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FIBER OPTICS PRODUCT

Optical Fiber · Cable · Connectivity · Accessories · Equipment

TAIHAN FIBEROPTICS CO., LTD

GLOBAL LEADING COMANY IN FIBER OPTICS

TAIHAN FIBER OPTICS

- Long history over 60 years
- Enhanced high technology in telecommunications
- Customer value in focus

2014 Developed 200um optical fiber(ANYWAVE 200) , Develops optical communication total solution(wire-wireless)

2013 Developed Korea's first ultra low loss fiber(ANYWAVE-LL)

2011 Business acquisition sign of Taihan Electric Wire Co., LTD. optical communication division
(Change the company name : Optomagic Co., Ltd. → TAIHAN FIBEROPTICS Co., Ltd.)

2010 Succeeded in mass-producing its "Bending-reinforced optical fiber"

2004 Developed the intergrated FTTH solution

2001 Taihan Electronic Wire Group separates the fiber optics department as Taihan Fiberoptics Co., Ltd.
(formerly Optomagic Co., Ltd.) and begins production of fiber optics

1998 Optical communication plant expansion in Anyang
(Introduction of VAD facilities and DRAWING facilities, Construct mass production system)

1996 Developed fiber distribution frame, optical terminal box and mechanical optical connector

1988 Developed submarine optical cable and leakage coaxial cable

1985 Began manufacturing of optical fiber ground wire(OPGW)

1981 Produced the nation's first optical cable & long wavelength low-loss fiber

1977 Developed optical fiber in Korea(MCVD method)

1974 Established TAIHAN FACTORY(Before Optomagic Co., Ltd.)

1961 Produced lead-sheathed communication cable for the first time in Korea

1955 Established TAIHAN ELECTRIC WRIE CO., LTD.

Connectivity

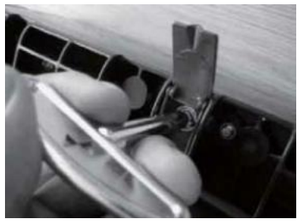
Inline Splice Closure_Non-bolt Type

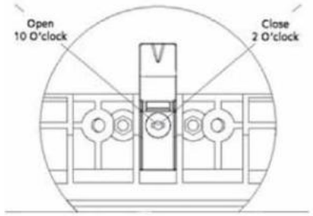
Easy installation applying handle-locking structure which is non-bolt system to closure assembly. One-body structure supports easy and fast installation. The cone type gasket allows adjusting the cable diameter and it completely protects water.

Specification

Parameter		TFO-CL-IS-96NB		TFO-CL-IS-192NB	
General	Dimensions(mm)	430(L)x190(W)x100(D)		430(L)x190(W)x144(D)	
	Weight	3.2kg		4.5kg	
Gasket Type	Gasket Type	CE3 (Type 1) 3 feeder	CE4 (Type 2) 4 feeder	CE2/16 (Type 3) 2 feeder / 16 drop	CE2/16 (Type 3) 2 feeder / 16 drop
	Cable diameter(mm)	8~22	6~16	6~20 / 3~6	3~6
Splice capa.	Splice capacity per tray	24 fibers			
	No. of splice tray	4		8	
	Total capa.	Max. 96 fibers		Max. 192 fibers	
Installation type		Aerial / Duct / Pole / Wall			
IP Grade		IP 68			

Handle Locking System





Handle-locking system is a assembly method of the fiber optic closure using a key to open and close the body of the closure. This method has shortened the installation time, and any bolts and nuts are not needed.

Multiple Type

Type		Cable Diameter (mm)	Photo	Type		Cable Diameter (mm)	Photo
CE3	3 Branches	8~22		CE216	Combination	Large : 8~22 Small : 3~4	
CE4	4 Branches	6~14		CE32	32 Branches	3~4	

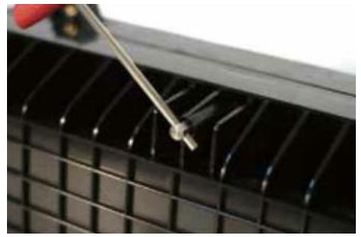
Inline Splice Closure_Non-bolt Type

Easy installation applying handle-locking structure which is non-bolt system to closure assembly. One-body structure supports easy and fast installation. The cone type gasket allows adjusting the cable diameter and it completely protects water.

Specification

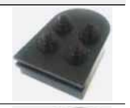
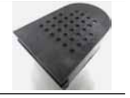
Parameter		TFO-CL-IS-288NB		TFO-CL-IS-360NB	
General	Dimensions(mm)	631(L)x230(W)x240(H)		631(L)x230(W)x240(H)	
	Weight	7.0kg		7.0kg	
Gasket Type	Gasket Type	CE1-L (Type 1) 1 feeder	CE2-L (Type 2) 2 feeder	CE4-L (Type 3) 4 feeder	CE32-L (Type 4) 32 drop
	Cable diameter(mm)	38(Max.)	22(Max.)	18(Max.)	6(Max.)
Splice capa.	Splice capacity per tray	24 fibers		36 fibers	
	No. of splice tray	12		10	
	Total capa.	288 fibers		360 fibers	
Installation type		Aerial / Underground			
Sealing method		Silicone gasket			

Handle Locking System



Handle-locking system is a assembly method of the fiber optic closure using a key to open and close the body of the closure. This method has shortened the installation time, and any bolts and nuts are not needed which also prevents the accident that can be happened during aerial installation.

Multiple Type

Type		Cable Diameter (mm)	Photo	Type		Cable Diameter (mm)	Photo
CE1L	1 Branches	12~38		CE4L	Combination	7~18	
CE2L	2 Branches	14~22		CE32L	32 Branches	3~6	

Inline Splice Closure_Bolt Type

The closure simplifies FTTx network installation, maintenance and management from central office to the each outside plants. TFO-CL-IS-96B provides for connections between fiber optic cables and passive optical splitters in the outside plant.

Specification

Parameter		TFO-CL-IS-96B			
General	Dimensions(mm)	430(L)x170(W)x110(H)			
	Weight	3.0kg			
Gasket Type	Gasket Type	CE3 (Type 1) 3 feeder	CE4 (Type 2) 4 feeder	CE2/16 (Type 3) 2 feeder / 16 drop	CE32 (Type 4) 32 drop
	Cable diameter(mm)	7~24	6~16	6~20 / 3~6	3~6
Splice capa.	Splice capacity per tray	24 fibers			
	No. of splice tray	4			
	Total capa.	96 fibers(Max.)			
Installation type		Aerial / Duct / Pole / Wall			
IP Grade		IP 68			

Multiple Type

Type		Cable Diameter (mm)	Photo	Type		Cable Diameter (mm)	Photo
CE3	3 Branches	8~22		CE216	Combination	Large : 8~22 Small : 3~4	
CE4	4 Branches	6~14		CE32	32 Branches	3~4	

Inline Splice Closure_Heat Shrinkable Type

Easy installation applying handle-locking structure which is non-bolt system to closure assembly. One-body structure supports easy and fast installation. The HS entry allows adjusting the cable diameter and it completely protects water by heat shrinkable tube.

Specification

Parameter		TFO-CL-IS-72HS		TFO-CL-IS-360NB	
General	Dimensions(mm)	570(L)x191(W)x103(H)		570(L)x191(W)x145(H)	
	Weight	3.2kg		3.2kg	
	Capa.	72 fibers		144 fibers	
Cable entry	Type	Large	Medium		Small
	No. of entry	2	2		2
Splice capa.	Splice capacity per tray	24 fibers			
	No. of splice tray	3		6	
	Total capa.	72 fibers		144 fibers	
Splice method	Sealing method	Fusion / Mechanical / Splitter			
	Splice protector / method	Heat shrinkable sleeve			
Installation type		Aerial / Duct / Pole / Wall			

Multiple Type

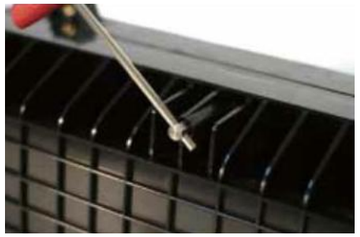
Cable Entry	Pipe dia.(mm)	Heat shrinkable (Acceptable cable)	Remark(STD.)
Large	22	8~40	12~22
Medium	20	8~40	12~20
Small	18	6~30	6~18

※ Cable entry radius of TFO3000-HS Series can be changed based on cable diameter.
And TFO3000-HS Series have combination cable entry to accommodate various cable diameter.

Inline Splice Closure_Heat Shrinkable Type

Easy installation applying handle-locking structure which is non-bolt system to closure assembly. One-body structure supports easy and fast installation. The cone type gasket allows adjusting the cable diameter and it completely protects water.

Handle Locking System



Handle-locking system is a assembly method of the fiber optic closure using a key to open and close the body of the closure. This method has shortened the installation time, and any bolts and nuts are not needed which also prevents the accident that can be happened during aerial installation.

Specification

Parameter		TFO-CL-IS-96B
General	Dimensions(mm)	710(L)x230(W)x240(H)
	Weight	7.0kg
	Capa.	288 fibers (Max.)
Cable entry	No. of entry(in/out)	05-5
	Cable diameter(mm)	22(Max.)
Splice capa.	Splice capacity per tray	36 fibers(upto 72C)
	No. of splice tray	8(Max.)
	Total capa.	288 fibers (Max.)
Splice method	Splicing method	Fusion / Mechanical / Splitter
	Splice protector/method	Heat Shrinkable Tube
Installation type		Aerial / Duct / Pole / Wall

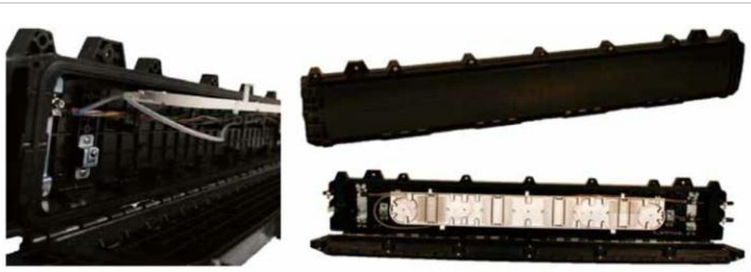
Dome Splice Closure_Heat Shrinkable Type

The closure simplifies FTTx network installation, maintenance and management from central office to the each outside plants.
TFO-CL-DS(96HS/144HS/288HS) provides for connections between fiber optic cables and passive optical splitters in the outside plant.

Specification

Parameter	TFO-CL-DS-96HS	TFO-CL-DS-144HS	TFO-CL-DS-288HS
Dimensions(mm)	445(H)x ø 130(R)	530(H)x ø 160(R)	695(H)x ø 235(R)
Weight	2.5kg	3.5kg	7.0kg
Material	Plastic	Plastic	Plastic
Entrance	Single : 4 / Oval : 1	Single : 5 / Oval : 1	Single : 5 / Oval : 1
Suitable cable dia.	Single : less than 200mm / Oval : less than 28	Single : less than 25mm / Oval : less than 33	Single : less than 35mm / Oval : less than 42
Max. No. of splice tray	4	6	12
Capa. per a tray	24 fibers	24 fibers	24 fibers
Max. capa.	96 fibers	144 fibers	288 fibers
Splice method	Fusion	Fusion	Fusion
Cable blocking	Heat Shrinkable Tube	Heat Shrinkable Tube	Heat Shrinkable Tube

Special Closure_Mid-Span Branch Type



The closure simplifies FTTx network installation, maintenance and management from central office to the each outside plants.
TFO-CL-MS-48 series provides mid-span branches without cable routing in the closure. 4 Way entry can accommodate various diameter of optical cables.

Specification

Parameter		TFO-CL-MS-48
General	Dimensions(mm)	950(L)x140(W)x75(H)
Cable entry	Input	2
	Output	2
Splice capa.	Splice capacity per tray	48 fibers
	No. of splice tray	1
	Total capa.	48 fibers
Installation type		Aerial

Splice Tray for Mid-Span Branch

Fiber Optic Splice Tray TJ24 is designed to provide a location to store and to protect the optical cable and the splicing point.
The splice tray-TJ24 is located at intermediate points along a route where cables are required to be joined or at the termination and patch panel points at the end of fiber cable runs. It can accommodate up to 24 fibers (splitter, ribbon fiber) on the tray.
And it provides enough storage area for surplus fibers up to 1.5m.

Mid-Span Closure(Single Type)

The closure simplifies FTTx network installation, maintenance and management from central office to the each outside plants.
TFO-CL-MS-12S series provides mid-span branches without cable routing in the closure.
4 Way entry can accommodate various diameter of optical cables.

Specification

Parameter		TFO-CL-MS-12S
General	Dimensions(mm)	518(L)x173(W)x75(H)
Cable entry	Input	3
	Output	3
Splice capa.	Splice capacity per tray	12 fibers
	No. of splice tray	1
	Total capa.	12 fibers
Installation type		Pole / Wall mount

Splice Tray for Mid-Span Branch

Fiber Optic Splice Tray TJ24 is designed to provide a location to store and to protect the optical cable and the splicing point. The splice tray-TJ24 is located at intermediate points along a route where cables are required to be joined or at the termination and patch panel points at the end of fiber cable runs. It can accommodate up to 24 fibers (splitter, ribbon fiber) on the tray.
And it provides enough storage area for surplus fibers up to 1.5m.

Mid-Span Closure(Dual Type)

· Telcordia GR-771-CORE compliant
· RoHS compliant
· Compact and durable structure
· Easy installation by one-touch clip and bolt
· Designed for mid-span installation
· Up to 16 drop cable
· Easy re-entry and re-use with drop cable
· Accommodate up to 2pcs of 1x8 Splitter module

Specification

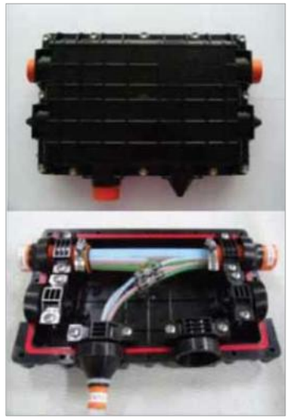
Parameter		TFO-CL-MS-48D
General	Dimensions(mm)	680(L)x205(W)x120(H)
	Weight	3.6kg
Cable entry	Feeder (Diameter)	2 / 2 (Ø7 ~16mm)
	Drop (Diameter)	16 (Ø2 ~3mm)
Splice capa.	Splice capacity per tray	48 fibers
	No. of splice tray	1
Sealing type		Silicon Gasket
Acceptable cable		Loose tube / Drop
Product type		Mid-span type
Installation type		Aerial
Splitter module	Type of slitter module	1 x 2 ~ 8
	No. of module	2(Max.)
	Type of Adapter	SC Simplex

Micro Duct Closure(4Branches)

· Protecting Micro duct (When it sets up Air-Blown Fiber)
· Size and bend radius by British Standard
· Double clamping structure for holding duct
· Using body and cable gasket for 100% sealing performance
· High strength plastic for impact and durability
· Easy maintenance and reassemble
· Installment : Underground, Direct buried, Aerial

Parameter	TFO-MCL-4B
Dimension (mm)	463x268x101
Weight (kg)	3.539
Micro duct Diameter (mm)	Ø9~Ø45
In-let Port	4
Water proof	IP68

Micro Duct Closure(6Branches)



· Protecting Micro duct (When it sets up Air-Blown Fiber)
· 6 ports are good for Micro duct branching
· Size and bend radius by British Standard
· Double clamping structure for holding duct
· Using body and cable gasket for 100% sealing performance
· High strength plastic for impact and durability
· Easy maintenance and reassemble
· Installment : Underground, Direct buried, Aerial

Parameter	TFO-MCL-6B
Dimension (mm)	316 x 220 x 70
Weight (kg)	1.984
Micro duct Diameter (mm)	Ø9~Ø45
In-let Port	6
Water proof	IP68

HD(High Density) **ODF Type**

The FDH is designed and constructed to be suitable for outdoor installation. The housing is sufficiently sturdy to withstand typical handling and installation procedures. The design and layout of the cable guides promote an efficient and ordered positioning of the cable within the hub.
The FDH provides the capacity to support up to 144 with fiber pigtails / patchcords storage and management facilities.

Specification

Parameter		72C	96C	Remarks
Dimension(mm)		820(H)x700(W)x500(D)	870(H)x700(W)x500(D)	Basement : 290
No. of cable entry (EA)	Inlet	1	1	Option
	Outlet	2	2	Option
Door		Front & Back Access		
HD-ODF for incoming cable		1EA		Capa. : 48 fibers
HD-ODF for distribution cable		1	2	
Capa.		72	96	
Splitter module slot(EA)		30(Max.)		
Adaptor type		SC/APC		
No. of adaptor(EA)		84	120	Assembled
Output parking lot(EA)		48(Max.)		Option

Parameter		144C	288C	Remarks
Dimension(mm)		920(H)x700(W)x500(D)	1060(H)x700(W)x500(D)	Basement : 290
No. of cable entry (EA)	Inlet	1	1	Option
	Outlet	2	2	Option
Door		Front & Back Access		
HD-ODF for incoming cable		1EA		Capa. : 48 fibers
HD-ODF for distribution cable		1	2	Capa : 144 fibers
Capa.		144	288	
Splitter module slot(EA)		30(Max.)		
Adaptor type		SC/APC		
No. of adaptor(EA)		156	300	Assembled
Output parking lot(EA)		48(Max.)		Option

Specification

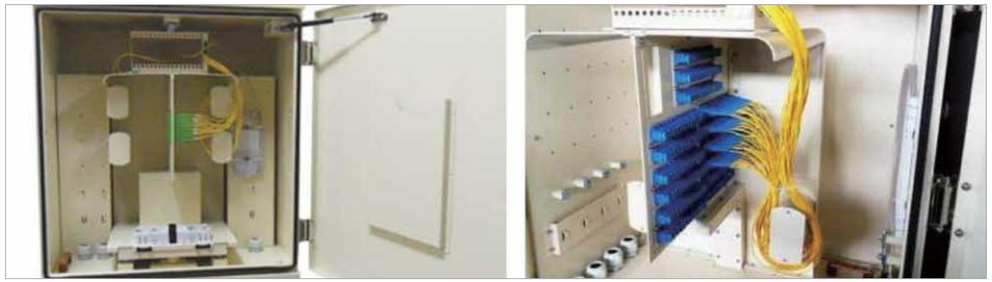
Parameter		72C	96C	Remarks
Dimension(mm)		1200(H)x700(W)x500(D)	1340(H)x700(W)x500(D)	Basement : 290
No. of cable entry (EA)	Inlet	1	1	Option
	Outlet	6	6	Option
Door		Front & Back Access		
HD-ODF for incoming cable		1EA		Capa. : 48 fibers
HD-ODF for distribution cable		3	4	
Capa.		432	576	
Splitter module slot(EA)		30(Max.)		
Adaptor type		SC/APC		
No. of adaptor(EA)		444	588	Assembled
Output parking lot(EA)		48(Max.)		Option

Parameter		144C	288C	Remarks
Dimension(mm)		1200(H)x1400(W)x500(D)	1300(H)x1400(W)x500(D)	Basement : 290
No. of cable entry (EA)	Inlet	2	2	Option
	Outlet	12	12	Option
Door		Front & Back Access		
HD-ODF for incoming cable		1EA		Capa. : 48 fibers
HD-ODF for distribution cable		6	7	Capa : 144 fibers
Capa.		864	960	
Splitter module slot(EA)		60(Max.)		
Adaptor type		SC/APC		
No. of adaptor(EA)		888	984	Assembled
Output parking lot(EA)		96(Max.)		Option

Test Report

Items	Test method and acceptance criteria
Dust and water protection test	· Test method : IEC 60529 IP55 · Dust : Ingress of dust is not totally prevented, but dust shall not penetrate in a quantity to interfere with satisfactory operation of the apparatus or to impair safety. · Water : Water splashed against the enclosure from any direction shall have no harmful effect.
	· Acceptance Criteria · Dust-Protected. · Protected against splashed water.

Sliding Type



The FDH is designed and constructed to be suitable for outdoor installation. The housing is sufficiently sturdy to withstand typical handling and installation procedures. The design and layout of the cable guides promote an efficient and ordered positioning of the cable within the hub.
The FDH provides the capacity to support up to 144 with fiber pigtails / patchcords storage and management facilities.

Specification

Parameter		TFO-FDH-BS-144	Remarks
Dimension(mm)	Body	760(H)x700(W)x460(D)	
	Base	290(H)x700(W)x460(D)	
Mounting Options		Ground	
No. of cable entry (EA)	Inlet	2	Option
	Outlet	4	Option
	Earthing	1	
Cable diameter (mm)	Inlet	13~18	
	Outlet	18~25	
	Earthing	5~10	
Splitter module slot(EA)		12(Max.)	
Applied splitter module		1x8~1x32	
Adaptor type		SC	
No. of adaptor(EA)		144	
Input parking lot(EA)		12(Max.)	Bulk
Output parking lot(EA)		36(Max.)	Bulk
Material		Aluminum	
Thickness(mm)		3	
Color		Ivory or Grey	

Swing Panel Type

The FDH is designed and constructed to be suitable for outdoor installation. The housing is sufficiently sturdy to withstand typical handling and installation procedures. The design and layout of the cable guides promote an efficient and ordered positioning of the cable within the hub.
The FDH provides the capacity to support up to 144 with fiber pigtails / patchcords storage and management facilities.

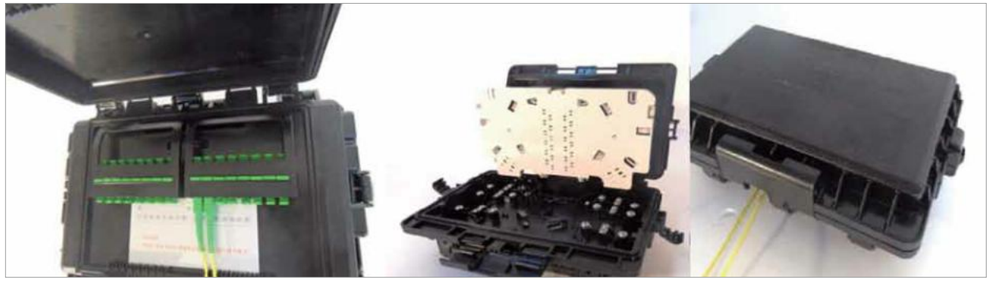
Specification

Description	TFO-FDH-PT-48	TFO-FDH-PT-96	TFO-FDH-PT-144	TFO-FDH-PT-288	TFO-FDH-PT-432
Body Dimensions(HxWxD)(mm)	470x500x300	570x500x300	790x600x400	1050x600x400	840x1200x400
Pad Dimensions(HxWxD)(mm)	150x500x300	150x500x300	150x600x400	150x600x400	150x1200x400
Number of door(EA)	1	1	1	1	2
No of cable entry(EA)	Inlet : 2	Inlet : 2	Inlet : 2	Inlet : 2	Inlet : 4
	Outlet : 4	Outlet : 4	Outlet : 4	Outlet : 4	Outlet : 8
Adaptor capa.(EA)	48	96	144	288	432
Output parking lot adaptor capa.(EA)	12	24	32	48	72
No. of or 'Slot' for splitter(EA)	4(slot)	4(slot)	18(slot)	18(slot)	32(slot)
No. of splice tray for input cable	1	3	3	4	8
No. of splice tray for output cable	2	4	6	12	22
Application	Pole/wall mounting	Pole/wall mounting	Pedestal	Pedestal	Pedestal
	Pedestal	Pedestal			

Test Report

Items	Test method and acceptance criteria
Dust and water protection test	· Test method : IEC 60529 IP55 · Dust : Ingress of dust is not totally prevented, but dust shall not penetrate in a quantity to interfere with satisfactory operation of the apparatus or to impair safety. · Water : Water splashed against the enclosure from any direction shall have no harmful effect.
	· Acceptance Criteria · Dust-Protected. · Protected against splashed water.

Optical Termination Closure Type



TFO-OT-16AR provides efficient cable connections between outside feeder cable and drop cable in front of FTTx service subscribers. TFO-OT-16AR integrates fiber splicing, storage, cable connections and branch to the subscriber line in the closure. TFO-OT-16AR has separated parts as splicing part and connection part. The reason of why TFO-OT-16AR supports individual two parts, in case of subscriber line connection, can connect drop cables with feeder cable line without contact splicing part.

Specification

Parameter		TFO-OT-16AR
General	Dimension(mm)	290(W)x182(D)x88(H)
	Installation	Aerial
	Protection grade	IP65
Cable	Cable entry	Main + Distribution : 3/3, Drop(or Patch) : 6
	Cable diameter(mm)	Main + Distribution : Φ 7~12, Drop(or Patch) : 3
Capa.	Capa. of core	8, 12, 16, 24C
Splice tray capa.		24C/tray(Max.)
Adaptor	Adaptor type	SC
	No. of Adaptor	16

Optical Termination Closure Type

TFO-OT-16PW provides efficient cable connections between outside feeder cable and drop cable in front of FTTx service subscribers. TFO-OT-16PW integrates fiber splicing, storage, cable connections and branch to the subscriber line in the closure. TFO-OT-16PW has separated parts as splicing part and connection part. The reason of why TFO-OT-16PW supports individual two parts, in case of subscriber line connection, can connect drop cables with feeder cable line without contact splicing part.

Specification

Parameter		TFO-OT-16PW
General	Dimension(mm)	270(W)x200(D)x80(H)
	Installation	Wall / Pole
	Protection grade	IP56
Cable	Cable entry	Loop through : 2, Single : 2, Drop : 16
	Cable diameter(mm)	Loop through : 21, Single : 14, Drop : Flat -2.1x3.0, Round : 3.0
Splitter module	Type of slitter module	Nx2~Nx8
	No. of module	2(Max.)
Adaptor	Adaptor type	SC
	No. of Adaptor	16

Optical Termination Closure Type

TFO-OT-8PW provides efficient cable connections between outside feeder cable and drop cable in front of FTTx service subscribers. TFO-OT-8PW integrates fiber splicing, storage, cable connections and branch to the subscriber line in the closure. TFO-OT-8PW has separated parts as splicing part and connection part. The reason of why TFO-OT-8PW supports individual two parts, in case of subscriber line connection, can connect drop cables with feeder cable line without contact splicing part.

Specification

Parameter		TFO-OT-8PW
General	Dimension(mm)	224(W)x145(D)x41(H)
	Installation	Wall / Pole
	Protection grade	IP65
Cable	Cable entry	Main : 1/1, Patch : 8
	Cable diameter(mm)	Main + Distribution : Φ 7, Patch : 3
Capa.	Capa. of core	2 splices / 8 termination
Adaptor	Adaptor type	Simplex SC
	No. of Adaptor	8(Max.)

Double Compartment Type

- TFO Optical Termination Box is designed to terminate, splice and interconnect fiber optic cables in an indoor environment. This box accommodates FTTH applications by mounting to the exterior surface of a dwelling and connecting between the distribution cable and drops routed to individual living units.
- The cables meet at a connector field that includes termination for the distribution cable and parking for the cables or the splicing field that can be configured with splice trays for splicing the cable. The enclosure may be pre terminated on the distribution side with an outside plant cable stub so that the unit is quickly connected to the plant.
- The unit accommodates a variety of OSP cable types via entry. Distribution cable fibers are terminated on standard fiber optic adaptors and staged at the parking position to the assigned distribution fiber easily makes service connections.
- Cables are secured with silicone rubber gasket to provide required pull out strength. The body of the enclosure provides the necessary protection against rain, wind, dust, rodents and other environmental contaminants while remaining light weight for easy installation.

Specification

Parameter		TFO-OTB-DC-12	TFO-OTB-DC-24	TFO-OTB-DC-36	TFO-OTB-DC-48
General	Dimension (LxWxH)(mm)	350x320x80	350x320x80	350x320x125	350x320x150
	Color	Ivory / Beige / Black			
	Material	SPCC			
Cable entry	No. of entry(in/out)	02-2			
	Dia. of inlet(mm)	25(Max.)			
	Dia. of outlet(mm)	25.(Max.)			
Adaptor	Type	SC(Default)			
	No. of adaptor	12(Max.)	24(Max.)	36(Max.)	48(Max.)
Connection	Splice method	Fusion / Adaptor			
	No. of splice tray	1	2	3	4
	Capa. per tray	12(Max.)			
Application	Installation environment	Indoor			
	Installation type	STD : Wall mount(Option for pole mount)			
	Grounding	Available			
	Locking method	Key-lock			

Double Layer Type_Plastic

· TFO Optical Termination Box is designed to terminate, splice and interconnect fiber optic cables in an indoor environment. This box accommodates FTTH applications by mounting to the exterior surface of a dwelling and connecting between the distribution cable and drops routed to individual living units.

· The cables meet at a connector field that includes termination for the distribution cable and parking for the cables or the splicing field that can be configured with splice trays for splicing the cable. The enclosure may be pre terminated on the distribution side with an outside plant cable stub so that the unit is quickly connected to the plant.

· The unit accommodates a variety of OSP cable types via entry. Distribution cable fibers are terminated on standard fiber optic adaptors and staged at the parking position to the assigned distribution fiber easily makes service connections.

· Cables are secured with silicone rubber gasket to provide required pull out strength. The body of the enclosure provides the necessary protection against rain, wind, dust, rodents and other environmental contaminants while remaining light weight for easy installation.

Specification

Parameter		TFO-OTB-DC-12	TFO-OTB-DC-24	TFO-OTB-DC-36
Cable entry	Feeder to feeder	02-2	02-2	02-2
	Feeder to drop	Feeder : 1 or 2	Feeder : 1 or 2	Feeder : 1 or 2
		Drop : 12(Max.)	Drop : 24(Max.)	Drop : 48(Max.)
Cable Diameter (mm)	In/Out	Feeder : 13~18(Customizing available)		
		Drop : 3~6		
Splice method		Fusion / Ribbon / Mechanical		
Splice tray capa.		12 / 24 fibers		
Max. No. of tray(EA)		1(Max.)	2(Max.)	4(Max.)
Adaptor type		LC / SC / FC /ST		
No. of adaptor(EA)		12(Max.)	24(Max.)	48(Max.)
Installation type		Wall / Pole		
Locking method		Clip / Clip+Key		
Material		Plastic		

Double Layer Type_Metal

· TFO Optical Termination Box is designed to terminate, splice and interconnect fiber optic cables in an indoor environment. This box accommodates FTTH applications by mounting to the exterior surface of a dwelling and connecting between the distribution cable and drops routed to individual living units.

· The cables meet at a connector field that includes termination for the distribution cable and parking for the cables or the splicing field that can be configured with splice trays for splicing the cable. The enclosure may be pre terminated on the distribution side with an outside plant cable stub so that the unit is quickly connected to the plant.

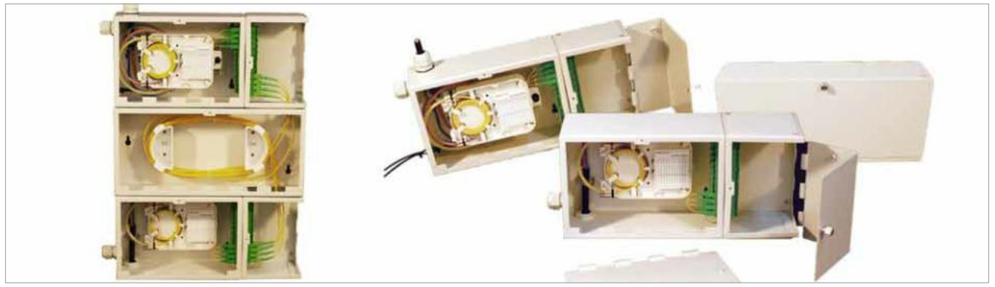
· The unit accommodates a variety of OSP cable types via entry. Distribution cable fibers are terminated on standard fiber optic adaptors and staged at the parking position to the assigned distribution fiber easily makes service connections.

· Cables are secured with silicone rubber gasket to provide required pull out strength. The body of the enclosure provides the necessary protection against rain, wind, dust, rodents and other environmental contaminants while remaining light weight for easy installation.

Specification

Parameter		TFO-OTB-DL-12M	TFO-OTB-DL-24M	TFO-OTB-DL-36M	TFO-OTB-DL-48M	TFO-OTB-DL-72M	TFO-OTB-DL-96M	TFO-OTB-DL-144M
Dimension (LxWxH)(mm)	Indoor	300x245x120		360x260x155		430x330x245		550x400x300
	Outdoor	330x275x130		390x290x165		460x350x250		580x420x300
Cable entry(In/Out)(EA)		02-2		04-2		08-2		
Cable Dia. (mm)	Indoor	13~18						
	Outdoor	25						
Splice method		Fusion						
Splice tray capa.		24 fibers for single of 12 slot for ribbon						
Max. No. of tray(EA)		1	2	3	4	5	6	7
Adaptor type		LC / SC / FC / ST						
No. of adaptor		12	24	36	48	72	96	144
Installation type		Wall						
Locking method		Key lock type						
Material		Indoor : Steel Outdoor : Aluminum or stainless steel						

Multi Operator Box



Multi Operator Box provides terminations by using SC adaptor in the box. And it provides splice capacity up to 12 / 24 / 36 / 48 cores for Operator Module and 24 / 48 / 72 / 96 cores for Client Module. Additional, the optical splitter with SC connectors can be installed into the splitter tray, so the RGFO Operator Module can distribute their fibers. In Additional Module (AM), the temporary storage for surplus patch cords is enabled. MOB enables the security from unauthorized access or vandalism by securing the box with 2 of locks. And it provides the quality based on international industrial standard.

Specification_OM(Operator Module)

Parameter		TFO-OTB-MOB-12OM	TFO-OTB-MOB-24OM	TFO-OTB-MOB-36OM	TFO-OTB-MOB-48OM
Dimension(WxDxH)		320x75x150	320x95x150	320x95x280	320x95x280
Material	Main body	Steel			
	Splice tray	Plastic			
Cable entry	External cable entry	2			
	Patch cord entry	2			
Cable dia. (mm)	External cable dia.	10~14			
	Patch cord dia.	30(Max.)			
Splice	No. of splice tray	1		2	
	Splice tray capa.	24 fibers(Max.)			
Splitter	No. of splitter tray	2(Max.)	3(Max.)	4(Max.)	5(Max.)
	Splitter type	1x4~1x32			
Adaptor	No. of adaptor	12	24	36	48
	Adaptor type	SC/APC			
Security	Pigtail compartment	Key lock			
	Patch cord	Key lock			
Protection grade		IP43			
Installation type		Wall			

Specification_CM(Client Module)

Parameter		TFO-OTB-MOB-24CM	TFO-OTB-MOB-48CM	TFO-OTB-MOB-72CM	TFO-OTB-MOB-96CM
Dimension(WxDxH)		320x75x150	320x95x150	320x95x280	320x95x280
Material	Main body	Steel			
	Splice tray	Plastic			
Cable entry	Riser cable entry	2	4	6	8
	Drop cable entry	24			
	Patch cord entry	2			
Cable dia. (mm)	External cable dia.	6~12			
	Drop cable dia.	4			
	Patch cord dia.	30(Max.)			
Splice	No. of splice tray	1	2	3	4
	Splice tray capa.	24fibers (Max.)			
Adaptor	No. of adaptor	24	48	72	96
	Adaptor type	SC/APC			
Security	Pigtail compartment	Key lock			
	Patch cord	Key lock			
Protection grade		IP43			
Installation type		Wall			

Specification_AM(Additional Module)

Parameter		TFO-OTB-MOB-2AM	TFO-OTB-MOB-4AM
Dimension(WxDxH)		320x75x150	320x60x280
Material	Main body	Steel	
	Splice tray	Plastic	
Cable entry	Patch cord entry	2	
Cable dia.(mm)	Patch cord dia.	30(Max.)	
Routing	No. of routing	2	4
Security		Self	
Installation type		Wall	

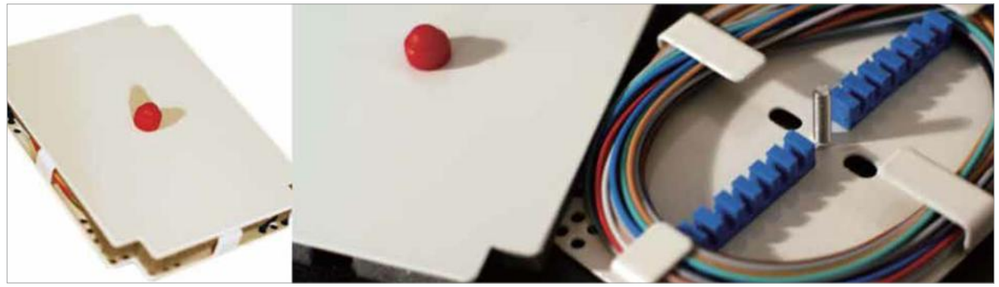
Fiber Splicing Box

TFO Fiber Splicing Box(FSB) is used to terminate and connect cable by splices. This FSB is designed to be suitable for indoor installation. FSB is divided as two types. Type A is drop cable out type and type B is distribution cable out type.

Specification

Parameter		TFO-OTB-MOB-12OM		TFO-OTB-MOB-24OM	
		A type	B type	A type	B type
Cable type		Distribution / Indoor cable			
Size(LxWxH)(mm)		290x190x80	290x190x130	290x190x120	290x190x170
Cable entry		Top : 1 Bottom : 3 Left : 1 Right : 1	Left : 1 Right : 1	Top : 1 Bottom : 3 Left : 1 Right : 1	Left : 1 Right : 1
Cable dia.	In(mm)	30			
	Out(mm)	3~5			
Splicing method		Fusion			
No. of splice tray		2		4	
Capa.		24 fibers		48 fibers	
Locking method		Key lock type			
Color		Beige			
Material		Aluminum			

Floor Box

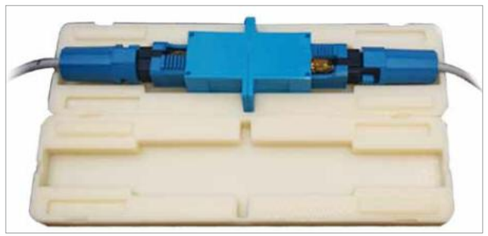


The unit accommodates a variety of optical fiber cable types via entry. Distribution cable fibers are terminated on splice chip and staged at the splice tray to the assigned distribution fiber easily makes service connections.

Specification

Parameter	TFO-OTB-FB-12
Material	Steel
Dimension(LxWXD)	115x85x13.2
Capa.	12 fibers(Max.)
Cable dia.(mm)	10(Max.)
Splice method	Fusion
Installation type	Indoor wall / Floor / Ceiling

Fiber Optic Connection Box



· Very small and flat design
· Convenience and ease of handling
· Applicable auto-shutter adaptor
· Cable entry 1 inlet port, 1 outlet port.

Parameter	TFO-OTB-SSM-2	Remark
Dimension(mm)	xxx(W)xxxx(D)xxx(H)	
Adapter type	SC	Auto shutter type for dust protection
No. of adaptor	1	
No. of cable entry	1	
Material	Plastic	
Installation	Wall	

Fiber Optic Outlet Type. A

· The fiber optic outlet is installed inside the customer's building to provide fiber termination points and housing for optical adapters and connectors.

· The TFO-OL-ID-2A shall be used for the interface and interconnection point between the customer's in-building fiber optic cabling system and ONT(Optical Network Terminal equipment) patch cord.

· For convenient cable management, they support termination, splicing and storage functions for fiber optic cable systems. The outlet has a simple design and enough work space to arrange clearly for cable management, and engineered fiber routing protect bend radius through the unit to ensure signal integrity.

Specification

Parameter	TFO-OL-ID-2A	Remark
Size(mm)	120(L)x70(W)x25(H)	
Adapter type	SC	
No. of adaptor	2	
Storage of fibers	G.657 of G.652.D applied	
Max. cable diameter(mm)	3~6	Available to change
No. of cable entry	2	Rear and Bottom
No. of Splice capa.(EA)	2(Max.)	
Capa.	2C	
Splice method	Fusion	40mm sleeve applied
Color	Ivory	
Material	Plastic	

Fiber Optic Outlet Type. B

· The fiber optic outlet is installed inside the customer's building to provide fiber termination points and housing for optical adapters and connectors.

· The TFO-OL-ID-2B shall be used for the interface and interconnection point between the customer's in-building fiber optic cabling system and ONT(Optical Network Terminal equipment) patch cord.

· For convenient cable management, they support termination, splicing and storage functions for fiber optic cable systems. The outlet has a simple design and enough work space to arrange clearly for cable management, and engineered fiber routing protect bend radius through the unit to ensure signal integrity.

Specification

Parameter	TFO-OL-ID-2B	Remark
Size(mm)	100(L)x95(W)x14(H)	
Adapter type	SC/APC	Auto shutter type for dust protection
No. of adaptor	2	
Storage of fibers	G.657	
Max. cable diameter(mm)	3~6	
No. of cable entry	2	
No. of protection sleeve slot	3	
Splice method	Fusion	40mm sleeve applied
Color	Ivory	
Material	Plastic	
Installation	Wall	

Fiber Optic Outlet Type. C

· The TFO-OL-ID-2M is installed to inside the customer's building to provide fiber termination points and housing for optical adaptors and connectors.

· The TFO-OL-ID-2M shall be used for the interface and interconnection point between the customer's in-building fiber optic cabling system and ONT(Optical Network Terminal equipment) patch cord.

· For convenient cable management, they support termination, splicing and storage functions for fiber optic cable systems. The outlet has a simple design and enough work space to arrange clearly for cable management, and engineered fiber routing protect bend radius through the unit to ensure signal integrity.

Specification

Parameter	TFO-OL-ID-2M	Remark
Size(mm)	88(L)x88(W)x31(H)	
Adapter type	SC/APC	
UTP connection	RJ45	
Coaxial connection	RF	
No. of SC adaptor	2	
No. of RJ45 adaptor	1	
No. of RF adaptor	1	
No. for protection sleeve slot	4	For fiber and ANT splice
Splice method	Fusion splice	
Material	Plastic	
Installation	Wall surface / Embed	
Application	Outlet / UTP termination box / Coaxial termination box	

Fiber Optic Outlet Type. D

· Outdoor Fiber Optic Outlet is mounted to outside wall of building or outside pole to distribute and connect optical cable for distribution of subscriber.

· TFO-OL-OD-2 is designed with controls that maintain the fiber bend radius throughout the unit on the segregated customer and provider sides. For convenient cable management, they support termination, splicing and storage functions for fiber optic cable systems. And it also accommodates the fiber optic cable coming from the inside of the wall and the outside.

· The outlet has a simple design and enough work space to arrange clearly for cable management, and engineered fiber routing protect bend radius through the unit to ensure signal integrity.

Specification

Parameter		TFO-OL-OD-2
General	Dimensions(mm)	88(L)x88(W)x31(H)
	Material	Plastic
Cable entry	No. of in/out	02-1
	Cable diameter(mm)	In : 10~13
		Out : 3~6
Fiber splice	Splice capa.	2 fibers
	Adaptor type	SC
	No. of adaptor	2
Installation type		Pole / Wall
IP grade		IP 65

Fiber Optic Outlet Type. E

· TFO Fiber Optic Outlet TFO-OL-OD-8 is mounted to inside wall of building to distribute and connect optical cable for distribution of subscriber.

· TFO-OL-OD-8 is designed with controls that maintain the fiber bend radius throughout the unit on the segregated customer and provider sides.

· For convenient cable management, they support termination, splicing and storage functions for fiber optic cable systems. The outlet has a simple design and enough work space to arrange clearly for cable management, and engineered fiber routing protect bend radius through the unit to ensure signal integrity.

Specification

Parameter	TFO-OL-ID-2M	Remark
Dimension(mm)	135(W)x170(D)x45(H)	
Slice capa.	1x8	
Cable port(in/out)	08-4	
Adaptor capa.	8 SC adaptors	
Cable dia.(mm)	in : 3 / out : 3.5	
Color	Beige	
Main body material	Plastic	
Installation type	Wall	Indoor

Cabinet Rack Type

· The rack has a function for LAN/WAN, Network, Server, Storage, Data/voice, telecom, transmission, and broadcasting. Using a Aluminum, the body is very much lighter than the steel rack. For the simple design the top and bottom frame is anodized. Mount bar is also Aluminum which can be adjustable back and forth for the efficient cable distribution. It is slim nut type and for easy identification, the line is printed by unit. The shelf is applied four mount bar type for efficient distribution of weight, and standard is two mount bar type.

· Front door has a safe locking system, also using a tempered glass. Side door is a slide latch type for easy removing.

Specification

Parameter	TFO-R-CT-45U	TFO-R-CT-40U	TFO-R-CT-36U	TFO-R-CT-31U	TFO-R-CT-27U	TFO-R-CT-22U
Height(mm)	2200	2000	1800	1600	1400	1200
Width(mm)	Standard : 600 / Single management : 750 / Dual management : 900					
Depth(mm)	600 / 650 / 800					
Unit	45	40	36	31	27	22
Mounting bar	19 inches					
Cord guidance	Standard : none / Single management : one side mandrel / Dual management : two side mandrel					
Door	Front & Rear					
Lock	Key lock					
Color	Light grey / Black(Available for customized color)					

Open Rack Type

· The rack has a function for LAN/WAN, Network, Server, Storage, Data/voice, telecom, transmission, and broadcasting. Using a Aluminum, the body is very much lighter than the steel rack. For the simple design the top and bottom frame is anodized. Mount bar is also Aluminum which can be adjustable back and forth for the efficient cable distribution. It is slim nut type and for easy identification, the line is printed by unit. The shelf is applied four mount bar type for efficient distribution of weight, and standard is two mount bar type.

· Front door has a safe locking system, also using a tempered glass. Side door is a slide latch type for easy removing.

Specification

Parameter	TFO-R-OT-45U	TFO-R-CT-40U	TFO-R-CT-36U	TFO-R-CT-31U	TFO-R-CT-27U	TFO-R-CT-22U
Height(mm)	2200	2000	1800	1600	1400	1200
Width(mm)	600					
Depth(mm)	300					
Unit	45	40	36	31	27	22
Mounting bar	19 inches					
Cord guidance	Standard : none / Single management : one side pathway					
Color	Light grey / Black(Available for customized color)					

Dual Rack Type

The rack has a function for LAN/WAN, Network, Server, Storage, Data/voice, telecom, transmission, and broadcasting. Using a Aluminum, the body is very much lighter than the steel rack. For the simple design the top and bottom frame is anodized. Mount bar is also Aluminum which can be adjustable back and forth for the efficient cable distribution. It is slim nut type and for easy identification, the line is printed by unit. The shelf is applied four mount bar type for efficient distribution of weight, and standard is two mount bar type.

Specification

Parameter		TFO-R-DT-44U	Remark
General	Type	Open rack	
	Capa.	4,320 fibers(Max.)	ODF Type : HD-ODF 48C
Rack	No. of rack	2	
	WxD(mm)	600x600	
	H(U)	44	
	Mounting bar(inch)	19	
Fiber management	Type	Routing spool	Available for reposition
	Location	Between two racks	
ETC.	Overhead manager	4 poles on each rack	
	Door	None	Option
	Color	Light grey(default) or black	

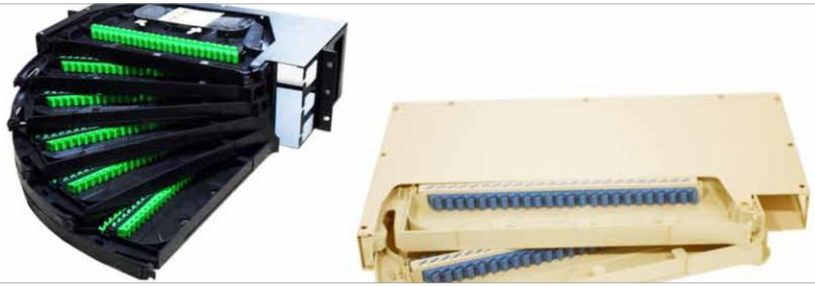
Mini Open Rack Type

- Ultra-lightweight
- Saving space with wall-mount design
- 19" Rack applied
- Easy and quick assembly and installation
- Durable steel construction

Specification

Parameter	TFO-R-MT-8U	TFO-R-MT-12U
Height(mm)	600	800
Width(mm)	600	
Depth(mm)	650	
Unit	8U	12U
Mounting bar	19 inches	
Cord guidance	Standard : none / Single management : one side pathway	
Color	Light grey / Black(Available for customized color)	

High Density Type



· High Density Optical Distribution Frame(HDF) provides efficient cable connections between outside plant cable and equipment in the buildings and communication facilities. HDF integrates fiber splicing, storage, and cable connections together in single unit. The frontal access and the unique adaptor arrangement design will increase your works speed and maintenance efficiency.

· High Density Optical Distribution Frame (HDF) provides industry-leading fiber cable protection and management. The fiber optic panel utilizes an internal splicing system that creates a compact, feature-rich, high-density solution.

· The wide range of features and options are designed for your networks growing needs. Frames are equipped with adjustable mounting brackets to provide 19 inches rack mounting.

Specification

Parameter		TFO-ODF-HD-48	TFO-ODF-HD-96	TFO-ODF-HD-144	TFO-ODF-HD-192	TFO-ODF-HD-240	TFO-ODF-HD-288
General	Dimension(WxD)	435x260					
	High(mm)	44	88	133	178	222	266
Cable distribution module	Cable dia.(mm)	ø8~32					
	No. of distribution module	2	4	6	8	10	12
	Capa. a module	24 fibers					
Adaptor	Adaptor type	SC / FC / LC					
	No. of adaptor	48	96	144	192	240	288

Swing Type

· Optical Distribution Frame Swing Type(SDF) provides efficient cable connections between outside plant cable and equipment in the buildings and communication facilities. SDF integrates fiber splicing, storage, and cable connections together in single unit. The frontal access and the unique adaptor arrangement design will increase your works speed and maintenance efficiency.

· SDF provides industry-leading fiber cable protection and management. The fiber optic panel utilizes an internal splicing system that creates a compact, feature-rich, high-density solution.

· The wide range of features and options are designed for your networks growing needs. Frames are equipped with adjustable mounting brackets to provide 19 inches rack mounting.

Specification

Parameter		TFO-ODF-ST-12	TFO-ODF-ST-24	TFO-ODF-ST-48	TFO-ODF-ST-72	TFO-ODF-ST-96	TFO-ODF-ST-144
General	Dimension (WxDxH)(mm)	435x310x44		435x310x44	435x310x176		435x310x266
	Unit	1	1	2	3	4	6
	Swing	Counter clockwise(default) / clock wise					
Cable	Cable dia.(mm)	ø8~32					
Splice tray	No. of splice tray	1	1	2	3	4	6
	Splice tray capa.	24 fibers					
Adaptor	Adaptor type	SC / FC / LC					
	No. of adaptor	12	24	48	72	96	144
Material		Steel					
Color		Ivory / Grey / Black					

Sliding Type

- The Sliding Optical Distribution Frame(LDF) utilizes an internal splicing system that creates a compact, feature-rich, high-density solution supporting loose tube cable. LDF Series achieves densities of terminations.
- The wide range of features and options are designed for your networks growing needs. ODFs are equipped with adjustable mounting brackets to provide 19 inch rack mounting.
- Patch cord management plate helps the orderly arrangement of cords. For convenient installation, it can be disassembled from the body by loosening screws.

Specification

Parameter		TFO-ODF-SD-24	TFO-ODF-SD-48
General	Dimension(WxD)	435x260x44	435x260x88
	Weight(kg)	4.5	6.5
	Color	Light grey / Black / Ivory	
	Access	Sliding	
Cable	Cable dia.(mm)	ø8~32	
	Entry	Left / Right / Rear	
Splice tray	No. of splice tray	2(Max.)	4(Max.)
	Capa.	24 fibers(Max.)	48 fibers(Max.)
Adaptor	Adaptor type	SC / LC / FC	

Panel Type

- Panel Optical Distribution Frame(PDF) provides efficient cable connections between outside plant cable and equipment in the buildings and communication facilities. PDF integrates fiber splicing, storage, and cable connections together in single unit. The frontal access and the unique adaptor arrangement design will increase your works speed and maintenance efficiency.
- PDF Series provides industry-leading fiber cable protection and management. The fiber optic panel utilizes an internal splicing system that creates a compact, feature-rich, high-density solution.
- The wide range of features and options are designed for your networks growing needs. Frames are equipped with adjustable mounting brackets to provide 19 inches rack mounting.

Specification

Parameter		TFO-ODF-PT-48	TFO-ODF-PT-72	TFO-ODF-PT-96	TFO-ODF-PT-144
General	Dimension (WxDxH)(mm)	435x310x133		435x310x177	435x310x222
	Tray position	Rear panel			
Cable	Cable dia.(mm)	ø8~32			
Splice tray	No. of splice tray	2	3	4	6
	Splice tray capa.	24 fibers / tray			
Adaptor	Adaptor type	SC / LC / FC / DIN / ST			
	No. of adaptor	48	72	96	144
Material		Steel			
Color		Ivory / Grey / Black			

Accessories

Field Assembly Connector(FAC)

The key part used in fiber optic patch cord and fiber optic pigtail

Specification

Parameter	FAC
Fiber type	Single Mode
Coating diameter	0.9mm / 2.0mm / 3.0mm / 3x4mm
Insertion loss	Max ≤ 0.4dB / Avg. ≤ 0.3dB
Return loss	PC : ≥ 40dB / APC : ≥ 50dB
The strength of coupling mechanism	〈 0.2dB with 2N Load
Operational temperature	−40~70℃
Storage temperature	−40~80℃
Tensile load(on 900㎛)	0.55lb(250g) Load ≤ 0.2dB change
Ferrule material	Zirconia Ceramic

Ordering Guide

FAC — X XX

Connector type
SA : SC/APC
SP : SC/PC
SM : SC/MM

Cable Diameter
B : 0.25mm
T : 0.9mm
2 : 2.0mm
3 : 3.0mm

Micro Duct Tube Connector & Cap

Straight connector

Used for simple fit connection of 5mm to 5mm TBF tubing

Gas seal connector

Used for gas sealing TBF tubing entering a customers premises and providing a gas tight seal for tubes

Water blocking connector

Used for water blocking TBF tubing entering underground external plant

End cap

Used for terminating unused TBF tubing within external plant

〈 Straight connector 〉

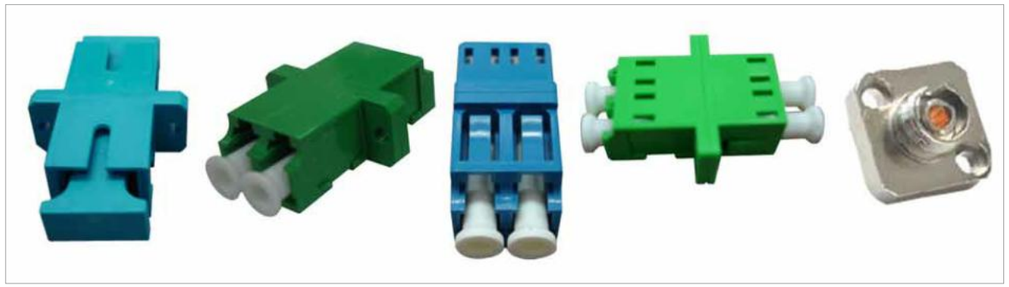
〈 Gas seal connector 〉

〈 Water blocking connector 〉

〈 End cap 〉

Optical Adaptor(OA)

The key part used in fiber optic patch cord and fiber optic pigtail



Specification

Parameter	FAC
Insertion loss	≤ 0.2dB
Sleeve retention force	2.0~5.9N(200~600gf)
Sealing full force	> 98N(10kgf)
Connect / Disconnect force	> 19.6N(2kgf)
Plug retention force	> 68.6N(7kgf)
Durability	1000times(≤ 0.2dB)
Temp. cycling	-40 to 80℃(42cycles)(≤ 0.2dB)
Humidity cycling	75℃, 95% / 336hrs(≤ 0.2dB)
Vibration	10~50Hz(2Hrs)(≤ 2.0dB)
Drop	1.5m, 8times(≤ 0.2dB)

Ordering Guide

OA — X

Adaptor type
1 : Simplex SC Blue
2 : Simplex SC Green
3 : Simplex LC Blue
4 : Simplex LC Green
5 : FC
6 : ST
7 : E2000 Blue
8 : E2000 Green
A : Duplex SC Blue
B : Duplex SC Green
C : Duplex LC Blue
D : Duplex LC Green
E : Simplex SC Blue(No Flange)
F : Simplex SC Green(No Flange)
G : Duplex LC Blue(No Flange)
H : Duplex LC Green(No Flange)

Auto Shutter Adaptor(ASA)

The key part used in fiber optic patch cord and fiber optic pigtail

Specification

Parameter	FAC
Insertion loss	≤ 0.2dB
Sleeve retention force	2.0~5.9N(200~600gf)
Sealing full force	> 98N(10kgf)
Connect / Disconnect force	> 19.6N(2kgf)
Plug retention force	> 68.6N(7kgf)
Durability	500times(≤ 0.2dB)
Temp. cycling	-40 to 80℃(42cycles)(≤ 0.2dB)
Humidity cycling	75℃, 95% / 336hrs(≤ 0.2dB)
Vibration	10~50Hz(2Hrs)(≤ 2.0dB)
Drop	1.5m, 8times(≤ 0.2dB)

Ordering Guide

ASA — XX

Adaptor type
SCB : SC Blue
SCG : SC Green

Optical Fiber Patch Cord

· Convenient handling
· Excellent cohesion efficiency
· Able to attach various connectors

Application

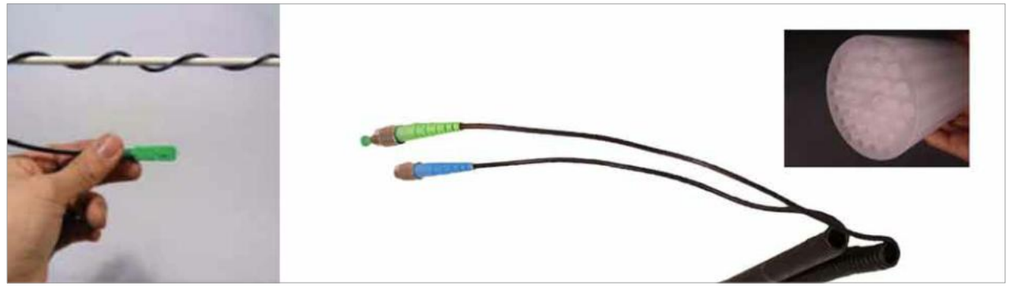
· Long-range optical transmission network
· Optical subscriber network
· Optical CATV network
· Optical LAN system

Specification

Parameter	Condition	Value(dB)		
		Min	Typical	Max
Insertion loss			< 0.15	< 0.30
Return loss	SPC	> 40	> 45	
	UPC	> 50	> 55	
	APC	> 60	> 65	
Mating durability	1000times			< 0.20
Temperature cycling	-40~+85℃			< 0.20
Humidity cycling	75℃, RH 95%			< 0.20
Vibration	10~55Hz(3Axis)			< 0.20
Impact	1.5m drop, 8times			< 0.20

Tie-up Curl Cord(TUC)

Bend insensitive curl cord



Specification

Parameter	FAC
Hole size	21㎛
Loss(dB/km)	0.220(1550nm)
MFD	10.4
Dispersion(1550nm)	17.73
Bending loss(dB/turn)	Carried out 10times
10mm Radius	< 0.01
7.5mm Radius	< 0.01
5mm Radius	< 0.02

Ordering Guide

TUC — XX XX — XX

Cable Length
ex) 15 : 1.5m

Adaptor type
NN : No connector
SA : SC/APC
SU : SC/UPC
SP : SC/PC
LA : LC/APC
LU : LC/UPC
LP : LC/PC
FA : FA/APC
FU : FC/UPC
FP : FC/PC
EA : E2000/APC
EU : E2000/UPC
EP : E2000/PC

Optical Fiber Attenuator

· Convenient handling
· Excellent cohesion efficiency
· Able to attach various connectors
· Excellent geometric properties

Application

· Long-range optical transmission network
· Optical subscriber network
· Optical CATV network

Specification

Parameter	Condition	Value(dB)		
		Min	Typical	Max
Attenuation	–	–	1~10	–
	–	> 40	15, 20	–
Return loss	SPC	> 50	> 45	–
	UPC	> 60	> 55	–
	APC	–	> 65	–
Attenuation accuracy	1~10	–	±0.5	–
	15~20	–	±1.0	–
Operating wavelength(nm)	1310 and 1550			
Operating temperature	-40~+85℃			
Humidity	75℃, RH 95%			

Optical Splitter Frame

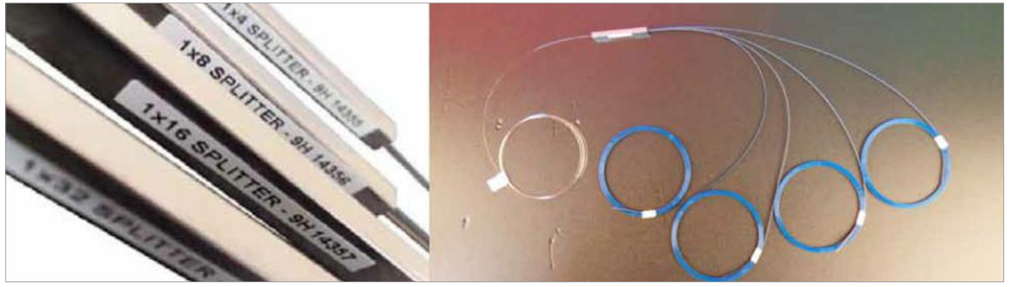
Provides the optical distribution by PLC splitters in the enclosure

Specification

Parameter		OSF-N x N
General	Dimension(W x D x H, mm)	435 x 230 x 44 / 88
	Unit	1U / 2U
	Splitter	1 x 2~1 x 64, 2 x 2~2 x 32
	No. of splitter	Depends on splitter type
	Material	Steel
	Color	Light grey(default) black
Adaptor	Adaptor type	SC / LC / ST / FC / E2000

Optical Splitter

· High channel count
· Compact design
· Wide band
· Wide operating temperature



Application

Intensity coupling and splitting in FTTH, PON and CATV systems

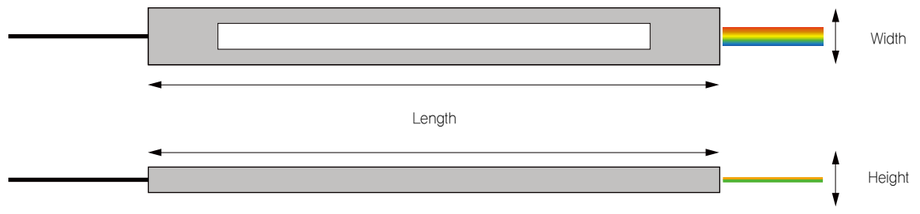
Specification

Parameter	Condition	Fiber Length (Input/Output)	Fiber Length (Input/Output)	Output (㎛)
1 x 2ch	4 x max4 x max40mm	1,000mm	1,000mm	250
1 x 4ch				
1 x 8ch				
1 x 16ch	7 x max4 x max55mm			127
1 x 32ch				
1 x 64ch	15 x max4 x max60mm			
2 x 4ch	7 x max4 x max55mm			250
2 x 8ch				127
2 x 16ch	7 x max4 x ma60mm			
2 x 32ch				
2 x 64ch	15 x max4 x max70mm			

Tight Buffer Type

Type	Size (WxHxL)	Length (mm)	Input Connector	Diameter (㎛)	Length (mm)	Input Connector	Diameter (㎛)
1x2ch	7x4x55	≥ 2,000	No	900	≥ 2,000	SC/APC	900

Dimension Parameter



Optical Performance

1 X N

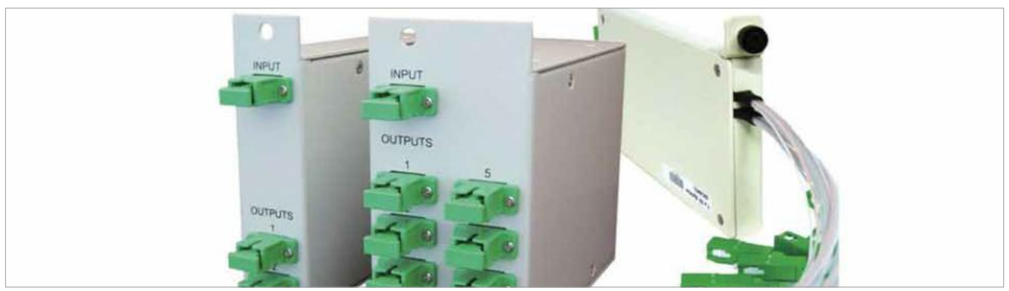
Parameter	Unit	1 x 2	1 x 4	1 x 8	1 x 16	1 x 32	1 x 64
Operating wavelength	nm	1260~1650					
Insertion loss(Max.)	dB	≤ 3.8	≤ 7.5	≤ 10.5	≤ 13.5	≤ 17.0	≤ 20.4
Uniformity	dB	≤ 0.6	≤ 0.6	≤ 0.8	≤ 1.0	≤ 1.3	≤ 2.0
PDL	dB	≤ 0.2	≤ 0.2	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3
Return loss	dB	≥ 55					
Directivity	dB	≥ 55					
Operating temperature	dB	-40~85℃					
Storage temperature	dB	-40~85℃					

2 X N

Parameter	Unit	2 x 4	2 x 8	2 x 16	2 x 32	2 x 64
Operating wavelength	nm	1260~1650				
Insertion loss(Max.)	dB	≤ 7.6	≤ 11.0	≤ 14.5	≤ 17.5	≤ 21.0
Uniformity	dB	≤ 1.4	≤ 1.5	≤ 2.0	≤ 2.5	≤ 3.0
PDL	dB	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.4
Return loss	dB	≥ 55				
Directivity	dB	≥ 55				
Operating temperature	dB	-40~85℃				
Storage temperature	dB	-40~85℃				

Optical Splitter Module

Includes various type splitters(1xN, 2xN)



Specification

Parameter	Specification	Remarks
Dimension(L x W x H)(mm)	150 x 80 x 11	Splitter module case
Splitter type	2 x 4, 2 x 8, 2 x 16	PLC type
Input	0.9mm buffered tube	
Output	0.9mm buffered tube	
Input cord length(mm)	1500mm	Allowance tolerance : ±5%mm
Output cord length(mm)	2000~2500mm	
Fiber type	SMF(G.657.A)	
Case material	Aluminum	
Case color	Gray	

Optical Splitter Tray

Includes various type splitters(1xN, 2xN)

Specification

Parameter	Splitter splice tray
Splice type	Splitter / Fusion
Capa.(EA)	Splitter / Splice
	Fan-out slot : 4

Drawing