



MSA Fiber[®]
Optics

The logo features the letters 'MSA' in a large, bold, white, sans-serif font. To the right of 'MSA', the word 'Fiber' is written in a smaller, white, sans-serif font, followed by a registered trademark symbol (®). Below 'Fiber', the word 'Optics' is written in a larger, white, sans-serif font. The entire logo is set against a dark blue background with several bright blue light rays emanating from behind the text, creating a sense of depth and technology.

MSA Fiber Optics Ltd.

Overview

MSA Fiber Optics Ltd. is high-tech and engineering company from Israel.
We supply, manufacture and provide services for data centers equipment and networks.

Our mission

Combine best practices, expertise and innovation in order to supply our clients with custom high-tech & engineering equipment and solutions.

Main business scope

Data Centers Equipment
Structured Cabling Systems
Monitoring Solutions

Markets

Infrastructure & Telecom
Institutions & Academia
Industrial & Construction

Operations

OEM-Manufacture & Supply
Wholesales
Distributing
Consulting
Import-Export

Products and Services

High Density Fiber Optics Products
Fiber Optics Components
Copper Fibers & Products
Special Fibers
Test & Laboratory Equipment
Active Equipment & Solutions
DCIM and Monitoring
Engineering Equipment & Networks
Engineering Projects Design & Consulting
Engineering Projects Chains Supply

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MSA Fiber Optics Catalogue

1. DC Solutions VENUS	Cabinets	High Density ODF	MTP/MPO Assemblies	Cassette Modules	Transceiver/AOC/DAC
2. Fiber Networks	Fiber Assemblies	Fiber PLC Splitter / FBT Couplers	Assemblies & Accessories	Cables & Patchcords	
3. FTTx Networks	Cables & Patchcords	Fiber Assemblies	Fiber PLC Splitter		
4. Telecom Services	Customized Optical Transmission Solutions				
5. OEM					
6. DCIM & Monitoring Solutions	OTDR	Neptune			

VENUS

Data Centre High-Density Fiber Optics System

MSA VENUS is a modular pre-terminated ultra-high-density fiber optic system, designed to address key operational needs in data centers (DCs) and storage area networks (SANs).

MSA VENUS delivers exceptional connection density through its modular design. It simplifies plug-ins, adds, and changes of MTP, MPO, LC, ... etc connectivity,

It offers easy access to ports, features an integrated cable management system, and requires less installation space compared to conventional fiber optic cabling systems.

A core strength of the MSA VENUS system lies in its use of bend-insensitive optical fibers, which ensure high reliability and maximum port density. These fibers significantly reduce macrobend losses, even under challenging routing conditions, contributing to consistent, high-performance operation.

MSA VENUS are designed to support two types of optical links:

- 12-fiber VENUS links
- 8-fiber VENUS 8 links

The 12-fiber links are currently the most widely adopted configuration, ideal for high-speed data transmission applications.

The 8-fiber links offer maximum fiber utilization efficiency and are optimally suited for migration to higher data rates, supporting speeds of up to 1600 Gbps.



MSA Venus — High Density Fiber Optics System

MSA VENUS — Scalable Fiber Infrastructure for the Future

MSA VENUS is a factory-assembled, plug-and-play fiber optic system built for speed, performance, and scalability. Whether you’re building a hyperscale data center or upgrading a SAN environment, VENUS delivers high-density connectivity with simplified installation and maintenance.

MSA VENUS — it is

- Ultra-fast deployment with pre-terminated components
- Reliable high-performance connections (≤ 0.35 dB insertion loss)
- Designed for 40G–800G applications and beyond
- Fully compliant with international standards (RoHS, REACH, IEC, TIA)
- Safe, compact, and modular — perfect for space-limited IT environments

Core components include high-density enclosures, cassettes, trunk and breakout cables, and patch cords — all designed to work seamlessly together for high efficiency and uptime.

Fiber optics parameters

The optical performance of the VENUS system meets the demands of applications requiring high connection density and exceptional throughput.

Parameter	MM ULTRA LOW LOSS (ULL)	SM ULTRA LOW LOSS (ULL)
IL MTP, Db	≤ 0.25	≤ 0.50
RL MTP, Db	≥ 35	≥ 60
IL LC, Db	≤ 0.10	≤ 0.15
RL LC, Db	≥ 35	≥ 55
RL LC APC, Db	≥ 60	≥ 60



MSA Venus — High Density Fiber Optics System

All MSA VENUS system components are factory-manufactured to guarantee native mechanical and optical compatibility, along with high, repeatable performance across the entire solution lifecycle.

The MSA VENUS modular system includes:

- High-density cabinets and enclosures, compliant with EIA/ECA-310-E rack-mount standards
- Optical patch panels (ODFs) with front access for tool-less maintenance and scalability
- Pre-terminated optical cassette modules, designed for 8-, 12-, and 24-fiber MTP®/MPO interfaces, per IEC 61754-7 and OM3
- Optical trunk cables, available in OM4, OM5, and OS2 grades, utilizing bend-insensitive fibers per ITU-T G.657.A1/A2 and IEC 60793-2-50
- Fanout/breakout cables, supporting configurations from 8 to 144 fibers
- Low-loss optical patch cords, built to IEC 61300-3-34 and Telcordia GR-326-CORE performance requirements

All components are:

- RoHS 3 (EU 2015/863) and REACH compliant
- Halogen-free (LSZH) for improved fire safety in confined IT environments
- Rated for operating temperature from -10°C to +60°C
- Designed to withstand up to 500 mating cycles without degradation of performance
- Factory tested for insertion loss (≤ 0.35 dB) and return loss (≥ -60 dB for APC, ≥ -30 dB for UPC)
- Available with optional UL 94V-0 flame-retardant enclosures

The MSA VENUS platform is optimized for mission-critical applications in data centers, SANs, and high-performance computing environments where density, reliability, and scalability are essential.



MSA VENUS Front Access Series

ETSI (ETS 300 119-3) Standard

MSA VENUS Front Access Series is:

- A fully integrated and consolidated system
- Designed for front-only access — no rear access required
- Optimized for ease and speed of installation
- Enables convenient maintenance and serviceability
- Provides scalable architecture for future expansion
- Uses uniform-length patch cords for simplified cabling and inventory
- Delivers efficient space utilization through compact and rational design
- ETSI (ETS 300 119-3) Standard

Capacity	1,920 LC ports (3,840 fibers) 1,920 MTP ports 8 (15,360 fibers) 1,920 MTP ports 12 (23,040 fibers)
Usable height	9 x 4U
Depth	300 mm
Width	1200 mm
Weight	220 kg
Color	Black RAL 9005
Country of origin	Israel

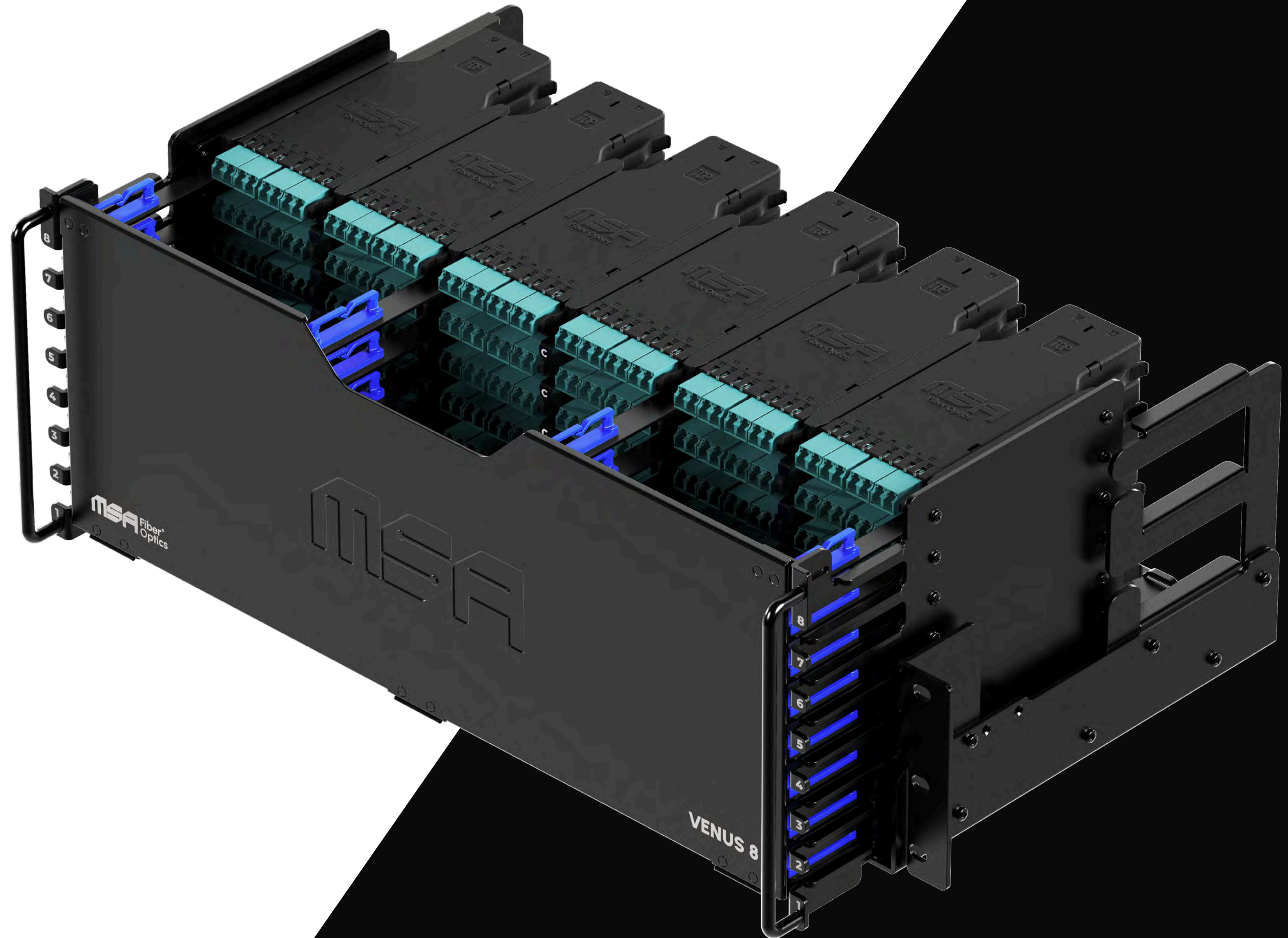


MSA VENUS Front Access Series

ETSI (ETS 300 119-3) Standard

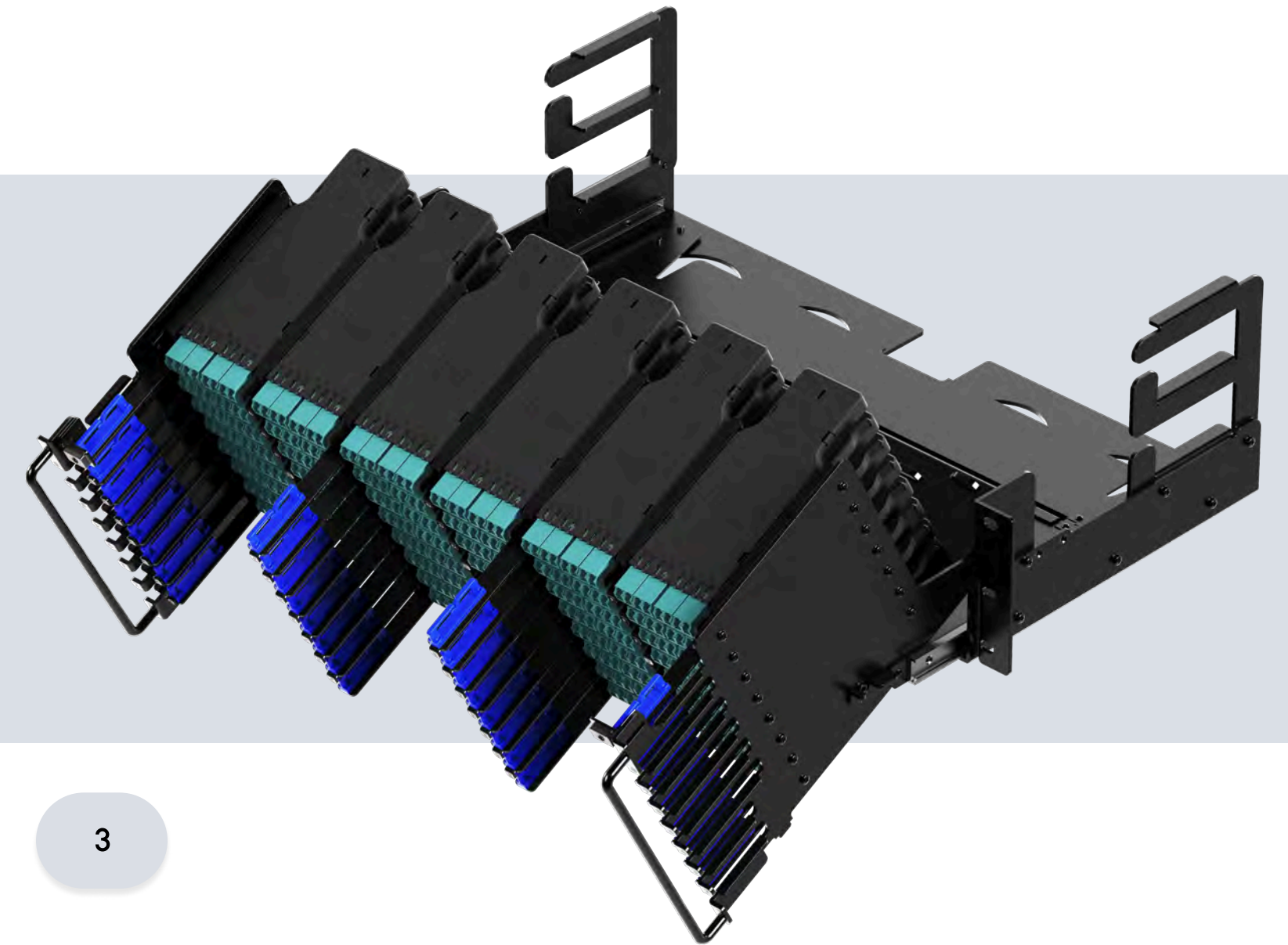
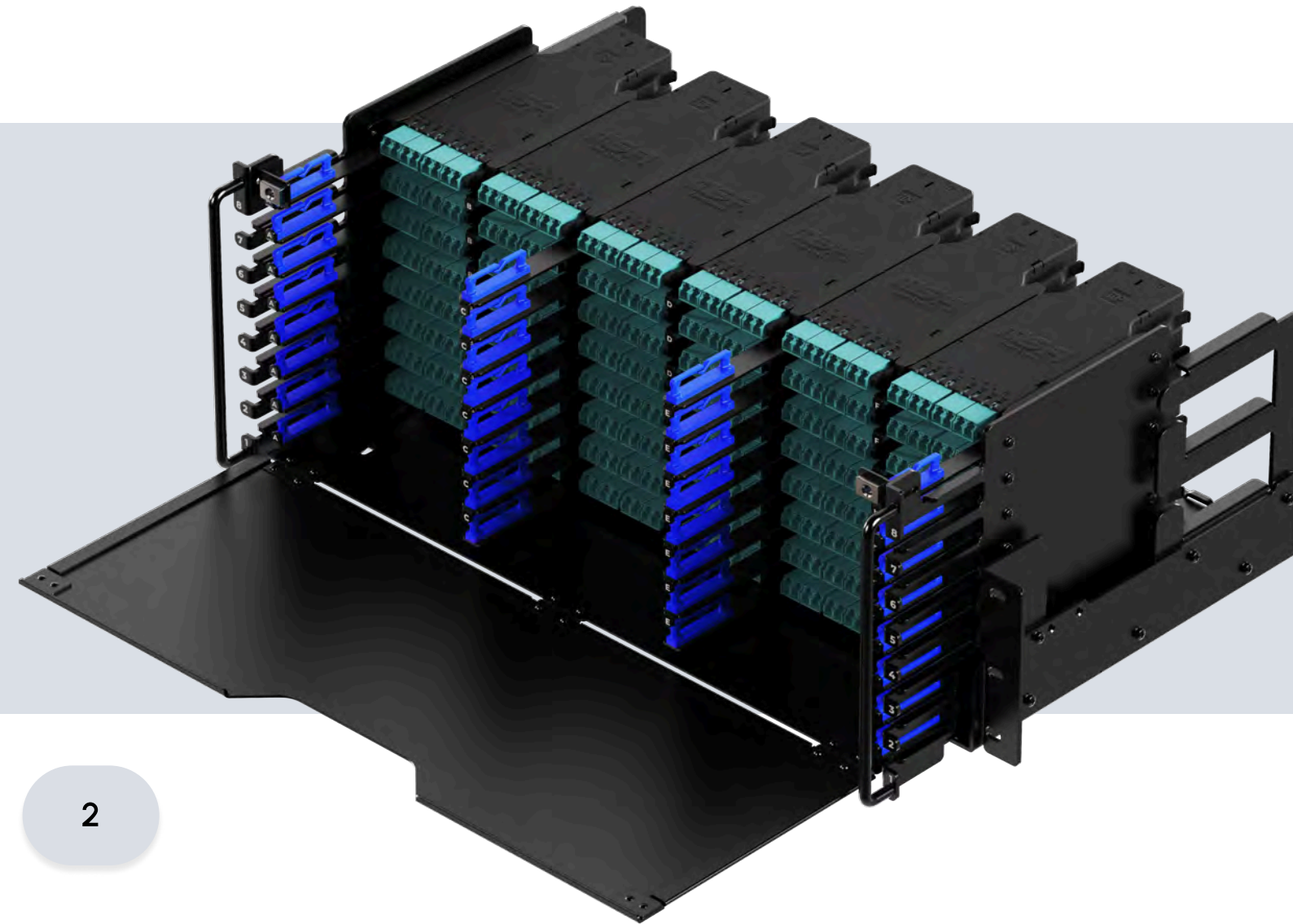
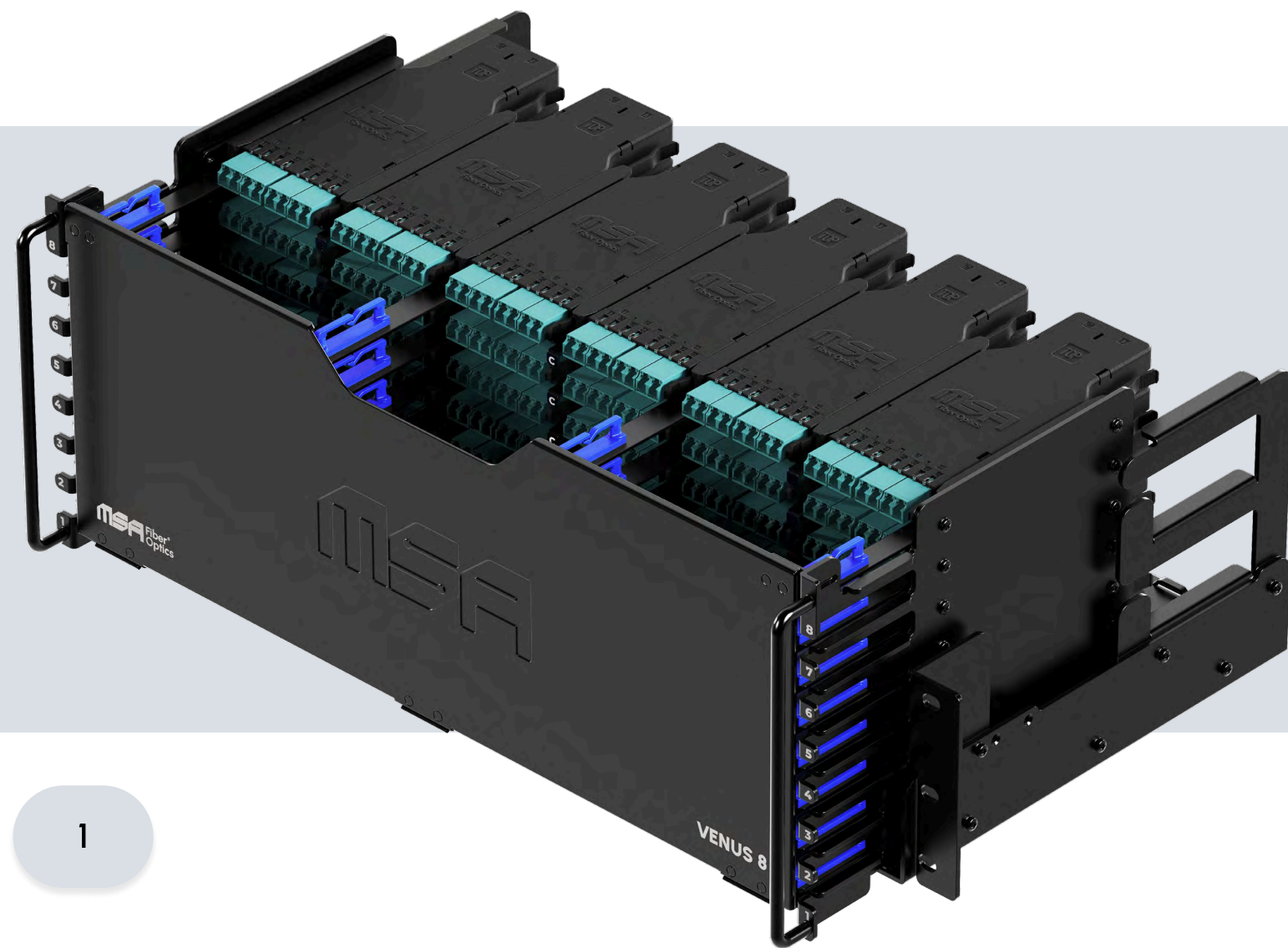
- Unobstructed access to the internal volume of the cabinet
- Modular configuration: allows for multiple cabinets to be connected back-to-back and/or in-line (side-by-side)
- Standardized patch cord length (4 meters) — suitable for routing within a single cabinet or between cabinets connected in-line or back-to-back
- Support for high-density optical cabling systems using the MTP interface

Capacity	192 LC ports (384 fibers) 192 MTP 12 ports (2,304 fibers) 192 MTP 8 ports (1,536 fibers)
Height	4U
Depth	290mm
Color	Black RAL 9005
Country of origin	Israel



MSA VENUS Front Access Series

ETSI (ETS 300 119-3) Standard

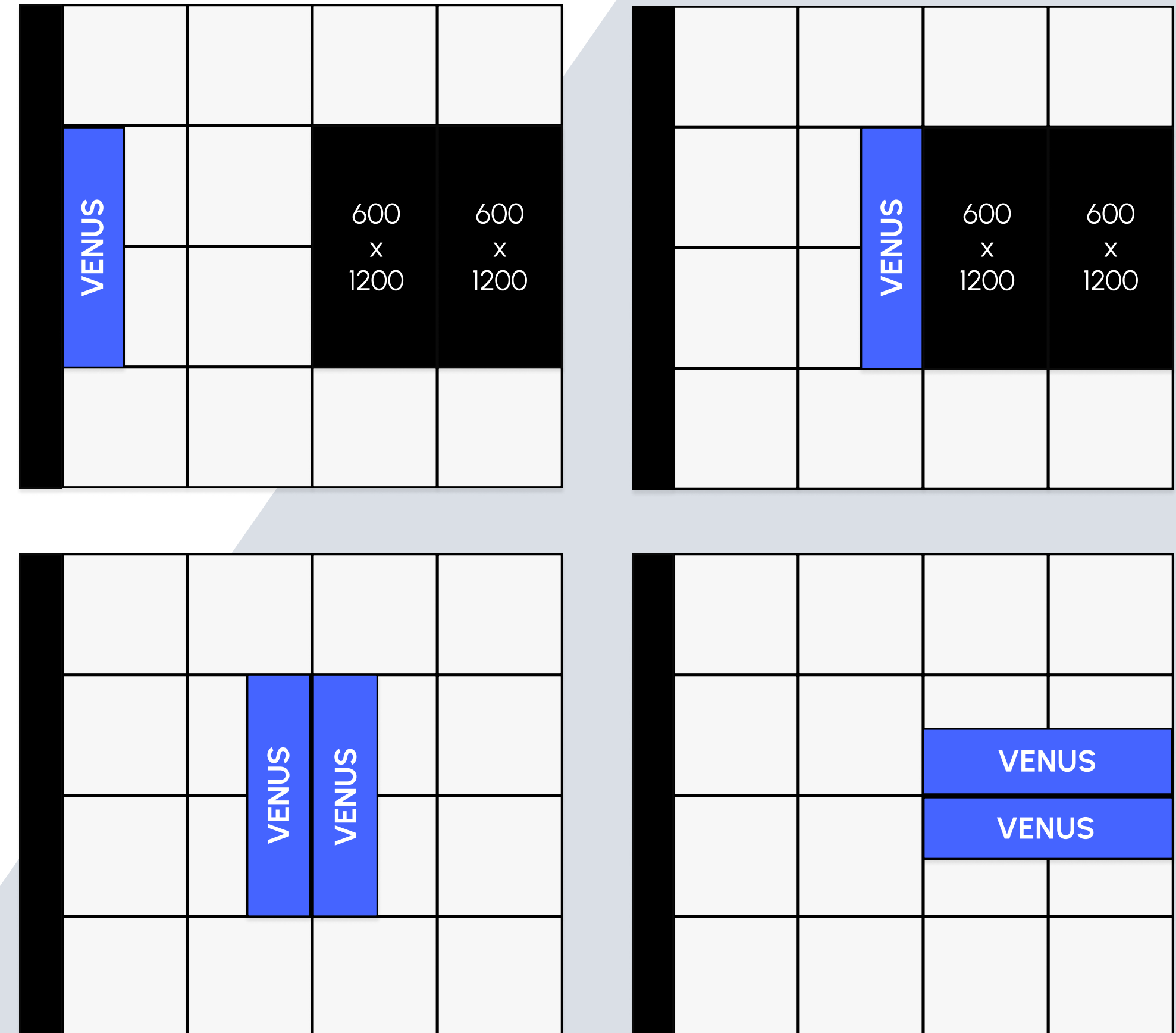


MSA VENUS Front Access Series

Cabinets and the Floor Plan

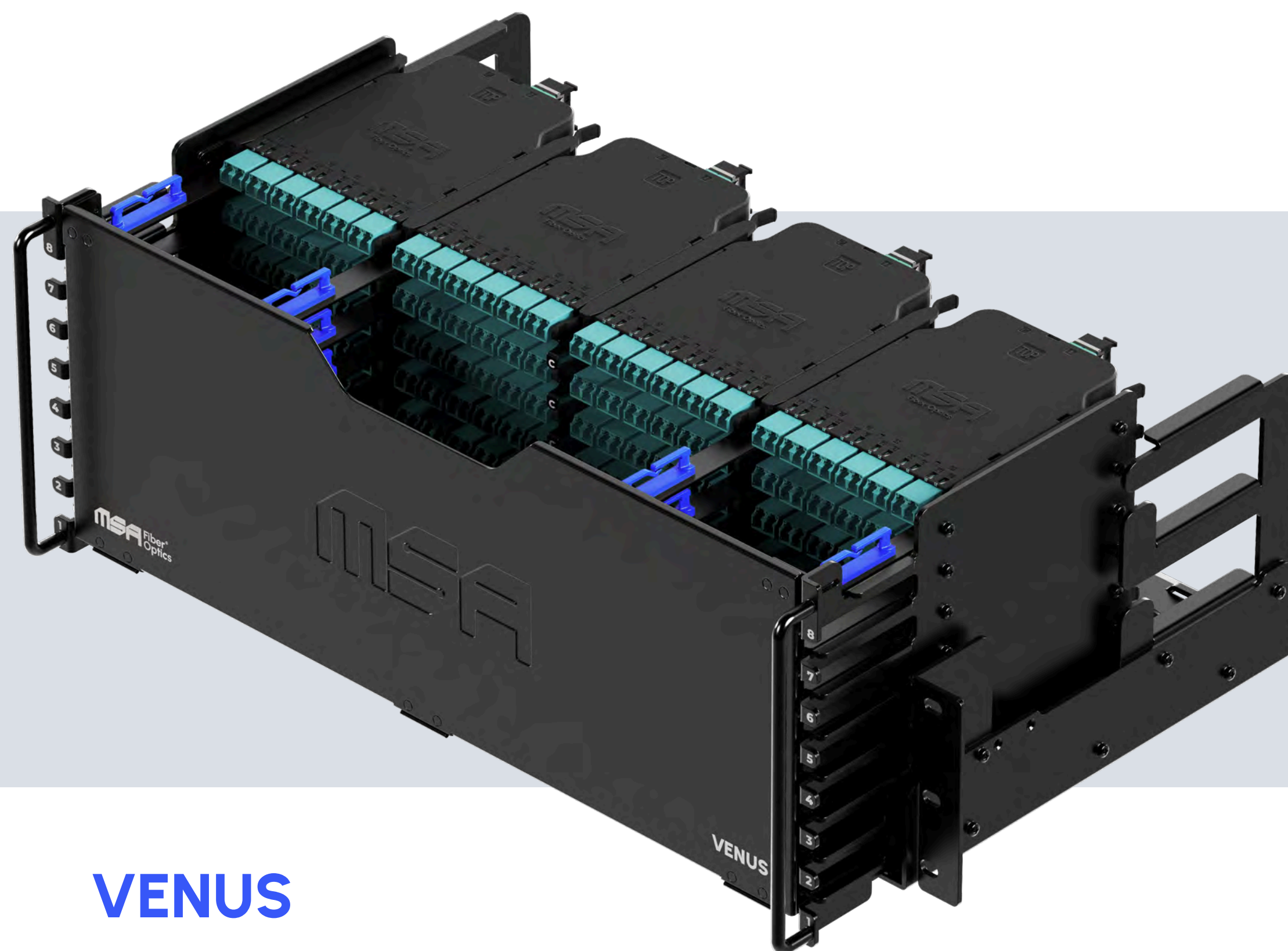
Cable Management Features:

- Dual-Sided Cable Entry: Supports cable routing from both the top and bottom of the cabinet, enabling flexible installation in various network configurations.
- High-Density Brush Entry Ports: Equipped with open-type dual brush cable entry systems at the top of the cabinet, allowing efficient and obstruction-free routing.
- High Capacity: Each upper brush port supports the entry of up to 340 MTP trunk cables, ensuring compatibility with high-density fiber deployments.
- Secure Trunk Cable Mounting: MTP CORE trunk cables can be reliably secured using integrated mounting brackets, designed for stability and ease of maintenance.
- Universal Cable Compatibility: Accommodates all standard fiber optic cable types with dedicated fastening solutions for secure and strain-relieved installation.

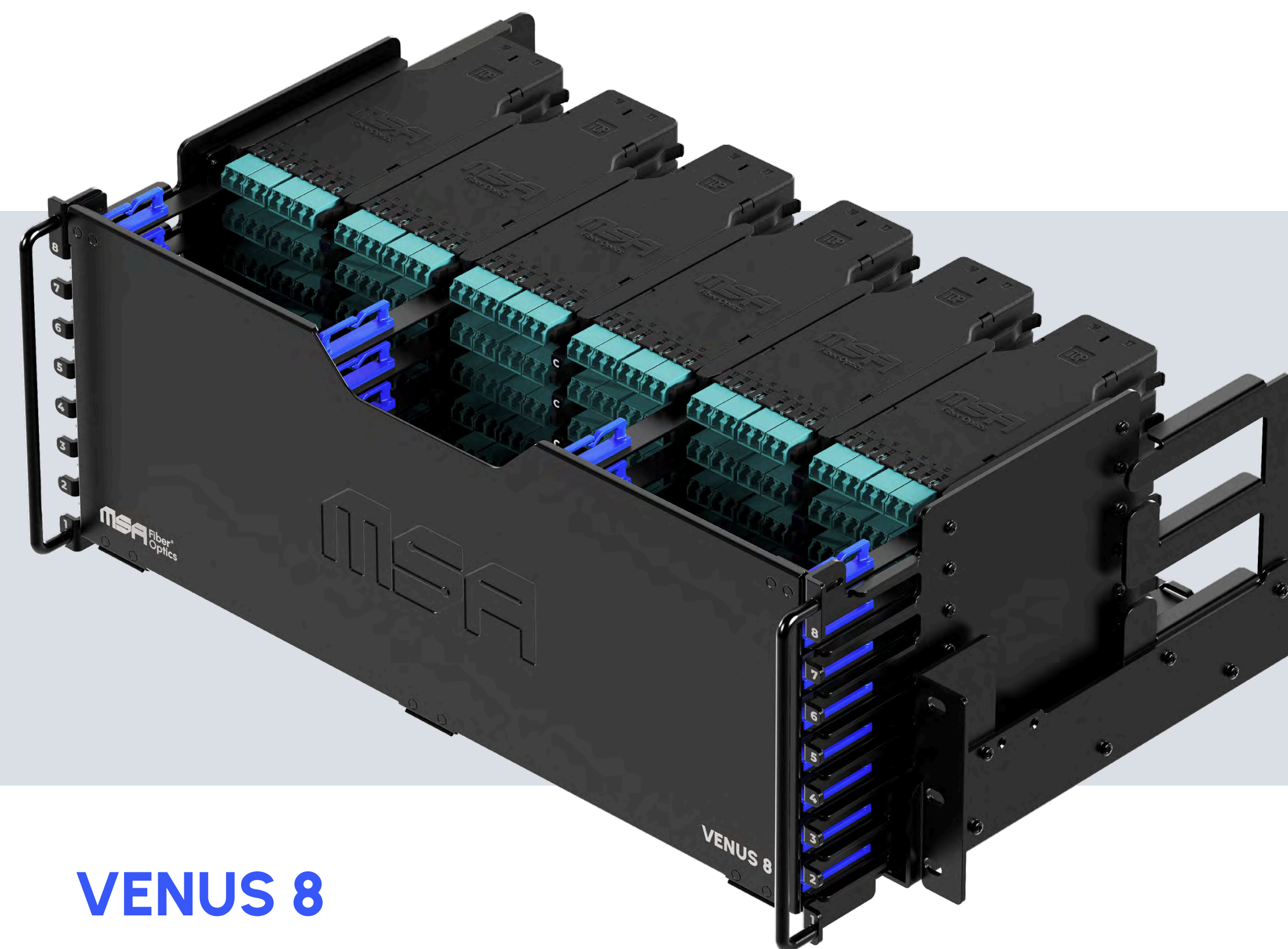


MSA VENUS Front Access Series

Optical Distribution Frames (ODF)



VENUS



VENUS 8

VENUS Series

High Density Fiber Optics Cabinets

MSA VENUS cabinets are designed and applied for high density of ports within a 19"-width common solution.

Fully loaded with 4U optic panels VENUS or VENUS 8 provides total capacity 2880 LC or MTP duplex ports.

Produced and performed in three designs: with the right organizer, with the left organizer and the right and left organizers.

Optic patch cords that are 4 meters long are to connect any port to any other port.

It takes less than two minutes to add or remove separate optic cables and/or cords, even when the cabinet is fully loaded.

- **2880 LC/MTP duplex ports in 4U**
- **2200×600×900/1200 mm, up to 1500 kg load**
- **Color: Black RAL 9005**



VENUS Series

High Density Fiber Optics Cabinets

Applied for: data centers, storage networks (SAN), large corporate systems, network core complexes. Optimized for high density applications.

- Type of access: front and rear
- Locks: top and bottom
- Total capacity: 2880 duplex LC- or MTP-ports at full load VENUS 19" 4U panels (5 760 LC fibers, 34 560 MTP fibers)
- VENUS mounting brackets for mounting 19" equipment above cabinets
- Maximum static load: 1500 kg
- Cabinet height: 2200 mm
- Cabinet width: 900, 1200 mm
- Cabinet depth: 600 mm
- Number of units (U): 40
- Front Glass Double Door
- Rear Metal Double Door
- Removable side panels, bolted
- Roof has brushed cable entry
- Base closed, has brushed cable entry
- Material: Steel
- Color: Black RAL 9005



VENUS Series

Mounting brackets for mounting 19" equipment above cabinets

The brackets are designed for mounting 19" equipment in the upper space above cabinets and racks. At the same time cable infrastructure does not take critical and expensive space in cabinets and racks. Attachment to existing cable-carrying constructions and elements, such as wire trays, which allows move cabinets and racks.

Height	4U, 6U
Height, mm	228, 317
Width, mm	500
Depth, mm	240
Color	Black RAL 9005

Code	Description	Color
60H-50-96-10BL	VENUS high density fiber optics cabinet 2200 × 600, 40U with right organizer	Black RAL 9005
60H-50-96-11BL	VENUS high density fiber optics cabinet 2200 × 600, 40U with left organizer	Black RAL 9005
60H-50-C6-10BL	VENUS high density fiber optics cabinet 2200 × 600, 40U with right and left organizers	Black RAL 9005
27U-4U-10BL	VENUS mounting brackets for 19" equipment above cabinets, 4U	Black RAL 9005
27U-6U-10BL	VENUS mounting brackets for 19" equipment above cabinets, 6U	Black RAL 9005



VENUS and VENUS 8

Optics Patch Panels, Optical Distribution Frames (ODF)

VENUS and VENUS 8 optics patch panels provide high-density cross-connection in a compact enclosure.

Constructively executed in the form of a rectangle enclosures with sliding trays for fast and convenient cassettes' management and upload operations without application of auxiliary tools.

- VENUS and VENUS 8 series 1U, 2U and 4U modular optics panels support connection up to 576 fibers in 4U version
- Universal solution for high density fiber optics cable management (cassettes with MTP-MTP and MTP-LC connectors)
- Separate sliding trays for easy access to each port even at high density compounds
- Minimal losses can be used maximum number of connections in each channel structured cable system (SCS) on TIA-942 standard
- Integrated cable management system
- Removable top cover for access to internal optic cross components
- Cassettes can be mounted from the back or from the front of the panel' tray



VENUS and VENUS 8

Optics Patch Panels, Optical Distribution Frames (ODF)

- Modular 1U, 2U, and 4U Optical Patch Panels Supporting up to 576 Fibers (in 4U configuration)
- A universal solution for organizing high-density fiber optic connections, supporting cassettes with MTP–MTP and MTP–LC connectors.
- Individual sliding trays provide easy access to each port, even at maximum connection density.
- Low insertion loss enables the use of the maximum number of connections per channel, ensuring compliance with TIA-942 structured cabling system standards.
- Built-in cable management system.
- Panel depth: 543.4 mm (1U LT series panels: 491.4 mm).
- Removable top cover allows convenient access to internal components of the optical panel.
- Panels can be equipped with bend-insensitive trunk cables and Uniboot patch cords for maximum connection density and reliability.

All VENUS optical panels, regardless of size, are designed with dedicated spaces for cable fasteners.

All trunk cables are supplied with pre-installed cable fasteners, enabling quick installation without the need for additional tools.

Large, reusable labeling tags on the front and rear covers of the optical panels ensure clear and easy identification of all connections.

A wide variety of cassettes is available to support solutions with bandwidths up to 400 Gbps.

Fully compliant with modern data transmission standards: 10, 40, 100, and up to 400 Gbps.

The VENUS series equipment allows for over 30% faster execution of moves, adds, and changes (MACs).

Compliant with TIA-942 and TELCORDIA GR-449-CORE specifications.

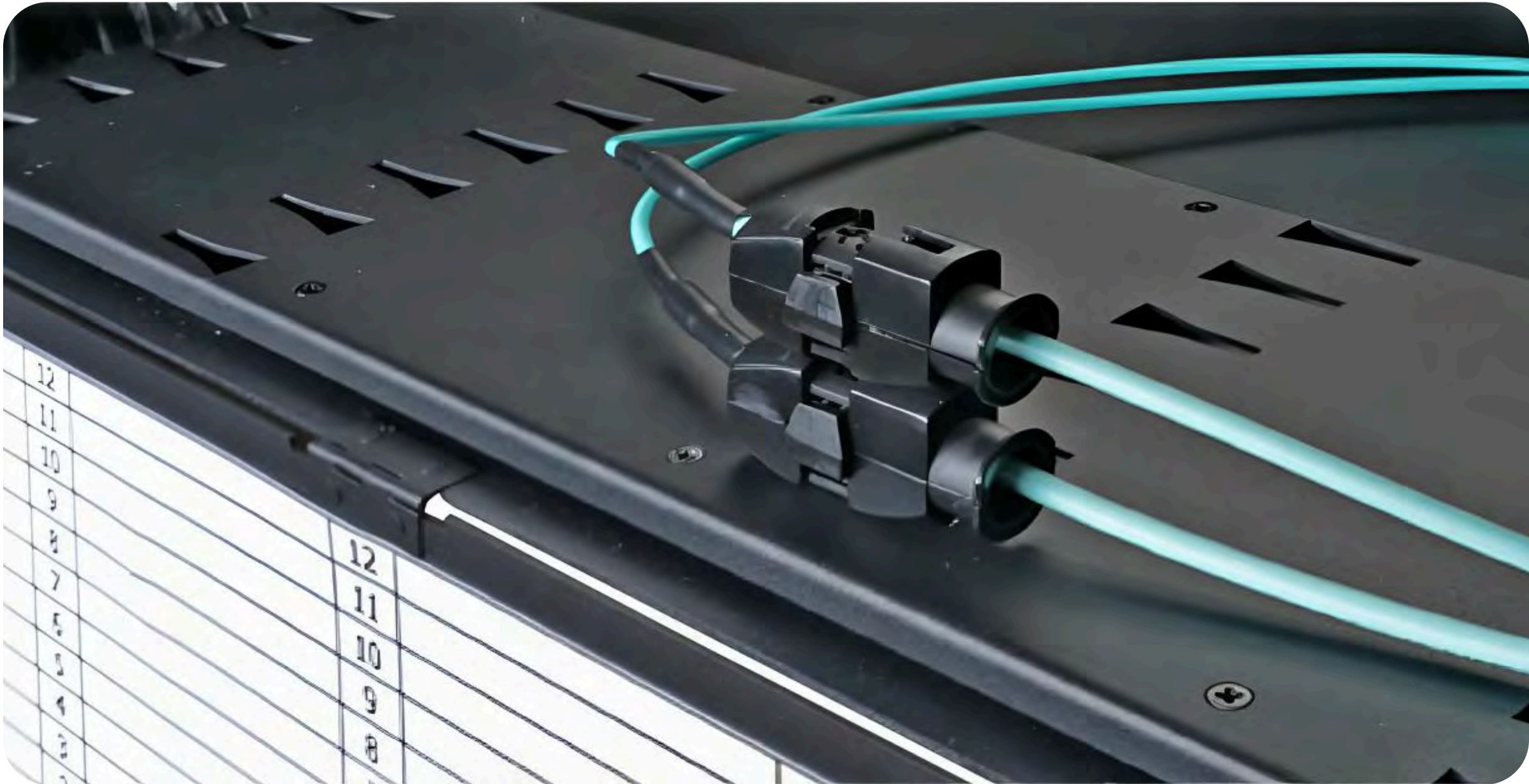
Cassettes can be installed at the front or rear of the panel.

Color: Black, RAL 9005

Trunk cable holders

Trunk cable holders are installed to the mounting surface at the rear side of the VENUS panel. Trunk cable holders might be set and attached at each other.

Code	Description	Color
47M-50-00-01BL	VENUS high density fiber optics panel, 19" 1U, 12 cassettes	Black RAL 5008
47M-50-00-01BL-LT	VENUS high density fiber optics panel, 19" 1U, 8 cassettes	Black RAL 5008
47M-50-00-02BL	VENUS high density fiber optics panel, 19" 2U, 24 cassettes	Black RAL 5008
47M-50-00-04BL	VENUS high density fiber optics panel, 19" 4U, 48 cassettes	Black RAL 5008
47M-60-00-01BL	VENUS 8 high density fiber optics panel, 19" 1U, 18 cassettes	Black RAL 5008
47M-60-00-01BL-LT	VENUS 8 high density fiber optics panel, 19" 1U, 12 cassettes	Black RAL 5008
47M-60-00-02BL	VENUS 8 high density fiber optics panel, 19" 2U, 36 cassettes	Black RAL 5008
47M-60-00-04BL	VENUS 8 high density fiber optics panel, 19" 4U, 72 cassettes	Black RAL 5008



VENUS and VENUS 8 Cassette Modules

MTP-LC, MTP-MTP

VENUS and VENUS 8 Optical Cassettes (MTP-LC, MTP-MTP) are designed to provide reliable connectivity, even in the most demanding operating conditions. The cassettes are integrated into a sliding tray system, enabling easy installation, as well as convenient access for performing moves, adds, and changes (MACs). VENUS and VENUS 8 cassettes support the installation of MTP adapters with 6/4 LC duplex ports or . MTP-only adapters in various configurations.

- Compliant with the following specifications:
TELCORDIA GR-449-CORE, IEC 61754-7, ANSI/TIA-568-C.3, IEC 11801, and TIA-942
 - Guaranteed compliance with Ethernet 400G standards
 - All products are tested for insertion loss and return loss
 - Supports fiber types: SM, OM3, OM4, OM5
 - All ferrules are tested using interferometry to ensure quality
 - Fast installation enabled by a compact housing with high connection density
- Individual sliding trays – provide easy access and management of each port
 - Insertion loss levels meet stricter criteria than those required by the TIA-942-A standard
 - Built-in inner-shuttered LC Duplex adapters ensure user safety from exposure to invisible laser radiation
 - A variety of cassettes available for solutions with bandwidths up to 1600 Gbps
 - Color: Black, RAL 5008

Code	Description	Color
49M-S3-12-LC-M1-MU-11BL	VENUS Cassette, 12 × LC — 1 × MTP(12) (male) SM G.657. A2, полярность U, ULL	Black RAL 5008
49M-40-12-LC-M1-MU-11BL	VENUS Cassette, 12 × LC — 1 × MTP(12) (male) OM3/OM4, полярность U, ULL	Black RAL 5008
49M-30-MT-10-06BL	VENUS Cassette, 6 × MTP, turquoise, KeyUp/KeyDown	Black RAL 5008
49M-S3-MT-10-06BL	VENUS Cassette, 6 × MTP, green, KeyUp/KeyDown	Black RAL 5008
49M-S3-08-LC-M8-FU-21BL	VENUS Cassette, 8 × LC — 1 × MTP(8) (female) SM G.657.A2, polarity U, ULL	Black RAL 5008
49M-40-08-LC-M8-FU-21BL	VENUS 8 Cassette, 8 × LC — 1 × MTP(8) (female) OM3/OM4, polarity U, ULL	Black RAL 5008
49M-30-MT-20-04BL	VENUS 8 Cassette, 4 × MTP, turquoise, KeyUp/KeyDown	Black RAL 5008
49M-30-MT-20-04BL	VENUS 8 Cassette, 4 × MTP, green, KeyUp/KeyDown	Black RAL 5008



VENUS and VENUS 8 Cassette Modules

Splice

VENUS and VENUS 8 LC splice cassettes simplify optical cable termination with LC connectors, enabling high-density, reliable connections in data centers.

- Supports up to 12/8 optical connections with LC connectors
 - 12/8 color-coded pigtails
 - 6/4 duplex LC adapters
 - Removable top cover for easy access and a specialized cable management system to reduce mechanical stress and maintain proper bend radius
 - Compatible with SM, OM3, OM4, OM5 fiber types
- Quick installation and removal thanks to a compact, high-density design
 - Individual sliding trays for easy access and management of each port
 - Built-in inner-shuttered LC Duplex adapters safeguard users from invisible laser exposure
 - Color: Black, RAL 5008

Code	Description	Color
49M-S3-12-2L-00-10BL	VENUS Cassette, 12 × LC SM G.657.A2, splice-cassette, mounting cords	Black RAL 5008
49M-30-12-2L-00-10BL	VENUS Cassette, 12 × LC OM3, splice-cassette, mounting cords	Black RAL 5008
49M-40-12-2L-00-10BL	VENUS Cassette, 12 × LC OM4, splice-cassette, mounting cords	Black RAL 5008
49M-S3-08-2L-00-20BL	VENUS 8 Cassette, 8 × LC SM G.657.A2, splice- cassette, mounting cords	Black RAL 5008
49M-30-08-2L-00-20BL	VENUS 8 Cassette, 8 × LC OM3, splice-cassette, mounting cords	Black RAL 5008
49M-40-08-2L-00-20BL	VENUS 8 Cassette, 8 × LC OM4, splice-cassette, mounting cords	Black RAL 5008



VENUS Cassettes Modules

MTP-LC, MTP-MTP, MTP Up to 400G Conversion



1. Venus MTP®-LC Module

Wide and long module.

Rear: one MTP® adapter.

Front: Six Suncall LC Duplex numbered front LC connections with inner shutters.



2. Venus MTP® Up to 400G Conversion Module

Wide and long module.

Rear: no MTP® adapter.

Front: six 8-fiber MTP® adapters.



3. Venus MTP®-MTP® Module

Wide and long module.

Rear: four 12-fiber MTP® adapters.

Front: six built-in MTP®-MTP® adapters.

VENUS Cassette Modules

Splice, TAP



4. Venus Splice Module

Wide and long module. Module has easy access to splice fibers inside (cover detachable).

Rear: no MTP® adapter.

Front: six Suncall LC adapters with inner shutters for 12 LC Splice connections - with 12 colour coded pigtails.



5. Venus TAP Module

Wide and long module.

Rear: two MTP® adapters (one is orange coloured).

Front: six Suncall LC Duplex numbered front LC connections with inner shutters.



OR

Rear: two MTP® adapters (one is orange coloured).

Front: One MTP® adapter.



OR

Rear: One MTP® adapter.

Front: two MTP® adapters (one is orange coloured).

VENUS 8 Cassette Modules

MTP-LC, MTP-MTP, Splice



1. Venus 8 MTP®-LC Module

Narrow and long module.

Rear: one MTP® adapter. Second MTP® adapter is an option.

Front: Four Suncall LC Duplex numbered front LC connections with inner shutters.



2. Venus 8 MTP®-MTP® Module

Narrow and long module.

Rear: no MTP® adapter.

Front: four built-in MTP®-MTP® adapters.



3. Venus 8 Splice Module

Narrow and long module. Module has easy access to splice fibers inside (cover detachable).

Rear: no MTP® adapter.

Front: four Suncall LC adapters with inner shutters for 8 LC Splice connections - with 8 colour coded pigtails.

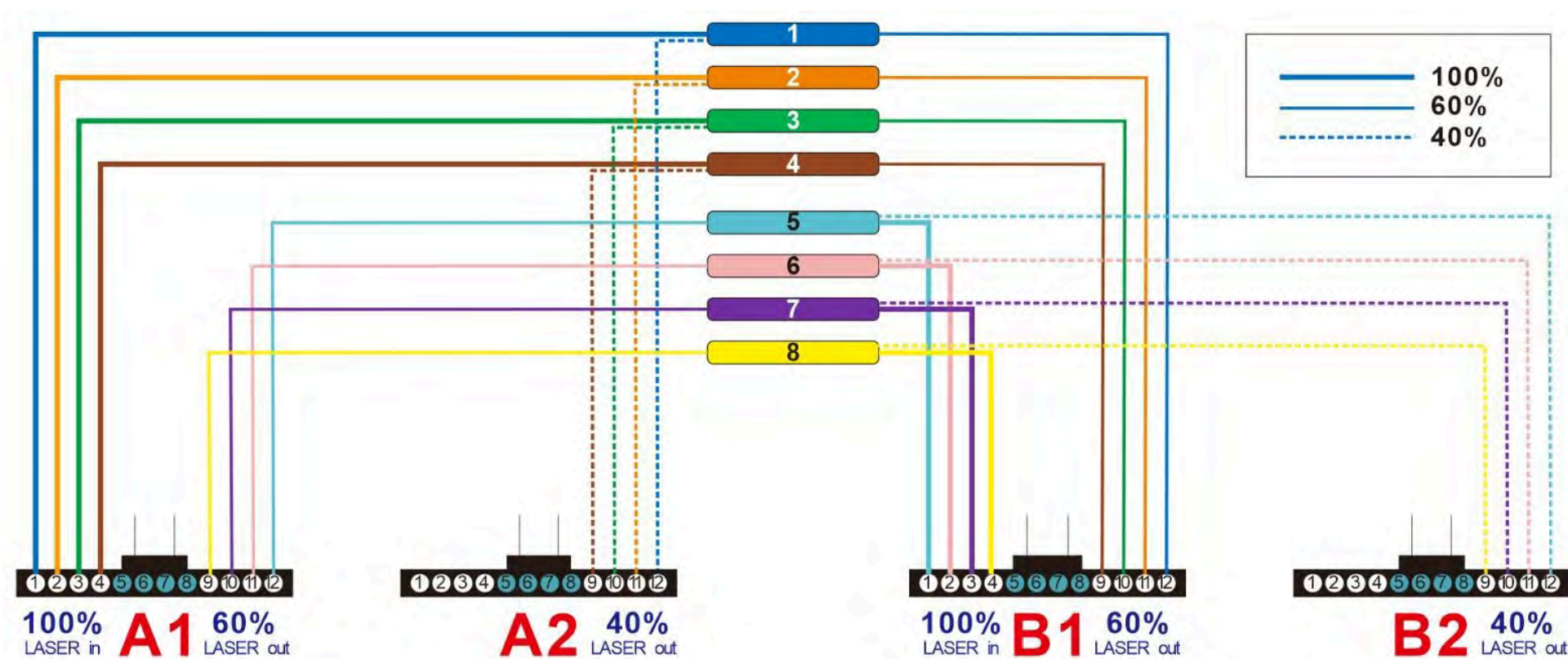
VENUS 8 Cassette Modules

TAP

Venus8 TAP Module is a module with fiber optic splitters, used to divide each optical signal into two outputs. One output is used for live traffic, and the other output is used for monitoring.

The module enables the monitoring equipment to connect to the existing, high-density network infrastructure, saving valuable space, and providing flexibility to connect the monitoring equipment on demand, without interfering with the live network traffic. The modules are available in the following pre-terminated configurations:

- MTP® to 12 LC with rear TAP connection
- MTP® to MTP® with rear TAP connection
- MTP® to MTP® with front TAP connection



VENUS 8 Cassette Modules

TAP



4. Venus 8 TAP Module
Narrow and long module.

Rear: two MTP® adapters (one is orange coloured).
Front: four Suncall LC Duplex numbered front LC connections with inner shutters.



OR

Rear: two MTP® adapter (one is orange coloured).
Front: one MTP® adapters.



OR

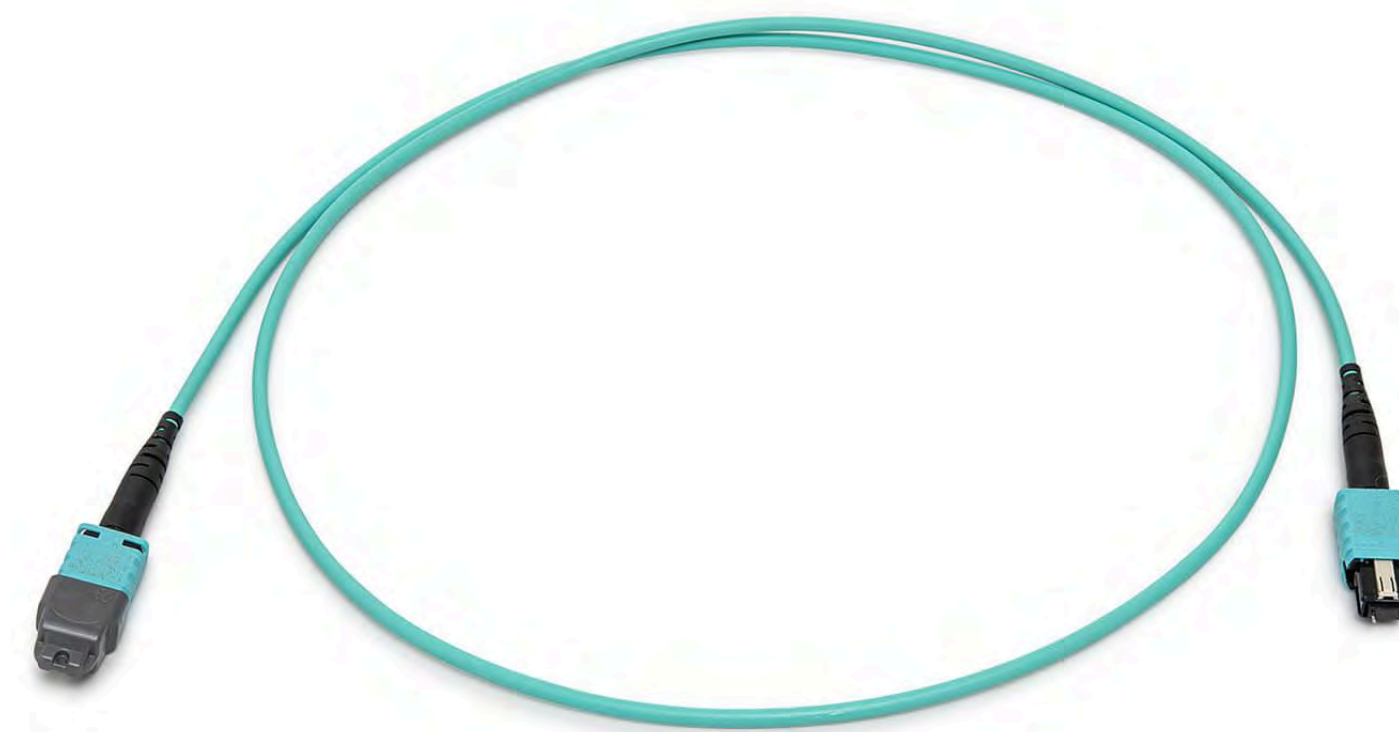
Rear: one MTP® adapter.
Front: two MTP® adapters (one is orange coloured).

MSA VENUS

Universal Polarity – One System for All Configurations

Optical Cables:
Type B

Cassettes and 'hydras':
Universal



Patch-cords:
Standard A-B / B-A

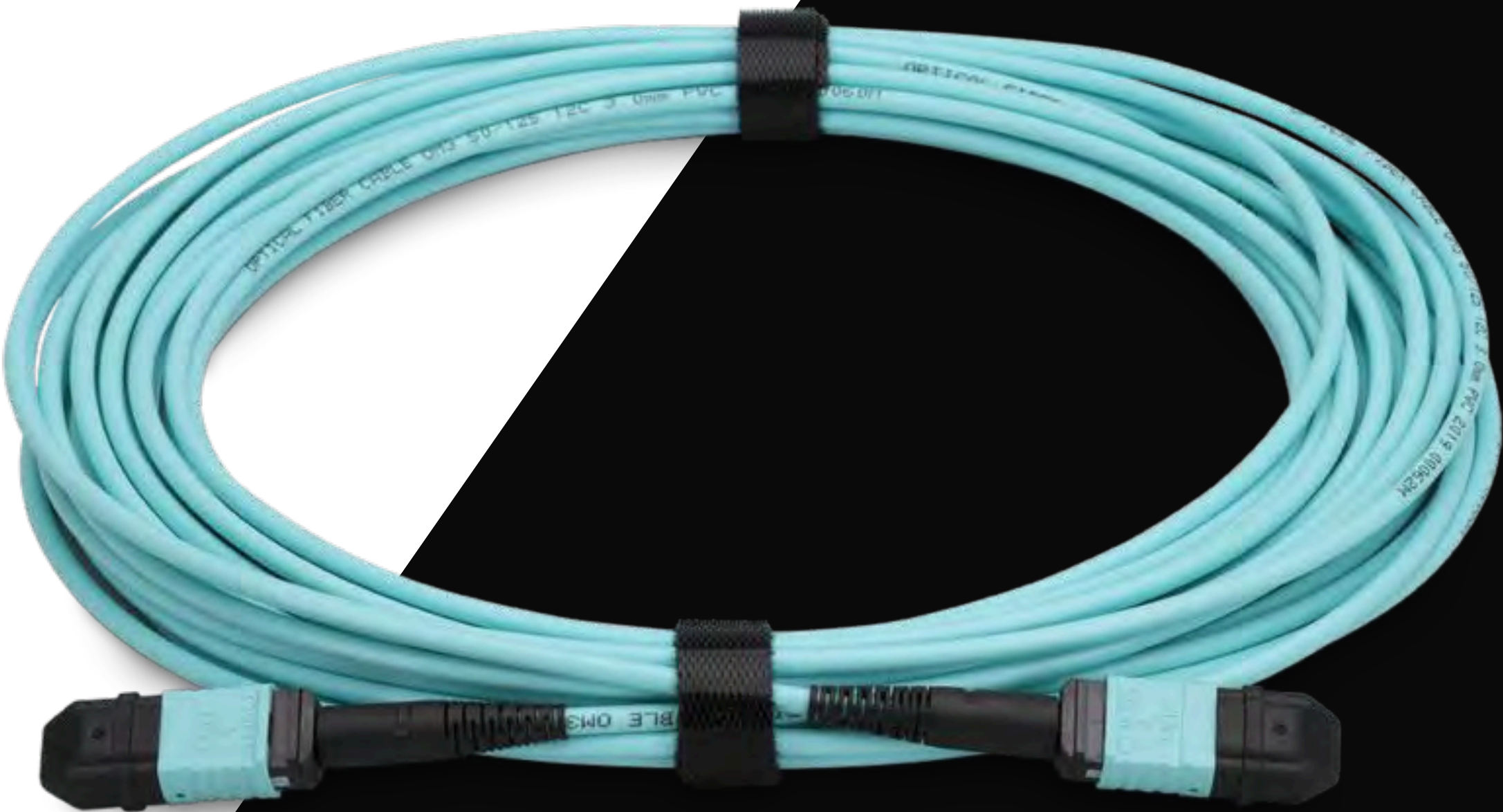


VENUS and VENUS 8

MTP trunk cables

Bend-resistant VENUS and VENUS 8 MTP trunk cables are designed to meet the demands of high-density connections and high performance. These trunk cables come with cable holders for secure fixation within VENUS racks and panels.

- From 8 to 144 fibers in a single MTP cable
- Installation sleeves for secure mounting
- LSZH jacket (low smoke, zero halogen)
- Bend-resistant fiber types: MM OM3, OM4, OM5 (IEC 60793-2-10, type A1a.2, A1a.3) and SM (ITU-T G.657.A2)
- Compliant with Telcordia GR-1435-CORE, IEC 61754-7, TIA 568-C.3, IEC 60793-1, IEEE 802.3ba, IEC 11801, TIA-492.AAAC, TIA-492.AAAD, and TIA-942-A standards
- RoHS directive compliant (restriction of hazardous substances)
- Customizable configurations tailored to customer requirements
- Simple and cost-effective upgrade path 10G to 1600G without replacing trunk cables
- High performance while saving space in cable pathways
- Ideal for installations with high-density connection and operational readiness demands, supporting Disaster Recovery Plans (DRP), Business Continuity Planning (BCP), and central data center hubs
- Insertion loss levels exceed the strict criteria of the TIA 942-A standard



1

CONSTRUCTION

43M = ТРАНКОВЫЕ КАБЕЛИ

2

FIBER

S3 = SM G.657.A2
30 = OM3
40 = OM4
50 = OM5

3

THE NUMBER OF FIBERS

08 = 8
12 = 12
24 = 24
36 = 36
48 = 48
.....
144 = 144

4

LEFT PLUGS

M1 = MTP 12
M8 = MTP 8

5

RIGHT PLUGS

M1 = MTP 12
M8 = MTP 8

6

LENGTH

001...999 M

7

THE LENGTH OF THE TAKEAWAYS

0G = 0,7M
01...99 M

8

GENDER ON THE LEFT

F = FEMALE
M = MALE

9

GENDER ON THE RIGHT

F = FEMALE
M = MALE

10

POLARITY

A = A
B = B
C = C

11

EXECUTION

51 = ULL

43M-S3-12-M1-M1-010-0G-FFB-51

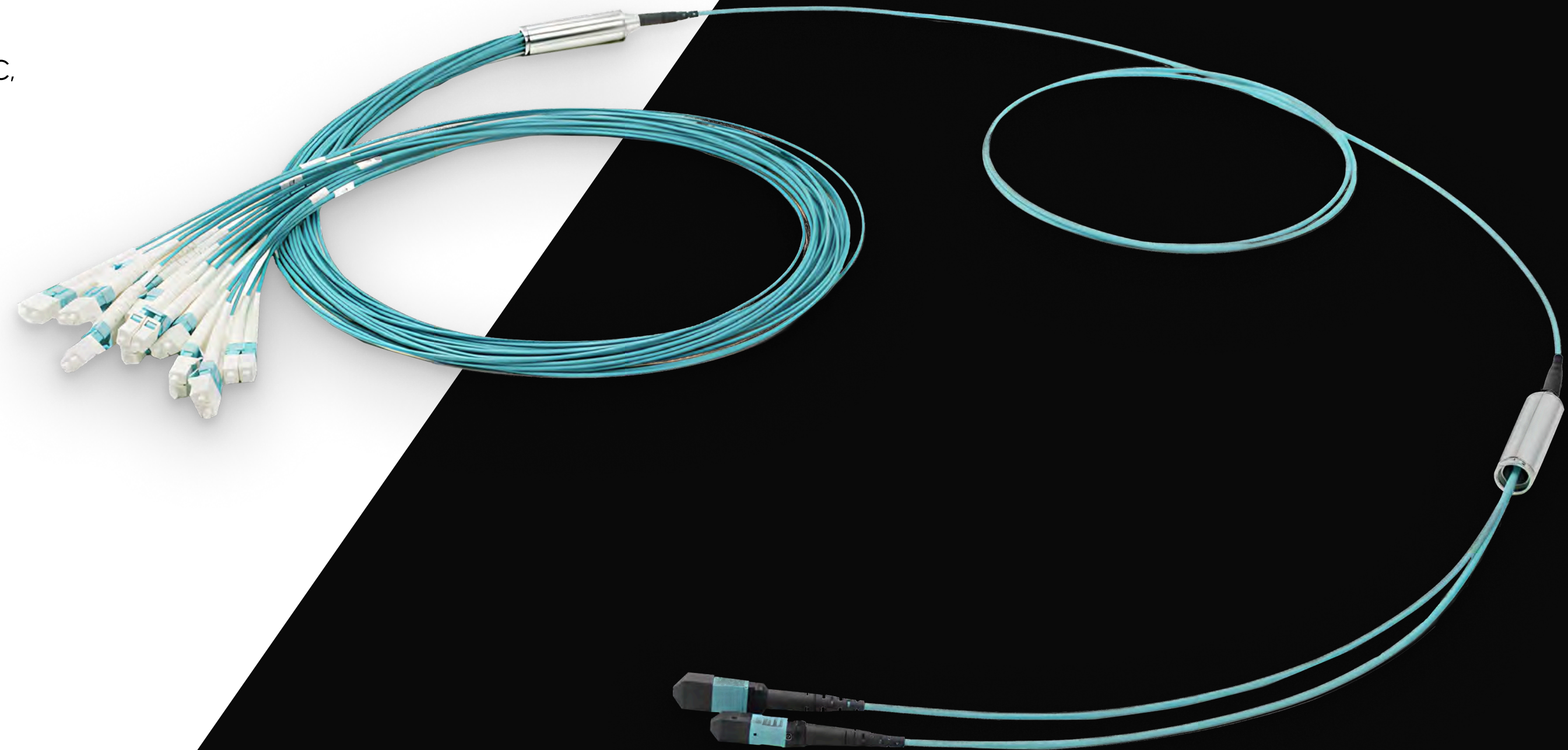
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VENUS and VENUS 8

MTP-LC splitter cables (fanout / breakout cables)

MTP-LC fanout cable assemblies combine MTP connectors—designed for connection to VENUS cassettes—with LC UNIBOOT duplex connectors for direct connection to active equipment. These assemblies provide additional cabling options for data center infrastructure.

- From 8 to 48 fibers in a single MTP cable
- LSZH jacket (Low Smoke Zero Halogen)
- Bend-resistant fiber types: MM OM3, OM4, OM5 (IEC 60793-2-10, type A1a.2, A1a.3) and SM (ITU-T G.657.A2)
- Compliant with: Telcordia GR-1435-CORE, IEC 61754-7, IEC 60793-1, IEC 11801, TIA 568-C.3, TIA-492.AAAC, TIA-492.AAAD, TIA-942-A, IEEE 802.3ba
- RoHS compliant (Restriction of Hazardous Substances)
- Compatible with all VENUS optical panels
- Configurable to meet specific customer requirements
- High performance with efficient space usage in cable pathways
- Ideal for deployments with strict density and operational readiness requirements, including Disaster Recovery Plans (DRP), Business Continuity Planning (BCP), and core data center nodes
- Insertion loss meets stricter criteria than those defined by the TIA 942-A standard



43H - S3 - 12 - M1 - LC - 003 - 0G - M - 20

1	2	3	4	5	6	7	8	9
CONSTRUCTION	FIBER	THE NUMBER OF FIBERS	LEFT PLUGS	RIGHT PLUGS	LENGTH	THE LENGTH OF THE TAKEAWAYS	GENDER	EXECUTION
43M = разветвительные сборки	S3 = SM G.657.A2 30 = OM3 40 = OM4 50 = OM5	08 = 8 12 = 12 24 = 24 36 = 36 48 = 48	M1 = MTP 12 M8 = MTP 8	LC = LC	001...999	0G = 0,7 M 01...99	M = MALE F = FEMALE	51 = ULL

VENUS and VENUS 8

Optics Cords and Cables

VENUS and VENUS 8 optic cords are designed to deliver maximum performance in environments with minimal installation space

- Contains 12/8 fibers in a slim, flexible 2.0 mm LSZH jacket (Low Smoke Zero Halogen)
- Bend-resistant fiber types: MM OM3, OM4, OM5 (IEC 60793-2-10, type A1a.2, A1a.3) and SM (ITU-T G.657.A2)
- Compliant with Telcordia GR-1435-CORE, IEC 61754-7, TIA 568-C.3, IEC 60793-1, IEEE 802.3ba, IEC 11801, TIA-492.AAAC, TIA-492.AAAD, and TIA-942-A standards
- RoHS compliant (Restriction of Hazardous Substances)
- Supports quick moves, adds, and changes, with easy maintenance of structured cabling systems
- Designed for high-density and high-availability installations, including core data center nodes, with support for Disaster Recovery Planning (DRP) and Business Continuity Planning (BCP)
- Factory-terminated LC connectors for high performance, compliant with TIA/EIA 604-10 (LC FOCIS 10)
- Factory-terminated MTP® Elite connectors exceed TIA/EIA 604-5 (MPO FOCIS 5) performance standards
- MTP® PRO connectors enable fast polarity and pin reconfiguration in the field—no need to disassemble the connector housing
- MTP® PRO features a push-pull boot for easy connect/disconnect access
- Field reconfiguration requires the MTP® PRO Field Tool (Part No. 18963)



43M-S3-12-M1-M1-010-FFB-56

1 2 3 4 5 6 7 8 9 10

1 CONSTRUCTION 43M = ОПТИЧЕСКИЕ ШНУРЫ	3 THE NUMBER OF FIBERS 08 = 8 12 = 12	6 LENGTH 001...999 M	9 POLARITY A = A B = B C = C
2 FIBER S3 = SM G.657.A2 30 = OM3 40 = OM4 50 = OM5	4 LEFT PLUGS M1 = MTP 12 M8 = MTP 8	7 GENDER ON THE LEFT F = FEMALE M = MALE	10 EXECUTION 55 = MTP ULL 56 = MTP PRO ULL
	5 RIGHT PLUGS M1 = MTP 12 M8 = MTP 8	8 GENDER ON THE RIGHT F = FEMALE M = MALE	

VENUS

LC duplex patch cords

VENUS LC duplex patch cords are designed to deliver maximum performance in environments with limited installation space

- Universal CORE optical LC duplex patch cord with single boot (Uniboot design)
- Dual-fiber 2.0 mm unified jacket saves up to 50% cable volume
- LSZH jacket (Low Smoke Zero Halogen)
- Bend-resistant fiber types: MM OM3, OM4, OM5 (IEC 60793-2-10, type A1a.2, A1a.3) and SM (ITU-T G.657.A2)
- Standards compliance: TIA-604-10 (LC FOCIS 10), IEC 61754-20, TIA 568-C.3, IEC 60793-1, IEC 61755-3, IEC 11801 (OS2, OM3, OM4), TIA-492.AAAC, TIA-492.AAAD, TIA 942-A, IEEE 802.3ae (10 Gb/s Ethernet)
- RoHS compliant (Restriction of Hazardous Substances)
- Tool-free polarity reversal
- Supports fast moves, adds, and changes with easy maintenance of structured cabling systems
- Ideal for high-density, high-availability environments—including core data center nodes—with consideration for Disaster Recovery Planning (DRP) and Business Continuity Planning (BCP)
- Factory-terminated connectors ensure high performance in accordance with TIA/EIA 604-10 (LC FOCIS 10)

41K-S3-LC-LC-01-ULL

1 2 3 4 5

1 CONSTRUCTION

41K = ОПТИЧЕСКИЕ ШНУРЫ
ДУПЛЕКС UNIBOOT

3 LEFT PLUGS

LC = LC

5 LENGTH

01...99 M

2 FIBER

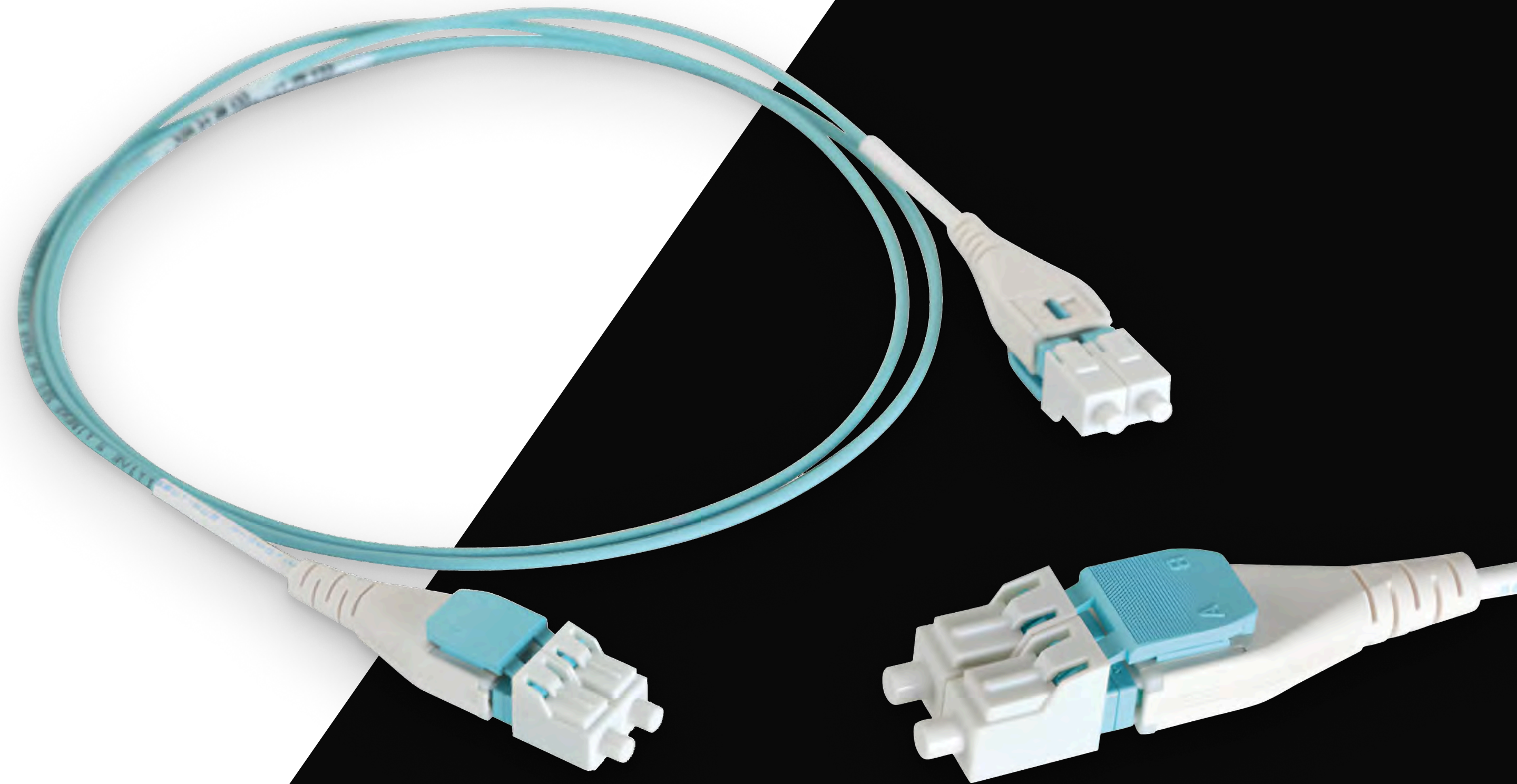
S3 = SM G.657.A2
30 = OM3
40 = OM4
50 = OM5

4 RIGHT PLUGS

LC = LC

6 EXECUTION

ULL = ULTRA LOW LOSS

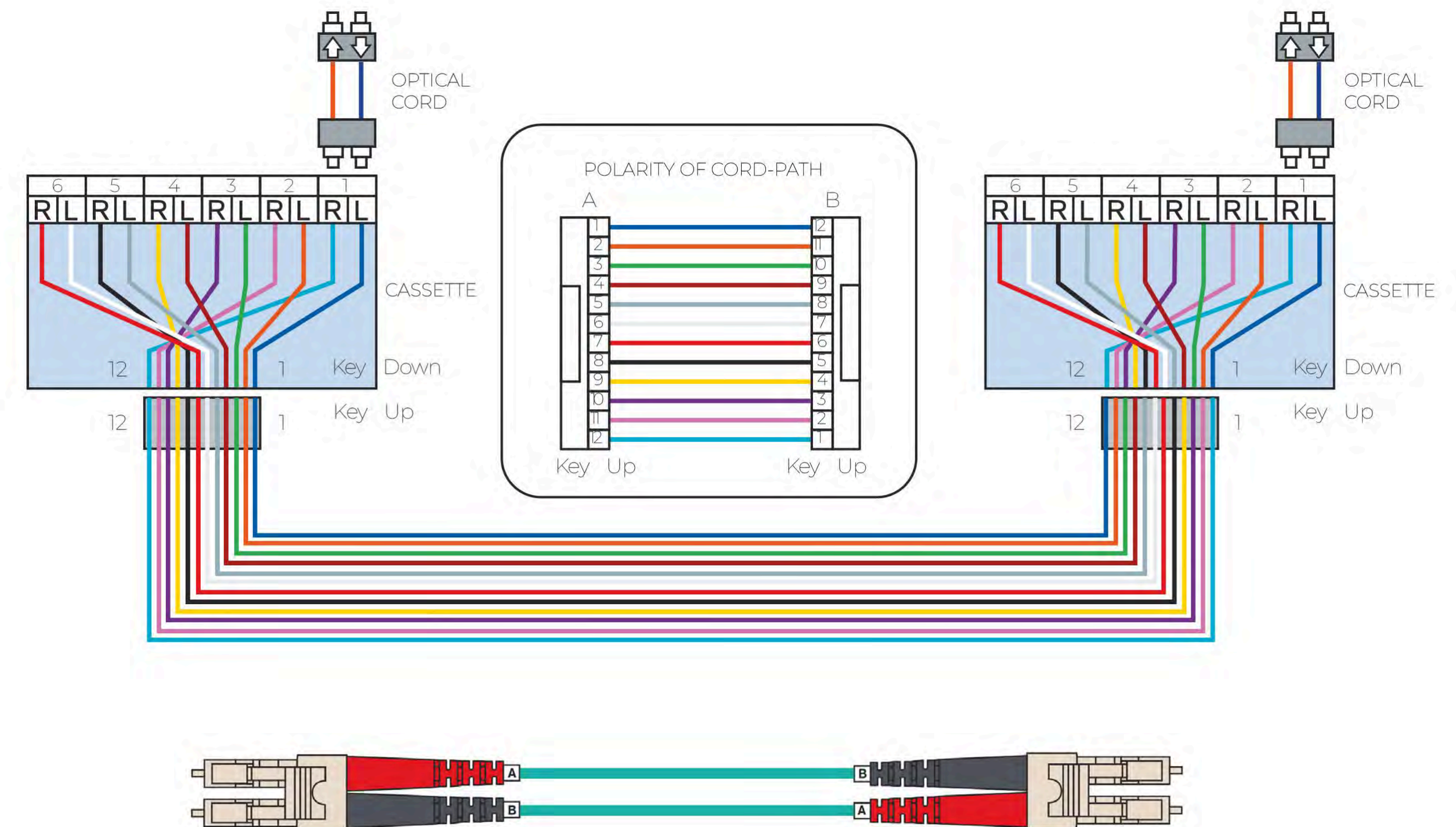


Polarity Selection Guidelines for MTP/MPO Multi-Fiber Links

The recommended method allows the creation of multi-fiber links of any complexity using standardized components and a unified strategy. These polarity guidelines apply to 12-fiber and 8-fiber MTP/MPO links, suitable for most applications. If your situation differs from these recommendations, please contact us — we'll be happy to assist.

12-Fiber Links

1. All MTP/MPO trunk cables and patch cords must use Polarity B.
 - a) All MTP/MPO trunk cables must be female–female.
 - b) All MTP/MPO patch cords must be male–female.
 - MTP PRO male–female patch cords are recommended.
 - c) All MTP/MPO through adapters in cassettes must be Key-Up to Key-Down.
2. When converting an MTP/MPO link to a duplex environment, use Type U universal polarity cassettes on both ends.
 - a) The wiring scheme for Type U cassettes is shown in the diagram.
 - b) Cassette MTP/MPO ports must be male.
 - c) Use standard LC A-B duplex patch cords for connectivity.



Polarity Selection Guidelines for MTP/MPO Multi-Fiber Links

8-Fiber Links

1. All MTP/MPO trunk cables and patch cords must use Polarity B.
 - a) All MTP/MPO trunk cables must be male-male.
 - b) All MTP/MPO patch cords must be female-female.
 - MTP PRO female-female patch cords are recommended.
 - c) All MTP/MPO through adapters in cassettes must be Key-Up to Key-Down.
2. When converting an MTP/MPO link to a duplex environment, use Type U universal polarity cassettes on both ends.
 - a) The wiring scheme for Type U cassettes is shown in the diagram.
 - b) Cassette MTP/MPO ports must be female.
 - c) Use standard LC A-B duplex patch cords for connectivity.



Singlemode Links

All MTP/MPO connectors for singlemode fibers are APC polished. Therefore, Key-Up to Key-Up adapters must not be used in singlemode systems. These types of adapters are not included in our recommendations.

NEPTUNE

Real-time monitoring system of fiber optic connectivity

MSA Fiber Optics Ltd. has recently developed a novel solution for real-time monitoring of fiber optic connectivity.

This innovative technology offers continuous visibility into the performance and integrity of fiber optic networks, enabling faster fault detection, improved maintenance efficiency, and overall enhanced network reliability.

We believe this solution holds strong potential for transforming how fiber optic infrastructure is managed—especially in high-demand environments such as data centers, telecom networks, and smart infrastructure systems.

We would be glad to explore opportunities for collaboration, feedback, or pilot implementation.





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