

1) CONSTRUCTION:

CONDUCTOR:	24 AWG 7/32 STRANDED TINNED COPPER	NOM. DIA.	.0236"
INSULATION:	HIGH DENSITY POLYETHYLENE, .011" NOM. WALL THICKNESS		.046"
PAIRS:	COLOR CODED SINGLES TWISTED INTO PAIRS		.092"
CABLE:	(4) TWISTED PAIRS TWISTED TOGETHER AND WRAPPED WITH A FOAM POLYPROPYLENE TAPE TO FORM A CABLE CORE.		.197"
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.		.216"
JACKET:	THERMOPLASTIC ELASTOMER, (COLOR, PER CHART 1), .037" NOM. WALL THICKNESS (PRESSURE) OVERALL CABLE DIAMETER		.290" ± .010" (BY CALIPER)

2) PHYSICAL PROPERTIES:

TEMPERATURE RATING, MAX.	75°C & 80°C
TEMPERATURE RATING, MIN.	-40°C (MANUFACTURER'S RECOMMENDED)
WT./M', NOM., NET.	46.7 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) 10 MILLION CYCLE TEST (20X CABLE O.D., MINIMUM RADIUS)
TORSION TEST (1 LB LOAD, 360°, 71 CYCLES/MIN, @ 20°C)	4.8 MILLION CYCLE TEST
PASSED ASSEMBLY TEST REQUIREMENTS	
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
5089	BLACK
5090	TEAL
5091	BLUE
5092	RED
5093	VIOLET
5097	GRAY
5934	GREEN

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)

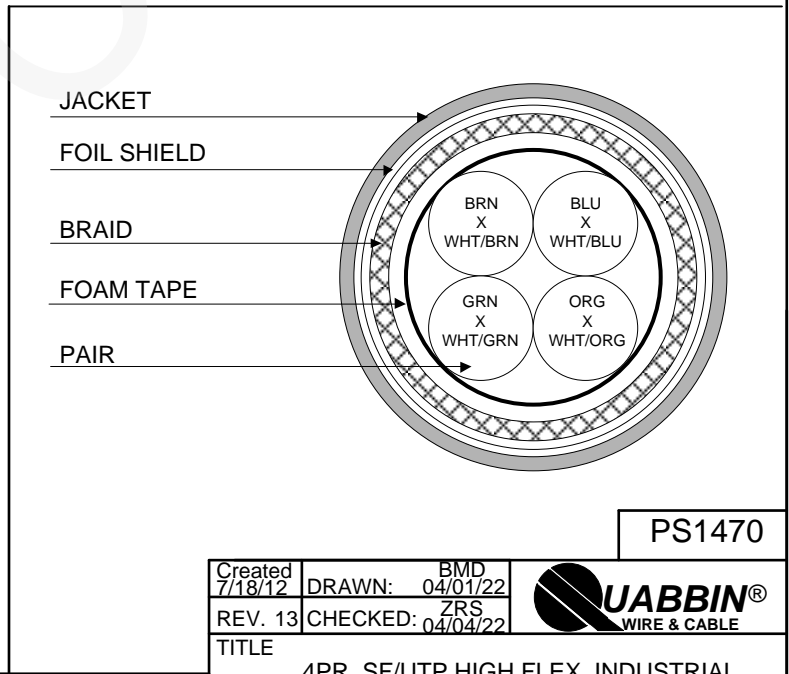
QUABBIN DATAMAX EXTREME HIGH FLEX
 INDUSTRIAL ETHERNET/IP PATCH CORD CAT 5e
 SF/UTP P/N (**P/N PER CHART 1**) -- U.S. PATENT NO. US
 8,487,184 B2 -- C(UL)US TYPE CMX OUTDOOR - CM 4PR
 24 AWG 75C SUN RES OR AWM 2463 80C 600V -- CE RoHS --
(LOT DESIGNATOR) (SEQUENTIAL FOOTAGE)

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



PS1470

Created 7/18/12	DRAWN: BMD 04/01/22	
REV. 13	CHECKED: ZRS 04/04/22	

TITLE
 4PR. SF/UTP HIGH FLEX INDUSTRIAL
 ETHERNET/IP PATCH CORD -- CAT 5e

CUSTOMER APPROVAL:

DATE:

DRAWING # QWC0038 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
 DIELECTRIC WITHSTANDING, MIN. 2000V RMS
 VOLTAGE RATING, MAX. 600V
 D.C. RESISTANCE, MAX. 26.2 Ω /1,000' (14.0 Ω /100m)

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

IMPEDANCE	100 \pm 15 Ω 1 - 100 MHz	
IMPEDANCE, SMOOTHED	100 \pm 20 Ω TYPICAL 5 - 100 MHz	
RETURN LOSS	1 \leq f < 10 MHz	20 + 6 LOG(f) dB MIN*
	10 \leq f < 20 MHz	26 dB MIN*
	20 \leq f \leq 100 MHz	26 - 5 LOG(f/20) dB MIN*
NEXT	1 \leq f \leq 100 MHz	35.3 - 15 LOG(f/100) dB MIN
PSNEXT	1 \leq f \leq 100 MHz	32.3 - 15 LOG(f/100) dB MIN
ACRF	1 \leq f \leq 100 MHz	23.8 - 20 LOG(f/100) dB MIN
PSACRF	1 \leq f \leq 100 MHz	20.8 - 20 LOG(f/100) dB MIN
INSERTION LOSS	1 \leq f \leq 100 MHz	1.2[1.967 \sqrt{f} + 0.023(f) + 0.050/ \sqrt{f}] dB MAX
DELAY	1 \leq f \leq 100 MHz	534 + 36/ \sqrt{f} ns MAX
DELAY SKEW	1 \leq f \leq 100 MHz	<45 ns
COUPLING ATTENUATION TESTED PER IEC 62153-4-9	30 \leq f \leq 100 MHz	\geq 60 dB E3* Segregation class d acc. EN 50174-2
VELOCITY OF PROPAGATION	68%	

*PER ODVA VOLUME 2 ETHERNET/IP

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DRAWING #	QWC0038	2 of 2

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