

# Modular plugs, accessories and tooling

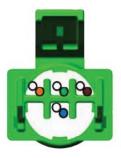
Category 6A/6 modular plugs, slim-line boots and color clips



### CommScope modular plug portfolio

CommScope offers a vast portfolio of modular plugs for a wide variety of applications, performance and cable and conductor styles. Below is a brief explanation of the basics of this portfolio to assist in proper plug selection.

### CAT 6A, CAT 6 UTP MODULAR PLUGS



CommScope Category 6A and 6 unshielded modular plug (MP-6AU) utilizes a patent-pending integrated pair-manager and cable strain-relief boot. The pair-manager provides 6 (six) unique channels for pair-placement, allowing ultimate flexibility in obtaining the highest possible transmission performance with the cable being terminated. The cable-strain relief feature secures the cable and isolates the wire from movement while not impacting cable performance. The wire-manager comes in two sizes based on insulation conductor diameter to ensure excellent wire-to-contact performance. The MP-6AU modular plug can be used with solid or stranded conductors.

### CAT 6A, CAT 6 AND CAT 5eMT MODULAR PLUGS



These modular plugs consist of a three-piece design: the modular plug body with contacts; a wire holder to manage the conductors and ensure performance and; a metal strain relief for securing the cable and if used with a shielded cable provides the shielding for the plug. These plugs can be used with shielded or unshielded cables. They are available with 3 different size strain reliefs to handle the range of cable diameters. Each performance level uses slightly different wire holders to achieve the desired performance levels. All three of these plug types utilize the 2153256-1 or 2153257-1 series plug boots. They utilize the Pro-Crimper III hand tool (354940-1) with the appropriate die set based on strain relief diameter.

### CAT 5e, 8-POSITION PLUG



The CAT 5E modular plug is a two-piece design consisting of the modular plug body with contacts, and a load bar or wire holder. In this design the strain relief is built into the plug body. If the shielded option is desired, the plug comes with a factory installed wrap around shield. This plug type has an optional boot component for additional strain relief. Depending upon the cable diameter, this plug utilizes 2843048-1, 2111797-1, 2843080-1, and 2843079-1 series boots. It utilizes the Pro-Installer tool with the "white" dot die set.

#### CAT 5, 8-POSITION MODULAR PLUG



The CAT 5, 8-position plug is a one-piece design. The plug is also available for use with "round" cable as well as "flat oval" cable. Additionally, it is available in unshielded and shielded utilizing a wrap-around shield. This plug utilizes the same boots as the CAT 5E and the Pro-Installer tool with the "black" dot die set.

#### **6-POSITION MODULAR PLUG**



The 6-position (RJ-11) modular plug is also a one-piece design and is offered in a "standard" design 0.530 inches long and also a "long" version which is 0.895 inches long. The plug is available for round as well as flat oval cable. It is available in unshielded and shielded versions. The 6-position plug has a unique variety called "small conductor" for use with conductors with thin-wall insulation and overall diameter of 0.029 to 0.034 inches. Lastly, the 6-position plug is available with only 4 or 2 contacts installed. This plug utilizes the Pro-Installer tool with the "standard" plug using the "Blue" dot die set and the "long" using the "violet" dot die set.

#### **4-POSITION MODULAR PLUG**



The 4-position (telephone handset) modular plug is a one-piece design and is 0.530 inches long and is designed for use with flat-oval cables. It is only available as unshielded. The plug utilizes the "green" dot die set with the Pro-Installer Tool.

### Features and benefits

- · True mass displacement termination of jacketed cable with solid or stranded conductors
- $\cdot$  New universal contact providing reliable termination of solid or stranded conductors
- $\cdot~$  Available in all performance grades: CAT 6A, CAT 6, CAT 5e, CAT 5 and CAT 3
- $\cdot$  Meets or exceeds EIA/TIA and ISO industry performance and specifications
- $\cdot$  Various positions, number of contacts, housing styles and packaging options available
- · The most complete line of semiautomatic and manual termination capabilities and tooling-low applied cost
- · Complete line of hand-held tooling available
- · Available for shielded and unshielded cable, round or flat oval, various cable diameters accommodated
- · Complete line of accessories such as boots, color clips and strain reliefs
- · UL Recognized Component to UL and CSA standards, File # E114344

### Specifications<sup>1</sup>

ELECTRICAL	
Voltage:	150 volts AC maximum
Current:	Signal application only, 0.75 ampere maximum
Voltage proof:	1000 volts AC between contacts 1500 volts AC all contacts connected together with shield
Insulation resistance:	500 Mega ohms minimum
MECHANICAL	
Durability:	750 mating cycles
Bending:	22N [5 lbs]
Pull (Tensile):	22N [5 lbs]
Flex:	50 cycles (solid conductors) or 250 cycles (stranded conductors)
Torsion:	10N [2.2 lbs]
ENVIRONMENTAL	
Temperature rating:	-10°C to +60°C
Rapid temperature:	-40°C to 70°C
Cyclic damp heat:	25°C to 65°C @ 93%RH
Mixed flow gas:	IEC 60512-11-7 Method 1
PRODUCT SPECIFICATION	S AND QUALIFICATION REPORT
108-131013	Modular Plugs, Unshielded and Shielded
501-131013	Qualification Report Modular Plugs, Unshielded and Shielded

<sup>1</sup> Consult Product Specification, 108-13103 for exact test conditions and requirements.

### CAT 6A and CAT 6, unshielded, 8-position plug (MP-6AU-\_\_-1)

#### FEATURES

- · Each kit includes:
  - Modular plug assembly
  - Wire manager
- Cat 6A and Cat 6 performance achievable depending upon cable and installation procedures.
- Use appropriate integrated boot manager depending upon cable diameter (ordered separately)





ORDERING INFORMATION						
DESCRIPTION	CONDUCTOR (AWG) <sup>1</sup>	INSULATION OD	100 PER BAG			
Unshielded CAT 6A and CAT 6	23-24 solid	1.09 mm-0.89 mm [0.043 in – 0.035 in]	MP-6AU-Plug-A-1 (6-2843007-1)			
	24-26 stranded	0.89 mm - 0.69 mm [0.035 in – 0.027 in]	MP-6AU-Plug-B-1 (6-2843008-1)			

<sup>1</sup> Typical conductor size supported by insulation OD. Insulation OD is the determining specification.

# CAT 6A and CAT 6, unshielded, 8-position integrated boot manager (MP-6AU-Boot-\_\_\_\_-1)

### FEATURES

- The cable-strain relief feature secures the cable and isolates the wire from movement without impacting performance.
- Transparent boot, with integrated pair-manager and cable strain relief, no need to color-match boot to cable jacket
- · Compatible with CommScope color-clip for increased easy of circuit identification and management



#### **ORDERING INFORMATION** DESCRIPTION CABLE DIAMETER 100 PER BAG 7.40 mm - 6.80 mm MP-6AU-Boot-71-1 [0.291 in - 0.268 in] (2843018-3) 6.80mm- 6.20mm MP-6AU-Boot-65-1 (2843019-3) [0.268 in - 0.244 in] MP-6AU 6.20 mm -5.60 mm MP-6AU-Boot-59-1 (2843020-3) integrated boot manager [0.244 in - 0.220 in] 5.70 mm - 5.10 mm MP-6AU-Boot-54-1 [0.224 in - 0.201] (2843021-3) 5.40 mm - 4.80 mm MP-6AU-Boot-51-1 [0.212 in - 0.189 in] (2843023-3)

### CAT 6A, shielded, 8-position plug (MP-6AS-\_-\_)

#### FEATURES

- · Each kit includes:
  - (1) Modular plug assembly
  - (1) Wire holder
  - (1) Strain relief
- · Cat 6A performance achievable when used with PiMF (Pairs-in-Metal-Foil) constructed cable
- · Use appropriate-sized slim-line modular plug boot (ordered separately)

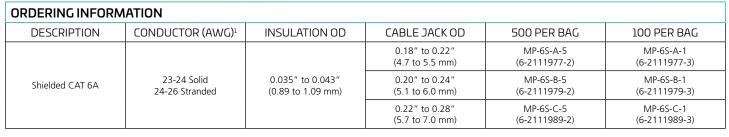
#### **ORDERING INFORMATION** DESCRIPTION CONDUCTOR (AWG)1 INSULATION OD 500 PER BAG CABLE JACK OD 100 PER BAG 0.20" to 0.24" MP-6AS-B-5 MP-6AS-B-1 0.035" to 0.043" (5.1 to 6.0 mm) (6-2111981-2) (6-2111981-3) 23-24 Solid Shielded CAT 6A 24-26 Stranded (0.89 to 1.09 mm) MP-6AS-C-5 0.22" to 0.28" MP-6AS-C-1 (5.7 to 7.0 mm) (6-2111984-2) (6-2111984-3)

<sup>1</sup> Typical conductor size supported by insulation OD. Insulation OE is the determining specification.

### CAT 6, shielded, 8-position plug (MP-6S-\_-\_)

### FEATURES

- Each kit includes:
  - (1) Modular plug assembly
  - (1) Wire holder
  - (1) Strain relief
- · Use appropriate-sized slim-line modular plug boot (ordered separately)



<sup>1</sup> Typical conductor size supported by insulation OD. Insulation OE is the determining specification.









### CAT 5E, shielded EMT, 8-position plug (MP-5EMT-\_-)

#### FEATURES

- · Each kit includes:
  - (1) Modular plug assembly
  - (1) Wire holder
  - (1) Strain relief
- · Use appropriate-sized slim-line modular plug boot (ordered separately)



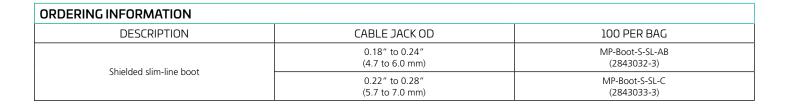
ORDERING INFORMATION								
DESCRIPTION	CONDUCTOR (AWG) <sup>1</sup>	INSULATION OD	CABLE JACK OD	500 PER BAG	100 PER BAG			
Shielded EMT ( AT SE			0.18" to 0.22" (4.7 to 5.5 mm)	MP-5EMT-A-5 (6-2111976-2)	MP-5EMT-A-1 (6-2111976-3)			
	23-24 Solid 24-26 Stranded	0.035" to 0.043" (0.89 to 1.09 mm)	0.20" to 0.24" (5.1 to 6.0 mm)	MP-5EMT-B-5 (6-2111986-2)	MP-5EMT-B-1 (6-2111986-3)			
			0.22" to 0.28" (5.7 to 7.0 mm)	MP-5EMT-C-5 (6-2111988-2)	MP-5EMT-C-1 (6-2111988-3)			

<sup>1</sup> Typical conductor size supported by insulation OD. Insulation OE is the determining specification.

### Shielded slim-line modular plug boot (MP-Boot-S-SL-\_)

### FEATURES

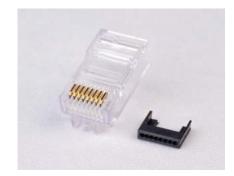
- · For use with shielded Category 6A/6 and Category 5e EMT modular plugs
- · Accepts cables with maximum diameters listed
- · Slim-line design support high-density applications and color clips
- · Transparent boot eliminates need for colored boots to match cable jacket color
- $\cdot$  Advised to use the smallest boot size possible that will accommodate cable



### CAT 5E, 8-position plug (MP-5E\_-\_)

#### FEATURES

- · Each kit includes:
  - (1) Modular plug assembly
  - (1) Wire holder
- · Use appropriate size CAT 5E modular plug boot (MP-5EU-Boot) for cable diameter



ORDERING INFORMATION								
DESCRIPTION	CONDUCTOR (AWG) <sup>1</sup>	INSULATION OD	CABLE JACK OD	500 PER BAG	100 PER BAG			
Unshielded CAT 5E	23-24 Solid	0.035" to 0.039"	0.19" to 0.22" (4.8 to 5.6 mm)	MP-5EU-5 (6-569278-2)	MP-5EU-1 (6-569278-3)			
Shielded CAT 5E	23-24 Solid 24-26 Stranded	(0.89 to 0.99 mm)	0.20" to 0.24" (5.1 to 6.0 mm)	MP-5ES-5 (6-569550-2)	MP-5ES-1 (6-569550-3)			

<sup>1</sup> Typical conductor size supported by insulation OD. Insulation OD is the determining specification.

### CAT 5e and 5 modular plug boots (MP-5EU-Boot- \_\_\_-10)

### FEATURES

- · Slim-line design to support high-density applications
- · Transparent boot eliminating need to color-match boot to cable jacket
- · Compatible with CommScope color-clip for increased easy of circuit identification and management
- Packaged in bags of 1,000



ORDERING INFORMATION			
DESCRIPTION	MID	CATALOG NUMBER	MODULAR PLUG COMPATIBILITY
8-position modular plug boot, 5.7 mm maximum cable diameter	2843048-1	MP-5EU-Boot-57-10	MP-5EU MP-5ES
8-position modular plug boot, 6.2 mm maximum cable diameter	2111797-1	MP-5EU-Boot-62-10	MP-88U-R MP-88S-R
8-position Flat Oval plug boot 5.7mm maximum cable diameter	2843080-1	MP-88FO-Boot-57-10	MP-88U-F
8-postion Flat Oval plug boot 6.2mm maximum cable diameter	2843079-1	MP-88FO-Boot-62-10	MP-88S-F

### Color Clips (MP-ColorClip-\_\_\_\_\_-50)

### FEATURES

- $\cdot$  Customer field-installable allowing for flexibility in identifying and managing patch cords
- $\cdot$  Compatible with all CommScope transparent boots for either shielded or unshielded
- · Packaged in bags of 50

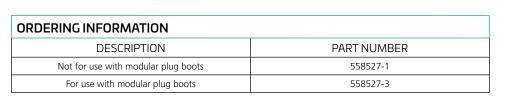


ORDERING INFORMATION		
MID	COLOR CLIPS	BOOT COMPATIBILITY
2843022-1	MP-ColorClip-Almond-50	
2843022-2	MP-ColorClip-Black-50	
2843022-3	MP-ColorClip-White-50	
2843022-4	MP-ColorClip-Gray-50	MP-6AU-Boot
2843022-5	MP-ColorClip-Orange-50	MP-BOOT-S-SL MP-5EU-Boot
2843022-6	MP-ColorClip-Blue-50	MP-88FO-Boot
2843022-7	MP-ColorClip-Red-50	
2843022-8	MP-ColorClip-Yellow-50	
2843022-9	MP-ColorClip-Green-50	

### External strain reliefs for modular plugs

### FEATURES

- · Metal strain relief that positively engages plug housing
- · PRO-CRIMPER tool and die set 224928-1 Tool & Die, 224928-2 Die only
- · For use with 8-position Category 5 and 5e modular plugs only
- · RoHS compliant





### CAT 5 and 3, 8-position plug (MP-88\_-\_\_)

### FEATURES

- Each kit includes:
  (1) Modular plug assembly
- · Packaged either 500 or 100 to bag
- · Use appropriate size modular plug boot for cable diameter







8-position round, standard

8-position flat, standard

Shielded 8-position round, standard

ORDERING INFORMATION													
DESCRIPTION	CONDUCTOR (AWG) <sup>1</sup>	INSULATION OD	CABLE TYPE	CABLE JACK OD (MAX)	500 PER BAG	100 PER BAG							
	24-26 stranded (0.86	0.034" to 0.039" (0.86 to 0.99 mm)	Round	0.20" (5.1 mm)	MP-88U-R-5 (6-557315-2)	MP-88U-R-1 (6-557315-3)							
										Small round	0.16" (4.0mm)	MP-88U-S-5 (6-557961-2)	MP-88U-S-1 (6-557961-3)
					Flat oval	0.10" x 0.35" (2.54 x 8.89 mm)	MP-88U-F-5 (6-554720-2)	MP-88U-F-1 (6-554720-3)					
Chielded 8 position					Round	0.20″ (5.1 mm)	MP-88S-R-5 (6-569530-2)	MP-88S-R-1 (6-569530-3)					
Shielded 8-position			Flat oval	0.10" x 0.35" (2.54 x 8.89 mm)	MP-88S-F-5 (6-569542-2)	MP-88S-F-1 (6-569542-3)							
Unshielded 8-position, small conductor	26-28 solid 26-28 stranded	0.029" to 0.034" (0.74 to 0.86 mm)	Flat oval	0.10" x 0.35" (2.54 x 8.89 mm)	MP-88U-FS-5 (6-557972-2)	MP-88U-FS-1 (6-557972-3)							

 $^{\rm 1}$  Typical conductor size supported by insulation OD. Insulation OD is the determining specification.  $^{\rm 2}$  Small conductor modular plugs are transparent blue in color.

### Keyed CAT 5 and 3, 8-position (MP-88\_-R-1-K)

### FEATURES

 $\cdot$  Small key on side of plug to interface with slot in jack.

ORDERING INFORMATION							
DESCRIPTION	CONDUCTOR (AWG) <sup>1</sup>	INSULATION OD	CABLE TYPE	CABLE JACK OD (MAX)	100 PER BAG		
Unshielded Keyed, 8-Position	24-26 solid	0.034" to 0.039"	Dound	0.20″	MP-88U-R-1-K (6-554170-3)		
Shielded Keyed, 8-Position	24-26 stranded	(0.86 to 0.99 mm)	Round	(5.1 mm)	MP-88S-R-1-K (6-569533-3)		

<sup>1</sup> Typical conductor size supported by insulation OD. Insulation OD is the determining specification.



### 6-position plugs (MP-66\_-\_\_)







6-position, round, standard 6-position, round, long 6-position, flat, standard

ORDERING INFO	RMATION							
DESCRIPTION	CONDUCTOR (AWG) <sup>1</sup>	INSULATION OD	CABLE TYPE	CABLE JACK OD (MAX)	500 PER BAG	100 PER BAG		
Unshielded	6-position, standard body Unshielded 24-26 solid 0.034" 1		Round	0.18" (4.6 mm)	MP-66U-R-5 (6-554710-2)	MP-66U-R-1 (6-554710-3)		
			Flat oval	0.09" x 0.26" (2.29 x 6.61 mm)	MP-66U-F-5 (6-641337-2)	MP-66U-F-1 (6-641337-3)		
		0.034" to 0.039" (0.86 to 0.99 mm)	Round	0.195″ (4.96 mm)	MP-66U-LR-5 (6-555177-2)	MP-66U-LR-1 (6-555177-3)		
			(0.86 to 0.99 mm)	(0.86 to 0.99 mm)	Flat oval	0.11" x 0.27" (2.79 x 6.85 mm)	MP-66U-LF-5 (6-555176-2)	MP-66U-LF-1 (6-555176-3)
Shielded 6-position,					Round	0.195" (4.96 mm)	MP-66S-LR-5 (6-555175-2)	MP-66S-LR-1 (6-555175-3)
long body			Flat oval	0.11" x 0.27" (2.79 x 6.85 mm)	MP-66S-LF-5 (6-555174-2)	MP-66S-LF-1 (6-555174-3)		
Unshielded 6-position, small conductor, standard body	26-28 solid 26-28 stranded	0.029" to 0.034" (0.74 to 0.86 mm)	Flat oval	0.09" x 0.26" (2.29 x 6.61 mm)	MP-66U-FS-5 (6-557971-2)	MP-66U-FS-1 (6-557971-3)		

<sup>1</sup> Typical conductor size supported by insulation OD. Insulation OD is the determining specification.

### 6-position, 4- or 2-contact plugs (MP-6\_\_-\_)

DRDERING INFORMATION								
DESCRIPTION	CONDUCTOR (AWG) <sup>1</sup>	INSULATION OD	CABLE TYPE	CABLE JACK OD (MAX)	500 PER BAG	100 PER BAG		
Unshielded 6-position, 4-contacts 24-26 solid 24-26 stranded 26-28 solid 26-28 stranded	0.034" to 0.039" (0.86 to 0.99 mm)	Round	0.11" (2.8mm)	MP-64U-R-5 (6-569031-2)	MP-64U-R-1 (6-569031-3)			
		Flat oval	0.09" x 0.26" (2.29 x 6.61 mm)	MP-64U-F-5 (6-641335-2)	MP-64U-F-1 (6-641335-3)			
	0.029" to 0.034" (0.74 to 0.86 mm)	Flat oval	0.09" x 0.26" (2.29 x 6.61 mm)	MP-64U-FS-5 (6-557965-2)	MP-64U-FS-1 (6-557965-3)			
Unshielded 6-position, 2-contacts	24-26 solid 24-26 stranded	0.034" to 0.039" (0.86 to 0.99 mm)	Flat oval	0.09" x 0.26" (2.29 x 6.61 mm)	MP-62U-F-5 (6-641333-2)	MP-62U-F-1 (6-641333-3)		

 $^1$  Typical conductor size supported by insulation OD. Insulation OD is the determining specification.  $^2$  Small conductor modular plugs are transparent blue in color.

### 4-position plug (MP-44U-\_-\_)



#### **ORDERING INFORMATION**

DESCRIPTION	CONDUCTOR (AWG) <sup>1</sup>	INSULATION OD	CABLE TYPE	CABLE JACK OD (MAX)	500 PER BAG	100 PER BAG
Unshielded	24-26 solid	0.034" to 0.039"	Flat oval	0.09" x 0.19"	MP-44U-F-5	MP-44U-F-1
4-position, headset	24-26 stranded	(0.86 to 0.99 mm)		(2.29 x 4.83 mm)	(6-641334-2)	(6-641334-3)

<sup>1</sup> Typical conductor size supported by insulation OD. Insulation OD is the determining specification.

### 10-position plug (MP-1010U-R-\_)

ORDERING INFORMATION							
DESCRIPTION	CONDUCTOR (AWG) <sup>1</sup>	INSULATION OD	CABLE TYPE	CABLE JACK OD (MAX)	500 PER BAG	100 PER BAG	
Unshielded 10-position	24-26 solid 24-26 stranded	0.034" to 0.039" (0.86 to 0.99 mm)	Round	0.21" (5.3 mm)	MP1010U-R-5 (6-557963-2)	MP1010U-R-1 (6-557963-3)	

<sup>1</sup> Typical conductor size supported by insulation OD. Insulation OD is the determining specification.

### Shielded category 6A, 6 and CAT 5EMT modular plugs

### FEATURES

- · Ratchet control provides complete termination cycle
- $\cdot~$  Die set and tool crimps both the strain relief and the modular contacts at the same time
- · Interchangeable die sets accommodate all plug sizes
- · Sold with or without die. Dies can be purchased separately



ORDERING INFORMATION						
CABLE (STRAIN RELIEF) DIAMETER	0.185" to 0.216" 4.7mm to 5.5 mm SIZE "A"	0.201" to 0.236" 5.1 mm to 6.0 mm SIZE "B"	0.224" to 0.276" 5.7mm to 7.0 mm SIZE "C"			
Die set only	790163-8	790163-2	1-790163-2			
Tool with die*	790163-7	790163-1	1-790163-1			

See instruction sheet 408-8738 for more information. \*Includes JacKnack Tool.



### Pro-installer's modular plug hand tool

### FEATURES

- · Ratchet control provides complete termination cycle
- · Sold with and without die sets
- · Interchangeable die sets accommodate all plug sizes

Die set to modular plug cross-reference shown

#### ORDERING INFORMATION



HAND TOOL WITHOUT DIE: 2-231652-0								
Plug style	Cat 6A 8-position (MP-6AU)	CAT 5E 8-position (MP-5E_)	Cat 5 8-position (MP-88_)	6-position long body (MP-66L_)	6-position standard body (MP-66)	4-position (MP-44U)		
DOT color	Pink	White	Black	Violet	Blue	Green		
Die only P/N	1-853400-5	1-853400-0	853400-1	853400-7	853400-8	853400-3		
Hand tool with die	3-231652-7	3-231652-0	2-231652-1	*	2-231652-8	2-231652-3		

See instruction sheet 408-9767 for more information.

\*Violet available in die set only.

# Pro-installer's modular plug hand tool kits and accessories

### FEATURES

· Each kit contains carrying case, blade replacement kit, screw driver, and items as listed

· Modular plug to die set cross reference listed as shown



#### ORDERING INFORMATION

	JacKnack tool	Hand tool	Cat 5E 8-position die set	8-position die set	6-position standard	4-position die set	
Plug catalog #			MP-5E	MP-88	MP-66	MP-44U	
Dot color			White	Black	Blue	Green	
Description		2-231652-0	1-853400-0	853400-1	853400-8	853400-3	Part numbe
Pro-installer's mod plug hand tool kits	Х	Х	x	х	Х	х	1-231666-5
	Х	Х	-	х	Х	х	1-231666-1
	Х	Х	-	х	Х	-	1-231666-0
Replacement blade kit (1 set of strip blades and gauge)						231662-1	
Cutter blade							856727-1

See instruction sheet 408-9767 for more information.

CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement. We collaborate with our customers and partners to design, create and build the world's most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at commscope.com



#### commscope.com

Visit our website or contact your local CommScope representative for more information.

#### © 2021 CommScope, Inc. All rights reserved.

Unless otherwise noted, all trademarks identified by (a) or M are registered trademarks, respectively, of CommScope, Inc. This document is for planning purposes only and is not intended to modify or supplement any specifications or warranties relating to CommScope products or services. CommScope is committed to the highest standards of business integrity and environmental sustainability with a number of CommScope's facilities across the globe certified in accordance with international standards, including ISO 9001, TL 9000, and ISO 14001. Further information regarding CommScope's commitment can be found at <a href="https://www.commscope.com/About-Us/Corporate-Responsibility-and-Sustainability">www.commscope.com/About-Us/Corporate-Responsibility-and-Sustainability.</a>