

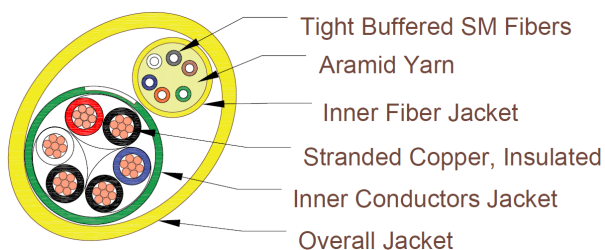
**40V-33XX76BRYO-XX/XP**

Issue Date: 06/08/2022

Revision: 19

## 40V-Series Activate™ PowerPipe™ Copper/Fiber Hybrid Cable

### Tight Buffer / Plenum Design



#### Scope

This document establishes the specification requirements for composite cables consisting of a copper twisted-pair cable and a tight buffered distribution fiber optic cable combined under one common UV resistant jacket.

#### Applications

Premise communication applications indoor or outdoor in duct. Copper pairs suitable for use in all Class 4 fault-manage power systems such as Pulse Power, Digital Electricity and other smart transfer systems.

#### Applicable Documents & Standards

- TIA/EIA FOTP Standards 455
- Color Coding of Fiber Optic Cables per TIA/EIA-598
- Meets CMP/FT6
- Compliant with ANSI/TIA-568-C.3 standard
- Compliant with NEC CL4 for fault managed power transmission

#### Construction Details (Copper Leg)

- Number of Pairs: See table on page 2.
- Conductor: 12, 14, 16, or 18 AWG stranded bare copper
- Insulation Material: Remguard™ Plenum Polymer
- Nominal Insulation Thickness: See table on page 2.
- Nominal Insulation Diameter: See table on page 2.
- Color Code: Black/Red, Black/White, Black/Green, Black/Blue, Black/Yellow, Black/Brown, Black/Orange and Red/White
- Inner Jacket Color: Green with a White stripe

#### Construction Details (Fiber Leg)

- Tight Buffered Fiber: 4F, 6F or 8F SM (OS2)
- Dimension: 900 μm
- Color Code: Blue, Orange, Green, Brown, Gray, White, Red and Black
- Cable Strength: Water swellable aramid yarns are pulled in with tight-buffered fibers under the jacket.
- Inner Jacket Material: Remguard™ Plenum Polymer
- Inner Jacket Color: Yellow
- Surface Print:  
REMFO 33-SERIES FIBER OPTIC CABLE XX (No. of Fibers)-SM OS2 BIF INDOOR/OUTDOOR REMEE PRODUCTS CORP. MM/YY (Month & Year of Mfg.) OFNP C(ETL)US MADE IN THE USA (Lot #) Sequential Footage MarkingFootage Marking

#### Overall Construction Details

- Construction Type: Copper cable and fiber cable are pulled in parallel with overall plenum jacket.
- Jacket Material: Remguard™ Plenum Polymer
- Overall Sheath Color: UV Resistant Yellow
- Surface Print:  
ACTIVATE™ by REMEE PowerPipe™ 40V-SERIES FIBER OPTIC CABLE XX (No. of Fibers)-SM OS2 BIF (No. of Pairs) (AWG size) OUTDOOR MM/YY (Month & Year of Manufacture) MADE IN THE USA (Lot #) + Sequential Footage Marking

#### Electrical Details (Pairs)

Maximum Operating Voltage: 300 Volts, rms.  
DCR: See Table on Page 2  
Nominal Mutual Capacitance, C to C: 35.0 pF/ft @ 1 kHz  
Upper Limit Capacitance, C to C: 40.0 pF/ft @ 1kHz  
Nominal Impedance, C to C: 100 Ohms  
Nominal D.C.R.: See Table on Page 2

**All warranty information can be viewed at [WWW.REMEE.COM](http://WWW.REMEE.COM)**

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### Nominal Cable Dimensions & Weights

| Remeë Products Part Number | Number of Pairs and AWG | D.C.R. $\Omega$ /Mft | Nom. Dia. Over Insul. (in.) | Nom Dia. Over Jkt. (Copper, in.) | Number of Fibers | Nom Dia. Over Jkt. (Fiber, in.) | Nominal Overall Dimensions in. | Nominal Overall Dimensions mm | Weight lb/1000ft | Weight Kg/km |
|----------------------------|-------------------------|----------------------|-----------------------------|----------------------------------|------------------|---------------------------------|--------------------------------|-------------------------------|------------------|--------------|
| 40V-330276BRYO-16/8P       | 8/P 16                  | 4.39                 | 0.089                       | 0.594                            | 2                | 0.170                           | 0.634 x 0.804                  | 16.1 x 20.4                   | 257              | 383          |
| 40V-330476BRYO-14/2P       | 2/P 14                  | 2.76                 | 0.104                       | 0.329                            | 4                | 0.185                           | 0.389 x 0.574                  | 9.9 x 14.6                    | 131              | 195          |
| 40V-330476BRYO-12/2P       | 2/P 12                  | 1.74                 | 0.123                       | 0.386                            | 4                | 1.185                           | 0.446 x 0.630                  | 11.3 x 16.0                   | 164              | 244          |
| 40V-330676BRYO-18/3P       | 3/P 18                  | 5.80                 | 0.074                       | 0.245                            | 6                | 0.200                           | 0.285 x 0.485                  | 7.2 x 12.3                    | 85               | 126.5        |
| 40V-330276BRYO-16/4P       | 4/P 16                  | 4.39                 | 0.089                       | 0.380                            | 6                | 0.200                           | 0.420 x 0.620                  | 10.7 x 15.7                   | 152              | 227          |
| 40V-330676BRYO-16/3P       | 3/P 16                  | 4.39                 | 0.089                       | 0.310                            | 6                | 0.200                           | 0.350 x 0.550                  | 8.9 x 14.0                    | 100              | 148.5        |
| 40V-330676BRYO-14/3P       | 3/P 14                  | 2.76                 | 0.104                       | 0.385                            | 6                | 0.200                           | 0.425 x 0.625                  | 10.8 x 15.9                   | 142              | 210.8        |
| 40V-330676BRYO-12/3P       | 3/P 12                  | 1.74                 | 0.123                       | 0.475                            | 6                | 0.200                           | 0.515 x 0.715                  | 13.1 x 18.2                   | 185              | 274.7        |
| 40V-330876BRYO-18/2P       | 2/P 18                  | 5.80                 | 0.074                       | 0.237                            | 8                | 0.215                           | 0.277 x 0.492                  | 7.0 x 12.5                    | 76               | 112          |
| 40V-330876BRYO-18/1P       | 1/P 18                  | 5.80                 | 0.074                       | 0.188                            | 8                | 0.215                           | 0.255 x 0.443                  | 6.5 x 11.3                    | 57               | 85           |
| 40V-330876BRYO-16/2P       | 2/P 16                  | 4.39                 | 0.089                       | 0.283                            | 8                | 0.215                           | 0.323 x 0.538                  | 8.2 x 13.7                    | 89               | 132          |
| 40V-330876BRYO-16/1P       | 1/P 16                  | 4.39                 | 0.089                       | 0.218                            | 8                | 0.215                           | 0.258 x 0.473                  | 6.6 x 12.0                    | 64               | 95           |
| 40V-331276BRYO-18/2P       | 2/P 18                  | 5.80                 | 0.074                       | 0.237                            | 12               | 0.250                           | 0.290 x 0.527                  | 7.4 x 13.4                    | 83               | 123          |
| 40V-331276BRYO-16/2P       | 2/P 16                  | 4.39                 | 0.089                       | 0.283                            | 12               | 0.250                           | 0.323 x 0.573                  | 8.2 x 14.6                    | 96               | 143          |

\*Cables printed in meters will have a "-MR" suffix on the part number.

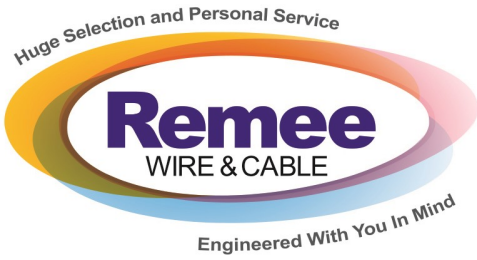
| Fiber Type (P/N)                          | Maximum Attenuation dB/km |         |         |         | Overfill Launch Min Bandwidth (MHz-km) |         | EMBc (MHz-km) | Gigabit Ethernet Minimum Link Distance (Meters) |         | 10 Gigabit Ethernet Minimum Link Distance (Meters) |         |
|---|---------------------------|---------|---------|---------|--|---------|---------------|---|---------|--|---------|
|   | 850 nm                    | 1300 nm | 1310 nm | 1550 nm | 850 nm                                 | 1300 nm |               | 850 nm  | 1300 nm | 850 nm   | 1300 nm |
| <b>SM OS2 G.652.D/G.657.A1 BIF (76B)*</b> | N/A                       | N/A     | 0.40    | 0.30    | N/A                                    | N/A     | N/A           | N/A   | 5000    | N/A  | 10000   |

\* G.652d&G.657.A1 (76B) Mandrel Radius of 10mm, 1 turn at 1550nm with an induced attenuation of  $\leq 0.50$ dB

Measured attenuations on shipping reels will not exceed the nominal values by 0.75 dB/km

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### Mechanical & Environmental Performance

•Maximum Tensile Load

Installation : 2&4 fiber 1405N / 315lbf  
6&8 fiber 1610N / 362lbf  
12&24 fiber 2700N / 600lbf

Long Term : 2&4 fiber 455N / 102lbf  
6&8 fiber 535N / 120lbf  
12&24 fiber 600N / 135lbf

•Minimum Bending Radius

Loaded : 20 x Diameter  
Unloaded : 10 x Diameter

•Crush Resistance

100 N/cm

•Impact Resistance (min.)

25 Impacts

•Flexing  $\pm 90^\circ$  (min.)

25 Cycles

•Temperature Rating

Operation : -20°C to +85°C  
Installation : 0°C to +75°C  
Storage : -40°C to +85°C

### Warranty Information

All warranty information can be viewed at [www.remee.com](http://www.remee.com). This product is RoHS compliant and is directive 2002/95/EC. It is the sole responsibility of the user to have the most current specification. Specifications are subject to change without notice.

### Preparation for Shipment

The cable shall be packaged to preclude the inducement of damage due to handling and transportation, and shall be in accordance with the best commercial practices available. Shipping containers shall be constructed as to eliminate any possible damage to the cables due to shipment.

**Note:** While Remeo Products Corp. has made every reasonable effort to ensure the accuracy of the information in this document, Remeo Products Corp. reserves the right to make any adjustments to the information contained herein at any time without notice. Remeo Products Corp. expressly disclaims all implied warranties regarding the information contained herein, including but not limited to, any implied warranties of merchantability or fitness for particular purpose. The dimensions in this documents are for reference purposes only and are subject to change without notice.

### Spec Approval (Custom Designs Only)

Your signature constitutes that you have read and agreed to this specification sheet and upon confirmation of your order. The Remeo Wire & Cable warranty is an integral part of this specification. This item may be non-cancelable and non-returnable.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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