19-INCH RACK FIBRE DISTRIBUTION UNIT

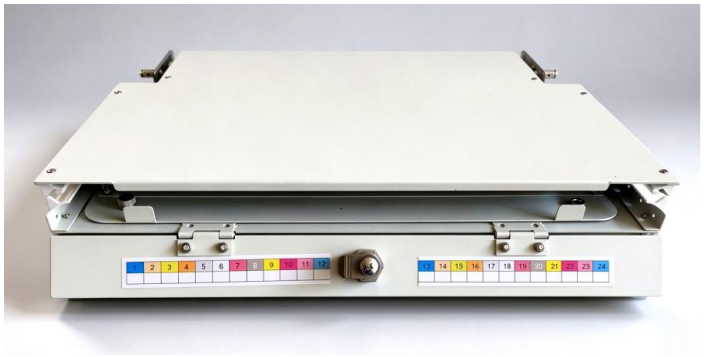
12-288C

RACK FDU · SC

MODEL **ZY-RKPP-SC-BI**

Rack FDU, also called rack ODF or rack fibre patch panel, is designed for standard 19-inch installation. It connects, distributes and protects optical fibres in data centres and telecom networks.

CAPACITY	HEIGHT
12C-288C	**1U-10U**
ADAPTER	RACK
SC SIMPLEX	**19 INCH**



01 DESCRIPTION

Description

Rack FDU, also called rack ODF or rack fibre patch panel, is designed for standard 19-inch installation and is a crucial component in optical fibre communication networks. It efficiently connects, distributes and protects optical fibres. With a compact design and a housing made of cold-rolled steel plate, electrostatically sprayed for durability, it safeguards fibre connections from external interference.

Widely used in data centres and telecommunications, its functions include fibre connection, signal distribution and reliable fibre protection. The standardised 19-inch rack-mount installation ensures compatibility and simplifies troubleshooting, enhancing the stability of the network system. In summary, the patch panel provides a reliable and flexible solution for optical fibre cabling.

02 FEATURES

- Detachable sub-panel for bidirectional functionality — swing left or right side
- Coupler holder support left or right adjustable
- 19-inch standard frame, modularised splicing unit
- Applicable to different capacity optical fibre communication projects
- Easy to install, expand and maintain
- Durable, long service life

03 PERFORMANCE

Performance index

ITEM	12C	24C	48C	72C	96C	144C	216C	288C
Capacity	12C	24C	48C	72C	96C	144C	216C	288C
Dimension H	1U	1U	2U	3U	3U	6U	8U	10U
Dimension W×D	482×280	482×280	482×280	482×280	482×280	482×280	482×280	482×280
Splice tray capacity	12C	12C	12C	12C	12C	12C	12C	12C
Splice tray qty	1	2	4	6	8	12	18	24

ITEM	PARAMETERS
Model	ZY-RKPP-SC-BI
Material	Frame metal steel with coating; tray use flame-retardant plastic
Adaptor type	SC simplex adapter UPC or APC
Adaptor slot	12 Adapter Slots per row
Pigtail	0.9 mm, SM G652D, PVC, 1 m length
Panel direction	Left or Right adjustable
Cover locking	Screw lock
Door locking	Hook lock

04 ENVIRONMENT

FDU environment performance

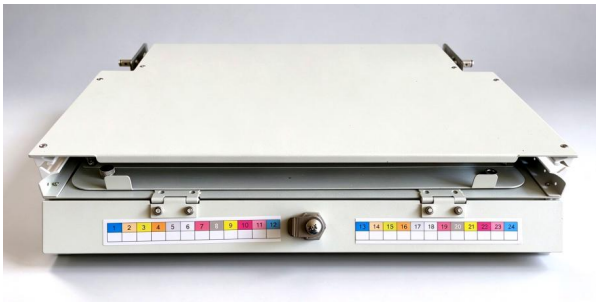
ITEM	REQUIREMENT
Insulation resistance	The high-voltage ground unit and the rack shall be insulated with an insulation resistance no less than 1,000 MΩ / 500 V DC
Withstand voltage	The withstand voltage between the high-voltage ground unit and the rack should be no less than 3,000 V DC / min without puncture or flashover
4.3 Combustion performance	The test samples do not burn. The continuous flaming combustion after the samples are isolated from fire shall not exceed 10 s. The flame or the burning / scorching particulate fallen from the samples does not make the combustion spread to the bottom layer of the test samples.

05 DESIGN

5.1 Picture



Door close



Side swing



Door open (1)



Door open (2)

Door close — unit closed, lock engaged. Side swing — sub-panel swung out to one side. Door open — sub-panel open, giving access to the adapters and the splice tray.

06 SWING

5.2 Can adjust swing left or right side

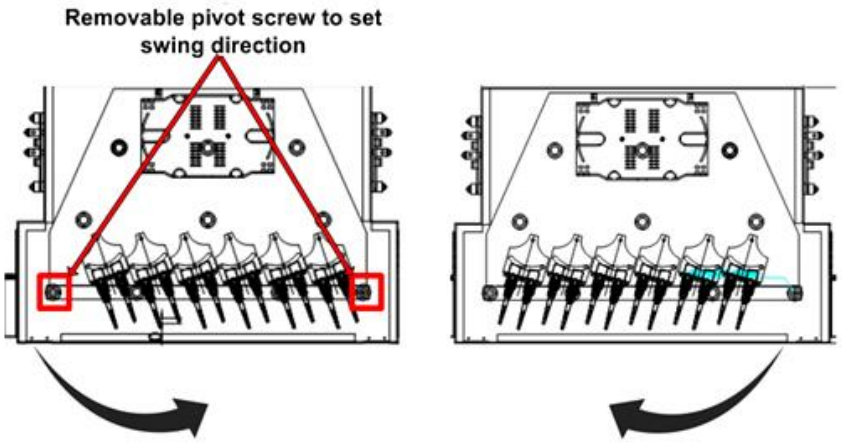
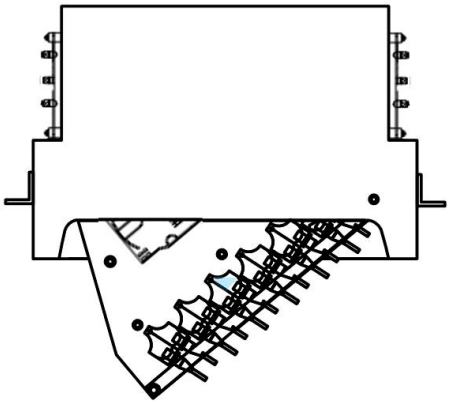
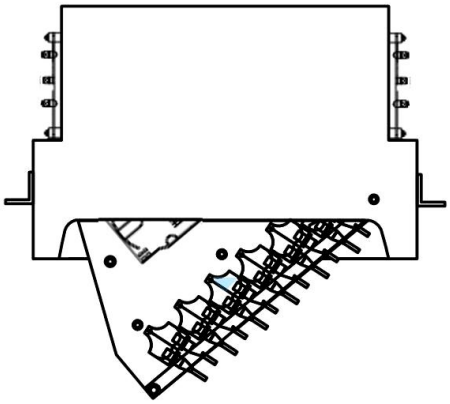


FIG. 1 Removable pivot screw to set swing direction



Swing to the left



Swing to the right

07 GROUNDING

5.3 Cable grounding, fix strength member and grounding post



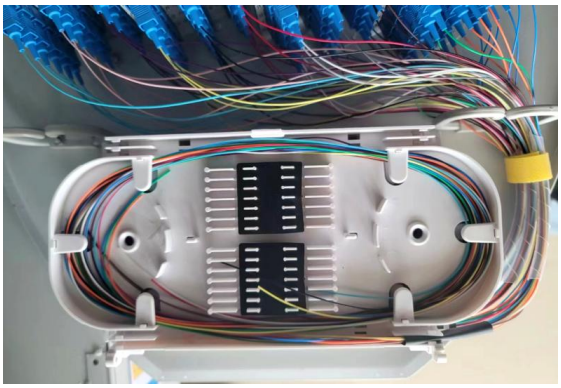
Left



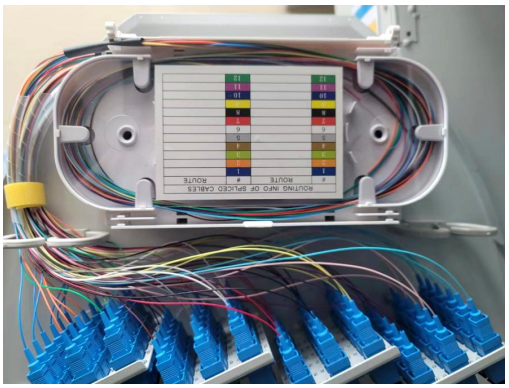
Right

08 SPLICE TRAY

5.4 Splicing tray



Splice tray



Splice tray, splices visible

09 CORD GUIDE

5.5 Horizontal patch cord guide on both sides

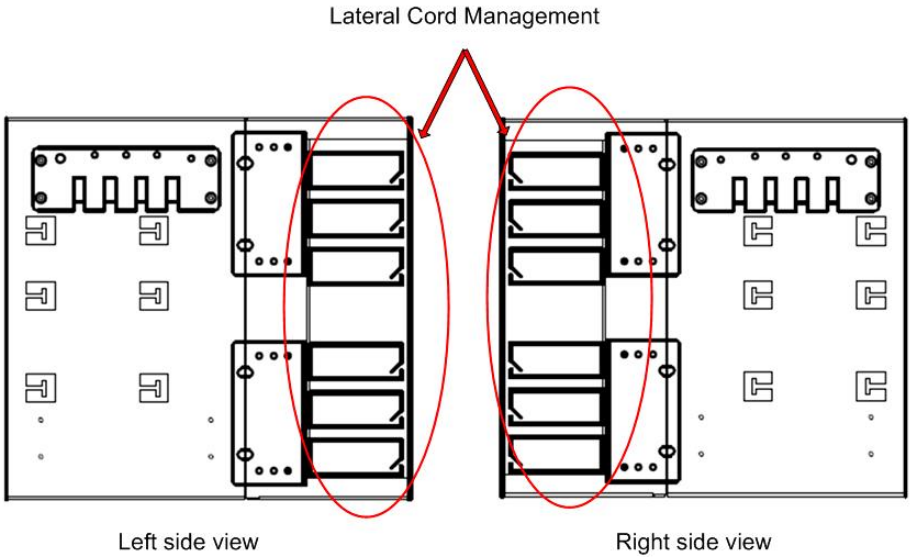


FIG. 2 Lateral cord management — left side view and right side view



Left



Right



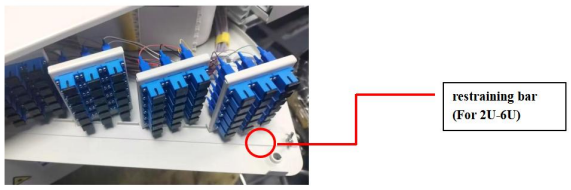
Left, closed



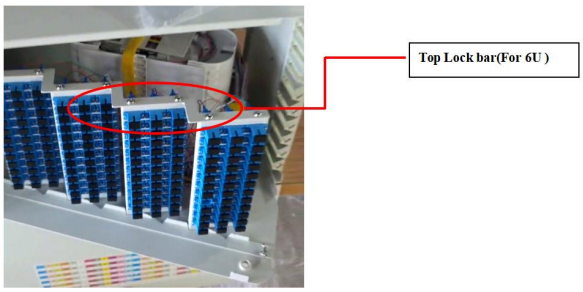
Right, closed

10 COUPLER HOLDER

5.6 Bi-directional coupler holder and restraining bar



Coupler holder

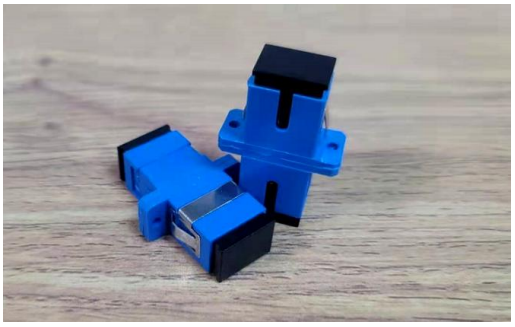


Restraining bar

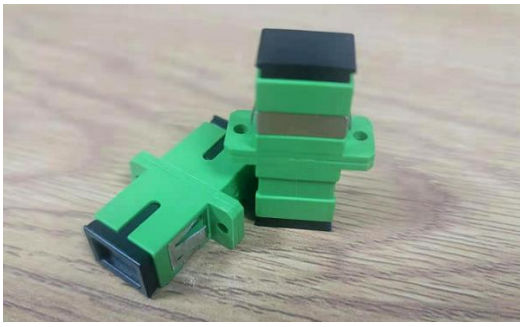
The coupler holder rotates on the sub-panel; the restraining bar slides up and down to lock the holder, and the top lock bar secures the outer row on 6U and larger units.

11 COMPONENTS

6.1 Couplers SC simplex UPC & APC



SC adapter, UPC (blue)

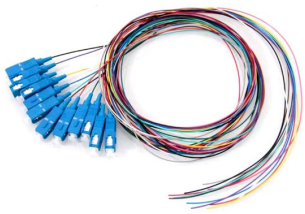


SC adapter, APC (green)

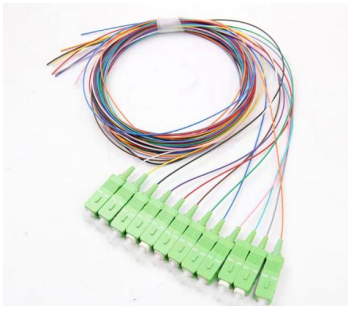
PARAMETER	TECHNICAL SPECIFICATION
Insertion loss (at 1310 nm & 1550 nm) (dB)	≤ 0.2
Mechanical durability (times)	≥ 1000
Temperature range (°C)	−40 to +80

12 PIGTAIL

6.2 Pigtail SC/UPC & SC/APC



SC pigtail, UPC (blue), 0.9 mm



SC pigtail, APC (green), 0.9 mm

PARAMETER		TECHNICAL SPECIFICATION
Fibre type		SM G652D
Fibre jacket		PVC
Diameter of jacket		0.9 mm
Cable length		1 m, tolerance 0 – 0.1 m
Operating temperature		−20 to +60 °C
Ultra-physical contact (UPC)	Insertion loss	≤ 0.12 dB
Ultra-physical contact (UPC)	Return loss	≥ 50 dB
Ultra-physical contact (UPC)	Interchangeability	≤ 0.2 dB
Angled-physical contact (APC)	Insertion loss	≤ 0.12 dB
Angled-physical contact (APC)	Return loss	≥ 65 dB
Angled-physical contact (APC)	Interchangeability	≤ 0.2 dB
Tensile test	0.9 mm tight buffer pigtail, 4.5 N, 1 min	Insertion loss ≤ 0.1 dB
Tensile test	0.9 mm tight buffer pigtail, 4.5 N, 1 min	Return loss ≤ 5 dB
Tensile test	—	No mechanical damage such as deformation, peeling or looseness

13 ADJUSTMENT

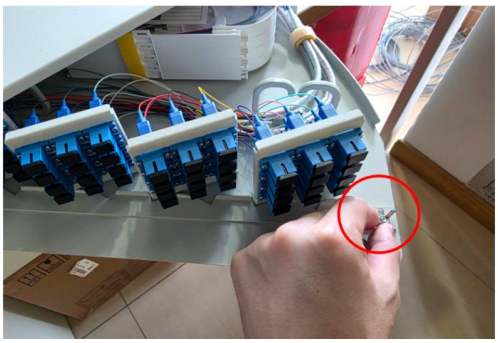
Direction adjustable manual — 7.1 to 7.3

7.1 Remove all screws on the lock bar by screwdriver and then remove the lock bar.



7.2 Twist the hand-turn screws on both sides of the restraining bar by hand to release the position limitation of the restraining bar.





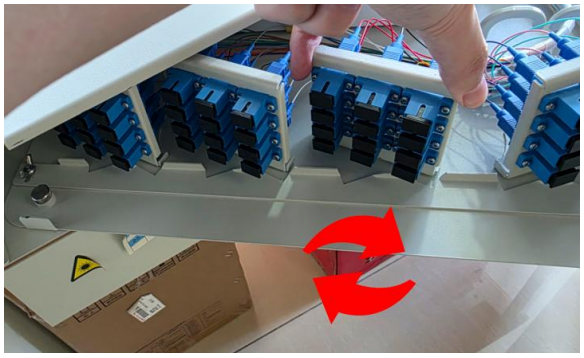
7.3 Slide the restraining bar downward to release the position limitation.



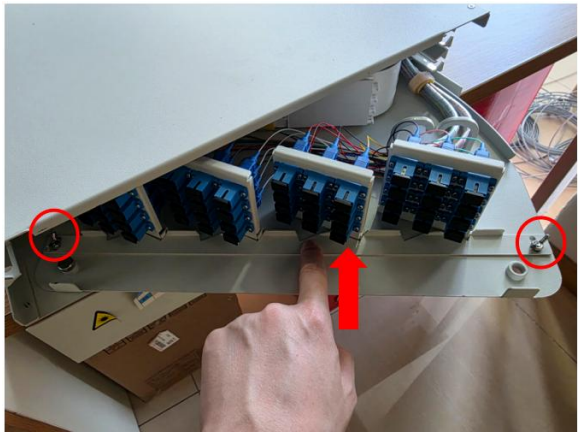
14 ADJUSTMENT

Direction adjustable manual — 7.4 to 7.6

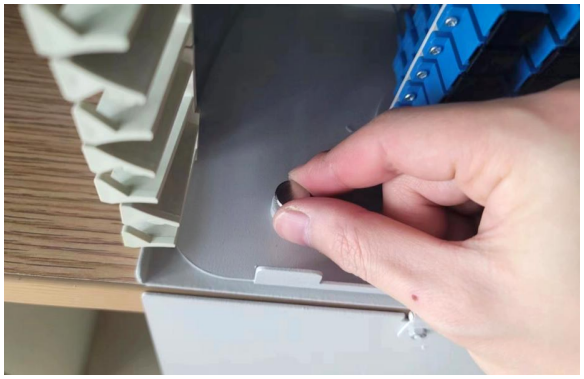
7.4 Rotate the coupler holder to adjust its direction.



7.5 Slide the restraining bar upward and lock the screw to prevent slipping.



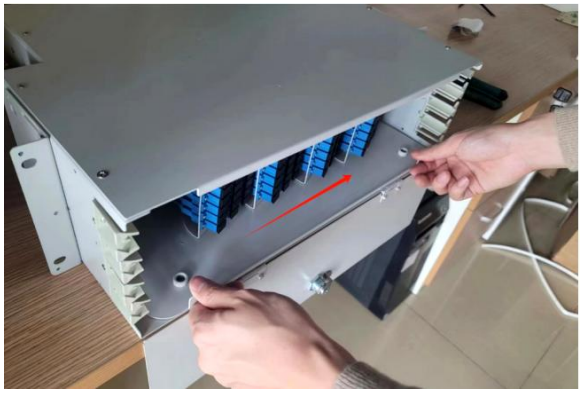
7.6 Remove the screw on the plate by hand.



15 ADJUSTMENT

Direction adjustable manual — 7.7 to 7.8

7.7 Pull the swing panel toward the screw installation direction, align the screw holes (to create more space on the other side and avoid interfering with its rotation).



7.8 Manually install the screw into the screw hole on the other side, and the process is complete.



ZUOYEAL

ZUOYEAL TECHNOLOGY

Connecting More, With Fiber

This datasheet describes the SC bi-directional rack FDU at the time of publication. Dimensions, capacities and configurations may change without notice; confirm current values with ZUOYEAL before ordering.

12–288C · 19 INCH · BI-DIRECTIONAL

Connecting More, With Fiber