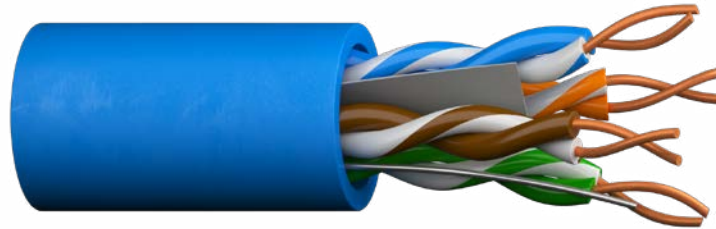


Category Cables



For more than a century and a half, Prysmian has stayed ahead of the industry's changing needs with products that anticipate future performance requirements and provide best value in cabling solutions. With the ever-increasing need for readily available information in our lives, CAROL® Brand Category Cables transmit data through computer and telecommunications systems and are available in a variety of performance levels and constructions, including Category 6 and Category 5e cables.

Prysmian's CAROL® MAX Category 6 Cable is a cost effective, extended distance 22 AWG cable that provides power and bandwidth beyond IEEE standards. Perfect for making it easier to connect complex network systems with high-powered PoE capabilities. CAROL® 6 MAX delivers 1 Gbps at up to 200 meters certified by Third Party Testers.

Next, our Category 6 cables have been enhanced to provide the market with a cost-effective, high-bandwidth and high-performance cabling solution for more robust and complex applications at Gigabit speed and full duplex transmissions. Our Cat 6 solutions provides a cable system infrastructure with assurance for advanced applications demanding more bandwidth.

Finally, with steady, continuous performance, our Category 5e solutions meet all Cat 5e requirements for present and future network requirements ensuring increased headroom, lower bit-error rates and higher signal transmission quality.

All CAROL® Brand Category Cables are safety listed to the NEC and CEC requirements, and most are verified for electrical performance. This independent third party testing further confirms the quality and performance of Prysmian products.

Category 6 Cable – CAROL® MAX

Extended Distance (22 AWG)



PART NUMBERS

JACKET COLOR	CMP (Plenum)		OSP (Outside Plant)
	PULL-PAC®	SPOOL-PAC®	SPOOL-PAC®
Blue	CP622.30.07	CP622.A3.07	N/A
White	CP622.30.02	CP622.A3.02	N/A
Gray	CP622.30.10	CP622.A3.10	N/A
Green	CP622.30.06	CP622.A3.06	N/A
Yellow	CP622.30.05	CP622.A3.05	N/A
Red	CP622.30.03	CP622.A3.03	N/A
Black	CP622.30.01	CP622.A3.01	CX622.A3.01

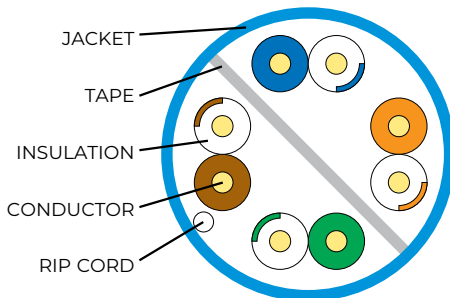
ELECTRICAL PERFORMANCE

FREQUENCY MHZ	PSACR (MIN)	ACR (MIN)	INSERTION LOSS (MAX)	PSNEXT (MIN)	NEXT (MIN)	RETURN LOSS (MIN)	TCL (MIN)
1	70.4	72.4	1.9	72.3	74.3	20.0	40.0
4	59.8	61.8	3.5	63.3	65.3	23.0	40.0
10	51.8	53.8	5.5	57.3	59.3	25.0	40.0
16	47.2	49.2	7.0	54.2	56.2	25.0	38.0
20	44.9	46.9	7.9	52.8	54.8	25.0	37.0
31.25	40.0	42.0	9.9	49.9	51.9	23.6	35.1
62.5	31.1	33.1	14.3	45.4	47.4	21.5	32.0
100	23.9	25.9	18.4	42.3	44.3	20.1	28.2
150	16.7	18.7	23.0	39.7	41.7	18.9	27.0
200	10.8	12.8	27.0	37.8	39.8	18.0	26.0
250	5.7	7.7	30.6	36.3	38.3	17.3	-

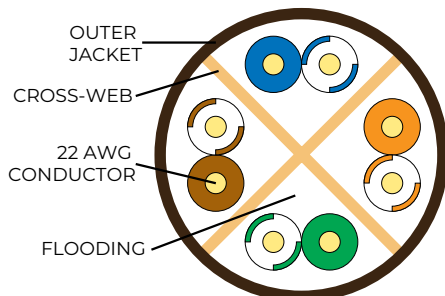
Note: Values are expressed in dB per 100m (328 ft.) length @ 20° C.

CMP

CATEGORY 6 CROSS-SECTION



OSP



Product Construction:

Conductors:

- 22 AWG solid bare annealed copper

Separator:

- CMP: Divider
- OSP: Cross-web

Insulation:

- CMP: Fluoropolymer
- OSP: Polyolefin

Jacket:

- CMP: Low-Smoke, Flame-Retardant PVC
- OSP: UV- and abrasion-resistant polyethylene

Applications:

- IEEE 802.3; 1000 Base-T, 100 Base-TX, 10 Base-T, PoE, PoE+, PoE++
- ANSI/TIA 854: 1000 Base-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband a Baseband Analog Video
- OSP: Duct and conduit installations
- Supports the growth of higher-wattage devices (IT/IP, IoT, and IoE)
- CMP: Compatible with new higher-speed, higher-power USB 3.1 SuperSpeed

Compliances:

- ANSI/TIA 568.2-D
- CMP: TIA TSB-184:2009
- UL 444
- RoHS Compliant Directive 2011/65 EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)
- OSP: Telcordia (Bellcore) Specification GR-421- CORE Water Penetration Requirement

Packaging:

- 1000' Spool-Pac®

PHYSICAL DATA

	PLENUM	OSP
Nominal Cable Diameter (in)	0.245	0.295
Nominal Cable Weight (lbs/1000ft)	38	40
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	32	32
Temperature Rating (° C)		
Installation:	0 to +60	-30 to +60
Operation:	-20 to +75	-45 to +80

ELECTRICAL CHARACTERISTICS

	MAX	OSP
DC Resistance Ohms/100m (328ft) @ 20° C	9.38	6.50
DC Resistance Unbalance Individual Pair %	4.00	< 1
Delay Skew ns/100m	45	35
Nom. Velocity of Propagation % Speed of Light	CMP: 72% OSP: 66%	
Characteristic Impedance Ohms	100 ± 15	
Frequency (f):	1-350 MHz	



CAROL® MAX

Cat 6 Extended Distance (22 AWG)

FEATURING
EFFICIENCY MAX
 technology to support PoE applications

Carol® 6 MAX Category 6 (22 AWG) cables provide maximum versatility to challenging installations with a Plenum and Outside Plant cable option. The cable meets all Category 6 requirements under 100 meters. It also provides power and bandwidth at extended distances beyond the IEEE standard. The same industry-trusted high-powered PoE cable that has been in the market since 2015 is now guaranteed to meet your extended distance needs.

Primary enhancement—larger copper (22 AWG)

- Less voltage drop
- Increased current-carrying capacity
- Performs better in hotter environments (less heat generation)

CAROL® 6 MAX delivers
 1 Gbps at up to
 200 meters certifiable
 by Third Party Testers

Exceeds the 100-meter Category Cable limitations distance while meeting all your application needs:



ITC

AV SYSTEMS
 IP PHONES



SECURITY

4K CAMERAS
 ACCES CONTROL



IoT DEVICES

RETAIL
 TEMPERATURE/HUMIDITY CONTROLS



BUILDING AUTOMATION

PARKING SYSTEMS
 BUILDING SYSTEMS

Performance expectations can vary based on application and temperature. The below table is a guide to the max distance in your installation:

Type 1 PoE (802.3af) up to 15.4W – ex. VoIP and Cameras

Type 2 PoE (802.3at) up to 30W – ex. Video IP Phones, Alarm Systems, Heated / PTZ Cameras

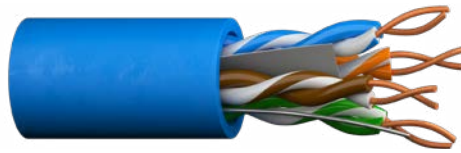
Type 3/Type 4 PoE (802.3bt) up to 60W/90W – ex. WiFi, Laptops, 8k Cameras

CAROL® MAX Cable**	PoE @ Ambient Temp			
	Type 1	Type 2	Type 3	Type 4
Max Distance @ 10 Mbps	274m	250m	250m	250m
Max Distance @ 100 Mbps	230m	230m	230m	230m
Max Distance @ 1Gbps	200m	200m	200m	200m

**Maximum distance is subject to change based on manufacturer's equipment and other environmental conditions.

Category 6 Cable

Standard-Compliant Solution



PART NUMBERS

JACKET COLOR	PULL-PAC® II		SPOOL-PAC®	
	CMR (NON-PLENUM)	CMP (PLENUM)	CMR (NON-PLENUM)	CMP (PLENUM)
Blue	CR6.30.07	CP6.30.07	CR6.A3.07	CP6.A3.07
White	CR6.30.02	CP6.30.02	CR6.A3.02	CP6.A3.02
Gray	CR6.30.10	CP6.30.10	CR6.A3.10	CP6.A3.10
Green	CR6.30.06	CP6.30.06	CR6.A3.06	CP6.A3.06
Yellow	CR6.30.05	CP6.30.05	CR6.A3.05	CP6.A3.05
Red	CR6.30.03	CP6.30.03	CR6.A3.03	CP6.A3.03

ELECTRICAL PERFORMANCE

FREQUENCY MHZ	PSACR (MIN)	ACR (MIN)	ATTENUATION (MAX)	PSNEXT (MIN)	NEXT (MIN)	PSELNEXT (MIN)	ELFEXT (MIN)	RETURN LOSS (MIN)	LCL (MIN)	ELTCTL (MIN)
1	70.3	72.3	2.0	72.3	74.3	64.8	67.8	20.0	40.0	35.0
4	59.3	61.5	3.8	63.3	65.3	52.8	55.7	23.0	40.0	23.0
10	51.3	53.3	6.0	57.3	59.3	44.8	47.8	25.0	40.0	15.0
16	46.7	48.7	7.6	54.2	56.2	40.7	43.7	25.0	38.0	10.9
20	44.3	46.3	8.5	52.8	54.8	38.8	41.7	25.0	37.0	9.0
31.25	39.2	41.2	10.7	49.9	51.9	34.9	37.9	23.6	35.1	5.1
62.5	29.9	32.0	15.4	45.4	47.4	28.9	31.8	21.5	32.0	5.0
100	22.5	24.5	19.8	42.3	44.3	24.8	27.8	20.1	30.0	5.0
150	14.9	16.9	24.7	39.7	41.7	21.3	24.3	18.9	28.2	5.0
200	8.8	10.8	29.0	37.8	39.8	18.8	21.8	18.0	27.0	5.0
250	3.5	5.5	32.8	36.3	38.3	16.8	19.8	17.3	26.0	5.0
350	—	—	39.8	34.1	36.1	13.9	16.9	16.3	—	—
400	—	—	43.0	33.3	35.3	12.8	15.8	15.9	—	—
500	—	—	48.9	31.8	33.8	10.8	13.8	15.2	—	—

Notes: Values are expressed in dB per 100m (328 ft.) length. Values above 250 MHz are for informational purposes only.

PHYSICAL DATA

	CMR (NON-PLENUM)	CMP (PLENUM)
Nominal Cable Diameter (in)	0.220	0.205
Nominal Cable Weight (lbs/1000ft)	28	28
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	32	32
Temperature Rating (°C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +75

ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20 °C	9.38
DC Resistance Unbalance (max) Individual Pair %	4.0
Delay Skew (max) ns/100m	45
Nom. Velocity of Propagation % Speed of Light	CMR: 70 CMP: 68
Characteristic Impedance Ohms	100 ± 15
Frequency (f):	1-250 MHz

Data subject to change.

Product Construction:

Conductors:

- Non-Plenum: 23 AWG sold bare annealed copper
- Plenum: 24 AWG sold bare annealed copper

Insulation:

- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

Separator:

- Tape

Rip Cord:

- Applied longitudinally under jacket

Jacket:

- Non-Plenum: flame-retardant PVC
- Plenum: low-smoke, flame-retardant PVC
- TRU-Mark® print legend contains footage markings from 1000' to 0'

Applications:

- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 1000 BASE-TX, 10 BASE-T
- ANSI/TIA/EIA 854: 1000 BASE-TX
- 155 Mp/s, 1.2 Gb/s ATM
- ANSI X3.263: 100 Mb/s
- IEEE 802.3af DTE Power (PoE)
- Digital video

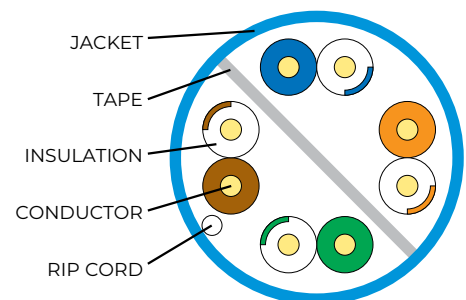
Compliances:

- ANSI/TIA 568 B.2-1 (Category 6)
- ANSI/TIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class E)
- IEC 60332-1 (Category 6)
- Type CMP (NFPA 262 and CSA FT6 Steiner Tunnel Fire Tests for Plenum Applications)
- UL 444
- NEC/CEC Type CMP (NFPA 262 and CSA FT6 Steiner Tunnel Fire Tests for Plenum Applications)
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- RoHS Compliant Directive 2011/65/EU
- Third-party verified for guaranteed performance

Packaging:

- 1000' Pull-Pac® II
- 1000' Spool-Pac®

CATEGORY 6 CROSS-SECTION



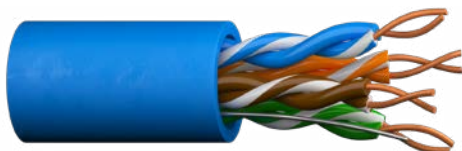
Designed to Meet
NFPA 262 and CSA FT6
Steiner Tunnel Fire Tests
for Plenum Applications

Underwriters Laboratories Inc.



Category 5e Cable

Enhanced Transmission Throughput



PART NUMBERS

JACKET COLOR	PULL-PAC® II		SPOOL-PAC®	
	CMR (NON-PLENUM)	CMP (PLENUM)	CMR (NON-PLENUM)	CMP (PLENUM)
Blue	CR5.30.07	CP5.30.07	CR5.A3.07	CP5.A3.07
White	CR5.30.02	CP5.30.02	CR5.A3.02	CP5.A3.02
Gray	CR5.30.10	CP5.30.10	CR5.A3.10	CP5.A3.10
Green	CR5.30.06	CP5.30.06	CR5.A3.06	CP5.A3.06
Yellow	CR5.30.05	CP5.30.05	CR5.A3.05	CP5.A3.05
Red	CR5.30.03	CP5.30.03	CR5.A3.03	CP5.A3.03

ELECTRICAL PERFORMANCE

FREQUENCY MHZ	PSACR (MIN)	ACR (MIN)	ATTENUATION (MAX)	PSNEXT (MIN)	NEXT (MIN)	PSELFEXT (MIN)	ELFEXT (MIN)	RETURN LOSS (MIN)
1	60.3	63.3	2.0	62.3	65.3	60.8	63.8	20.0
4	49.2	52.2	4.1	53.3	56.3	48.7	51.7	23.0
10	40.8	43.8	6.5	47.3	50.3	40.8	43.8	25.0
16	36.0	39.0	8.2	44.2	47.2	36.7	39.7	25.0
20	33.5	36.5	9.3	42.8	45.8	34.7	37.7	25.0
25	30.9	33.9	10.4	41.3	44.3	32.8	35.8	24.3
31.25	28.2	31.2	11.7	39.9	42.9	30.9	33.9	23.6
62.5	18.4	21.4	17.0	35.4	38.4	24.8	27.8	21.5
100	10.3	13.3	22.0	32.3	35.3	20.8	23.8	20.1
155	1.4	4.4	28.1	29.4	32.4	16.9	19.9	—
200	—	—	32.4	27.8	30.8	14.7	17.7	—
250	—	—	36.9	26.3	29.3	12.8	15.8	—
350	—	—	44.9	24.1	27.1	9.9	12.9	—

Notes: Values are expressed in dB per 100m (328 ft.) length. Values above 250 MHz are for informational purposes only.

PHYSICAL DATA

	CMR (NON-PLENUM)	CMP (PLENUM)
Nominal Cable Diameter (in)	0.200	0.180
Nominal Cable Weight (lbs/1000ft)	21	19
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	25	25
Temperature Rating (°C)		
Installation:	0 to +60	0 to +60
Operation:	-10 to +60	-10 to +60

ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20 °C	9.38
DC Resistance Unbalance (max) Individual Pair %	4.0
Delay Skew (max) ns/100m	45
Nom. Velocity of Propagation % Speed of Light	CMP: 72 CMR: 70
Characteristic Impedance	Ohms
Frequency (f):	1-100 MHz 100 ± 15

Data subject to change.

Product Construction:

Conductors:

- 24 AWG solid bare annealed copper

Insulation:

- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

Rip Cord:

- Applied longitudinally under jacket

Jacket:

- Non-Plenum: flame-retardant PVC
- Plenum: low-smoke, flame-retardant PVC
- TRU-Mark® print legend contains footage markings from 1000' to 0'

Applications:

- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- 52/155 Mp/s ATM
- ANSI X3.263: 100 Mb/s
- 4/16 Mp/s token ring

Compliances:

- ANSI/TIA 568 B.2 (Category 5e)
- ICEA S-90-661 (Category 5e)
- Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262 and CSA FT6 Steiner Tunnel Fire Tests for Plenum Applications)
- UL 444
- RoHS Compliant Directive 2011/65/EU
- Third-party verified for guaranteed performance

Packaging:

- 1000' Pull-Pac® II
- 1000' Spool-Pac®

CATEGORY 5e CROSS-SECTION

