

1) CONSTRUCTION:

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| CONDUCTOR: | 24 AWG 7/32 STRANDED TINNED COPPER | NOM. DIA. |
| INSULATION: | HIGH DENSITY POLYETHYLENE, .011" NOM. WALL THICKNESS | .0236" |
| PAIRS: | COLOR CODED SINGLES TWISTED INTO PAIRS | .047" |
| CABLE: | (2) TWISTED PAIRS TWISTED TOGETHER AND WRAPPED WITH A FOAM POLYPROPYLENE TAPE TO FORM A CABLE CORE. | .094" |
| SHIELDS: | AN OVERALL SHIELD OF 38 AWG TINNED COPPER BRAID (75% 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. | .160" |
| JACKET: | THERMOPLASTIC ELASTOMER, (COLOR PER CHART 1), .037" NOM. WALL THICKNESS (PRESSURE) | .191" |
| | OVERALL CABLE DIAMETER | .265" ± .010" |

2) PHYSICAL PROPERTIES:

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| TEMPERATURE RATING, MAX. | 75°C & 80°C (JACKET 105°C, 75°C OIL) |
| TEMPERATURE RATING, MIN. (STATIC) | -40°C (MANUFACTURER'S RECOMMENDED) |
| WT./M', NOM., NET. | 37.2 LBS. |
| JACKET IS WELD SPATTER RESISTANT | |
| JACKET IS SUNLIGHT RESISTANT | |
| FLEX LIFE (126 CYCLES/MIN, @ 20°C) | 1 MILLION CYCLE TEST (10X CABLE O.D., MINIMUM RADIUS) 20 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 CUTTING/MACHINING OIL RESISTANCE (6 MONTHS @ 20°C) | |
| TENSILE STRENGTH RETENTION, NOM. | 80% |
| ELONGATION RETENTION, NOM. | 100% |

CHART 1:

| QUABBIN P/N | JACKET COLOR |
|-------------|--------------|
| 5023 | BLACK |
| 5024 | GRAY |
| 5025 | TEAL |
| 5027 | RED |
| 5028 | BLUE |
| 5029 | ORANGE |

3) ELECTRICAL CHARACTERISTICS:
SEE PAGE 2

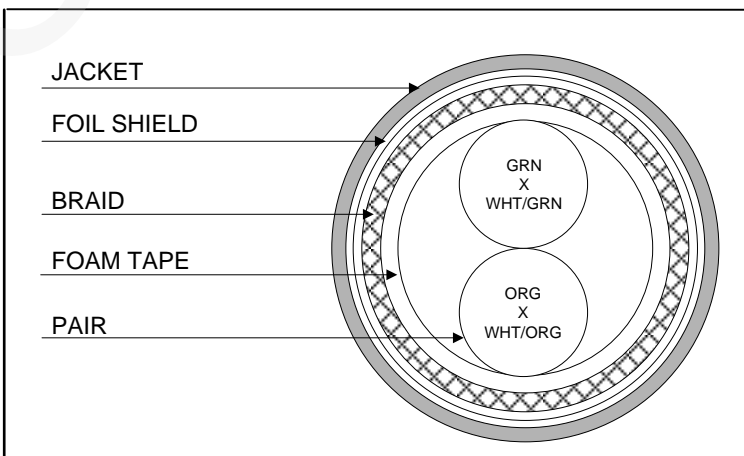
4) AGENCY APPROVALS:
UL AWM STYLE 2463 (80C 600V)
NEC (UL) TYPE CMX OUTDOOR - CM
CEC C(UL) TYPE CMX OUTDOOR - CM
EU CE MARK: MEETS EU DIRECTIVE 2011/65/EU (RoHS II)

5) APPLICATION:
U.S. PATENT NO. US 8,487,184 B2

6) PRINT: (WHITE INK ON BLACK JACKET, ALL OTHERS BLACK INK)
QUABBIN DATAMAX EXTREME HIGH FLEX
INDUSTRIAL ETHERNET/IP PATCH CORD CAT 5e
SF/UTP P/N (**P/N PER CHART 1**) -- C(UL)US TYPE CMX
OUTDOOR - CM 2PR 24 AWG 75C SUN RES OR AWM
2463 80C 600V -- CE RoHS -- (**LOT DESIGNATOR**)
(SEQUENTIAL FOOTAGE)

7) COLOR CODE:
1. GREEN X WHITE/GREEN
2. ORANGE X WHITE/ORANGE

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



CUSTOMER APPROVAL: _____ DATE: _____

| | | | |
|---|-------------------|------------|--------|
| Created 1/17/13 | DRAWN: 05/13/20 | BMD ZRS | |
| REV. 12 | CHECKED: 05/13/20 | | |
| TITLE 2PR. SF/UTP HIGH FLEX INDUSTRIAL ETHERNET/IP PATCH CORD -- CAT 5e | | | |
| DRAWING# | | QWC0053 | 1 of 2 |

3) ELECTRICAL CHARACTERISTICS:

POE COMPLIANT TO 85 METERS WHEN INSTALLED PER RECOMMENDATIONS IN TIA TSB-184
 CABLE WILL MEET CAT 5e CHANNEL REQUIREMENTS TO 85 METER LENGTH
 CAPACITANCE, MUTUAL, NOM. 13.5 PF/FT. AT 1 MHz @ 20°C
 DIELECTRIC WITHSTANDING, MIN. 2000V RMS
 VOLTAGE RATING, MAX. 600V
 D.C. RESISTANCE, MAX. 26.5 Ω/1,000' @ 20°C

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

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|---|--------------------|--|
| IMPEDANCE | 100 ± 15 Ω | 1 ≤ f ≤ 100 MHz |
| IMPEDANCE, SMOOTHED | 100 ± 10 Ω TYPICAL | 5 ≤ f ≤ 100 MHz |
| RETURN LOSS | 1 ≤ f < 10 MHz | 20 + 6 LOG (f) dB MIN* |
| | 10 ≤ f < 20 MHz | 26 dB MIN* |
| | 20 ≤ f ≤ 100 MHz | 26 - 5 LOG(f/20) dB MIN* |
| NEXT | 1 ≤ f ≤ 100 MHz | 35.3 - 15 LOG(f/100) dB MIN |
| ACRF | 1 ≤ f ≤ 100 MHz | 23.8 - 20 LOG(f/100) dB MIN |
| INSERTION LOSS | 1 ≤ f ≤ 100 MHz | 1.2[1.967 √f + 0.023(f) + 0.050/√f] dB MAX |
| DELAY | 1 ≤ f ≤ 100 MHz | 534 + 36/√f ns MAX |
| DELAY SKEW | 1 ≤ f ≤ 100 MHz | <25 ns |
| COUPLING ATTENUATION PER IEC 62153-4-9 | 30 ≤ f ≤ 100 MHz | 50 dB MINIMUM |
| VELOCITY OF PROPAGATION | 68% | |

*PER ODVA VOLUME 2 ETHERNET/IP

| | | |
|---|--------------------------|---|
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| TITLE 2PR. SF/UTP HIGH FLEX INDUSTRIAL ETHERNET/IP PATCH CORD -- CAT 5e | | |
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| | | 2 of 2 |

CUSTOMER APPROVAL:

DATE: