



## Activate™ PCS – Bandwidth/Power Product Optimization Chart

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| 100 MBp/s Optimized | 48 VDC – RECEIVING END |          |          |     | POWER DISTANCE (FT) |       |       |       | DATA DISTANCE (FT) |          |          |
|---------------------|------------------------|----------|----------|-----|---------------------|-------|-------|-------|--------------------|----------|----------|
|                     | Amps                   | Watts-PS | Watts-PD | mA  | 18AWG               | 16AWG | 14AWG | 12AWG | OM3 (MM)           | OM4 (MM) | OS2 (SM) |
|                     | 0.3125                 | 15.4     | 12.95    | 350 | 1300                | 1730  | 2740  | 5200  | 6500               | 6500     | 32800    |
| 0.625               | 30                     | 25.5     | 600      | 800 | 900                 | 1400  | 3200  | 6500  | 6500               | 32800    |          |
| 1.25                | 60                     | 51       | 600x2    | 400 | 450                 | 700   | 1600  | 6500  | 6500               | 32800    |          |

  

| 1 GBp/s Optimized | 48 VDC – RECEIVING END |          |          |     | POWER DISTANCE (FT) |       |       |       | DATA DISTANCE (FT) |          |          |
|-------------------|------------------------|----------|----------|-----|---------------------|-------|-------|-------|--------------------|----------|----------|
|                   | Amps                   | Watts-PS | Watts-PD | mA  | 18AWG               | 16AWG | 14AWG | 12AWG | OM3 (MM)           | OM4 (MM) | OS2 (SM) |
|                   | 0.3125                 | 15.4     | 12.95    | 350 | 1300                | 1730  | 2740  | 5200  | 2600               | 3281     | 32800    |
| 0.625             | 30                     | 25.5     | 600      | 800 | 900                 | 1400  | 3200  | 2600  | 3281               | 32800    |          |
| 1.25              | 60                     | 51       | 600x2    | 400 | 450                 | 700   | 1600  | 2600  | 3281               | 32800    |          |

  

| 10 GBp/s Optimized | 48 VDC – RECEIVING END |          |          |     | POWER DISTANCE (FT) |       |       |       | DATA DISTANCE (FT) |          |          |
|--------------------|------------------------|----------|----------|-----|---------------------|-------|-------|-------|--------------------|----------|----------|
|                    | Amps                   | Watts-PS | Watts-PD | mA  | 18AWG               | 16AWG | 14AWG | 12AWG | OM3 (MM)           | OM4 (MM) | OS2 (SM) |
|                    | 0.3125                 | 15.4     | 12.95    | 350 | 1300                | 1730  | 2740  | 5200  | 980                | 1640     | 32800    |
| 0.625              | 30                     | 25.5     | 600      | 800 | 900                 | 1400  | 3200  | 980   | 1640               | 32800    |          |
| 1.25               | 60                     | 51       | 600x2    | 400 | 450                 | 700   | 1600  | 980   | 1640               | 32800    |          |

  

| Twisted Pair           | 50 VDC – SOURCE |          |          |        | POWER DISTANCE (FT) |       |       |               | DATA DISTANCE (FT)    |       |         |        |
|------------------------|-----------------|----------|----------|--------|---------------------|-------|-------|---------------|-----------------------|-------|---------|--------|
|                        | Amps            | Watts-PS | Watts-PD | mA     | 24AWG               | 23AWG | 22AWG | Activate™ uTP | Size                  | 1Gbps | 100Mbps | 10Mbps |
| PoE (802.3af)          | 0.308           | 15.4     | 12.99    | 308    | 850                 | 1050  | 1300  | 1700          | 24AWG (Cat 5E)        | 328   | 328     | 328    |
| PoE+ (802.3at)         | 0.600           | 30       | 25.5     | 600    | 400                 | 500   | 625   | 800           | 23AWG (Cat 6 or 6A)   | 328   | 328     | 328    |
| PoE++ (802.3bt Type 3) | 1.2 (2 Prs)     | 60       | 51       | 600x2  | 400                 | 500   | 625   | 800           | 21AWG (Activate™ uTP) | 656   | 700     | 1000   |
| PoE++ (802.3bt Type 4) | 2.0 (2 Prs)     | 100      | 71       | 1000x2 | 460                 | 575   | 725   | 950           |                       | 656   | 700     | 1000   |

\*\* Power distance is calculated based on Ohms Law. Your systems' equipment may include programming to limit voltage, amperage, and/or circuit resistance and so effectively limiting the distance between the PSE and the PD. Such limitations may be in observation of IEEE 802 criteria as interpreted by the equipment manufacturer or by their specification.