designed for long-term, reliable operation in harsh industrial environments, and a fault-specific LED indicator is provided for rapidly ascertaining the operating status of the extender and the link. Packaged in a rugged aluminum housing, the FDW1000 is designed for shelf or surface mounting. The FDW1000 series are supplied as a remote unit for door or gate locations, and a central unit for control panel installation. Plug-and-play design ensures ease of operation, and no optical adjustments are ever required.

APPLICATIONS

› Optical extension of any Wiegand, MagStripe, or F/2F-based control panel and door or gate

FEATURES

› Wiegand, MagStripe, or F/2F-based reader formats/control panel-compatible.

› Completely supervised and secure operation

› Service mode provides simple and fast system set-up and configuration

› DIP-switch selection of the desired reader format

› Auxiliary I/O (input/output) interface is available for ascertaining door, gate, and control panel status and signaling.

› Relay interface provides door strike or gate activation functions.

› LED fault-specific status indicator for rapidly determining the operating status of the extender and the link.

› Voltage transient/surge protected.

› Small size: Ideal for use in those installations where space is at a premium.

› Plug-and-play design ensures ease of operation, and no optical adjustments are ever required.

› Lifetime warranty

› Made in the U.S.A.

SPECIFICATIONS

Data

Interface:	Wiegand, Strobed (Clock and Data), and F/2F
	LED: 0 – 30 VDC

Relays

Maximum Switching	
Voltage & Current:	220 VDC 30W, 1A, resistive load only
	250 VAC, 37.5VA, 1A
Running Specification with Load:	30 VDC, 1A, resistive load only.
	Contact lifetime: 1x10e5 operations at 20° C
	operating temperature.
	125 VAC, 0.3A, resistive load only.
	Contact lifetime: 1x10e5 operations at 20° C
	operating temperature.

Fibers

Multimode:	Loss Budget	13 dB	850nm	62.5/125µm
	Loss Budget	9 dB	850nm	50/125µm
Single mode:	Loss Budget	20 dB	1300nm	9/125µm
Fibers:	2			
Optical Emitter:	Laser			
LED Status Indicator:	Fault-specific diagnostic LED for operating power and communications link status			

Connectors

Optical:	ST
Data, Power, and Relay Interface:	Removable Screw Terminal Blocks

Electrical & Mechanical

Power:	Input 8 – 16 VDC @ 300mA Max
	Output +5 VDC @ 100mA
Current Protection:	Automatic Resettable Solid-State Current Limiters
Circuit Board:	Meets IPC Standard
Size (L×W×H):	4.5 × 3.1 × 2.0 in.
	(11.4 × 7.8 × 5 cm)
Shipping Weight:	<2 lb./0.9 kg

Environmental

MTBF:	>100,000 hours
Operating Temp:	-40˚ C to +80˚ C
Storage Temp:	-40˚ C to +85˚ C
Relative Humidity:	0% to 95% (non-condensing)*

* May be extended to condensation conditions by adding suffix '/C' to model number for conformal coating.

AGENCY COMPLIANCE

PART 15 COMPLIANT E322911 N24621

MADE IN THE USA

ORDERING INFORMATION

Part Number	Description	Fibers Required	Fiber	Optical Power Budget	Maximum Distance‡
FDW1000M/C	Optical Wiegand Extender, Central Unit	2	Multimode‡ – 62.5/125µm	13 dB	3.5 km (2 miles)
FDW1000M/R	Optical Wiegand Extender, Remote Unit	2	Multimode‡ – 62.5/125µm	13 dB	3.5 km (2 miles)
FDW1000S/C	Optical Wiegand Extender, Central Unit	2	Single Mode‡ – 9/125µm	20 dB	40 km (24 miles)
FDW1000S/R	Optical Wiegand Extender, Remote Unit	2	Single Mode‡ – 9/125µm	20 dB	40 km (24 miles)
Accessories	9 Volt DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included)				
Options	Add '/C' for Conformally Coated Circuit Boards (Extra charge, consult factory)				

‡ Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels. Distance can also be limited by fiber bandwidth. For 50/125 Fiber subtract 4 dB from Optical Power Budget.

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