



General Description

The PDR Fiber Optic Adapter (coupler) is a precision passive component used to join two fiber optic connectors end-to-end, providing reliable optical continuity across a bulkhead, patch panel, or enclosure. A high-precision zirconia-ceramic or phosphor-bronze split alignment sleeve seated inside the housing aligns the mating ferrules for consistently low insertion loss and high return loss across repeated matings. Available for all common connector standards — SC, LC, FC, ST, MU, E2000, and MT-RJ — in simplex, duplex, and quad configurations and in both UPC and APC polish, the adapter supports single-mode and multimode fiber alike. A robust plastic or metal housing with flanged or flangeless panel mounting delivers a service life exceeding 1000 mating cycles, making it suited to telecom, data centre, and field deployments.

Key Features

- Couples two like connectors (SC, LC, FC, ST, MU, E2000, MT-RJ) for optical continuity across a panel
- High-precision zirconia-ceramic or phosphor-bronze split alignment sleeve for accurate ferrule alignment
- Low insertion loss ≤ 0.2 dB for minimal signal degradation
- High return loss ≥ 50 dB (UPC) and ≥ 60 dB (APC) for single-mode
- Available in simplex, duplex, and quad configurations
- UPC and APC polish options to match connector end-faces
- Compatible with both single-mode (OS1/OS2) and multimode (OM1–OM4) fiber
- Durable plastic or metal (zinc-alloy) housing with flanged or flangeless mounting
- Easy plug-and-play installation requiring no special tools
- Long service life of ≥ 1000 mating cycles over a wide -40°C to $+75^{\circ}\text{C}$ range

PDR VIDEOTRONICS (INDIA) PRIVATE LIMITED

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Technical Specifications

Connector Types	SC, LC, FC, ST, MU, E2000, MT-RJ
Configuration	Simplex / Duplex / Quad
Fiber Type	Single-mode (OS1/OS2) / Multimode (OM1–OM4)
Polish	UPC / APC
Insertion Loss	≤ 0.2 dB
Return Loss	UPC: ≥ 50 dB APC: ≥ 60 dB (SM)
Alignment Sleeve	Zirconia Ceramic / Phosphor Bronze
Housing Material	Plastic / Metal (Zinc Alloy)
Mounting Type	Flanged / Flangeless (panel snap)
Operating Wavelength	1310 nm / 1550 nm
Durability	≥ 1000 mating cycles
Operating Temperature	-40°C to +75°C
Storage Temperature	-40°C to +85°C
Compliance	RoHS compliant

* Insertion loss and return loss values are typical; actual values vary with connector end-face quality and polish. Measured per IEC 61300-3-4 / IEC 61300-3-6.

Applications

- Fiber-to-the-Home (FTTH) and Fiber-to-the-Building (FTTB) network deployments
- Telecommunications patch panels, ODFs, and bulkhead interconnects
- Data centre cross-connects and enterprise LAN cabling
- Cable TV (CATV) and broadband infrastructure
- Test, measurement, and laboratory fiber connections
- Field restoration and maintenance of fiber optic links

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Ordering Information

Part Number Guide

Part Number	Connector	Config.	Polish	Description
PDR-FA-SC-SX	SC	Simplex	UPC	SC Simplex Adapter (UPC)
PDR-FA-SC-DX	SC	Duplex	UPC	SC Duplex Adapter (UPC)
PDR-FA-SC-APC	SC	Simplex	APC	SC Simplex Adapter (APC)
PDR-FA-LC-DX	LC	Duplex	UPC	LC Duplex Adapter (UPC)
PDR-FA-LC-QD	LC	Quad	UPC	LC Quad Adapter (UPC)
PDR-FA-LC-APC	LC	Duplex	APC	LC Duplex Adapter (APC)
PDR-FA-FC-SX	FC	Simplex	UPC	FC Simplex Adapter (UPC)
PDR-FA-FC-APC	FC	Simplex	APC	FC Simplex Adapter (APC)
PDR-FA-ST-SX	ST	Simplex	PC	ST Simplex Adapter
PDR-FA-MU-SX	MU	Simplex	UPC	MU Simplex Adapter (UPC)
PDR-FA-E20-SX	E2000	Simplex	APC	E2000 Simplex Adapter (APC)
PDR-FA-MTRJ	MT-RJ	Duplex	PC	MT-RJ Duplex Adapter

Standard Package Contents

Item	Quantity
Fiber Optic Adapter (specify type & configuration)	1
Protective Dust Caps (both ports)	1 set
Mounting Hardware (flanged types)	1 set
Product Datasheet	1

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