



Routing and Raceway Products

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Surface Raceway Systems

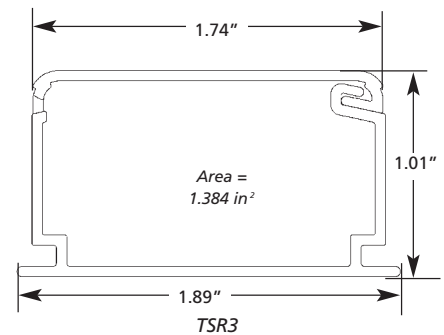
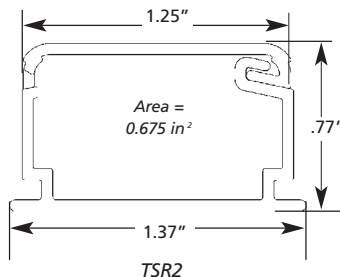
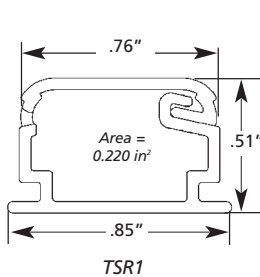
HellermannTyton's surface raceway systems are industry preferred for their sleek designs, labor savings features, and durability. With the recent addition of the new TSRP power surface raceway, HellermannTyton offers an integrated raceway package which fits together to meet the requirements of most any raceway application. Installed at school systems, hospitals, research centers, factories, offices, and many other end-user locations, HellermannTyton's raceway systems make the difference in aesthetics, durability and cost savings through designs which promote easy installation.

TSR — Low Voltage Surface Raceway

HellermannTyton's low voltage raceway (TSR) is a one piece, non-metallic, adhesive backed latching raceway designed to aesthetically organize and route communications wires including high speed UTP cable and fiber optic cable from the telecommunications room to the work area.



- Tamper resistant, the cover's self-locking, hidden positive latch permits quick re-entry as well as providing a secure installation of premise wire.
- Manufactured from UL 94V-0 rated PVC material
- Fittings incorporate a minimum 1" bend radius per TIA/EIA 568-B and 569-A standards.
- Rubber-based foam tape adhesive with high ultimate bond strength conforms to any surface.
- Flexible hinge allows the raceway to endure numerous openings without creating discoloration or stress cracking.
- Junction boxes can be used for electrical or data outlets
- Available in 6 and 8 ft. lengths in three widths – 3/4", 1-1/4" and 1-3/4" for varying cabling requirements .



Product Selection

Part Number	Description	Dimensions	Pkg. Qty.
TSR1 Raceway			
TSR1X-6A	3/4" One Piece Surface Raceway	3/4" (W) x 1/2" (H) x 6'(L)	120 feet of 6 foot lengths
TSR1X-8A	3/4" One Piece Surface Raceway	3/4" (W) x 1/2" (H) x 8'(L)	160 feet of 8 foot lengths
TSR2 Raceway			
TSR2X-6A	1-1/4" One Piece Surface Raceway	1-1/4" (W) x 3/4" (H) x 6'(L)	120 feet of 6 foot lengths
TSR2X-8A	1-1/4" One Piece Surface Raceway	1-1/4" (W) x 3/4" (H) x 8'(L)	160 feet of 8 foot lengths
TSR3 Raceway			
TSR3X-6A	1-3/4" One Piece Surface Raceway	1-3/4" (W) x 1" (H) x 6'(L)	120 feet of 6 foot lengths
TSR3X-8A	1-3/4" One Piece Surface Raceway	1-3/4" (W) x 1" (H) x 8'(L)	160 feet of 8 foot lengths



Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white), W (white)



TSR — Low Voltage Surface Raceway Accessories

HellermannTyton provides a complete line of fittings to manage connectivity requirements from the telecommunications room to the work area. Each size of raceway offers numerous fittings, offered in electrical ivory, white or office white, including TIA/EIA-568-B compliant 1" bend radius accessories which help ensure consistent data transmission performance of Category 5, 5e and 6 communications systems.



Designated with -50



Designated with -36



Designated with -25-1



Designated with -29-1



Designated with -14



Designated with -12



Designated with -33-1



Designated with -21-1



Junction Boxes

Product Selection

Part Number	Description	Pkg. Qty.
TSR1 Fittings		
TSR1X-14	Splice Cover – 3/4"	10
TSR1X-21-1	Tee Cover – 3/4" – 1" Bend Radius	10
TSR1X-25-1	Elbow Cover – 3/4" – 1" Bend Radius	10
TSR1X-29-1	External Corner – 3/4" – 1" Bend Radius	10
TSR1X-33-1	Internal Corner – 3/4" – 1" Bend Radius	10
TSR1X-36	End Cap – 3/4"	10
TSR1X-50	Ceiling Drop – 3/4"	10
TSR2 Fittings		
TSR2X-14	Splice Cover – 1-1/4"	10
TSR2X-21-1	Tee Cover – 1-1/4" – 1" Bend Radius	10
TSR2X-25-1	Elbow Cover – 1-1/4" – 1" Bend Radius	10
TSR2X-29-1	External Corner – 1-1/4" – 1" Bend Radius	10
TSR2X-33-1	Internal Corner – 1-1/4" – 1" Bend Radius	10
TSR2X-36	End Cap – 1-1/4"	10
TSR2X-50	Ceiling Drop – 1-1/4"	10
TSR3 Fittings		
TSR3X-14	Splice Cover – 1-3/4"	10
TSR3X-21-1	Tee Cover – 1-3/4" – 1" Bend Radius	10
TSR3X-25-1	Elbow Cover – 1-3/4" – 1" Bend Radius	10
TSR3X-29-1	External Corner – 1-3/4" – 1" Bend Radius	10
TSR3X-33-1	Internal Corner – 1-3/4" – 1" Bend Radius	10
TSR3X-36	End Cap – 1-3/4"	10
TSR3X-50	Ceiling Drop – 1-3/4"	10
Reducers		
TSR1X-12	Reducer – 1-3/4" to 1-1/4" (TSR3 to TSR2)	10
TSR2X-12	Reducer – 1-3/4" to 3/4" (TSR3 to TSR1)	10
TSR3X-12	Reducer – 1-1/4" to 3/4" (TSR2 to TSR1)	10
Junction Boxes		
TSRX-JB1	Junction Box Single Gang – 3"(W) x 4-3/4"(L) x 1-1/4"(H)	1
TSRX-JB2	Junction Box Single Gang – 3"(W) x 4-3/4"(L) x 2"(H)	1
TSRX-JBD	Junction Box Dual Gang – 4.91"(W) x 4.83"(L) x 1-1/2"(H)	1

Replace "X" in the part number with the following letters for desired color:
 X = I (ivory), FW (office white), W (white)

Junction Boxes

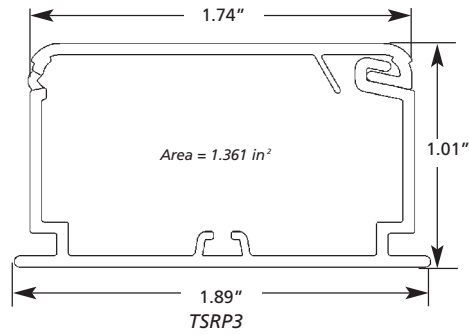
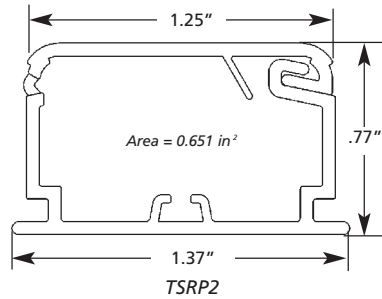
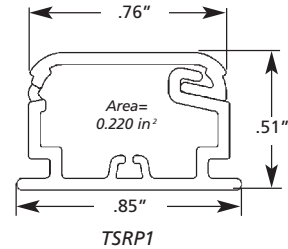
Offered in a dual or single gang format, HellermannTyton's low voltage junction boxes are versatile enough for any network cabling application. Available in varying depths, these boxes are all equipped with concentric knockouts on all four sides for every TSR size of raceway which eliminates routing and installation inconvenience. All three styles of junction boxes come with adhesive strips on the back of the base and also #6 screws to secure the box to the base. See page 62 for knockout sizes and locations.



TSRP — Power Surface Raceway

HellermannTyton's TSRP power surface raceway is a one piece, non-metallic, adhesive backed latching raceway designed to aesthetically organize and route either power or communications cables.

- Completely tamper resistant, the cover's self-locking, hidden positive latch permits quick re-entry as well as providing a secure installation of power cables.
- U.L. Listed for power up to 600 Volts, meeting UL5A and CSA 22.2 Number 62-93 Standards.
- Manufactured from UL 94V-0 rated PVC material
- Fittings incorporate a minimum 1" bend radius per TIA/EIA 568-B and 569-A standards.
- Large base for greater adhesive surface.
- Rubber-based foam tape adhesive with high ultimate bond strength, which conforms to any surface.
- Flexible hinge allows the raceway to endure numerous openings without creating discoloration or stress cracking.
- Junction boxes can be used for electrical or data outlets.
- Designed to complement HellermannTyton's industry standard TSR low voltage raceway system.



TSRP — Power Surface Raceway

Product Selection

Part Number	Description	Dimensions	Pkg. Qty.
TSRP1 Raceway			
TSRP1X-6A	3/4" One Piece Surface Raceway	3/4"(W) x 1/2"(H) x 6'(L)	120 feet of 6 foot lengths
TSRP1X-8A	3/4" One Piece Surface Raceway	3/4"(W) x 1/2"(H) x 8'(L)	160 feet of 8 foot lengths
TSRP2 Raceway			
TSRP2X-6A	1-1/4" One Piece Surface Raceway	1-1/4"(W) x 3/4"(H) x 6'(L)	120 feet of 6 foot lengths
TSRP2X-8A	1-1/4" One Piece Surface Raceway	1-1/4"(W) x 3/4"(H) x 8'(L)	160 feet of 8 foot lengths
TSRP3 Raceway			
TSRP3X-6A	1-3/4" One Piece Surface Raceway	1-3/4"(W) x 1"(H) x 6'(L)	120 feet of 6 foot lengths



Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white), W (white)



TSRP — Power Surface Raceway Accessories

HellermannTyton provides a complete line of fittings to manage connectivity requirements from the telecommunications room to the work area. Each size of raceway offers numerous fittings, offered in electrical ivory, white or office white, including TIA/EIA-568-B compliant 1" bend radius accessories which help ensure consistent data transmission performance of Category 5, 5e and 6 communications systems.

Product Selection



Ceiling Drop

Designated with -50



Elbow

Designated with -25-1



Internal Corner

Designated with -33-1



End Cap

Designated with -36



Reducer

Designated with -12



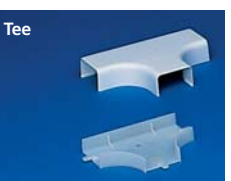
Splice Cover

Designated with -14



External Corner

Designated with -29-1



Tee

Designated with -21-1



Junction Boxes

Part Number	Description	Pkg. Qty.
TSRP1 Fittings		
TSRP1X-14	Splice Cover – 3/4"	10
TSRP1X-21-1	Tee – 3/4" – 1" Bend Radius	10
TSRP1X-25-1	Elbow – 3/4" – 1" Bend Radius	10
TSRP1X-29-1	External Corner – 3/4" – 1" Bend Radius	10
TSRP1X-33-1	Internal Corner – 3/4" – 1" Bend Radius	10
TSRP1X-36	End Cap – 3/4"	10
TSRP1X-50	Ceiling Drop – 3/4"*	10
TSRP2 Fittings		
TSRP2X-14	Splice Cover – 1-1/4"	10
TSRP2X-21-1	Tee – 1-1/4" – 1" Bend Radius	10
TSRP2X-25-1	Elbow – 1-1/4" – 1" Bend Radius	10
TSRP2X-29-1	External Corner – 1-1/4" – 1" Bend Radius	10
TSRP2X-33-1	Internal Corner – 1-1/4" – 1" Bend Radius	10
TSRP2X-36	End Cap – 1-1/4"	10
TSRP2X-50	Ceiling Drop – 1-1/4"*	10
TSRP3 Fittings		
TSRP3X-14	Splice Cover – 1-3/4"	10
TSRP3X-21-1	Tee – 1-3/4" – 1" Bend Radius	10
TSRP3X-25-1	Elbow – 1-3/4" – 1" Bend Radius	10
TSRP3X-29-1	External Corner – 1-3/4" – 1" Bend Radius	10
TSRP3X-33-1	Internal Corner – 1-3/4" – 1" Bend Radius	10
TSRP3X-36	End Cap – 1-3/4"	10
TSRP3X-50	Ceiling Drop – 1-3/4"*	10
Reducers		
TSRP1X-12	Reducer – 1-3/4" to 1-1/4" (TSRP3 to TSRP2)	10
TSRP2X-12	Reducer – 1-3/4" to 3/4" (TSRP3 to TSRP1)	10
TSRP3X-12	Reducer – 1-1/4" to 3/4" (TSRP2 to TSRP1)	10
Junction Boxes		
TSRPX-JB1	Single Gang – 3"(W) x 4.75"(L) x 1.25" (H)	1
TSRPX-JB2	Single Gang – 3"(W) x 4.75"(L) x 2" (H)	1
TSRPX-JBD	Dual Gang – 4.91"(W) x 4.83"(L) x 1.25" (H)	1

Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white), W (white) * Note: TSRPXX-50 accepts 1/2" and 3/4" conduit.

Junction Boxes

Offered in a dual or single gang format, HellermannTyton's power-rated junction boxes are versatile enough for any network cabling application. Available in varying depths, these boxes are all equipped with concentric knockouts on all four sides for every TSRP size of raceway which eliminates routing and installation inconvenience. All three styles of junction boxes come with adhesive strips on the back of the base and #6 screws to secure the box to the base. See page 62 for knockout sizes and locations.



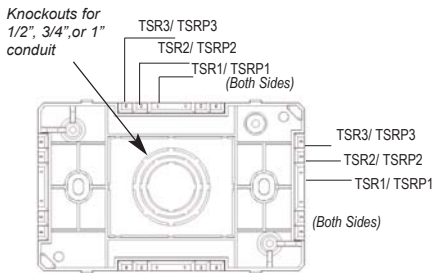
TSR and TSRP Surface Raceway Systems

Wire Fill Chart

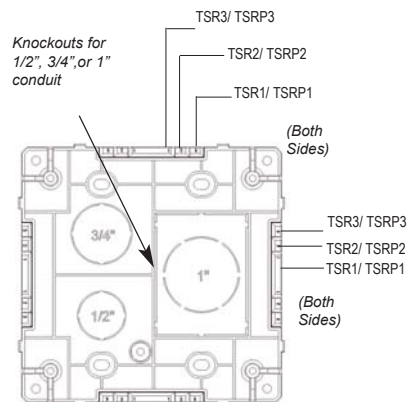
Wire Type	Wire Size	O.D. of Wire	Low Voltage - TSR						Power Rated - TSRP					
			TSR1		TSR2		TSR3		TSRP 1		TSRP 2		TSRP3	
			A = 0.220 in ²		A = 0.675 in ²		A = 1.384 in ²		A = 0.220 in ²		A = 0.651 in ²		A = 1.361 in ²	
			Spec	Max	Spec	Max	Spec	Max	Spec	Max	Spec	Max	Spec	Max
Twisted Pair 24 AWG Unshielded	2 Pr.	0.140	5	8	17	26	35	53	5	8	16	25	35	53
	3 Pr.	0.150	4	7	15	22	31	46	4	7	14	22	30	46
	4 Pr. Cat 5e	0.217	2	3	7	10	14	22	2	3	7	10	14	22
	4 Pr. Cat 6	0.240	1	2	5	8	12	18	1	2	5	8	12	18
	25 Pr.	0.410	0	0	2	3	4	6	0	0	1	2	4	6
Coax	RG58/U	0.193	3	4	9	13	18	28	2	4	8	13	18	27
	RG59/U or RG62/U	0.242	1	2	5	8	12	18	1	2	4	6	9	14
	RG6/U	0.270	1	2	4	7	9	14	1	2	4	6	9	14
Fiber Optic FA Jacket OFNP	2 Strand	0.175	3	5	11	16	23	34	3	5	10	16	22	33
	4 Strand	0.185	3	4	10	15	20	30	3	4	9	14	20	30
	6 Strand	0.210	2	3	7	11	15	23	2	3	7	11	15	23
Electrical Wire	14 AWG THHN	0.105	-	-	-	-	-	-	-	8	-	11	-	15
	12 AWG THHN	0.122	-	-	-	-	-	-	-	6	-	9	-	12
	10 AWG THHN	0.153	-	-	-	-	-	-	-	4	-	6	-	7

Formula used to calculate communications wire fill capacity - Numbers of wires = duct / {1/4 x 3.14 x (wire o.d.)² x 0.4 or 0.6. Per ANSI/TIA/EIA-569-A-: SPEC = 40% fill which is recommended for planning perimeter pathways
 MAX (for data) = 60% fill which is allowed to accommodate unplanned additions after initial installation
 MAX (for power) = Maximum number determined by UL temperature testing
 Note: It is recommended to place electrical cables loosely in raceway

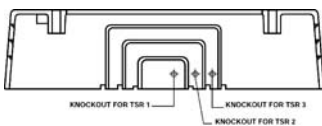
TSR and TSRP Junction Box Knockout Locations



JB1, JB2 - SINGLE GANG



JBD - DUAL GANG





INFOSTREAM® Multi-Channel Raceway



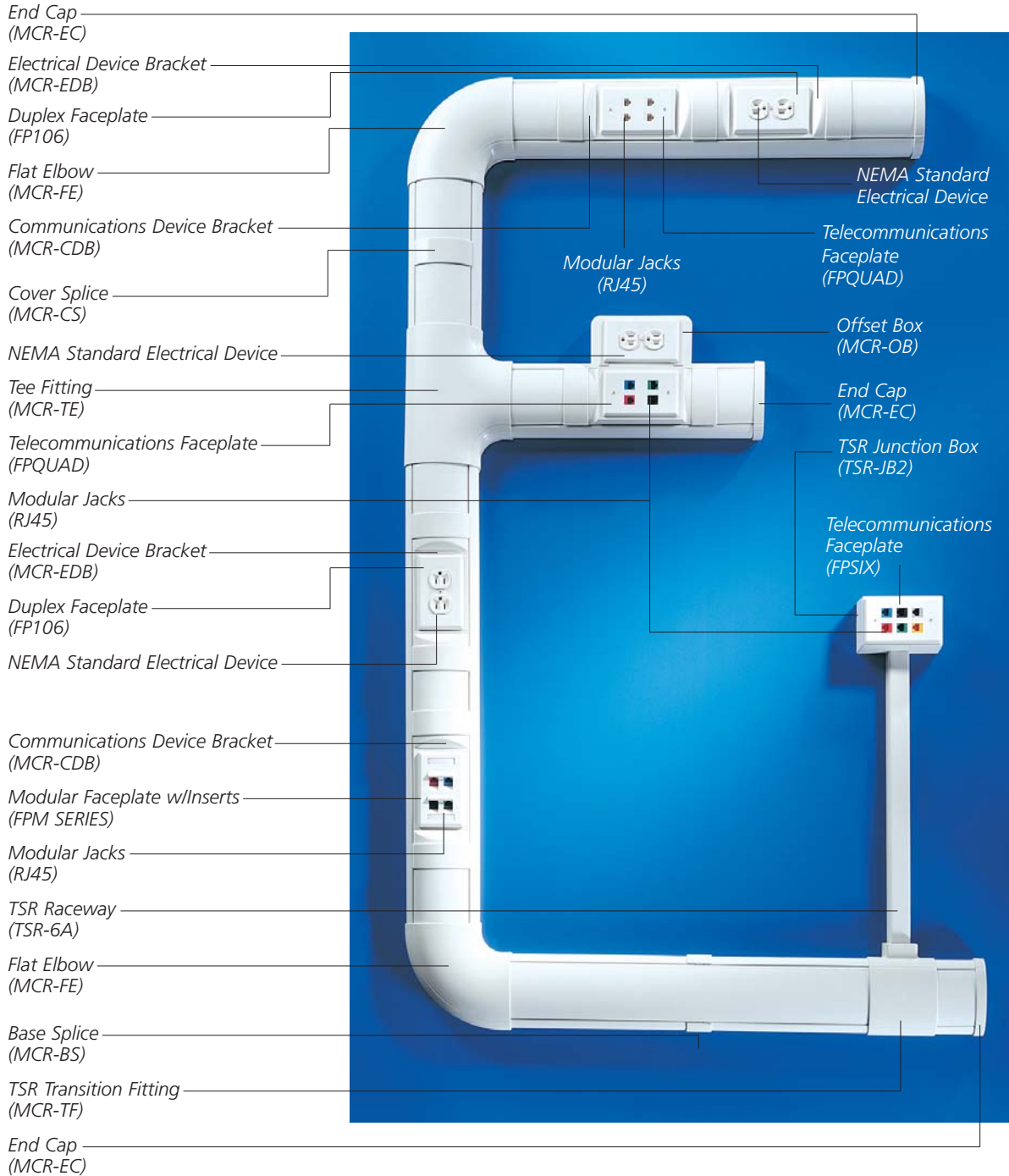
HellermannTyton's InfoStream is a revolutionary design for a non-metallic raceway system. The elliptical shape is aesthetically pleasing when compared to other designs. By using the three rails to snap in dividers, the InfoStream system can accommodate up to four separate channels of electrical, voice, data, video or fiber optic cabling. InfoStream's unique and patented design make installations quicker and easier. The raceway and fittings are manufactured from a UL 94V-0 rated material.

- All fittings have been designed to maintain the required 1" minimum bend radius per TIA/EIA-568-B and 569-A standards.
- U.L. Listed to 600 Volts – Meets new UL5A and CSA 22.2 No. 62-93 standards.
- Patented hinged cover speeds installation time by allowing installer to partially mount cover prior to laying cables.
- Light weight also eases installation and reduces labor costs.
- Offset elbow is the only solution currently on the market for wall offsets between 2-7" .
- Mates directly with HellermannTyton's TSR and TSRP - single channel raceway system.
- System is designed to accept all NEMA standard faceplates and devices.
- Offset box gives installer the option to offset electrical outlet above or below raceway.
- Cable tie mount retains cables inside of channel if necessary and accepts standard HellermannTyton cable ties.
- Entrance end fitting allows entrance into raceway from ceiling or through wall.





INFOSTREAM®
Multi-Channel Raceway Diagram





INFOSTREAM® Multi-Channel Raceway

Power and Data Only



Power Only Configuration

Components: Raised Electrical Device Bracket (MCR-REB)
Area: 2.50 sq. in.



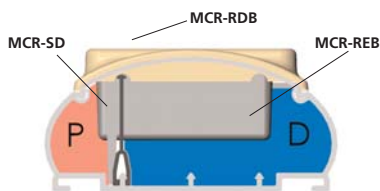
Data Only Configuration

Components: Raised Communications Device Bracket (MCR-RDB)
Area: 3.08 sq. in.

Power and Data Inline



High Data Capacity Option With Side Divider



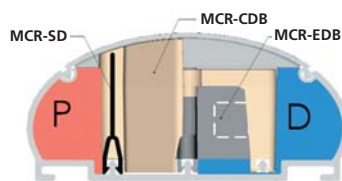
High Capacity / Side Divider Configuration

Components:

- Raceway Side Divider (MCR-SD)
- Raised Device Bracket (MCR-RDB)
- Raised Electrical Bracket (MCR-REB)

 Data Area: 2.45 sq. in.
Power Area: 0.80 sq. in.

With Side Divider



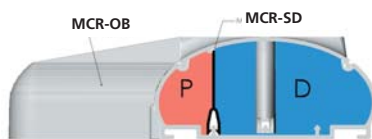
Side Divider Configuration

Components:

- Raceway Side Divider (MCR-SD)
- Communications Device Bracket (MCR-CDB)
- Electrical Device Bracket (MCR-EDB)

 Data Area: 1.15 sq. in.
Power Area: 1.00 sq. in.

Offset Box with Data



Offset Box with Data Configuration

Components:

- Offset Box (MCR-OB)
- Raceway Side Divider (MCR-SD)

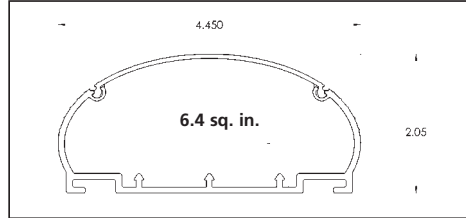
 Data Area: 4.26 sq. in.
Power Area: 1.22 sq. in.



**INFOSTREAM®
Multi-Channel Raceway**



Unique, streamlined design enhances the aesthetics of any installation.



Hinged cover speeds installation.



Multi-Channel Raceway Base

Base is supplied with pre-punched mounting slots every 8". Raceway base also includes adhesive double-sided tape for aid in mounting. Raceway must still be properly fastened to the wall per included instructions. Center and side dividers are not interchangeable.

Product Selection

Part Number	Description	Pkg. Qty.
MCRX-BS8	Raceway Base – 8 feet with side divider	48 feet
MCRX-BS10	Raceway Base – 10 feet with side divider	60 feet
MCRX-BC8	Raceway Base – 8 feet with center divider	48 feet
MCRX-BC10	Raceway Base – 10 feet with center divider	60 feet



Replace "X" in the part number with the following letters for desired color:
X = I (ivory), FW (office white)



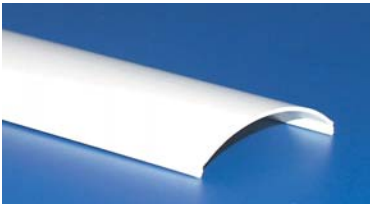
Multi-Channel Raceway Cover

Product Selection

Part Number	Description	Pkg. Qty.
MCRX-C8	Raceway Cover – 8 feet	48 feet
MCRX-C10	Raceway Cover – 10 feet	60 feet



Replace "X" in the part number with the following letters for desired color:
X = I (ivory), FW (office white)



Multi-Channel Raceway Divider

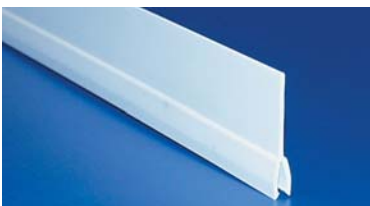
Product Selection

Snaps onto either side of raceway base rails for proper power and data separation per UL/CSA.

Part Number	Description	Pkg. Qty.
MCRW-SD8	White Raceway Side Divider – 8 feet	96 feet
MCRW-SD10	White Raceway Side Divider – 10 feet	120 feet

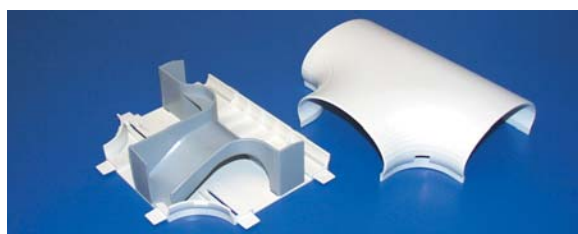
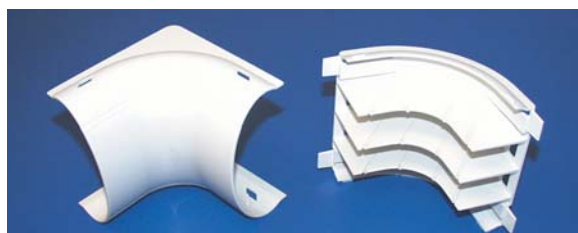


Replace "X" in the part number with the following letters for desired color:
X = I (ivory), FW (office white)





INFOSTREAM® Multi-Channel Raceway



Flat Elbow

Product Selection

Joins raceway at 90° flat angle.

Part Number	Description	Pkg. Qty.
MCRX-FE	Flat Elbow	1



Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white)

External Elbow

Product Selection

Joins raceway at 90° outside corner.

Part Number	Description	Pkg. Qty.
MCRX-EE	External Elbow	1



Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white)

Internal Elbow

Product Selection

Joins raceway at 90° inside corner.

Part Number	Description	Pkg. Qty.
MCRX-IE	Internal Elbow	1



Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white)

Offset Elbow

Product Selection

For small wall offsets between 2"-7". Used in conjunction with piece of raceway. Corner filler included for a flush appearance.

Part Number	Description	Pkg. Qty.
MCRX-OE	Offset Elbow	1



Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white)

Tee Fitting

Product Selection

Joins 3 sections of raceway and includes divider.

Part Number	Description	Pkg. Qty.
MCRX-TE	Tee Fitting	1



Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white)

Tee Fitting - Left Side

Product Selection

Divides power and communications cables on the opposite side.

Part Number	Description	Pkg. Qty.
MCR-LTD	Tee Fitting Divider - left side	1



Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white)



INFOSTREAM® Multi-Channel Raceway




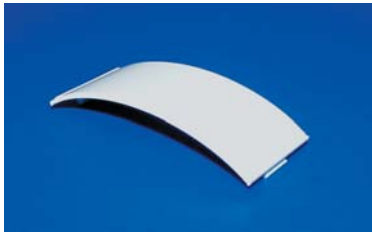
Base Splice

Joins 2 sections of raceway base.

Product Selection

Part Number	Description	Pkg. Qty.
MCRX-BS	Base Splice	10

 Replace "X" in the part number with the following letters for desired color:
X = I (ivory), FW (office white)




Cover Splice

Joins 2 sections of raceway cover and required with use of Communications and Electrical Device Brackets.

Product Selection

Part Number	Description	Pkg. Qty.
MCRX-CS	Cover Splice	10

 Replace "X" in the part number with the following letters for desired color:
X = I (ivory), FW (office white)




End Cap

Completes raceway or provides transition for 1/2", 3/4" and 1" conduit.

Product Selection

Part Number	Description	Pkg. Qty.
MCRX-EC	End Cap	1

 Replace "X" in the part number with the following letters for desired color:
X = I (ivory), FW (office white)




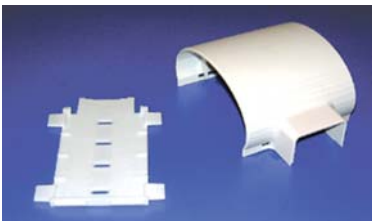
Transition Fitting

Knockouts are provided for TSR1, TSR2, and TSR3 surface raceway.

Product Selection

Part Number	Description	Pkg. Qty.
MCRX-TF	Transition Fitting	1

 Replace "X" in the part number with the following letters for desired color:
X = I (ivory), FW (office white)




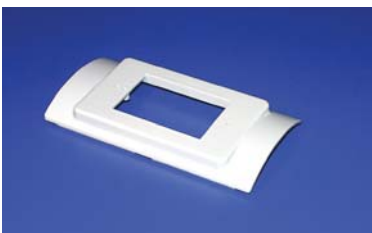
Power Transition Fitting

Knockouts are provided for TSRP1, TSRP2, and TSRP3 surface raceway.

Product Selection

Part Number	Description	Pkg. Qty.
MCRX-PTF	Power Transition Fitting	1

 Replace "X" in the part number with the following letters for desired color:
X = I (ivory), FW (office white)




Raised Device Bracket

Used to mount NEMA standard single gang device and faceplate. Raised bracket allows for additional wire fill space and additional device clearance. Use with side divider for 2-channel applications.

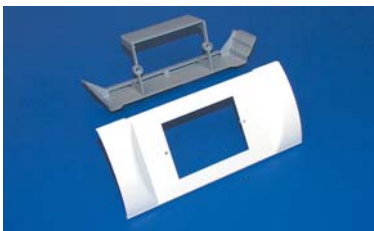
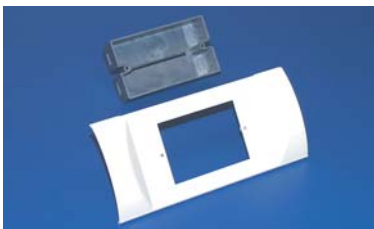
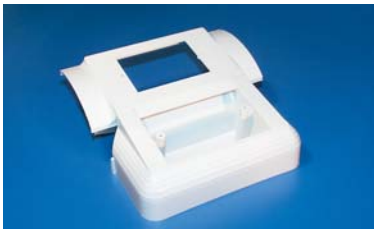
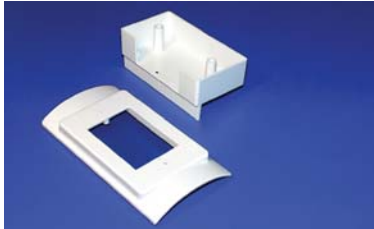
Product Selection

Part Number	Description	Pkg. Qty.
MCRX-RDB	Raised Device Bracket Fitting	10

 Replace "X" in the part number with the following letters for desired color:
X = I (ivory), FW (office white)



INFOSTREAM® Multi-Channel Raceway



Tie Mount


Wire Retainer

Raised Electrical Box

Used to mount NEMA standard single gang device and faceplate. Raised electrical box allows for additional low voltage wire fill space. Use with side divider for 2-channel applications.

Product Selection

Part Number	Description	Pkg. Qty.
MCRX-REB	Raised Electrical Bracket Fitting	5


 Replace "X" in the part number with the following letters for desired color:
X = I (ivory), FW (office white)

Offset Box

Option for communications devices in raceway and electrical outlets on side.

Product Selection

Part Number	Description	Pkg. Qty.
MCRX-OB	Offset Box	1


 Replace "X" in the part number with the following letters for desired color:
X = I (ivory), FW (office white)

Entrance End Fitting

For use as a ceiling drop, conduit transition from end or base of raceway, or low voltage entrance from end or base of raceway. Includes dual 0.75", 1.0", 1.25", 1.75", 2", and 2.5" knockouts.

Product Selection

Part Number	Description	Pkg. Qty.
MCRX-ENT	Entrance End Fitting	1


 Replace "X" in the part number with the following letters for desired color:
X = I (ivory), FW (office white)

Electrical Device Bracket

Used to mount NEMA standard single gang electrical faceplates — cover splice is required for proper use.

Product Selection

Part Number	Description	Pkg. Qty.
MCRX-EDB	Electrical Device Bracket	10


 Replace "X" in the part number with the following letters for desired color:
X = I (ivory), FW (office white)

Communications Device Bracket

Used to mount NEMA standard single gang faceplates for communications devices — cover splice is required for proper use.

Product Selection

Part Number	Description	Pkg. Qty.
MCRX-CDB	Communications Device Bracket	10


 Replace "X" in the part number with the following letters for desired color:
X = I (ivory), FW (office white)

Wire Retainer/Tie Mount

Wire retainer keeps wire & cable in place. Recommend placement every 18" to 24". Tie mount keeps wire & cable bundled. Accepts standard HellermannTyton cable ties T18-T50.

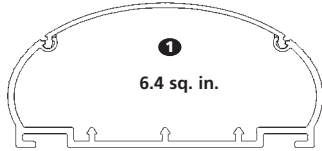
Product Selection

Part Number	Description	Pkg. Qty.
MCRG-WR	Wire Retainer – Gray	10
MCRG-TM	Tie Mount – Gray	100

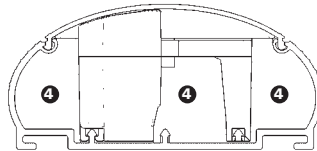
 Replace "X" in the part number with the following letters for desired color:
X = I (ivory), FW (office white)



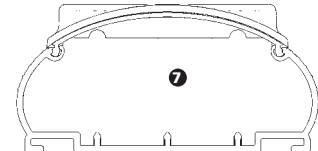
INFOSTREAM® Multi-Channel Raceway



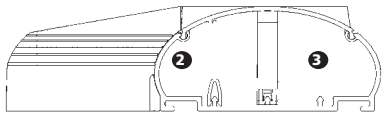
Base and Cover with No Devices



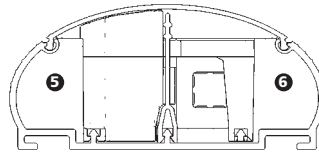
Data Only Using Communications Device Bracket (CDB)



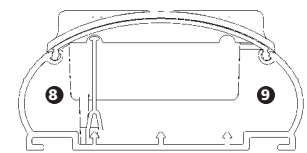
Data Only using Raised Bracket (RDB)



Offset Box with Data (OB)



Power and Data Inline (EDB, CDB)



Power and Data Inline using Raised Brackets (REB, RDB)

Wire Fill Capacity

LOW VOLTAGE			Raceway Area of Raceway	Channel 1 6.40in ²	Channel 2 1.220in ²	Channel 3 4.260in ²	Channel 4 3.060in ²	Channel 5 1.000in ²	Channel 6 1.150in ²	Channel 7 5.880in ²	Channel 8 0.800in ²	Channel 9 2.450in ²
Wire Type	Wire Size	OD of Wire	Spec	Max	Spec	Max	Spec	Max	Spec	Max	Spec	Max
Twisted Pair 24 AWG Unshielded	2 Pr.	0.140	166	249	31	47	110	166	79	119	25	38
	3 Pr.	0.150	144	217	27	41	96	144	69	103	22	33
	4 Pr. Cat 5e	0.217	69	103	13	19	46	69	33	49	10	16
	4 Pr. Cat 6	0.240	56	84	10	16	37	56	27	40	8	13
	25 Pr.	0.410	19	29	3	5	12	19	9	13	3	4
Coax	RG58/U	0.193	87	131	16	25	58	87	41	62	13	20
	RG59/U or RG62/U	0.242	55	83	10	15	37	55	26	39	8	13
	RG6/U	0.270	44	67	8	12	29	44	21	32	6	10
Fiber Optic FA Jacket OFNP	2 Strand	0.175	106	159	20	30	70	106	50	76	16	24
	4 Strand	0.185	95	142	18	27	63	95	45	68	14	22
	6 Strand	0.210	73	110	14	21	49	73	35	53	11	17
Fiber Optic 62.5/125/900 PVC Jacket OFNR	2 Strand	0.175	106	159	20	30	70	106	50	76	16	24
	4 Strand	0.185	95	142	18	27	63	95	45	68	14	22
	6 Strand	0.210	73	110	14	21	49	73	35	53	11	17
	8 Strand	0.230	61	92	11	17	41	61	29	44	9	14
	10 Strand	0.250	52	78	9	14	34	52	24	37	8	12
Electrical Wire	14 AWG THHN	0.105		30		21		-		17		-
	12 AWG THHN	0.122		25		15		-		12		-
	10 AWG THHN	0.153		19		9		-		8		-

Formula used to calculate communications wire fill capacity - Numbers of wires = $\text{duct} / \{ (1/4 \times 3.14 \times (\text{wire o.d.})^2) \times 0.4 \text{ or } 0.6 \}$. Per ANSI/TIA/EIA-569-A-:
 SPEC = 40% fill which is recommended for planning perimeter pathways
 MAX (for data) = 60% fill which is allowed to accommodate unplanned additions after initial installation
 MAX (for power) = Maximum number determined by UL temperature testing
 Note: It is recommended to place electrical cables loosely in raceway



Lightguide Fiber Optic Protection System



The Lightguide Fiber Optic Protection System is a fully enclosed system designed to isolate, route and protect fiber optic cable. This system provides a smooth, protective surface and channel to prevent fiber kinking, cutting and associated signal loss. Consisting of connectors and channels in gray, orange or yellow, the Lightguide System is easily adaptable for cable routing in a LAN, central office, data center, telecommunications office or wherever cable is run from the building entrance to its termination point. The Lightguide System is designed to be supported by existing equipment such as bays, cable racks, unistrut, threaded rod, etc., and is mounted and secured with metal hardware kits available from HellermannTyton. The connectors and channels are secured by nuts and bolts or HellermannTyton's rivet fasteners.

Components

There are more than 40 components in different sizes with various horizontal and vertical transitions. System sizes include 1" x 1", 2" x 2", 2" x 4", 4" x 2", 4" x 4", and 8" x 4". Designed to provide easy re-entry, the Lightguide connectors feature a hook and loop cover attachment, eliminating fiber pinching and the need for additional hardware. When the connector cover is removed, the cable remains in place due to an inside flange providing cable retention. The complete lay-in capability of the connectors and channels eliminates the pulling of fiber and allows ease of access and tracing. The connectors and channels are designed to prevent fiber cables from exceeding the 2" minimum bend radius requirement.

HellermannTyton has simplified the assembly process by offering rivet fasteners, which do not require tools to assemble, and can connect the components to the channel. Unlike other rivets, these interlocking rivet fasteners can be easily removed and re-installed. A 10-32 bolt also can be used for assembly. Manufactured from a PVC/Acrylic alloy with a flammability rating of UL94V-0, the connectors possess an oxygen index of 37 with a maximum continuous temperature rating of 122° Fahrenheit.

Protective Channel

The protective channel is available in 6 foot lengths as solid or slotted with snap-on covers. The solid channel provides fiber routing and protection for all straight horizontal runs. The slotted channel is designed for vertical drops from the overhead environment down to the front face of the equipment bay. The slotted fingers can be broken off to create a custom size opening so the fiber and cable can branch out to the equipment. The snap-on covers easily interlock with the channel and feature a non-slip surface.

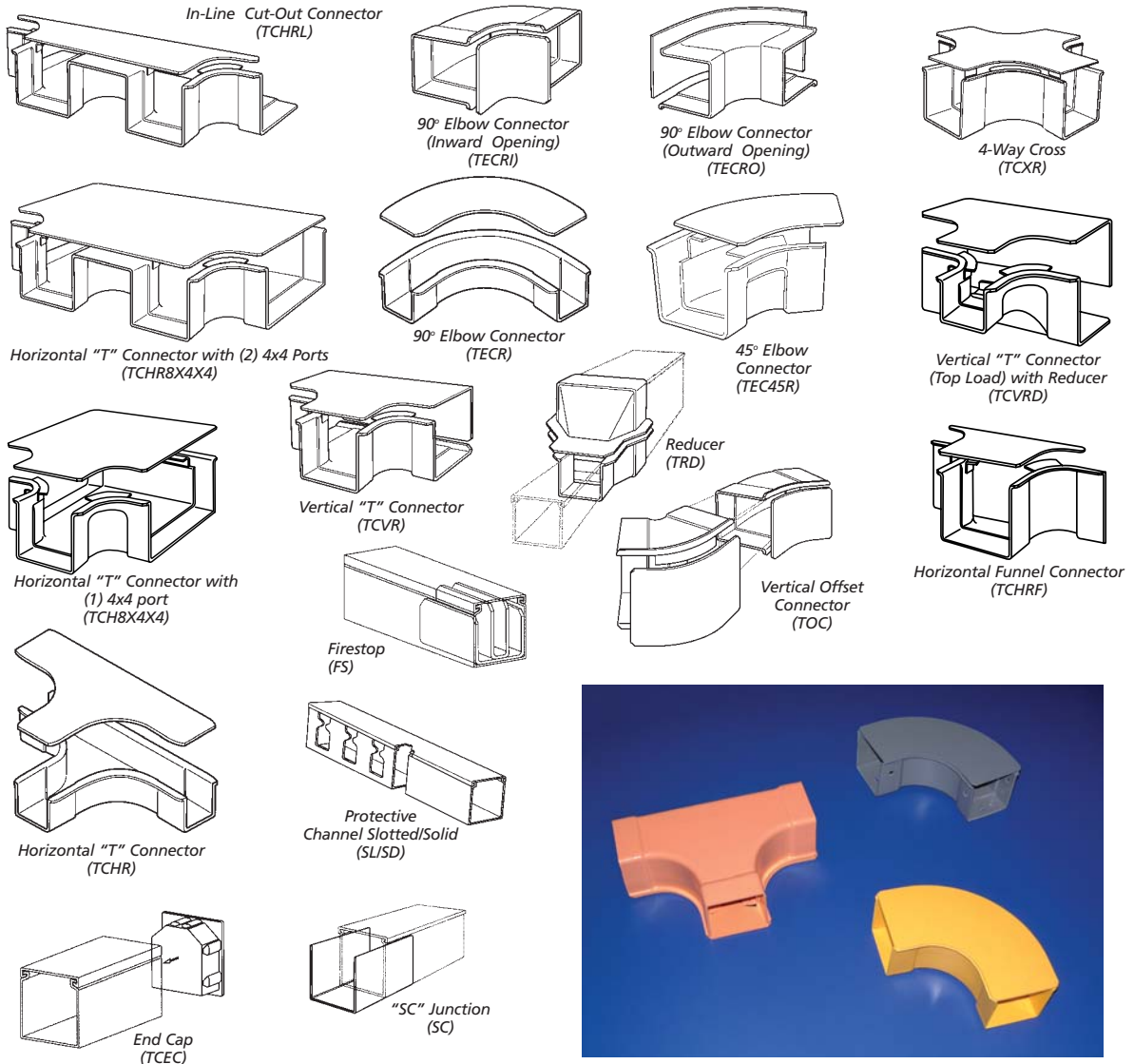
Both styles of protective channel and cover are manufactured from a rigid, non-flammable polyvinyl chloride. This material is 94V-0 rated with an oxygen index of 40 to 48 per ASTM 2863. (See page 108 for Fiber Optic Cable Tape to identify the routing of fiber optic cable.)



Routing and Raceway Products

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Lightguide Fiber Optic Protection System



Product Selection

Part Number	Description	Pkg. Qty.
1" x 1" System		
TECR1x1X	90° Elbow Connector	1
TCHR1x1X	Horizontal "T" Connector	1
SD1x1X/TC1	1" x 1" Solid Channel with Cover	30 feet of 6 foot lengths
SL1x1X/TC1	1" x 1" Slotted Channel with Cover	30 feet of 6 foot lengths
2" x 2" System		
TOC2x2X	Vertical Offset Connector (Inward & Outward Set)	1
TCVR2x2X	Vertical "T" Connector (Top Load)	1
TCVRD2x2X	Vertical "T" Connector (Top Load) with 2" to 1" reducer	1
TCXR2x2X	4-Way Cross	1

Replace "X" in the part number with the following letters for desired color: X = G (gray), Y (yellow) — ORN (orange) is available in selected fittings. Please call HellermannTyton customer service for availability, lead times and minimums on fittings - not all colors available.



Lightguide Fiber Optic Protection System

Product Selection

Part Number	Description	Pkg. Qty.
2" x 2" System		
TECRO2x2X	90° Elbow Connector (Outward Opening)	1
TECRI2x2X	90° Elbow Connector (Inward Opening)	1
TECR2x2X	90° Elbow Connector	1
TEC45R2x2X	45° Elbow Connector	1
TCHR2x2X	Horizontal "T" Connector	1
TCEC2x2X	End Cap	1
FS2x2X	Firestop Support	1
SC2x2X	Straight Connector (Junction)	1
TRD2x1X	2" to 1" Reducer	1
SD2x2X/TC2	2" x 2" Solid Channel with Cover	30 feet of 6 foot lengths
SL2x2X/TC2	2" x 2" Slotted Channel with Cover	30 feet of 6 foot lengths
SDWR2x20K2	Wire Retainer for 2" x 2" Solid Channel, Black	50 pieces per bag
SLWR20C2	Wire Retainer for 2" x 2" Slotted Channel, Black	100 pieces per bag
2" x 4" System		
TECR2x4X	90° Elbow Connector	1
SD2x4X/TC2	2" x 4" Solid Channel with Cover	30 feet of 6 foot lengths
SL2x4X/TC2	2" x 4" Slotted Channel with Cover	30 feet of 6 foot lengths
SLWR20C2	Wire Retainer for 2" x 4" Slotted Channel, Black	100 pieces per bag
4" x 2" System		
TECR4x2X	90° Elbow Connector	1
TCHR4x2X	Horizontal "T" Connector	1
TCVR4x2X	Vertical "T" Connector (Top Load)	1
TCHVRD4x2x2X	Vertical "T" Connector (Top Load) with Reducer	1
SC4x2X	Straight Connector (Junction)	1
TRD4x2x2X	4" x 2" to 2" x 2" Reducer	1
SD4x2X/TC4	4" x 2" Solid Channel with Cover	30 feet of 6 foot lengths
SL4x2X/TC4	4" x 2" Slotted Channel with Cover	30 feet of 6 foot lengths
SDWR4x20K2	Wire Retainer for 4" x 2" Solid Channel, Black	50 pieces per bag
SLWR40C2	Wire Retainer for 4" x 2" Slotted Channel, Black	100 pieces per bag
4" x 4" System		
TOC4x4X	Vertical Offset Connector (Inward & Outward Set)	1
TCVR4x4X	Vertical "T" Connector (Top Load)	1
TCVRD4x4X	Vertical "T" Connector (Top Load) with 4" to 2" Reducer	1
TCXR4x4X	4-Way Cross	1
TECRO4x4X	90° Elbow Connector (Outward Opening)	1
TECRI4x4X	90° Elbow Connector (Inward Opening)	1
TECR4x4X	90° Elbow Connector	1
TEC45R4x4X	45° Elbow Connector	1
TCHR4x4X	Horizontal "T" Connector	1
TCHRD4x4X	Horizontal "T" Connector with 4" to 2" Reducer	1
TCHRF4x4X	Horizontal Funnel Connector	1
TCEC4x4X	End Cap	1
FS4x4X	Firestop Support	1
SC4x4X	Straight Connector (Junction)	1
TRD4x2X	4" x 4" to 2" x 2" Reducer	1
TRD4x4x2X	4" x 4" to 4" x 2" Reducer	1
SD4x4X/TC4	4" x 4" Solid Channel with Cover	30 feet of 6 foot lengths
SL4x4X/TC4	4" x 4" Slotted Channel with Cover	30 feet of 6 foot lengths
SDWR4x40P2	Wire Retainer for 4" x 4" Solid Channel, Black	10 pieces per bag
SLWR40C2	Wire Retainer for 4" x 4" Slotted Channel, Black	100 pieces per bag
8" x 4" System		
TOC8x4X	Vertical Offset Connector (Inward & Outward Set)	1
TCXR8x4X	4-Way Cross	1
TECRO8x4X	90° Elbow Connector (Outward Opening)	1
TECR8x4X	90° Elbow Connector	1
TCHR8x4X	Horizontal "T" Connector	1
TCH8x4x4X	Horizontal "T" Connector with one 4" x 4" port	1
TCHR8x4x4X	Horizontal "T" Connector with two 4" x 4" ports	1
TCHRL8x4x4X	In-Line Cut-Out Connector with two 4" x 4" ports	1
TCEC8x4X	End Cap	1
SC8x4X	Straight Connector (Junction)	1
TRD8x4x4X	8" x 4" to 4" x 4" Reducer	1
SD8x4X/TC8	8" x 4" Solid Channel with Cover	30 feet of 6 foot lengths

Replace "X" in the part number with the following letters for desired color: X = G (gray), Y (yellow) — ORN (orange) is available in selected fittings. Please call Hellermann Tyton customer service for availability, lead times and minimums on fittings - not all colors available.



Lightguide Fiber Optic Protection System

Fill Capacity Chart

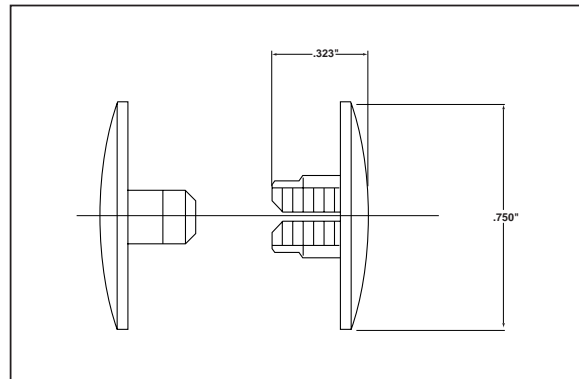
		CHANNEL SIZE		1X1		2X2		2X4		4X2		4X4		8X4		12X4	
		CHANNEL AREA (SQ. IN.)		0.73		3.48		6.87		7.32		14.66		30.01		45.36	
WIRE TYPE	WIRE SIZE	O.D. OF WIRE		40%	60%	40%	60%	40%	60%	40%	60%	40%	60%	40%	60%	40%	60%
UNSHIELDED TWISTED PAIR, 24 AWG	2 Pr.	0.140		18	28	90	135	178	267	190	285	380	571	779	1169	1178	1767
	3 Pr.	0.150		16	24	78	118	155	233	165	248	331	497	679	1018	1026	1540
	4 Pr., Category 5e	0.220		7	11	36	54	72	108	77	115	154	231	315	473	477	715
	4 Pr., Category 6	0.240		6	9	30	45	60	91	64	97	129	194	265	398	401	601
	25 Pr.	0.510		1	2	6	10	13	20	14	21	28	43	58	88	88	133
TWISTED PAIR, SHIELDED	4 Pr., 24 AWG	0.250		5	8	28	42	56	84	59	89	119	179	244	366	369	554
	25 Pr.	0.510		1	2	6	10	13	20	14	21	28	43	58	88	88	133
FIBER OPTIC CABLE	50/125 or	(2.0)	0.079	60	90	287	431	568	852	604	907	1211	1817	2480	3720	3748	5623
	62.5/125 micron	(3.0)	0.118	26	40	127	191	251	377	267	401	536	804	1097	1646	1659	2488

Formula used to calculate communications wire fill capacity. Numbers of wires = duct / {1/4 x 3.14 x (wire o.d.)²} x 0.4 or 0.6. Per ANSI/TIA/EIA-569-A-1, the maximum pathway fill shall be 40 percent for planning perimeter pathways. A maximum of 60 percent pathway fill is allowed to accommodate unplanned additions after initial installation.

Rivets

The plastic ratchet rivet (TR1) provides a secure connection of the Lightguide component to the Lightguide protective channel. Each component is equipped with predrilled holes allowing easy insertion of the plastic rivet.

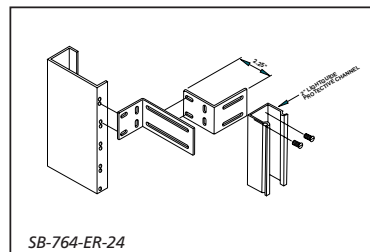
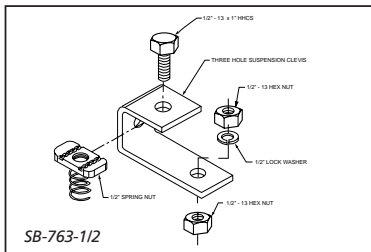
Product Selection			
Part Number	Description	Color	Pkg. Qty.
TR1	Plastic Ratchet Rivet to Connect Component and Channel	Black	100 sets/kit (200 pieces)



Mounting Hardware Kits

Various configurations of brackets are available for mounting and securing the Lightguide system to existing equipment. Kits are available for mounting onto threaded rod, strut, channel, cable runway, as well as equipment racks and computer floor posts.

All mounting brackets are steel with a telco gray finish. Following are just some of the available kits. Contact HellermannTyton or refer to the online Lightguide Design and Installation Manual for more information, <http://www.hellermann.tyton.com/lightguide.asp>



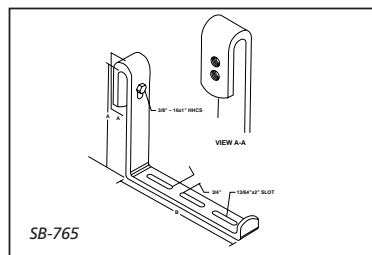
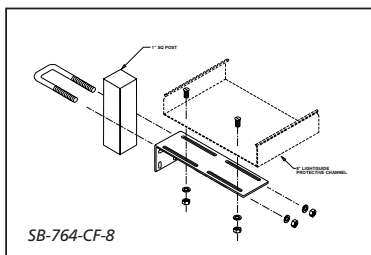
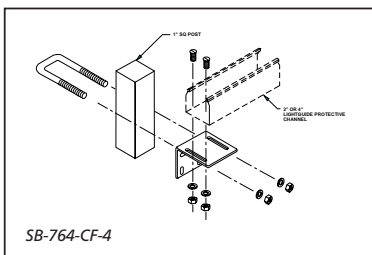


Mounting Hardware Kits

Product Selection

Part Number	Description
SB-763-1/2	Threaded Channel/Strut Channel Support
SB-764-ER-24	Equipment Rack / Lightguide Channel Support
SB-764-CF-4	Computer Floor Post / Lightguide Channel Support
SB-764-CF-8	Computer Floor Post / Lightguide Channel Support
SB-765-41/2X5	Cable Runway / Lightguide Channel Support
SB-765-9X5	Cable Runway / Lightguide Channel Support
SB-765-9X7	Cable Runway / Lightguide Channel Support

See *Lightguide Design and Installation Manual* for more information.



Converter Kit

When the complete connection of duct and tubing is required, or rigid Lightguide components may not fit through a certain area, the converter kit can be used. The kit consists of two gray PVC connectors, a section of black convoluted tubing, and two black Snapper clamps (SNP42) to secure the converters to the tubing. The black convoluted tubing is available in lengths of 2 feet, 4 feet, and 6 feet. The converter kit provides a smooth transition from 2" x 2" Lightguide to 1-1/2" flexible tubing.



Product Selection

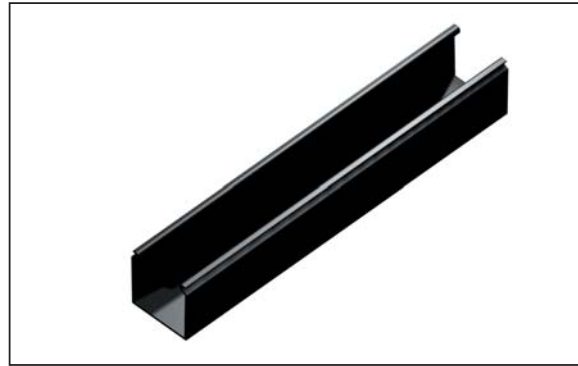
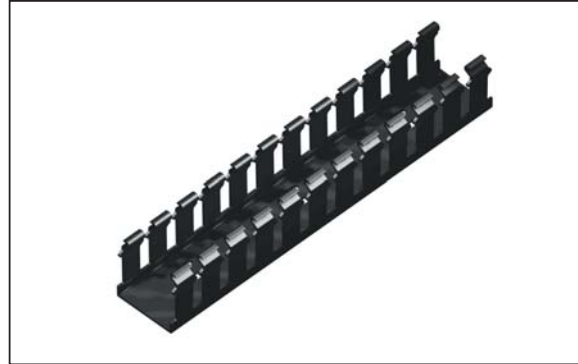
Part Number	Description	Pkg. Qty.
TFJK2X2	Kit containing two gray connectors, 2 foot section black convoluted tubing & two black Snapper clamps.	1
TFJK2X2-4	Kit containing two gray connectors, 4 foot section black convoluted tubing & two black Snapper clamps.	1
TFJK2X2-6	Kit containing two gray connectors, 6 foot section black convoluted tubing & two black Snapper clamps.	1
TJ2XRD	Gray connector	1



Wiring Duct

HellermannTyton manufactures wiring duct from high impact and rigid PVC for routing and protecting wire and cable.

The slotted duct features break-away fingers which provide additional access for wire and cable. Each section of slotted duct is provided with two score lines. The first one is at the base of the finger which allows the finger to be bent and broken away when a greater opening is required. The second score line is lower which allows a section of the sidewall to be easily removed by simply cutting the sidewall down to the lower score line and snapping out the desired section. These two score lines provide smooth edges to ensure user comfort and cable safety. For straight wire runs where break-outs are not required, HellermannTyton also provides solid wall duct. The covers are flush with the side of the duct and also are provided with a non-slip plastic lining to ensure that the covers remain in place. **The covers must be ordered separately.**



Wiring Duct

Product Selection

Part Number	Description	*Color	Pkg. Qty.
SL1X1BK4	1" (W) x 1" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL1X4BK4	1" (W) x 4" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL1.5X4BK4	1.5" (W) x 4" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL1.5X1.5BK4	1.5" (W) x 1.5" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL1.5X2BK4	1.5" (W) x 2" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL2X2BK4	2" (W) x 2" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL2X3BK4	2" (W) x 3" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL2X4BK4	2" (W) x 4" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL3X2BK4	3" (W) x 2" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL3X3BK4	3" (W) x 3" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL3X4BK4	3" (W) x 4" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL3X5BK4	3" (W) x 5" (H) x 6' (L) Slotted Duct	Black	60 feet of 6 foot lengths
SL4X4BK4	4" (W) x 4" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL4X5BK4	4" (W) x 5" (H) x 6' (L) Slotted Duct	Black	60 feet of 6 foot lengths
SD1X1BK4	1" (W) x 1" (H) x 6' (L) Solid Duct	Black	120 feet of 6 foot lengths
SD1.5X1.5BK4	1.5" (W) x 1.5" (H) x 6' (L) Solid Duct	Black	120 feet of 6 foot lengths
SD2X2BK4	2" (W) x 2" (H) x 6' (L) Solid Duct	Black	120 feet of 6 foot lengths
SD3X3BK4	3" (W) x 3" (H) x 6' (L) Solid Duct	Black	120 feet of 6 foot lengths
SD4X4BK4	4" (W) x 4" (H) x 6' (L) Solid Duct	Black	120 feet of 6 foot lengths
TC1BK4	Cover for 1" Wide Duct	Black	120 feet of 6 foot lengths
TC1.5BK4	Cover for 1.5" Wide Duct	Black	120 feet of 6 foot lengths
TC2BK4	Cover for 2" Wide Duct	Black	120 feet of 6 foot lengths
TC3BK4	Cover for 3" Wide Duct	Black	120 feet of 6 foot lengths
TC4BK4	Cover for 4" Wide Duct	Black	120 feet of 6 foot lengths

*Also available in standard White and Gray – Call for availability of additional sizes.