

TECHNICAL BULLETIN



Product: Fiber Optic Cables
Manufacturer: PRG
Subject: Neutrik opticalCON ADVANCED Connector System
Bulletin No: FBR-001A
Date: December 6, 2013

INTRODUCTION

Neutrik opticalCON ADVANCED Connector System

PRG Dallas can now manufacture fiber cables using the Neutrik® opticalCON ADVANCED connection system. The opticalCON system is based on LC-Duplex connectors, but eliminates its weakness and guarantees a dust-protected, rugged connection. The opticalCON ADVANCED system makes the cables even more robust by adding a lockable, water-proof metal cap (designed especially for outdoor applications) and a rubber guard. The ergonomically designed cable strain relief also improves the cable protection and water resistance in long-term use, while the color-coding options allow custom-built coding.

The new standard for fiber cables is described in this technical bulletin. There is no need to replace existing NIF LEMO or PRG Nocturne Stratos cables, but where departments are using long LC, SC or ST fiber cables these shall be replaced with the opticalCON ADVANCED fiber cables. Neutrik opticalCON cables are far more robust and are specifically designed for the rigors of touring and rough handling.

Why Use Fiber?

Copper Ethernet cables have a distance limit of 100m at a data rate of 100 Mbps, but if a longer distance or a higher data rate is required, a fiber cable must be used. The MA2 protocol, for instance, requires a data rate of 1 Gbps (1000 Mbps) and therefore must use fiber for runs over 70m (for example, from the control position at FOH to the lighting equipment on stage). Another reason to use fiber would be to carry data several hundred meters between equipment or rack positions at large events.

Ordering Instructions

Cables and panel assemblies can be ordered at orders@prg.com.

Refer to the "Cable Types" and "Breakout Panels" sections on the following pages for part numbers and ecodes.

Installation and Maintenance

- + For installation instructions, refer to the PRG Fiber Optic Systems User Manual.
- + For maintenance instructions, refer to the PRG Fiber Optic Systems Service Manual.



Cable Types

Quad core armored fiber cable shall be used for extreme duty applications, and in cases where four fibers increase operational efficiency. Dual core field fiber cable shall be used for standard duty fiber applications.

Extreme Duty: We have selected the TMB PCF4OM3PS Quad Core Cable for extreme duty and 4-way applications. This cable has a dual sheath with a galvanized steel armor layer and additional heavy packing with Kevlar Aramid fibers. It is very robust and flexible, easy to coil and kink free.

Standard Duty: We have selected the OCC OC-0002036 Dual Core Cable for standard, 2-core applications. This is a bend tolerant, laser optimized Ultra-Fox cable with Kevlar Aramid reinforcement fibers. It is matte black in color.

Available terminated cables:

PRG Part No.	Ecode	Description
Extreme Duty Quad:		
25.0013.0050	394AF-	FIBER MM OPTICALCON QUAD ARMORED 50' 15M
25.0013.0075	394AH-	FIBER MM OPTICALCON QUAD ARMORED 75' 23M
25.0013.0100	394AJ-	FIBER MM OPTICALCON QUAD ARMORED 100' 30M
25.0013.0125	394AK-	FIBER MM OPTICALCON QUAD ARMORED 125' 38M
25.0013.0150	394AM-	FIBER MM OPTICALCON QUAD ARMORED 150' 45.5M
25.0013.0175	394AN-	FIBER MM OPTICALCON QUAD ARMORED 175' 53M
25.0013.0200	394AO-	FIBER MM OPTICALCON QUAD ARMORED 200' 60.5M
25.0013.0250	394AR-	FIBER MM OPTICALCON QUAD ARMORED 250' 76M
25.0013.0300	394AT-	FIBER MM OPTICALCON QUAD ARMORED 300' 91M
25.0013.0350	394AW-	FIBER MM OPTICALCON QUAD ARMORED 350' 106.5M
25.0013.0600	394AZ-	FIBER MM OPTICALCON QUAD ARMORED 600' 182.5M
25.0013.1000	394BA-	FIBER MM OPTICALCON QUAD ARMORED 1000' 305M
Standard Duty Duo:		
25.0014.0005	394B6-	FIBER MM OPTICALCON DUO FIELD 5' 1.5M
25.0014.0010	394B9-	FIBER MM OPTICALCON DUO FIELD 10' 3M
25.0014.0025	394BE-	FIBER MM OPTICALCON DUO FIELD 25' 7.5M
25.0014.0050	394BH-	FIBER MM OPTICALCON DUO FIELD 50' 15M
25.0014.0075	394BI-	FIBER MM OPTICALCON DUO FIELD 75' 22M
25.0014.0100	39425-	FIBER MM OPTICALCON DUO FIELD 100' 30M
25.0014.0125	394BK-	FIBER MM OPTICALCON DUO FIELD 125' 38M
25.0014.0150	394BM-	FIBER MM OPTICALCON DUO FIELD 150' 45.5M
25.0014.0175	394BP-	FIBER MM OPTICALCON DUO FIELD 175' 53M
25.0014.0200	39426-	FIBER MM OPTICALCON DUO FIELD 200' 60M
25.0014.0250	39427-	FIBER MM OPTICALCON DUO FIELD 250' 75M
25.0014.0300	39429-	FIBER MM OPTICALCON DUO FIELD 300' 91M
25.0014.0330	39430-	FIBER MM OPTICALCON DUO FIELD 330' X2 100M REEL
25.0014.0350	3942C-	FIBER MM OPTICALCON DUO FIELD 350' 106.5M
25.0014.0492	3942X-	FIBER MM OPTICALCON DUO FIELD 492' 150M
25.0014.0600	39433-	FIBER MM OPTICALCON DUO FIELD 600' 183M
25.0014.1000	39439-	FIBER MM OPTICALCON DUO FIELD 1000' 305M

Note: All fibers are Multi mode, 50/125 um, OM3.

Breakout Components

opticalCON connectors should be used for all connections to be made during daily set-ups. Standard LC patch cords may be used to interconnect within enclosed racks where there is some level of protection and there is no need to make connections daily. Breakout components can be ordered at orders@prg.com.

Available breakout panels, boxes, blank modules, and frame kits:

Item	PRG Part No.	Ecode	Description
1	21.9801.0004	3945X-	ASSY, BREAKOUT BOX OPTICALCON
2	21.9801.0003	3945A-	RACK PANEL OPTICALCON B/O QUAD TO DUO X2 1RU
3	55.6755.0003.0	522-200620	FRAME KIT FK-2
4	21.9801.0001	39454-	RACK PANEL UCP MODULE OPTICALCON QUAD X1
5	21.9801.0002	39455-	RACK PANEL UCP MODULE OPTICALCON DUO X2
6	55.6755.2001.0	522-200621	MODULE, BLANK UCPB1
7	25.9801.1000	39574-	FIBER MM SLIM LC-LC DUPLEX TO SIMPLEX X2 3' 1M
8	25.9801.1001	39584-	FIBER MM SLIM LC-SC DUPLEX OM2 3' 1M
9	25.9801.1002	39594-	FIBER MM SLIM LC-ST DUPLEX OM2 3' 1M
10	52.6104.0002.0	39451-	FIBER MM OPTICALCON DUO COUPLER IP65 BLK

Refer to **Figure 1** on the following page for component illustrations.

(Refer to the chart on the previous page for part numbers and descriptions.)

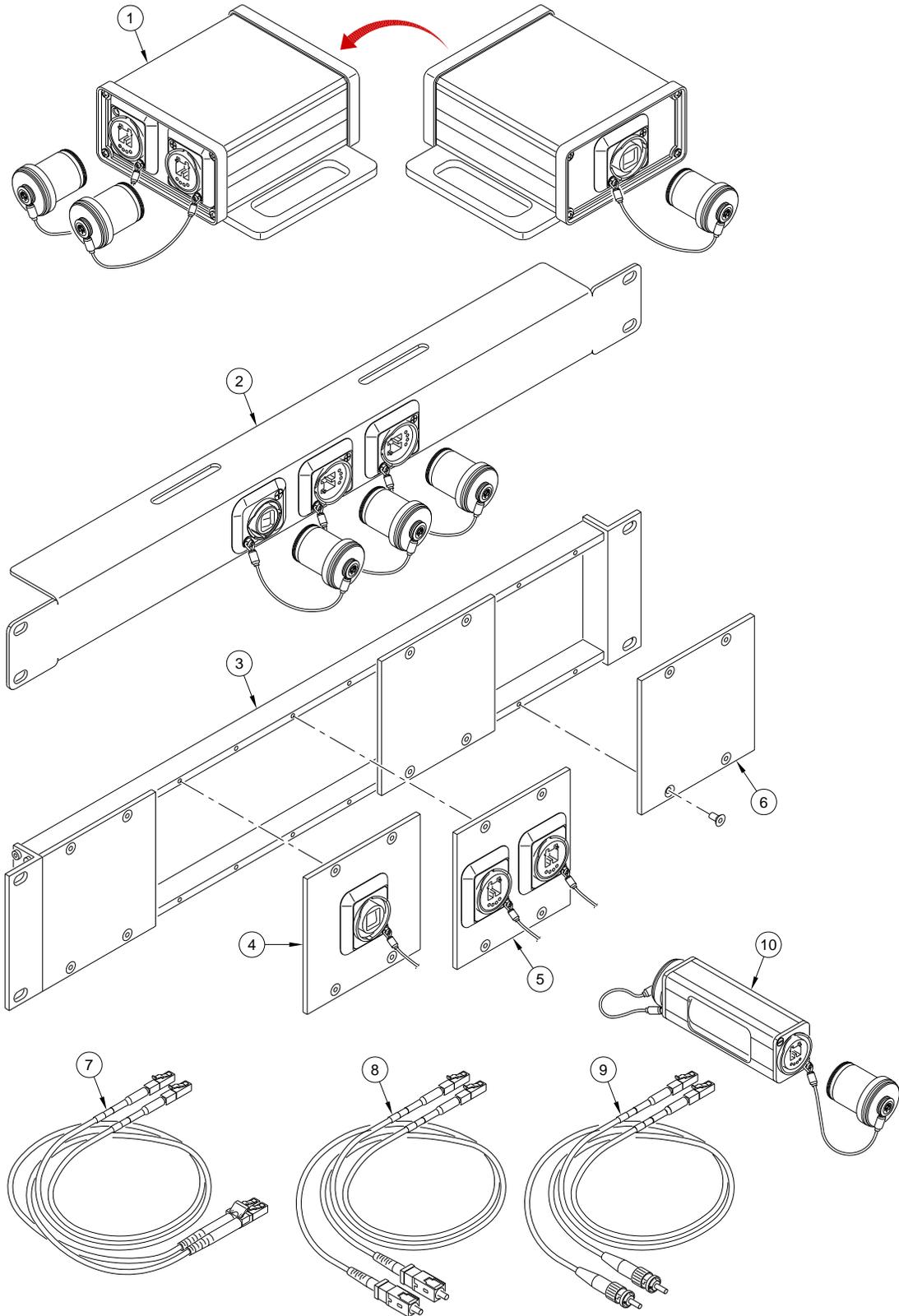


Figure 1: Breakout Components