1) CONSTRUCTION: NOM. DIA.

CONDUCTOR: 26 AWG 7/34 STRANDED TINNED COPPER .019" HIGH DENSITY POLYETHYLENE, .009" NOM. WALL THICKNESS INSULATION: .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"

AN OVERALL SHIELD OF 38 AWG TINNED COPPER BRAID (80% MINIMUM SHIELDS:

> COVERAGE) SHALL BE APPLIED OVER THE CABLE CORE. AN ALUMINIZED POLYESTER FOIL SHIELD (FOIL IN, 100% COVERAGE) SHALL BE APPLIED OVER

THE BRAID SHIELD. .195"

POLYURETHANE, BLACK, .022" NOM. WALL THICKNESS (PRESSURE) JACKET:

OVERALL CABLE DIAMETER .239" NOM. (± .010")

(BY CALIPER)

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2) PHYSICAL PROPERTIES:

75°C TEMPERATURE RATING, MAX. -40°C TEMPERATURE RATING, MIN.

CABLE CAN WITHSTAND STORAGE TEMPERATURES UP TO 85°C FOR 16 HOURS (PER QUABBIN TEST REPORT

#10-0001, BY DESIGN SIMILARITY)

WT./M', NOM., NET. 32.4 LBS.

JACKET IS UV RESISTANT

FLEX LIFE

1 MILLION CYCLE TEST (10X CABLE O.D., MINIMUM RADIUS) (126 CYCLES/MIN, @ 20°C)

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

3) ELECTRICAL CHARACTERISTICS:

SEE PAGE 2

4) AGENCY APPROVALS:

EU CE MARK: MEETS EU DIRECTIVE 2011/65/EU (RoHS II)

5) APPLICATION:

SHIELDED FLEXIBLE PATCH/JUMPER CABLE TO SUPPORT SCREENED 568.2-D CATEGORY 6 AND 6a APPLICATIONS. RoHS COMPLIANT MATERIALS MEET EU DIRECTIVE 2002/95/EC, EU DIRECTIVE 2011/65/EU, AND EU DIRECTIVE 2015/863/EU. PATENT NO. US 8.487.184 B2.

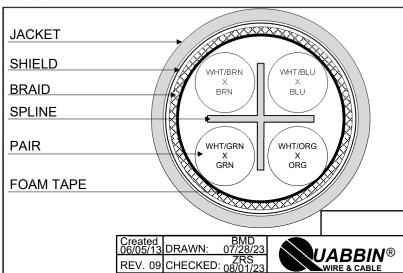
6) PRINT: (WHITE INK)

QUABBIN DATAMAX EXTREME HIGH FLEX INDUSTRIAL ETHERNET/IP PATCH CORD CAT 6/6a SF/UTP P/N 5919 4PR 26 AWG -- PATENT NO. US 8,487,184 B2 -- 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



TITLE

4PR. SF/UTP HIGH FLEX INDUSTRIAL

ETHERNET/IP PATCH CORD -- CATEGORY 6/6a

QUABBIN P/N 5919

CUSTOMER APPROVAL:

DATE:

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. $100 \pm 15 \Omega 1 - 100 MHz$

 $100 \pm 20 \Omega 100 - 500 MHz$

RETURN LOSS $1 \le f < 10 \text{ MHz}$ 20 + 6 LOG(f) dB MIN*

> $10 \le f \le 20 \text{ MHz}$ 26 dB MIN*

20 ≤ *f* ≤100 MHz 26 - 5 LOG(f/20) dB MIN* $100 < f \le 500 \text{ MHz}$ 25 - 8.6 LOG(f/20) dB MIN

PSNEXT $1 \le f \le 500 \text{ MHz}$ 42.3 - 15 LOG (f/100) dB MIN

NEXT $1 \le f \le 500 \text{ MHz}$ 44.3 - 15 LOG (f/100) dB MIN

PS ACRF 24.8 - 20 LOG(f/100) dB MIN $1 \le f \le 500 \text{ MHz}$

ACRF 27.8 - 20 LOG(f/100) dB MIN $1 \le f \le 500 \text{ MHz}$

INSERTION LOSS $1.5[1.82 \sqrt{f} + 0.0091(f) + 0.25/\sqrt{f}]$ dB MAX $1 \le f \le 500 \text{ MHz}$

 $4 \le f \le 500 \text{ MHz}$ **DELAY** $534 + 36/\sqrt{f}$ ns MAX**

DELAY SKEW $1 \le f \le 500 \text{ MHz}$ <45 ns

TCL 30 - 10 LOG(f/100) dB MIN $1 \le f \le 500 \text{ MHz}$

ELTCTL 35 - 20 LOG(f) dB MIN $1 \le f \le 30 \text{ MHz}$

PSANEXT LOSS (6 AROUND 1) $1 \le f < 50 \text{ MHz}$ 67 dB MIN

> $50 \le f \le 500 \text{ MHz}$ 62.5 - 15 LOG (f/100) dB MIN

PSAFEXT (6 AROUND 1) 38.2 - 20 LOG(f/100) dB MIN $1 \le f \le 500 \text{ MHz}$

COUPLING ATTENUATION 100 - 20 LOG(f) (MAX 60 dB) E3 * $30 \le f \le 500 \text{ MHz}$ Segregation class d acc. EN 50174-2

TESTED PER IEC 62153-4-9

VELOCITY OF PROPAGATION 68%

*PER ODVA VOLUME 2 ETHERNET/IP

**PER IEC 61156-6

REV. 09 CHECKED: 08



TITI F

4PR. SF/UTP HIGH FLEX INDUSTRIAL ETHERNET/IP PATCH CORD -- CATEGORY 6/6a

QUABBIN P/N 5919

CUSTOMER APPROVAL: