

Network Connectivity

Actassi Iris

High-density pre-terminated optical cabling system for data centres



We know data centres from port to rack to room to building



With our turn-key solutions including Actassi Iris you can relax

- We listen and give advice
- We design
- We give support
- We monitor and manage



Actassi Iris. The innovative result of a partnership with Corning.

Schneider Electric is an expert in designing and building reliable and efficient data centres. Our goal is to free your time so you can concentrate on your core business and don't have to worry about future IT refreshes. Actassi Iris, the result of a partnership with Corning Cable Systems, is the high-density fibre optics part of our turn-key solutions for data centres.



The partnership with Corning, the global leader in fibre optics technology, guarantees the performance of our turn-key solutions.



Discover Actassi Iris with Corning technology

Actassi Iris is our premium fibre optic offer with several customer benefits:

- Powered with the Corning technology
- Simplifies installation and improves the performance
- The highest port density in the market
- Modular system approach for reduced installation time
- Provides a comprehensive end-to-end network connectivity portfolio

Schneider
Electric



CORNING
TECHNOLOGY

Actassi Iris

Features & benefits



Actassi Iris simplifies the installation and improves the performance.

Actassi Iris is a high-density pre-terminated optical cabling system that simplifies installation and improves performance in data centre environments. Actassi Iris provides increased system density and offers the highest port density in the market. The modular system approach with pre-terminated components allows for reduced installation time and faster moves, adds and changes (MACs).

Schneider Electric's factory-terminated solutions provide improved system performance, ensure component compatibility and yield consistent quality.

Actassi Iris consists of optical trunks and extender trunks, cassettes, harnesses, panels and jumpers with reduced cable diameters and bending radii, enabled by Corning ClearCurve optical fibre.



Innovative drawer-style hardware

Offers unprecedented patchcord/connector access while achieving the highest port density in the market: 576 fibres in a 4U panel and 96 fibres in a 1U panel

Bend-insensitive fibre cables

Corning "ClearCurve" fibres enable tighter trunk cable bends for slack storage and routing and reduce system downtime

Data centre standard compliant

Comply to EN 50173-5 and TIA 942

Custom engineered harness assemblies

Allow seamless integration into the most common SAN directors

Low insertion loss

Allows flexible network design with longer links and multiple interconnects

Shuttered modules

One-handed operation, no need for dust caps

Universal polarity system

Enables moves, adds and changes without polarity concerns; provides a simple migration path from 2-fibre to parallel optic applications

100% factory-tested solutions

Provide consistent quality, ensure system performance and reduce installation time

Actassi Iris

Features & benefits

ClearCurve multimode and single-mode fibres are developed and manufactured by Corning to provide superior bend performance and resilience in fibre optic cabling systems. Innovative fibre design in core, cladding and coating ensures leading performance with full compatibility to the most recent fibre standards.

Corning cable systems has been making MTP®-based fibre optic cabling systems for more than a decade, exceeding 10 million terminations on MTP connectors.

The entire system follows an easy snap-and-latch approach – from the installation of modules and cables to the connection of system components at the fibre interface. There is no time-consuming fibre preparation and termination, and there are no consumables or piece parts. No tools are required other than a screwdriver for installation of hardware.

Pre-terminated trunk cabling systems fitted with a factory-installed protective pulling grip are routed through the cabling pathways and spaces. Once deployed, the pulling grip is

removed and the MTP connectors on both ends are plugged into adaptor supports or cassettes.

High-density MTP connector-based trunk systems plug into breakout cassettes or harnesses for a simple, fast-to-deploy, modular solution with easy scalability.

Cassettes and harnesses conveniently load into Actassi Iris hardware, and correct fibre polarity is guaranteed throughout the systems' link by the universal wiring scheme.

Actassi Iris products are packaged in recycled material, and the packaging is 100 % recyclable.



The Corning ClearCurve optical fibres provide superior bending performance and reduced cable diameters.



12-Fibre Actassi Iris trunk



144-Fibre Actassi Iris trunk

Connected mated pairs with single or multi fibre connectors		
Connector type	MTP	LC/PC
Ferrule	Composite	Ceramic
Housing	Composite	Composite
Colour	Housing/Boot	Housing/Boot
MM OM3 50 µm	Aqua/Black	Black/Aqua
MM OM4 50 µm	Aqua/Black	Black/Aqua
SM OS2 (E9)	Green/Black(APC)	Blue/Blue (UPC)
Optical performance		
Loss max (dB) MM	< 0.35	< 0.15
Loss max. (dB) SM	< 0.75	< 0.50
Back reflection typical (dB) SM	<-65 (APC)	< -58 (UPC)
Mechanical performance		
Durability change to FOTP -21	< 0.2 dB, 200 rematings	< 0.2 dB, 500 rematings
Max. tensile load on connector	44N for 2.9 mm legs	44 N for 2.0 mm legs
Specification of modules/harnesses (max. 4 m)		
Loss max. (dB)		
MM low loss	< 0.5	
SM Standards	< 1.3	

Fibre characteristics			
	ClearCurve Multimode 50/125 µm OM3 Pretium 300	ClearCurve Multimode 50/125 µm OM4 Pretium 550	Single-mode 9/125µm SMF-28e XBTM OS2
Laser bandwidth at 850 nm	2000 MHz	4700 MHz km	N/A
Fibre core diameter	50.0 + 2.5 µm	50.0 + 2.5 µm	N/A
Mode field diameter 1310 nm	N/A	N/A	9.2 + 0.4 µm
Mode field diameter 1550 nm	N/A	N/A	10.4 + 0.5 µm
Typical attenuation	2.5/0.7 dB/km (850 nm/1300 nm)	2.5/0.7 dB/km (850 nm/1300 nm)	0.36/0.22 dB/km (1310 nm/1550 nm)
Induced attenuation, 7.5 mm radius, 250 µm coated fibre at 850 nm	< 0.2 dB	< 0.2 dB	N/A
Induced attenuation, 10 mm radius, 250 µm coated fibre at 1550 nm	N/A	N/A	< 0.50 dB
Fibre meets or exceeds standards	TIA/EIA 492AAAC-A, ISO/IEC 11801 OM3, tested with minEMBc method to TIA/EIA 455-220 IEC 60793-2-10 Type A1a.2 IEC Ed. 2.0 and IEC 60793-1-49 Ed. 2.0	TIA/EIA 492AAAC-A, ISO/IEC 11801 OM4 (proposal), tested with minEMBc method to TIA/EIA 455-220 IEC 60793-2-10 Type A1a.2 IEC Ed. 2.0 and IEC 60793-1-49 Ed. 2.0	TIA/EIA 492AAAC-A, IEC standards 60793-2-10 Type B1.3 ISO/IEC 11801 OS2 Telcordia GR 20, complies with ITU-T G. 652Table D and G. 657Table A

Trunk cables

Specifications

- Provide 12 to 144 fibre connectivity
- Utilize MTP Connectors
 - Small form factor
 - 12-fibre push/pull optical connectors
 - minimize errors and reduce space
- Allow for lower bend radii and smaller slack loops
- Enable up to 6x the cable tray capacity over traditional bulkier cabling solutions
- Save up to 65 percent space
- Minimize cable tray weight and improve air flow
- Meet the highest skew criteria for 100G
- Feature round furcation legs that provide easy routing and improved storage
- Feature small-profile furcation plugs allow stress-free cable mounting leave no legs outside the panel
- Are shipped with strain-relief cradles
- Are available with optional flexible pulling grips that allow easy installation around corners allow trunk pull through conduits up to 450 N provide complete protection for connectors
- Are shipped on a light-weight reel for easy installation
- Feature round furcation legs that provide easy routing and improved storage
- Feature small-profile furcation plugs allow stress-free cable mounting leave no legs outside the housing are shipped with strain-relief mounting cradles
- Are available with optional flexible pulling grips that allow easy installation around corners allow trunk pull through conduits up to 450 N provide complete protection for connectors
- Are shipped on a light-weight reel for easy installation
- Hybrid trunks use LC-uniboot legs on the single-fibre end

Low smoke (IEC 61034), zero halogen (IEC 60754-1),
flame retardant (IEC 60332-3), non-corrosive (IEC 60754-2)

Cable characteristics								
Temperature range:		Laying and installation		-5 to + 50°C				
		Operation		-20 to + 60°C				
		Transport and storage		-25 to + 70°C				
Fibre count	Cable diameter (mm)	Cable weight (kg/km)	Min. bend radius installation (mm)	Min. bend radius in service (mm)	Max. tensile load installation (N)	Crush resistance short term (N/10cm)	Fire rating (MJ/m)	Pulling grip (mm)
1 x (1x12) distribution	4.6	18.3	46	23	400	750	0.48	41
1 x (2x12) distribution	5.2	22.8	52	26	600	750	0.58	41
1 x (3x12) distribution	7.6	57	76	38	600	750	0.58	56
1 x (4x12) distribution	7.6	57	76	38	600	750	0.58	56
1 x (6x12) distribution	9.0	96	90	45	600	750	0.58	56
1 x (8x12) distribution	9.0	96	90	45	600	750	0.58	56
1 x (12x12) distribution	9.0	96	90	45	600	750	0.58	56

Trunk cables

Specifications pulling grip

Mechanical characteristics pulling grip				
Cable fibre count	Grip/Plug Size	Pulling grip tensile (N)	Pull grip outer diameter (mm)	Min. duct size diameter (mm)
12	1	400	41	64
24	1	450	41	64
36-144	2	450	56	89

Reel capacities (m)			
Trunk fibre count	Reel A diameter 600 mm width 130 mm	Reel B diameter 600 mm width 310 mm	Reel C diameter 600 mm width 470 mm
12	2-330 m		
24	2-330 m		
36	2-264 m	265-300 m	
48	2-264 m	265-300 m	
72	2-148 m	149-330 m	
96	2-132 m	133-330 m	
144	2-99 m	100-264 m	265-330 m



Actassi Iris trunk packaging

Actassi Iris trunk pulling grip
Integration system

Extender Trunks

Ordering information

- Transition from multi-fibre into single-fibre environments
- Feature non-pinned (male) MTP connectors on one end and single-fibre connectors (LC - duplex Uniboot) on the other
- Single-fibre connector side to plug into single-fibre patch panels or electronics ports.
- Non-pinned MTP side plugs into modules or harnesses

VDIDTE X M

1 2 3 4 5 6 7 8 9

1 Select grip application

G= Grip on first end only package outside of reel
 D= Grip on both ends (double)
 Z= No grip

2 Select MTP connector on first end

(Packaged outside reel).
 93= MTP MM low loss (with pins)
 89= MTP/APC SM (with pins)

3 Select MTP connector

(Second end packaged inside of reel).
 75= MTP lowloss (without pins)
 90= MTP/APC SM (without pins)

4 Select fibre count

12= 12 fibres
 24= 24 fibres
 36= 36 fibres
 48= 48 fibres
 72= 72 fibres
 96= 96 fibres
 E4= 144 fibres

5 Select fibre type

T= ClearCurve multi mode 50/125 µm OM3 Pretium 300
 Q= ClearCurve multi-mode 50/125 µm OM4 Pretium 550
 G= Single-mode fibre 9/125 µm Corning ClearCurve XB

6 Cable type

LZ= Low smoke, zero halogen, FRNC, data centre distribution cable

7 Select trunk furcation leg length for first end of panel

B= 1000 mm (+70/-0 mm), for Actassi Iris 4U panel
 C= 1500 mm (+70/-0 mm), for Actassi Iris 1U panel

8 Select trunk furcation leg length for second end to rear of reel

5= 500 mm (+70/-0 mm), for Actassi Iris 4U panel
 8= 840 mm (+70/-0 mm), for Actassi Iris 1U panel

9 Select overall length

002-999 metre*
 *Trunk length is measured from furcation plug to furcation plug (+1m/-0)

Example: VDIDTEG937548TLZB5X030M

Description: Actassi Iris MTP extender trunk: pulling grip on 1st end, MTP pinned connectors on 1st end (in pulling grip), MTP pinless connectors on 2nd end, 48 ClearCurve multimode 50/125 m OM3 Pretium 300 fibres, LSZH/FRNC data centre cable, aqua sheath, 1000 mm legs on 1st end for front connection to Actassi Iris 4U panel, 500 mm legs on 2nd end for rear connection to Actassi Iris 4U panel, trunk length 30 m with universal wiring. Delivered with 2 trunk holders and test report.

Hybrid Trunks

Ordering information

- Transition from multi-fibre into single-fibre environments
- Feature non-pinned (male) MTP connectors on one end and single-fibre connectors (LC - duplex Uniboot) on the other
- Single-fibre connector side to plug into single-fibre patch panels or electronics ports.
- Non-pinned MTP side plugs into modules or harnesses

VDIDTH LZ W M

1 2 3 4 5 6 7 8 9

1 Select grip application

G= Grip on first end only package outside of reel
 Z= No grip

2 Select MTP connector on first end

(Packaged outside reel).
 75= MTP lowloss (without pins)
 90= MTP/APC SM (without pins)

3 Select MTP connector

(Second end packaged inside of reel).
 78= LC duplex, Uniboot, MM
 79= LC duplex, Uniboot, SM, UPC

4 Select fibre count

12= 12 fibres
 24= 24 fibres
 36= 36 fibres
 48= 48 fibres
 72= 72 fibres
 96= 96 fibres
 E4= 144 fibres

5 Select fibre type

T= ClearCurve multi-mode 50/125 µm OM3 Pretium 300
 Q= ClearCurve multi-mode 50/125 µm OM4 Pretium 550
 G= Single-mode fibre 9/125 µm Corning ClearCurve XB

6 Cable type

LZ= Low Smoke, zero halogen, FRNC, data centre distribution cable

7 Select trunk furcation leg length for first end to front of panel

(Packaged outside of reel).
 5= 500 mm (+70/-0 mm) for EDGE 4U-RDH
 8= 840 mm (+70/-0 mm) for EDGE 1U

8 Select leg length on the single-fibre End

(2 mm dual-fibre with LC uniboot, packaged inside of reel).
 J= 300 mm (+70/-0 mm)* available only upon special request
 K= 600 mm (+70/-0 mm)
 L= 1000 mm (+70/-0 mm) (standard)
 M= 1200 mm (+70/-0 mm)

9 Select overall length

002-999 metre*
 *Trunk length is measured from furcation plug to furcation plug (+1m/-0)

Example: VDIDTHG757848TLZ5LW030M

Description: Actassi Iris Solutions Hybrid Trunk: Pulling grip on 1st end, MTP connectors on 1st end (in pulling grip), LC duplex uniboot connectors on 2nd end, 48 ClearCurve Multimode 50/125m OM3 Pretium 300 fibres, LSZH/FRNC data centre cable, aqua sheath, 500 mm legs on 1st end for connection to Actassi Iris 4Upanel, 1000 mm legs on 2nd end for connection to LC-duplex patch panels or into electronics ports., trunk length 30 m with Universal Wiring. Delivered with 2 trunk holders and test report.

MTP-LC cassettes

Specifications

- Break out 12-fibre MTP terminations into LC duplex connectivity
- Low loss connectivity enables system design flexibility
- Feature LC duplex port adaptors across the front and a MTP adaptor in the back
- Internal wiring (Universal Polarity) ensures correct fibre polarity throughout the system
- Feature LC duplex adaptors with translucent inward folding shutters
 - no need for dust caps
 - provide reliable dust protection
 - allow fibre identification with VFL (visual fault locator)
 - diffuse VFL light
 - eye safety by diffusing laser light
 - single-handed LC duplex operation
 - no contact with connector end-face
- Install fast from front or rear of housing
 - all steps can be performed from one side of a cabinet row (trunk attach, leg routing, MTP connection, module insertion)
- Enable pay-as-you-grow approach to network installation
- Can be easily upgraded with MTP panels to
 - accommodate changing requirements while leaving trunk cable infrastructure in place
 - allow seamless upgrades to parallel optics
- Are packaged in easy-open containers



Actassi Iris cassette



VFL-compatible shutter

MTP-LC cassettes

Ordering information

VDIDC2ECM-UM - -

1 2 3 4

1 Fibre count

12= 12 fibres

2 Select front side adaptor types

05= shuttered LC duplex, multimode, ceramic insert, aqua
 04= shuttered LC duplex, single-mode, ceramic insert, blue

3 Select rear side adaptor types

93= MTP, multimode, aqua, contains low loss pinned MTP
 89= MTP/APC, single-mode, green, contains pinned MTP

4 Select fibre type

T= ClearCurve multimode 50/125 µm OM3 Pretium 300
 Q= ClearCurve multimode 50/125 µm OM4 Pretium 550
 G= Single-mode fibre 9/125 µm Corning ClearCurve XB

Product Details		
	Dimesions H x W x D (mm)	Weight
ECM-UM12 Module	90 x 100 125	0,056

Example: VDIDC2ECM-UM12-05-93T

Description: Actassi Iris cassette: 6 LC duplex shuttered adaptors, aqua on front side, 1 MTP aqua adaptor on rear side, ClearCurve multimode 50/125m OM3 Pretium 300 fibres, universal wiring. Delivered with test report.



Actassi Iris cassette in packaging

Harnesses

Specifications

- Break out 12-fibre MTP terminations into LC duplex connectors
- Connect to trunks through a pinned MTP connector
- Plug into dual-fibre electronics ports with LC uniboot duplex connectors.
- Occupy less space than 6 duplex jumpers
- Improve airflow for cooling efficiency
- Enable higher density in equipment patch panels
- Ease handling of cable connections on high-fibre count SAN directors and switch blades
- Feature custom-engineered taper to match electronics port pitch
- Facilitate neat routing through unique snap-on features
- Are available in two lengths
 - short harness legs for minimal cable slack
 - long harness legs for mounting flexibility within a cabinet



Actassi Iris harnesses in switch



Actassi Iris harness

Harnesses

Ordering information

VDIDHH **12** **LZ** **-Z**

1 2 3 4 5 6

1 Select MTP connector

93= Multimode, pinned
89= Single-mode, pinned

2 Select duplex connector

79= LC duplex uniboot MM
78= LC duplex uniboot SM

3 Select fibre type

T= ClearCurve multimode 50/125 µm OM3 Pretium 300
Q= ClearCurve multimode 50/125 µm OM4 Pretium 550
G= Single-mode fibre 9/125 µm Corning ClearCurve XB

4 Cable type

LZ= Low Smoke, zero halogen, FRNC, datacentre distribution cable

5 Select leg length for break out-side 2.0 diameter

1= Cisco 9513/9509/9506 LC stagger
2= Brocade 48K/DCX, Mi1 LC stagger
3= Cisco Nexus LC stagger
4= Universal LC leg length of 150 mm

6 Select MTP leg length

1650= Short harness for panel Actassi Iris mounted directly above or below SAN Director (mm)
2700= Long harness for Actassi Iris panel mounted elsewhere in SAN Director cabinet (mm)

Example: VDIDHH937912TLZ1-Z1650

Description: Actassi Iris Harness: 6 LC duplex uniboot connectors to 1 MTP pinned connector, ClearCurve multimode 50/125m OM3 Pretium 300 fibres, LSZH/FRNC jacket, aqua, LC furcation legs tailored for Cisco 9513, harness length (MTP leg): 1650 mm, universal wiring. Delivered with test report.

Jumpers

Ordering information

- Feature
 - slim round 2-fibre interconnect cable
 - uniboot style duplex connectors
- Improve handling in high-density applications
- Low loss connectivity enables system design flexibility
- Enabled by bend-insensitive ClearCurve multimode or SMF-28e XB Single-mode fibres
- Designed to withstand tight bends and challenging cable routes

VDIDJE M

1 2 3 4 5 6

1 Select first end connector

79= LC duplex uniboot MM
78= LC duplex uniboot SM

2 Select second end connector

Use same option as in 1

3 Select fibre count

02= 2 fibres

4 Select fibre type

T= ClearCurve Multimode 50/125 µm OM3 Pretium 300
Q= ClearCurve Multimode 50/125 µm OM4 Pretium 550
G= Single-mode fibre 9/125 µm Corning™ ClearCurve™ XB

5 Select cable type

2.0 mm Patchcord
NZ20= FRNC, 2-fibre cable, single jacket

6 Select overall length

001-999 metre

Example: VDIDJE797902TNZ20002M

Description : Actassi Iris low loss patchcord: LC duplex uniboot connectors, ClearCurve multimode 50/125m OM3 Pretium 300 fibres, standard reverse fibre polarity, LSZH/FRNC jacket, aqua, length: 2 m.



Actassi Iris jumper



Jumper routing in Actassi Iris panel

MTP Adaptor support Specifications

- Provide MTP connection points between trunks and harnesses or extender trunks
- Can be installed or removed from the front or rear of a panel
- Facilitate simple upgrades to parallel optics
- Are packaged in easy-open containers

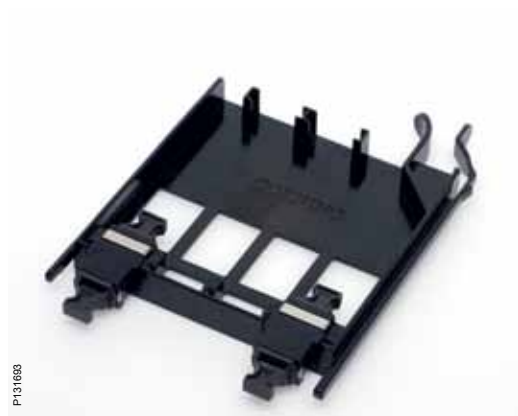
Product Details		
	Dimesions H x W x D (mm)	Weight
VDIDC123	90 x 100x125	0,028

Ordering inforamtion		
Part Number	Dimesions	
VDIDC123	Actassi Iris support equipped with 2 MTP aqua (OM3) adaptors	
VDIDC122	Actassi Iris support equipped with 2 MTP black (OS2) adaptors	
VDIDC143	Actassi Iris support equipped with 4 MTP aqua (OM3) adaptors	
VDIDC142	Actassi Iris support equipped with 4 MTP black (OS2) adaptors	



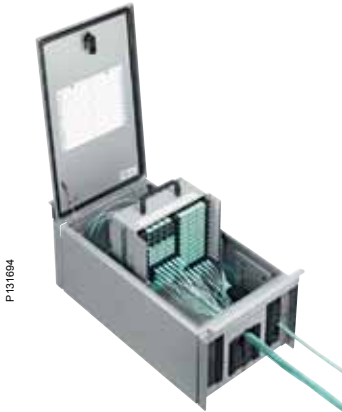
P131682

Actassi Iris MTP adaptor support installed in panel



P131683

Actassi Iris MTP adaptor support



P131694

Actassi Iris, Compact zone box



P131695

Actassi Iris, 4U panel with LC cassettes

- Actassi Iris 4U panel holds up to
 - 48 LC modules (288 ports = 576 fibres) or
 - 48 MTP adaptor supports (192 MTPs (12f) = 2304 fibres)
- Actassi Iris 1U panel holds up to
 - 8 LC modules (48 ports = 96 fibres) or
 - 8 MTP adaptor supports (32 MTPs (12f) = 384 fibres)
- Mount in 19-inch racks or cabinets
- Provide industry-leading high-density connectivity
- Enable growth of port counts through modular design
- Contain individually sliding trays that accommodate 4 LC connector cassettes or MTP adaptor support.
 - provide easy access to connectors without compromising optical connectivity of other ports
 - facilitate fast moves, adds and changes of port configurations
- Feature
 - horizontal jumper management guides on each tray
 - external jumper routing guides to facilitate
 - cable management and drawer movement port labeling on inside of front door
 - mounting plates at the rear enabling one-handed
 - installation and strain-relief of trunks
 - brush cable entries that make trunk installation easy and keep dust out
- Actassi Iris compact zone box holds up to
 - 24 LC cassettes (144 ports = 288 fibres) or
 - 24 MTP adaptor supports (96 MTPs (12f) = 1152 fibres)
 - lifting cassettes block for easy port access
 - brush cable entries for easy cable installation and dust protection
 - keylock for access control

19" Panels

Specifications

Product details		
	H x W x D (mm)	Product Weight (kg)
VDIDP1	44 x 490 x 495	4.2
VDIDP4	176 x 513 x 440	12.3
VDIDF2	500 x 290 x 225	12
Package details		
VDIDP1	128 x 520 x 548	5.2
VDIDP4	349 x 635 x 500	13.6
VDIDF2	586 x 386 x 332	13.5

Empty Actassi Iris panels	
Part Number	Description
VDIDP1	Actassi Iris 1U panel , reduced depth, panel equipped with 2 sliding drawers and U-clip trunk mounting compatibility. Capacity for 8 trunks. Capacity for 8 Actassi Iris LC cassettes or MTP Connector adaptor supports. Cassettes and supports are ordered separately.
VDIDP4	Actassi Iris 4U panel, reduced depth, equipped with 12 sliding drawers and trunk mounting compatibility for U-clip trunk holder. Capacity for 48 size-1 or 16 size-2 trunks. Capacity for 48 Actassi Iris LC cassettes or MTP Connector adaptor supports. Cassettes and supports are ordered separately.
VDIDF2	Actassi Iris compact zone box equipped with lifting cassette block for up to 24 Actassi Iris LC cassette or MTP connector adaptor support, ordered separately. Holds up to 24 size-1 or trunks 12 size-2 trunks.
Accessories for Actassi Iris panels	
VDIDA1	Additional U-Clip trunk holder fixture for size-1 trunk (12 or 24 fibre)
VDIDA2	Additional U-Clip trunk holder fixture for size-2 trunk (>24 fibre)
VDIDAD	Additional U-Clip double trunk holder fixture for two size 1 trunks, not with Actassi Iris 1U panel

Note: Other products and options are available. Please contact your Schneider Electric representative.

* Make the most of your energy

Schneider Electric Industries SAS
35 rue Joseph Monier
92500 Rueil-Malmaison
France
www.schneider-electric.com

As standards, specifications and designs change from time to time, please ask for confirmation of the information given in this publication.



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