



routing and raceway  
PRODUCTS

A revolutionary new multi-channel raceway, InfoStream features a unique, rounded profile which offers a sleek appearance and helps absorb shock. Many features, including InfoStream's light weight, make it a favorite with installers and end users. Here is why one customer prefers InfoStream:

*"Since InfoStream is lighter, one person can hold up a single piece and install it. This ultimately allows us to cut back on labor and shipping charges."*



# ROUTING AND RACEWAY PRODUCTS

## 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 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.

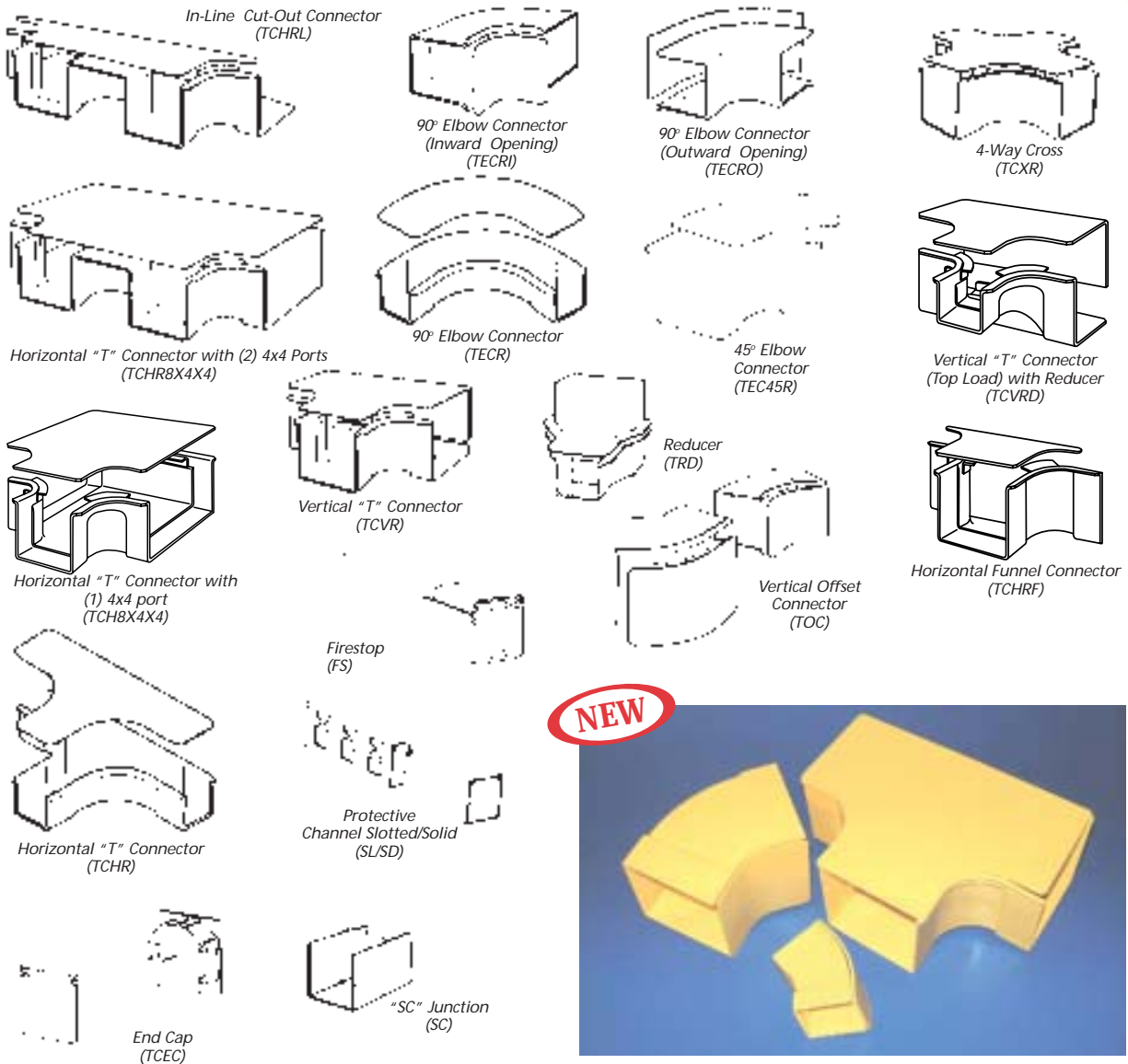
Manufactured from a PVC/Acrylic alloy with a flammability rating of UL94V-0, the connectors possess an oxygen index of 37 with a maximum continuous temperature rating of 122° Fahrenheit.

### 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 86 for Fiber Optic Cable Tape to identify the routing of fiber optic cable.)

# ROUTING AND RACEWAY PRODUCTS



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
<b>1" x 1" System</b>		
TECR1x1X	90° Elbow Connector	1
TCHR1x1X	Horizontal "T" Connector	1
SD1x1X/TC1	1" x 1" Solid Channel with Cover	120 feet of 6 foot lengths
SL1x1X/TC1	1" x 1" Slotted Channel with Cover	120 feet of 6 foot lengths
<b>2" x 2" System</b>		
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)

# ROUTING AND RACEWAY PRODUCTS

HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
<b>2" x 2" System</b>		
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	120 feet of 6 foot lengths
SL2x2X/TC2	2" x 2" Slotted Channel with Cover	120 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
<b>2" x 4" System</b>		
TECR2x4X	90° Elbow Connector	1
SD2x4X/TC2	2" x 4" Solid Channel with Cover	120 feet of 6 foot lengths
SL2x4X/TC2	2" x 4" Slotted Channel with Cover	120 feet of 6 foot lengths
SLWR20C2	Wire Retainer for 2" x 4" Slotted Channel, Black	100 pieces per bag
<b>4" x 2" System</b>		
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	120 feet of 6 foot lengths
SL4x2X/TC4	4" x 2" Slotted Channel with Cover	120 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
<b>4" x 4" System</b>		
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	120 feet of 6 foot lengths
SL4x4X/TC4	4" x 4" Slotted Channel with Cover	120 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
<b>8" x 4" System</b>		
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	120 feet of 6 foot lengths

Replace "X" in the part number with the following letters for desired color: X = G (gray), Y (yellow)

# ROUTING AND RACEWAY PRODUCTS

## Lightguide Fiber Optic Protection System – Fill Capacity Chart

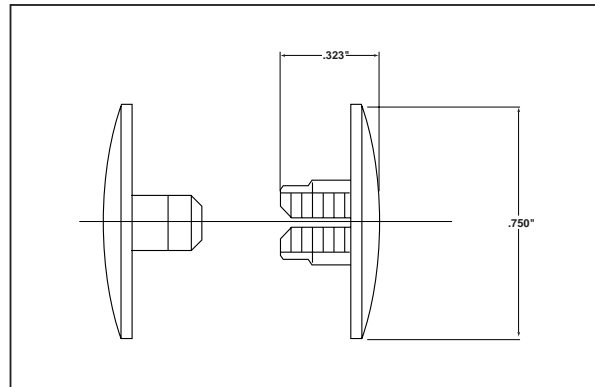
CHANNEL SIZE			1X1		2X2		2X4		4X2		4X4		8X4		12X4	
CHANNEL AREA (SQ. IN.)			0.73		3.48		6.87		7.32		14.66		30.01		45.36	
WIRE TYPE	WIRE SIZE	O.D. OF WIRE	40%	60%	40%	60%	40%	60%	40%	60%	40%	60%	40%	60%	40%	60%
UNSHIELDED TWISTED PAIR, 24 AWG	2 Pr.	0.140	18	28	90	135	178	267	190	285	380	571	779	1169	1178	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)	60	90	287	431	568	852	604	907	1211	1817	2480	3720	3748	5623
	62.5/125 micron	(3.0)	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.)<sup>2</sup>} 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.

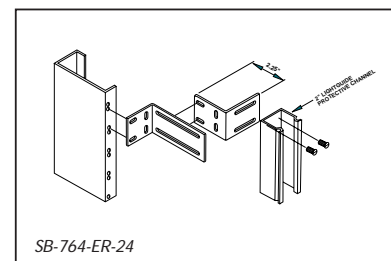
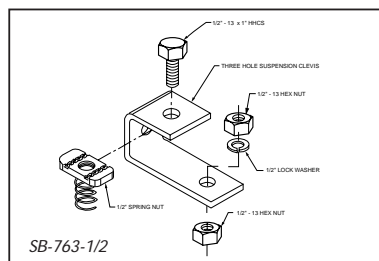
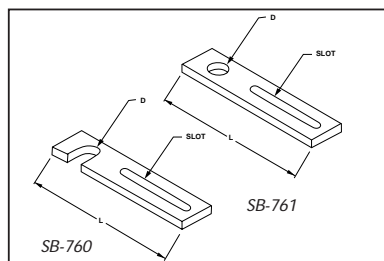
HELLERMANN TYTON PART NO.	DESCRIPTION	COLOR	PKG. QTY
TR1	Plastic Ratchet Rivet to Connect Component and Channel	Black	100 sets/kit (200 pieces)



## 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. Below are just some of the available kits. Contact HellermannTyton or refer to the Lightguide Design and Installation Manual for more information.

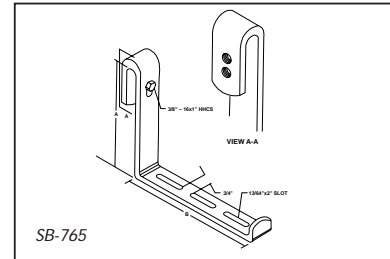
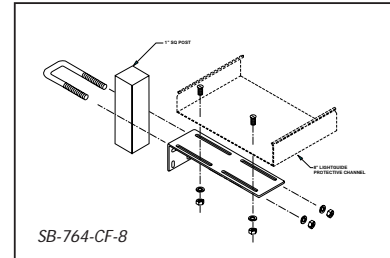
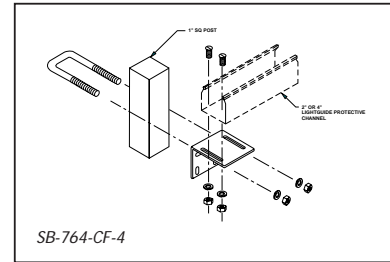


# ROUTING AND RACEWAY PRODUCTS

## Mounting Hardware Kits

HELLERMANN TYTON PART NO.	DESCRIPTION
SB-760-1/2X4	Threaded Rod/Lightguide Channel Support (Slotted)
SB-760-1/2X6	Threaded Rod/Lightguide Channel Support (Slotted)
SB-760-1/2X10	Threaded Rod/Lightguide Channel Support (Slotted)
SB-760-5/8X4	Threaded Rod/Lightguide Channel Support (Slotted)
SB-760-5/8X6	Threaded Rod/Lightguide Channel Support (Slotted)
SB-760-5/8X10	Threaded Rod/Lightguide Channel Support (Slotted)
SB-761-1/2X4	Threaded Rod/Lightguide Channel Support
SB-761-1/2X6	Threaded Rod/Lightguide Channel Support
SB-761-1/2X10	Threaded Rod/Lightguide Channel Support
SB-761-5/8X4	Threaded Rod/Lightguide Channel Support
SB-761-5/8X6	Threaded Rod/Lightguide Channel Support
SB-761-5/8X10	Threaded Rod/Lightguide Channel Support
SB-762-4	Strut Channel/Lightguide Channel Support
SB-762-6	Strut Channel/Lightguide Channel Support
SB-762-10	Strut Channel/Lightguide Channel Support
SB-763-1/2	Threaded Channel/Strut Channel Support
SB-764-ER-2	Equipment Rack/Lightguide Channel Support
SB-764-ER-4	Equipment Rack/Lightguide Channel Support
SB-764-ER-24	Equipment Rack/Lightguide Channel Support
SB-764-ER-44	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-765-41/2X9	Cable Runway/Lightguide Channel Support
SB-765-9X5	Cable Runway/Lightguide Channel Support
SB-765-9X7	Cable Runway/Lightguide Channel Support
SB-765-9X9	Cable Runway/Lightguide Channel Support

See *Lightguide Design and Installation Manual* for more information.  
(Viewable online at [www.hellermann.tyton.com](http://www.hellermann.tyton.com) – go to products then manuals.)



## 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.



HELLERMANN TYTON PART NO.	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

See page 118 for bulk convoluted tubing.

# ROUTING AND RACEWAY PRODUCTS

## SURFACE RACEWAY SYSTEMS

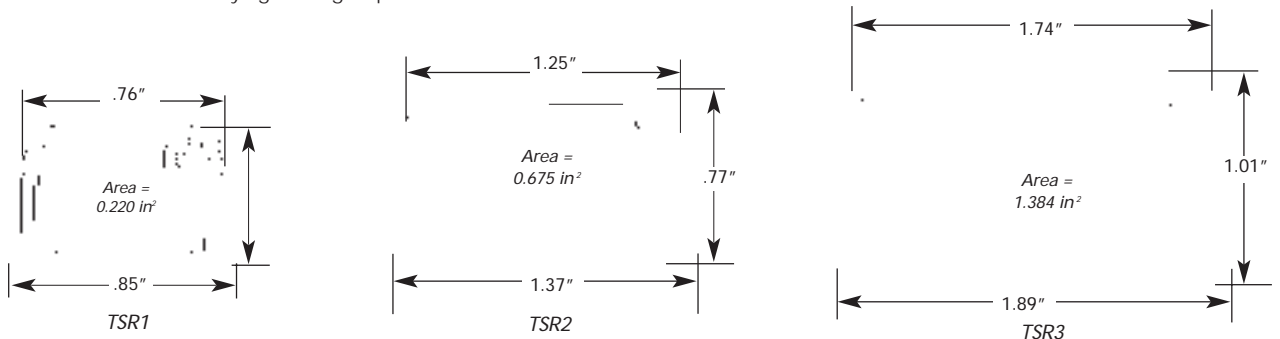
HellermannTyton's surface raceway systems are industry preferred for their sleek designs, labor savings features, and durability. With the recent addition of the new TSRP power surface raceway, HellermannTyton offers an integrated raceway package which fits together to meet the requirements of most any 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 .



HELLERMANN TYTON PART NO.	DESCRIPTION	DIMENSIONS	PKG. QTY.
<b>TSR1 Raceway</b>			
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
<b>TSR2 Raceway</b>			
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
<b>TSR3 Raceway</b>			
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)

# ROUTING AND RACEWAY PRODUCTS

## 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



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG QTY.
<b>TSR1 Fittings</b>		
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 Cover - 3/4" - 1" Bend Radius	10
TSR1X-33-1	Internal Cover - 3/4" - 1" Bend Radius	10
TSR1X-36	End Cap - 3/4"	10
TSR1X-50	Ceiling Drop - 3/4"	10
<b>TSR2 Fittings</b>		
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 Cover - 1-1/4" - 1" Bend Radius	10
TSR2X-33-1	Internal Cover - 1-1/4" - 1" Bend Radius	10
TSR2X-36	End Cap - 1-1/4"	10
TSR2X-50	Ceiling Drop - 1-1/4"	10
<b>TSR3 Fittings</b>		
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 Cover - 1-3/4" - 1" Bend Radius	10
TSR3X-33-1	Internal Cover - 1-3/4" - 1" Bend Radius	10
TSR3X-36	End Cap - 1-3/4"	10
TSR3X-50	Ceiling Drop - 1-3/4"	10
<b>Reducers</b>		
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
<b>Junction Boxes</b>		
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 45 for knockout sizes and locations.

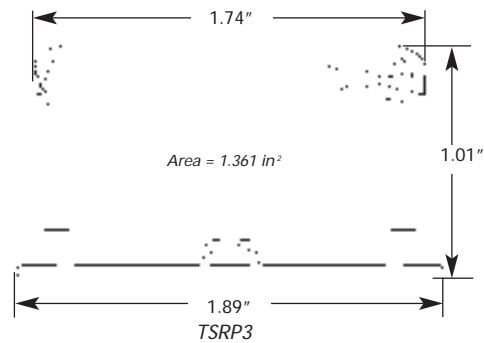
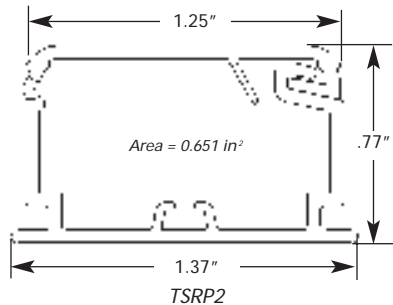
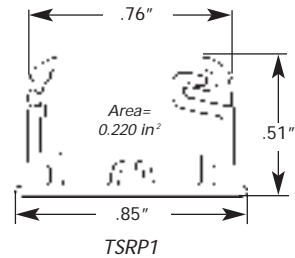
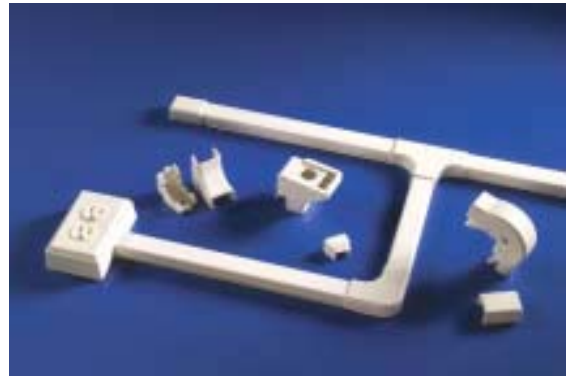


# ROUTING AND RACEWAY PRODUCTS

## 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 No. 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 our industry standard TSR low voltage raceway system.



## TSRP Power Surface Raceway



HELLERMANN TYTON PART NO.	DESCRIPTION	DIMENSIONS	PKG. QTY.
<b>TSRP1 Raceway</b>			
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
<b>TSRP2 Raceway</b>			
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
<b>TSRP3 Raceway</b>			
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
TSRP3X-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)

# ROUTING AND RACEWAY PRODUCTS

## 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.



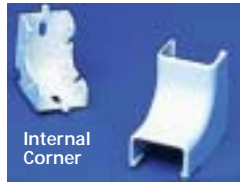
Ceiling Drop

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

HELLERMANN TYTON PART NO.	DESCRIPTION	PKG QTY.
<b>TSRP1 Fittings</b>		
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
<b>TSRP2 Fittings</b>		
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
<b>TSRP3 Fittings</b>		
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
<b>Reducers</b>		
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
<b>Junction Boxes</b>		
TSRP1X-JB1	Single Gang - 3" (W) x 4.75" (L) x 1.25" (H)	1
TSRP2X-JB2	Single Gang - 3" (W) x 4.75" (L) x 2" (H)	1
TSRP3X-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 45 for knockout sizes and locations.

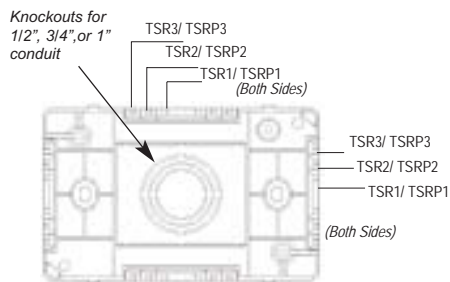
# ROUTING AND RACEWAY PRODUCTS

## TSR and TSRP Wire Fill Chart

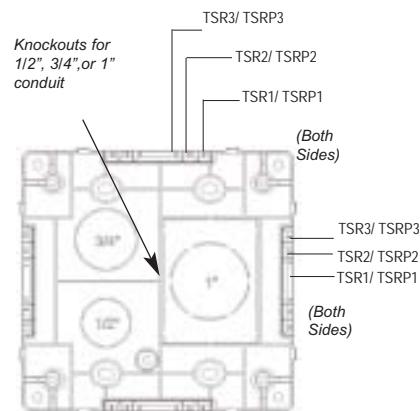
Wire Type	Wire Size	O.D. of Wire	Low Voltage - TSR						Power Rated - TSRP					
			TSR1 A = 0.220 in <sup>2</sup>		TSR2 A = 0.675 in <sup>2</sup>		TSR3 A = 1.384 in <sup>2</sup>		TSRP 1 A = 0.220 in <sup>2</sup>		TSRP 2 A = 0.651 in <sup>2</sup>		TSRP3 A = 1.361 in <sup>2</sup>	
			Spec	Max	Spec	Max	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	<b>0.217</b>	<b>2</b>	<b>3</b>	<b>7</b>	<b>10</b>	<b>14</b>	<b>22</b>	<b>2</b>	<b>3</b>	<b>7</b>	<b>10</b>	<b>14</b>	<b>22</b>
	4 Pr. Cat 6	<b>0.240</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>12</b>	<b>18</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>12</b>	<b>18</b>
Coax	25 Pr.	0.410	0	0	2	3	4	6	0	0	1	2	4	6
	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
Fiber Optic FA Jacket OFNP	RG6/U	0.270	1	2	4	7	9	14	1	2	4	6	9	14
	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
Electrical Wire	6 Strand	0.210	2	3	7	11	15	23	2	3	7	11	15	23
	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 /  $\{1/4 \times 3.14 \times (\text{wire o.d.})^2\} \times 0.4$  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

## TSR and TSRP Junction Box Knockout Locations



**JB1, JB2 -  
SINGLE GANG**



**JBD -  
DUAL GANG**

# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™

### Multi-Channel Raceway



HellermannTyton's InfoStream is a revolutionary design for a non-metallic raceway system. The elliptical shape is aesthetically pleasing to customers 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.

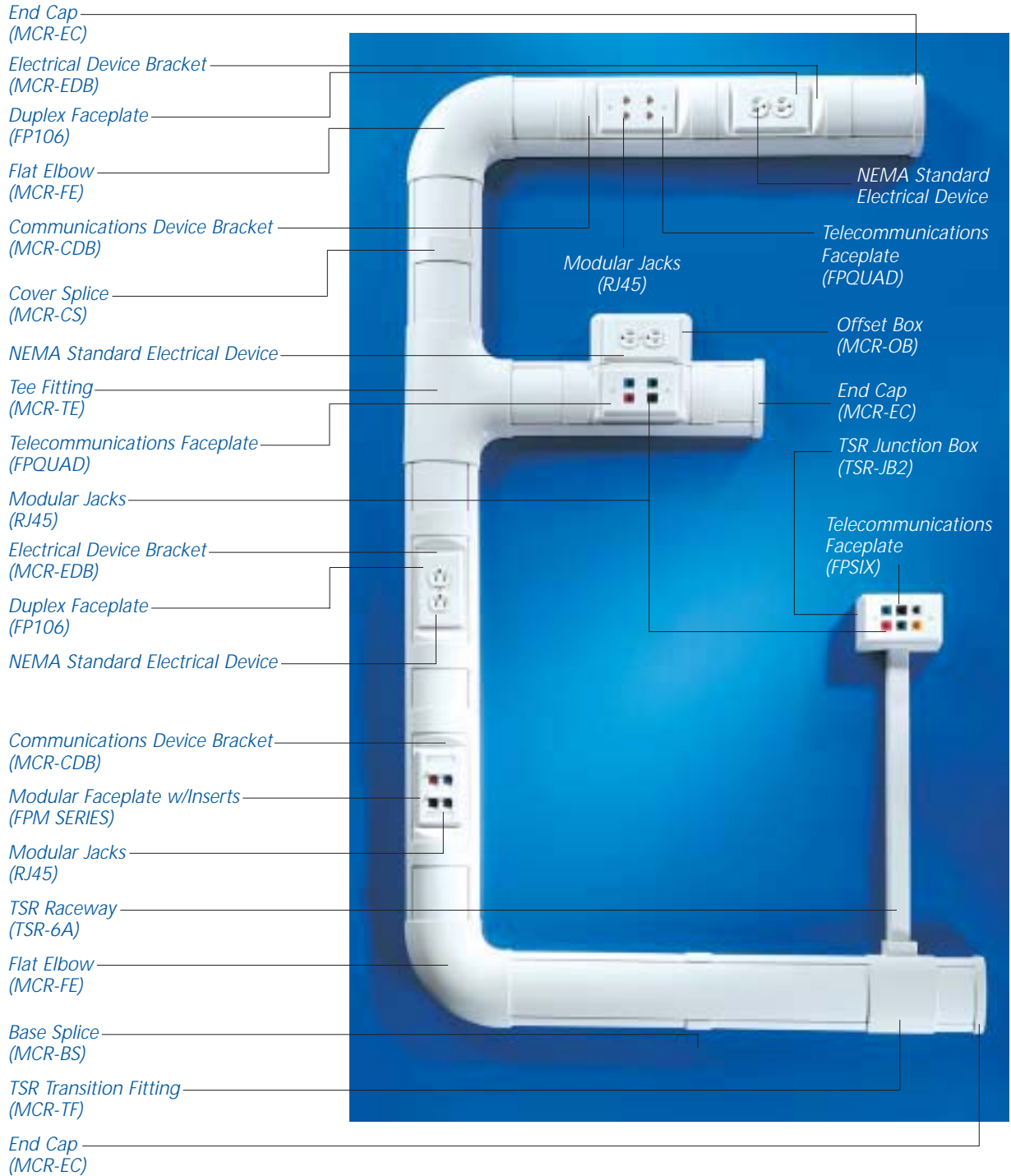
- All fittings have been designed to maintain the required 1" minimum bend radius per TIA/EIA-568-B and 569-A standards.
- U.L. Listed to 600 Volts – Meets new UL5A and CSA 22.2 No. 62-93 standards.
- Patented hinged cover speeds installation time by allowing installer to partially mount cover prior 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 2-6".
- 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.



# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™

### Multi-Channel Raceway Diagram



# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™

### Multi-Channel Raceway

#### Power and Data Only



#### Power Only Configuration

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



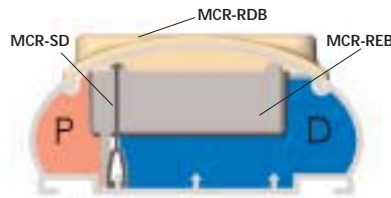
#### Data Only Configuration

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

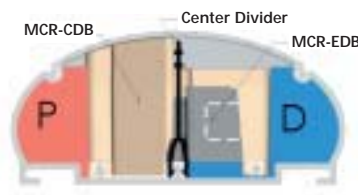
#### Power and Data Inline



#### High Data Capacity Option With Side Divider



#### With Center Divider



#### 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.

#### Center Divider Configuration

Components:
 

- Raceway Center Divider (included with base)
- Communications Device Bracket (MCR-CDB)
- Electrical Device Bracket (MCR-EDB)

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

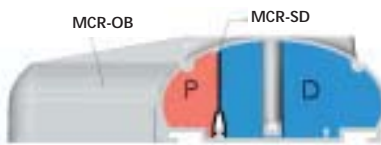
#### Side Divider Configuration

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)

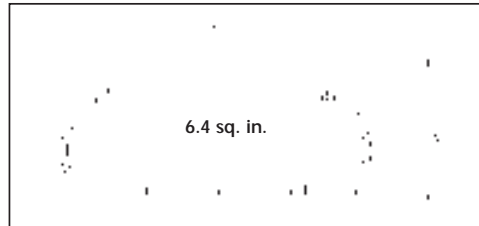
 Data Area: 4.26 sq. in.  
Power Area: 1.22 sq. in.

# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™ Multi-Channel Raceway



Unique, streamlined design enhances the aesthetics of any installation.



Hinged cover speeds installation.



### Multi-Channel Raceway Base

HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
	<i>Base is supplied with pre-punched mounting slots every 8". Center and side dividers are not interchangeable. Raceway base also includes adhesive double-sided tape for aid in mounting. Raceway must still be properly fastened to the wall per included instructions.</i>	
<b>MCRX-B8</b> <b>MCRX-B10</b>	Raceway Base – 8 feet with <b>center</b> divider Raceway Base – 10 feet with <b>center</b> divider	48 feet 60 feet
<b>MCRX-BS8</b> <b>MCRX-BS10</b>	Raceway Base – 8 feet with <b>side</b> divider Raceway Base – 10 feet with <b>side</b> divider	48 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 Cover

HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
<b>MCRX-C8</b> <b>MCRX-C10</b>	Raceway Cover – 8 feet Raceway Cover – 10 feet	48 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

HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
	<i>Snaps onto either side of raceway base rails for proper power and data separation per UL/CSA.</i>	
<b>MCRW-SD8</b> <b>MCRW-SD10</b>	White Raceway Side Divider – 8 feet White Raceway Side Divider – 10 feet	96 feet 120 feet



# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™ Multi-Channel Raceway



### Flat Elbow



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-FE	Joins raceway at 90° flat angle. Flat Elbow	1

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



### External Elbow



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-EE	Joins raceway at 90° outside corner. External Elbow	1

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



### Internal Elbow



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-IE	Joins raceway at 90° inside corner. Internal Elbow	1

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



### Offset Elbow



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-OE	For small wall offsets between 2"-6". Used in conjunction with piece of raceway. Corner filler included for a flush appearance. Offset Elbow	1

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



### Tee Fitting



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-TE	Joins 3 sections of raceway and includes divider. Tee Fitting	1

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



# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™

### Multi-Channel Raceway

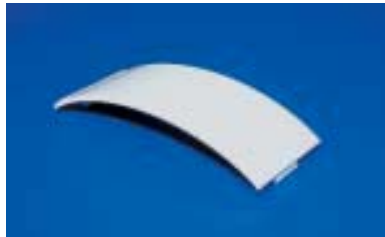


#### Base Splice



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-BS	Joins 2 sections of raceway base. Base Splice	10

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



#### Cover Splice



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-CS	Joins 2 sections of raceway cover and required with use of Communications and Electrical Device Brackets. Cover Splice	10

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



#### End Cap



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-EC	Completes raceway or provides transition for 1/2", 3/4" and 1" conduit. End Cap	1

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



#### Transition Fitting



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-TF	Knockouts are provided for TSR1, TSR2, and TSR3 surface raceway. Transition Fitting	1

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

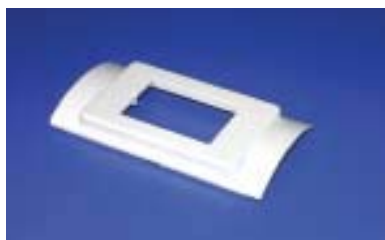


#### Power Transition Fitting



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-PTF	Knockouts are provided for TSRP1, TSRP2, and TSRP3 surface raceway. 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

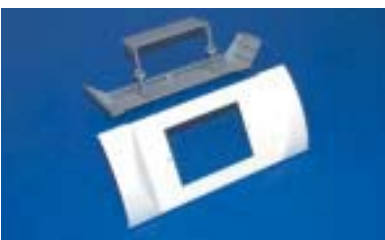
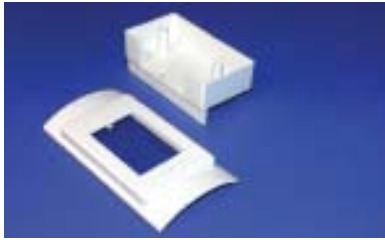


HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-RDB	Used to mount NEMA standard single gang device and faceplate. Raised bracket allows for additional wire fill space and additional device clearance. Use with side divider for 2-channel applications. Raised Device Bracket Fitting	10

Replace "X" in the part number with the following letters for desired color:  
X = I (Electrical Ivory), FW (Office White)

# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™ Multi-Channel Raceway



### Raised Electrical Box



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-REB	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. Raised Electrical Bracket Fitting	5

Replace "X" in the part number with the following letters for desired color:  
X = I (Electrical Ivory), FW (Office White)

### Wire Retainer/Tie Mount



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRG-WR	Keeps wire & cable in place. Recommend placement every 18" to 24". Wire Retainer – Gray	10
MCRG-TM	Keeps wire & cable bundled. Accepts standard HellermannTyton cable ties T18-T50. Tie Mount – Gray	100



### Offset Box

HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-OB	Option for communications devices in raceway and electrical outlets on side. Offset Box	1

Replace "X" in the part number with the following letters for desired color:  
X = I (Electrical Ivory), FW (Office White)

### Entrance End



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-ENT	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. Entrance End Fitting	1

Replace "X" in the part number with the following letters for desired color:  
X = I (Electrical Ivory), FW (Office White)

### Electrical Device Bracket



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-EDB	Used to mount NEMA standard single gang electrical faceplates — cover splice is required for proper use. 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



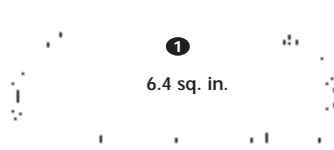
HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-CDB	Used to mount NEMA standard single gang faceplates for communications devices — cover splice is required for proper use. Communications Device Bracket	10

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

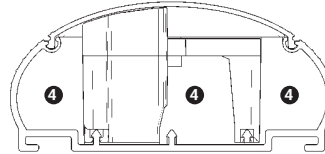
# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™

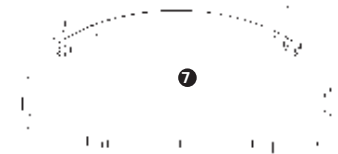
### Multi-Channel Raceway



Base and Cover with No Devices



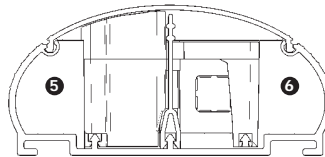
Data Only Using Communications Device Bracket (CDB)



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)

### Multi-Channel Raceway Wire Fill Capacity

LOW VOLTAGE		Raceway Area of Raceway	Channel 1 6.40in <sup>2</sup>	Channel 2 1.220in <sup>2</sup>	Channel 3 4.260in <sup>2</sup>	Channel 4 3.060in <sup>2</sup>	Channel 5 1.000in <sup>2</sup>	Channel 6 1.150in <sup>2</sup>	Channel 7 5.880in <sup>2</sup>	Channel 8 0.800in <sup>2</sup>	Channel 9 2.450in <sup>2</sup>
Wire Type	Wire Size	OD of Wire	Spec Max	Spec Max	Spec Max	Spec Max	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	29 44	152 229	20 31	63 95
	3 Pr.	0.150	144 217	27 41	96 144	69 103	22 33	26 39	133 199	18 27	55 83
	4 Pr. Cat 5e	0.217	69 103	13 19	46 69	33 49	10 16	12 18	63 95	8 12	26 39
	4 Pr. Cat 6	0.240	56 84	10 16	37 56	27 40	8 13	10 15	51 77	7 10	21 32
	25 Pr.	0.410	19 29	3 5	12 19	9 13	3 4	3 5	17 26	2 3	7 11
Coax	RG58/U	0.193	87 131	16 25	58 87	41 62	13 20	15 23	80 120	10 16	33 50
	RG59U or RG62U	0.242	55 83	10 15	37 55	26 39	8 13	10 15	51 76	6 10	21 31
	RG6/U	0.270	44 67	8 12	29 44	21 32	6 10	8 12	41 61	5 8	17 25
Fiber Optic FA Jacket OFNP	2 Strand	0.175	106 159	20 30	70 106	50 76	16 24	19 28	97 146	13 19	40 61
	4 Strand	0.185	95 142	18 27	63 95	45 68	14 22	17 25	87 131	11 17	36 54
	6 Strand	0.210	73 110	14 21	49 73	35 53	11 17	13 19	67 101	9 13	28 42
Fiber Optic 62.5/125/900 PVC Jacket OFNR	2 Strand	0.175	106 159	20 30	70 106	50 76	16 24	19 28	97 146	13 19	40 61
	4 Strand	0.185	95 142	18 27	63 95	45 68	14 22	17 25	87 131	11 17	36 54
	6 Strand	0.210	73 110	14 21	49 73	35 53	11 17	13 19	67 101	9 13	28 42
	8 Strand	0.230	61 92	11 17	41 61	29 44	9 14	11 16	56 84	7 11	23 35
	10 Strand	0.250	52 78	9 14	34 52	24 37	8 12	9 14	47 71	6 9	19 29
Electrical Wire	14 AWG THHN	0.105	30	21	-	-	17	-	27	14	-
	12 AWG THHN	0.122	25	15	-	-	12	-	22	11	-
	10 AWG THHN	0.153	19	9	-	-	8	-	17	8	-

Formula used to calculate communications wire fill capacity - Numbers of wires = duct / {1/4 x 3.14 x (wire o.d.)<sup>2</sup>} 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

# ROUTING AND RACEWAY PRODUCTS

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

HELLERMANN TYTON PART NO.	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
SL1.5XBK4	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.