

1) CONSTRUCTION:

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, ( <b>COLOR PER CHART 1</b> ), .037" NOM. WALL THICKNESS (PRESSURE)	OVERALL CABLE DIAMETER .191"
		.265" ± .010"

2) PHYSICAL PROPERTIES:

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

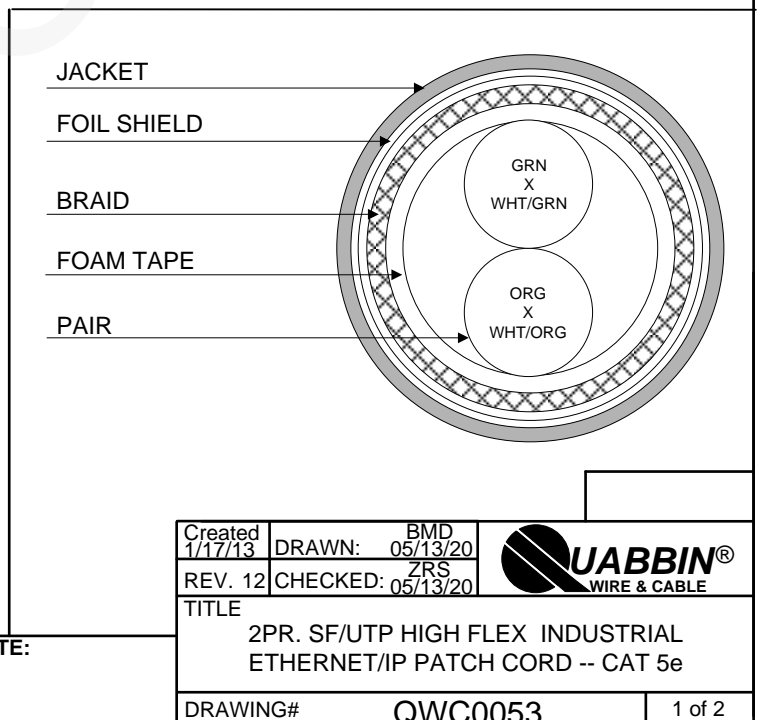
4) AGENCY APPROVALS:  
UL AWM STYLE 2463 (80C 600V)  
NEC (UL) TYPE CMX OUTDOOR - CM  
CEC C(UL) TYPE CMX OUTDOOR - CM  
EU CE MARK: MEETS EU DIRECTIVE 2011/65/EU (RoHS II)

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: \_\_\_\_\_


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)

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

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

CUSTOMER APPROVAL:

DATE: