

1) CONSTRUCTION:		NOM. DIA.
CONDUCTOR:	26 AWG 7/34 STRANDED TINNED COPPER	.019"
INSULATION:	HIGH DENSITY POLYETHYLENE, .009" NOM. WALL THICKNESS	.036"
PAIRS:	COLOR CODED SINGLES TWISTED INTO PAIRS	.072"
CABLE:	(4) TWISTED PAIRS TWISTED TOGETHER WITH A CENTRAL SPLINE AND WRAPPED WITH A FOAM POLYPROPYLENE TAPE TO FORM A CABLE CORE.	.176"
SHIELDS:	AN OVERALL SHIELD OF 38 AWG TINNED COPPER BRAID (80% MINIMUM COVERAGE), SHALL BE APPLIED OVER THE CABLE CORE. A SECOND SHIELD OF ALUMINIZED POLYESTER FOIL (FOIL IN, 100% COVERAGE) SHALL BE APPLIED OVER THE BRAID.	.195"
JACKET:	ZHFR POLYURETHANE, (COLOR, PER CHART 1) , .037" NOM. WALL THICKNESS	.269" ± .010" (BY CALIPER)
	OVERALL CABLE DIAMETER	

2) PHYSICAL PROPERTIES:	
TEMPERATURE RATING, MAX.	75°C
TEMPERATURE RATING, MIN.	-40°C
WT./M', NOM., NET.	37.3 LBS.
FLEX LIFE*	1 MILLION CYCLE TEST (10X CABLE O.D., MINIMUM RADIUS) 10 MILLION CYCLE TEST (20X CABLE O.D., MINIMUM RADIUS)
TORSION TEST*	
(1 LB LOAD, 360°, 71 CYCLES/MIN, @ 20°C)	3 MILLION CYCLE TEST
JACKET SMOKE GENERATION PER ASTM E662, NOM.	Ds = 251 (FLAMING, @ 4 MINUTES) Ds = 16 (NON-FLAMING, @ 4 MINUTES)
JACKET OIL RESISTANCE (IRM 902 OIL, 7 DAYS @ 100°C)	
TENSILE STRENGTH RETENTION, NOM.	100%
ELONGATION RETENTION, NOM.	80%

CHART 1:

QUABBIN P/N	JACKET COLOR
5123	BLACK
5124	BLUE
5125	TEAL
5126	RED
5127	YELLOW

*BASED ON TESTING OF SIMILAR CABLES

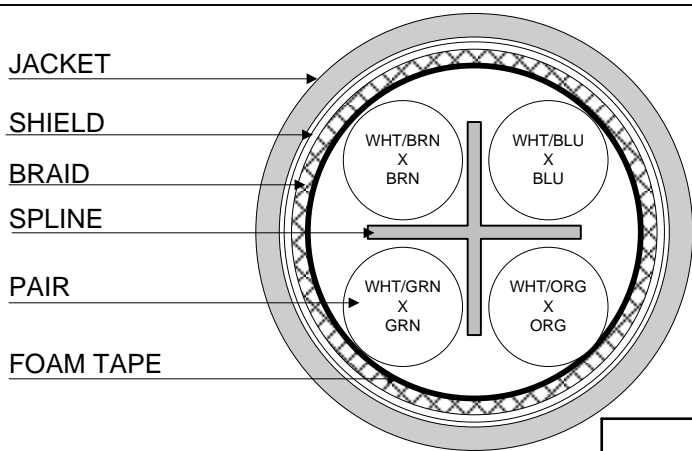
- 3) ELECTRICAL CHARACTERISTICS:
SEE PAGE 2
- 4) AGENCY APPROVALS:
NEC (ETL) TYPE CMX
CEC C(ETL) TYPE CMX
EU CE MARK: MEETS EU DIRECTIVE 2011/65/EU (RoHS II)

5) APPLICATION:
PASSES VW-1.

6) PRINT: (WHITE INK ON BLACK JACKET, ALL OTHERS BLACK INK)
QUABBIN DATAMAX EXTREME HIGH FLEX ZERO HALOGEN INDUSTRIAL ETHERNET/IP PATCH CORD CAT 6a SF/UTP P/N **(P/N PER CHART 1)** -- C(ETL)US TYPE CMX OIL RES I 26 AWG 75C -- CE RoHS -- **(LOT DESIGNATOR) (SEQUENTIAL FOOTAGE)**

- 7) COLOR CODE:
- 1. BLUE X WHITE/BLUE
- 2. ORANGE X WHITE/ORANGE
- 3. GREEN X WHITE/GREEN
- 4. BROWN X WHITE/BROWN

8) PACKAGING:
TO BE PACKAGED AS PER QWC'S STANDARD PACKAGING



CUSTOMER APPROVAL:

DATE:

Created 10/29/18	DRAWN: SGH 07/16/21	
REV. 03	CHECKED: ZRS 08/05/21	
TITLE 4PR SF/UTP INDUSTRIAL HIGH FLEX ETHERNET/IP PATCH CORD – CATEGORY 6/6a		
DRAWING#	QWC0111	1 of 2

3) ELECTRICAL CHARACTERISTICS:

POE COMPLIANT TO 70 METERS WHEN INSTALLED PER RECOMMENDATIONS IN TIA TSB-184
 CABLE WILL MEET CAT 6a CHANNEL REQUIREMENTS TO 70 METER LENGTH
 CAPACITANCE, MUTUAL, NOM. 13.5 PF/FT. AT 1 MHz
 DIELECTRIC WITHSTANDING, MIN. 1500V RMS
 VOLTAGE RATING, MAX. 300V
 D.C. RESISTANCE, MAX. 42.6 Ω/1,000'

NOTE: TESTING FOR THE FOLLOWING IS CONDUCTED OFF THE REEL. (FOR 100m OF CABLE)

IMPEDANCE, NOM.	100 ± 15 Ω 1 - 100 MHz 100 ± 20 Ω 100 - 500 MHz	
RETURN LOSS	$1 \leq f < 10 \text{ MHz}$ 20 + 6 LOG(<i>f</i>) dB MIN* $10 \leq f < 20 \text{ MHz}$ 26 dB MIN* $20 \leq f \leq 100 \text{ MHz}$ 26 - 5 LOG(<i>f</i> /20) dB MIN* $100 < f \leq 250 \text{ MHz}$ 25 - 8.6 LOG(<i>f</i> /20) dB MIN	
PS NEXT	$1 \leq f \leq 500 \text{ MHz}$ 42.3 - 15 LOG (<i>f</i> /100) dB MIN	
NEXT	$1 \leq f \leq 500 \text{ MHz}$ 44.3 - 15 LOG (<i>f</i> /100) dB MIN	
PS ACRF	$1 \leq f \leq 500 \text{ MHz}$ 24.8 - 20 LOG(<i>f</i> /100) dB MIN	
ACRF	$1 \leq f \leq 500 \text{ MHz}$ 27.8 - 20 LOG(<i>f</i> /100) dB MIN	
INSERTION LOSS	$1 \leq f \leq 500 \text{ MHz}$ 1.5[1.82 √(<i>f</i>) + 0.0091(<i>f</i>) + 0.25/√(<i>f</i>)] dB MAX	
DELAY	$4 \leq f \leq 500 \text{ MHz}$ 534 + 36/√(<i>f</i>) ns MAX**	
DELAY SKEW	$1 \leq f \leq 500 \text{ MHz}$ <45 ns	
PS ANEXT LOSS (6 AROUND 1)	$1 \leq f \leq 500 \text{ MHz}$ 62.5 - 15 LOG(<i>f</i> /100) dB 50 - 500 MHz 67 dB 1 - 50 MHz	
PS AFEXT (6 AROUND 1)	$1 \leq f \leq 500 \text{ MHz}$ 38.2 - 20 LOG(<i>f</i> /100) dB	
COUPLING ATTENUATION TESTED PER IEC 62153-4-9	$30 \leq f \leq 250 \text{ MHz}$ 100 - 20 LOG(<i>f</i>) (MAX 60 dB) E3 * Segregation class d acc. EN 50174-2	
VELOCITY OF PROPAGATION	68%	

*PER ODVA VOLUME 2 ETHERNET/IP
 **PER IEC 61156-6

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DRAWING#		QWC0111
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