CMR-LSHF

	MIDR ESSEX
Heat Dissipation Element Solid Annealed Copper Conductor Thermoplastic Insulation Flame Retardant PVC Jacket	
SPPOE	SIB 1G SIB 1G Solution Partner

## PECIFICATIONS

SPECIFICATIONS	
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	22 (0.64)
Insulation	Solid HPDE
Insulation Colors	Pair 1: ColorTip Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Heat Dissipation Element	Coated Copper
Jacket	Flame retardant LSHF
Characteristic Impedance Ohms	100 ± 15
Nominal Velocity of Propagation, %	70
Performance Compliance	UL listed CMR-LP (0.5) UL 444 CSA C22.2 No. 214-08 UL 1666 IEC 60134 IEC 60332-1 IEC 60754 IEC 62821-1 IEC 62821-2 IEC 62821-3 ANSI/TIA-568.2-D Article 800, NEC (NFPA 70) RoHS-compliant/RoHS 2-compliant HDBaseT Class A and B
NRTL Programs	UL listed CMR-LP (0.5) c(UL) listed CMR-LSHF
Sustainability	RoHS-compliant/RoHS 2-compliant Living Product Challenge

### **CAUTIONARY INFORMATION**

For distance and warranty information please refer to TG115 PowerWise® Extended Distance Frequently Asked Questions.

### PRODUCT DESCRIPTION

PowerWise® 1G 4PPoE CMR-LSHF AWG 22 with heat dissipation element cables provide the best performance and overall value for 4 Pair Power over Ethernet (4PPoE) applications requiring up to 100W of power and up to 2.5GBASE-T Ethernet performance. PowerWise® 1G 4PPoE CMR-LSHF cables are specifically designed to mitigate temperature build-up offer exceptional energy efficiency and ensure performance (up to 2.5GBASE-T Ethernet) over the lifetime of your system. Cable temperature increases are reduced and power efficiency is increased as a result of 22 gauge conductors and the heat dissipation element.

PowerWise® 1G 4PPoE CMR-LSHF cable provides the performance benefits with a small diameter. PowerWise® 1G 4PPoE CMR-LSHF cables are the best solution to connect and power your 4PPoE and extended distance applications compared to standard category cable designs.

PowerWise® 1G 4PPoE CMR-LSHF is ideal for sustainable certified building

#### APPLICATIONS

- 10BASE-T through 2.5GBASE-T Ethernet
- Power over Ethernet (PoE) IEEE 802.3bt Type 1 to 4
- ATM and token ring
- HDBaseT Class A and B

#### FEATURES

- Guaranteed 0.3 dB headroom Performance assurance for for IL, ACR and PSACR exceptional overall channel performance Tested 350 MHz Assures ample bandwidth Headroom Tested in most severe AWG 22 insulated wire offers
- temperature conditions in bundle of 100 cables
- CableID<sup>®</sup> alpha numeric code printed every 2 feet
- QuickCount<sup>®</sup> marking system in feet and meters
- ColorTip® circuit identification system
- Color coded box labels
- HDBaseT Class A and B certified •
- UL LP listed
- Temperature cable rating: 75°C for CMR
- Heat dissipation element
- Ideal for extended distance over 100m

# BENEFITS

- 88% power efficiency and lowest temperature increase inside a bundle, the best of its class
- Allows both ends of a cable run to be easily identifiable without the need to separately label or tone the cable
- Provides remaining length of cable on reel
- Easily identifiable conductor mates even in low-light environments
- Easily identifies jacket colors
- Ideal for any A/V applications up to 100m channel
- Third-party assurance of product safety in high-heat and high-power applications
- Temperature rating of the insulation AND of the jacket provide improved cable lifespan despite high-heat and high-power applications
- Mitigate the heat to same level along the whole distance of the link for improved bandwidth performances
- Guaranteed distance for different applications based on BER test performed by UL at UL facility





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PART NUMBERS AND PHYSICAL CHARACTERISTICS											
Listing	Part Number <sup>1</sup>		Nominal Diameter in (mm)		pprox. Weight s/kft (kg/km)	Package		Packages per Pallet			
CMR	PW52-H46-xM		0.27 (6.9)		36 (54)	1,000 ft BrakeBox®		12			
CMR	PW52-H72-xM		0.27 (6.9)		36 (54)	1,000 ft Plywood Reel		16			
JACKET COLORS											
<sup>1</sup> Replace "x" with:	Blue = 2	Gray = 3	White = 4	Green = 5	Yellow = 6	Purple = 7	Red = 9	Black = E			

#### ELECTRICAL SPECIFICATIONS

	Insertion Loss @ 20°C Maximum dB/100 m			NEXT Minimum dB/100 m		ACR Minimum dB/100 m			PSNEXT Minimum dB/100 m	
Frequency	TIA-568.2-D Superior Essex		TIA-568.2-D Superior Essex		TIA-568.2-D Superior Essex			TIA-568.2-D	Superior Essex	
MHz	Specified	Guaranteed	Typical	Specified	Typical	Calculated	Guaranteed	Typical	Specified	Typical
1	2	1.7	1.7	65.3	76.8	63.3	63.6	81.0	62.3	75.3
4	4.1	3.8	3.7	56.3	67.8	52.2	52.5	70.1	53.3	66.3
8	5.8	5.5	5.4	51.8	63.3	46.0	46.3	63.9	48.8	61.8
10	6.5	6.2	6.0	50.3	61.8	43.8	44.1	61.8	47.3	60.3
16	8.2	7.9	7.7	47.2	58.7	39.0	39.3	57.0	44.3	57.2
20	9.3	9.0	8.6	45.8	57.3	36.5	36.8	54.7	42.8	55.8
25	10.4	10.1	9.6	44.3	55.8	33.9	34.2	52.2	41.3	54.3
31.25	11.7	11.4	10.8	42.9	54.4	31.2	31.5	49.6	39.9	52.9
62.5	17	16.7	15.5	38.4	49.9	21.4	21.7	40.4	35.4	48.4
100	22	21.7	19.8	35.3	46.8	13.3	13.6	33.0	32.3	45.3
155			24.8		43.9			25.1		42.4
200			28.2		42.3			20.1		40.8
250			31.8		40.8			15.0		39.3
300			35		39.6			10.6		38.1
350			38.3		38.6			6.3		37.1

	PSACR Minimum dB/100 m				s Minimum 00 m	ELFEXT Minimum dB/100 m		PSELFEXT Minimum dB/100 m	
Frequency MHz	TIA-568.2-D	Superior Essex		TIA-568.2-D	Superior Essex	TIA-568.2-D	Superior Essex	TIA-568.2-D	Superior Essex
	Calculated	Guaranteed	Typical	Specified	Typical	Specified	Typical	Specified	Typical
1	60.3	60.6	78.3	20.0	33.0	63.8	74.6	60.8	69.3
4	49.2	49.5	67.4	23.0	36.0	51.8	62.6	48.8	57.3
8	43.0	43.3	61.2	24.5	37.5	45.7	56.5	42.7	51.2
10	40.8	41.1	59.1	25.0	38.0	43.8	54.6	40.8	49.3
16	36.1	36.4	54.3	25.0	38.0	39.7	50.5	36.7	45.2
20	33.5	33.8	52.0	25.0	38.0	37.8	48.6	34.8	43.3
25	30.9	31.2	49.5	24.3	37.3	35.8	46.6	32.8	41.3
31.25	28.2	28.5	46.9	23.6	36.6	33.9	44.7	30.9	39.4
62.5	18.4	18.7	37.7	21.5	34.5	27.9	38.7	24.9	33.4
100	10.3	10.6	30.3	20.1	33.1	23.8	34.6	20.8	29.3
155			22.4		31.8		30.8		25.5
200			17.4		31.0		28.6		23.3
250			12.3		30.3		26.6		21.3
300			7.9		29.8		25.1		19.8
350			3.6		29.3		23.7		18.4

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