

1) CONSTRUCTION:		NOM. DIA.
CONDUCTOR:	24 AWG 7/32 STRANDED TINNED COPPER	.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)	.290" ± .010"
	OVERALL CABLE DIAMETER	

2) PHYSICAL PROPERTIES:	
TEMPERATURE RATING, MAX.	75°C & 80°C
TEMPERATURE RATING, MIN.	-40°C (MANUFACTURER'S RECOMMENDED)
WT./M', NOM., NET.	43.0 LBS.
JACKET IS WELD SPATTER RESISTANT	
JACKET IS SUNLIGHT RESISTANT	
FLEX LIFE (PENDING)	
(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 (PENDING)	
(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%
POE COMPLIANT (802.3af) TO 90 METERS WHEN INSTALLED PER RECOMMENDATIONS IN TIA TSB-184	
CABLE WILL MEET CAT 5e CHANNEL REQUIREMENTS TO 90 METER LENGTH	
CHART 1:	

QUABBIN P/N	JACKET COLOR
5089	BLACK
5090	TEAL

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

5) APPLICATION:
RoHS COMPLIANT MATERIALS.
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 -- 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

JACKET

FOIL SHIELD

BRAID

FOAM TAPE

PAIR

PS1470

Created 7/18/12	DRAWN: BMD 09/26/14	
REV. 06	CHECKED: GBM 09/26/14	
TITLE 4PR. SF/UTP HIGH FLEX INDUSTRIAL ETHERNET PATCH CORD -- CAT 5e		
DRAWING #	QWC0038	1 of 1

CUSTOMER APPROVAL: _____ DATE: _____


3) ELECTRICAL CHARACTERISTICS: (FOR 100m OF CABLE.)

CAPACITANCE, MUTUAL, NOM.	13.5 PF/FT. AT 1 MHz	
DIELECTRIC WITHSTANDING, MIN.	2000V RMS	
VOLTAGE RATING, MAX.	600V	
D.C. RESISTANCE, MAX.	14.0 Ω	
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	<25ns
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

NOTE: ALL TESTING IS CONDUCTED OFF THE REEL.

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TITLE		
4PR. SF/UTP HIGH FLEX INDUSTRIAL ETHERNET PATCH CORD -- CAT 5e		
DRAWING #	QWC0038	2 of 2

CUSTOMER APPROVAL:

DATE: