# P3 PowerPorts™ Capacity Information Note

The number of fixtures that can be driven from an output of a P3 PowerPort depends on the total chain length (= distance between P3 PowerPort and the end of the last fixture in the chain). This total chain length does include the length of the fixtures themselves.

Example: Table A shows that when the total chain length is less than 25 meters, up to 12 meters of VDO Sceptron XB fixtures can be connected. This means that such a maximized chain could consist of 12 meters of fixtures plus 13 meters of cables. Or 11 meters of fixtures plus 14 meters of cables. Or any other combination adding up to maximum 25 meters, with maximum 12 meters of fixtures.

Please be aware that the quantities listed in below tables are specified per output port. So, for the P3 PowerPort 2000, the total capacity across all ports is four times the specified quantity.

## P3 PowerPort 2000 AC Input Voltage

The tables below assume the P3 PowerPort 2000 to be supplied with 208-240V AC input.

When the P3 PowerPort 2000 is supplied with 100-120V AC input, its output capacity is reduced. In such case the fixture quantities in the tables below need to be reduced to 2/3rd.

Example: Table A shows that when the total chain length is less than 25 meters, up to 12 meters of VDO Sceptron XB fixtures can be connected. When the P3 PowerPort 2000 is supplied with 100-120V AC input, this needs to be reduced to 8 meters of VDO Sceptron XB.

The P3 PowerPort 500 IP Rental and P3 PowerPort 500 IP Install do not have a reduced output capacity at lower AC input voltages.

## Power Mode

The number of fixtures that can be driven from an output does also depend on the Power Mode selected on the fixture. Please respect the limits for the Power Mode in use, as outlined in the tables below.

## DCE DataSplitterBooster IP

Please be aware that uninterrupted cable runs can be maximum 75 meters long. If the distance between P3 PowerPort and the first fixture on the chain exceeds 75 meters, a DCE DataSplitterBooster IP needs to be added to amplify the data signals. Also, when the

distance between two daisy-chained fixtures does exceed 75 meters, a DCE DataSplitterBooster IP needs to be added to amplify the data signals.

## Exterior DC-Feeder

For fixtures driven via the Exterior DC-Feeder, the cables between the Exterior DC-Feeder and Exterior Dot-1/4/9 Pro do not need to be considered. The limitations outlined in below tables only refer to the cables between the P3 PowerPort and the last Exterior DC-Feeder on the chain.

## Mixing Fixture Types

When different fixture types are mixed on a chain, you need to calculate to what percentage of the maximum load each fixture type accumulates. The total may not exceed 100%.

Example:
- Total length of chain is 50 meters (Table B).
- P3 PowerPort set to Half Power mode (second column).
- 9 meters of VDO Sceptron XB are present on the chain, which equals to 50% of max load (9 meters / 18 meters = 50%).
- 60 Exterior Dot-HP Pro fixtures are present on the chain, which equals to 48% of max load (60 fixtures / 125 fixtures = 48%).

So, this is an allowed configuration, as it sums up to 98% of maximum load.

## Alternative Chain Lengths

If the total chain length is not given in the tables below, respect the limit for the next highest total chain length.

## Table A: Total Chain Length ≤ 25 meters

| Product | P3 PowerPort Full Power Mode | P3 PowerPort Half Power Mode | DCE PSU 240 IP Full Power Mode | DCE PSU 240 IP Half Power Mode |
|---|---|---|---|---|
| **Exterior Dot-1 Pro** (via Exterior DC-Feeder) | 400 dots | 762 dots | 200 dots | 400 dots |
| **Exterior Dot-4 Pro** (via Exterior DC-Feeder) | 256 dots | 478 dots | 128 dots | 256 dots |
| **Exterior Dot-9 Pro** (via Exterior DC-Feeder) | 144 dots | 272 dots | 72 dots | 144 dots |
| **Exterior Dot-HP Pro** | 84 dots | 149 dots | 37 dots | 70 dots |
| **VDO Sceptron XB** | 12 meters of fixtures | 21 meters of fixtures | 6 meters of fixtures | 10 meters of fixtures |

## Table B: Total Chain Length ≤ 50 meters

| Product | P3 PowerPort Full Power Mode | P3 PowerPort Half Power Mode | DCE PSU 240 IP Full Power Mode | DCE PSU 240 IP Half Power Mode |
|---|---|---|---|---|
| **Exterior Dot-1 Pro** (via Exterior DC-Feeder) | 347 dots | 658 dots | 200 dots | 390 dots |
| **Exterior Dot-4 Pro** (via Exterior DC-Feeder) | 220 dots | 423 dots | 128 dots | 253 dots |
| **Exterior Dot-9 Pro** (via Exterior DC-Feeder) | 124 dots | 243 dots | 72 dots | 144 dots |
| **Exterior Dot-HP Pro** | 68 dots | 125 dots | 35 dots | 68 dots |
| **VDO Sceptron XB** | 11 meters of fixtures | 18 meters of fixtures | 5 meters of fixtures | 9 meters of fixtures |

## Table C: Total Chain Length ≤ 75 meters

| Product | P3 PowerPort Full Power Mode | P3 PowerPort Half Power Mode | DCE PSU 240 IP Full Power Mode | DCE PSU 240 IP Half Power Mode |
|---|---|---|---|---|
| **Exterior Dot-1 Pro** (via Exterior DC-Feeder) | 243 dots | 454 dots | 190 dots | 358 dots |
| **Exterior Dot-4 Pro** (via Exterior DC-Feeder) | 157 dots | 302 dots | 121 dots | 228 dots |
| **Exterior Dot-9 Pro** (via Exterior DC-Feeder) | 85 dots | 170 dots | 68 dots | 129 dots |
| **Exterior Dot-HP Pro** | 53 dots | 104 dots | 33 dots | 64 dots |
| **VDO Sceptron XB** | 9 meters of fixtures | 15 meters of fixtures | 5 meters of fixtures | 9 meters of fixtures |

## Table D: Total Chain Length ≤ 100 meters

| Product | P3 PowerPort Full Power Mode | P3 PowerPort Half Power Mode | DCE PSU 240 IP Full Power Mode | DCE PSU 240 IP Half Power Mode |
|---|---|---|---|---|
| **Exterior Dot-1 Pro** (via Exterior DC-Feeder) | 193 dots | 355 dots | 178 dots | 338 dots |
| **Exterior Dot-4 Pro** (via Exterior DC-Feeder) | 124 dots | 240 dots | 115 dots | 215 dots |
| **Exterior Dot-9 Pro** (via Exterior DC-Feeder) | 69 dots | 136 dots | 64 dots | 122 dots |
| **Exterior Dot-HP Pro** | 41 dots | 88 dots | 31 dots | 61 dots |
| **VDO Sceptron XB** | 7 meters of fixtures | 11 meters of fixtures | 4 meters of fixtures | 8 meters of fixtures |

## Table E: Total Chain Length ≤ 125 meters

| Product | P3 PowerPort Full Power Mode | P3 PowerPort Half Power Mode | DCE PSU 240 IP Full Power Mode | DCE PSU 240 IP Half Power Mode |
|---|---|---|---|---|
| **Exterior Dot-1 Pro** (via Exterior DC-Feeder) | 150 dots | 263 dots | 159 dots | 305 dots |
| **Exterior Dot-4 Pro** (via Exterior DC-Feeder) | 97 dots | 181 dots | 104 dots | 197 dots |
| **Exterior Dot-9 Pro** (via Exterior DC-Feeder) | 54 dots | 106 dots | 59 dots | 112 dots |
| **Exterior Dot-HP Pro** | 32 dots | 70 dots | 28 dots | 56 dots |
| **VDO Sceptron XB** | 5 meters of fixtures | 9 meters of fixtures | 4 meters of fixtures | 7 meters of fixtures |

## Table F: Total Chain Length ≤ 150 meters

| Product | P3 PowerPort Full Power Mode | P3 PowerPort Half Power Mode | DCE PSU 240 IP Full Power Mode | DCE PSU 240 IP Half Power Mode |
|---|---|---|---|---|
| **Exterior Dot-1 Pro** (via Exterior DC-Feeder) | 128 dots | 220 dots | 145 dots | 280 dots |
| **Exterior Dot-4 Pro** (via Exterior DC-Feeder) | 83 dots | 153 dots | 93 dots | 175 dots |
| **Exterior Dot-9 Pro** (via Exterior DC-Feeder) | 47 dots | 90 dots | 54 dots | 99 dots |
| **Exterior Dot-HP Pro** | 27 dots | 56 dots | 26 dots | 52 dots |
| **VDO Sceptron XB** | 4 meters of fixtures | 7 meters of fixtures | 3 meters of fixtures | 7 meters of fixtures |

## Table G: Total Chain Length ≤ 175 meters

| Product | P3 PowerPort Full Power Mode | P3 PowerPort Half Power Mode | DCE PSU 240 IP Full Power Mode | DCE PSU 240 IP Half Power Mode |
|---|---|---|---|---|
| **Exterior Dot-1 Pro** (via Exterior DC-Feeder) | 106 dots | 172 dots | 117 dots | 225 dots |
| **Exterior Dot-4 Pro** (via Exterior DC-Feeder) | 68 dots | 122 dots | 77 dots | 145 dots |
| **Exterior Dot-9 Pro** (via Exterior DC-Feeder) | 38 dots | 74 dots | 44 dots | 83 dots |
| **Exterior Dot-HP Pro** | 22 dots | 47 dots | 23 dots | 46 dots |
| **VDO Sceptron XB** | 3 meters of fixtures | 6 meters of fixtures | 3 meters of fixtures | 6 meters of fixtures |

## Table H: Total Chain Length ≤ 200 meters

| Product | P3 PowerPort Full Power Mode | P3 PowerPort Half Power Mode | DCE PSU 240 IP Full Power Mode | DCE PSU 240 IP Half Power Mode |
|---|---|---|---|---|
| **Exterior Dot-1 Pro** (via Exterior DC-Feeder) | 94 dots | 144 dots | 100 dots | 200 dots |
| **Exterior Dot-4 Pro** (via Exterior DC-Feeder) | 61 dots | 105 dots | 68 dots | 128 dots |
| **Exterior Dot-9 Pro** (via Exterior DC-Feeder) | 34 dots | 65 dots | 40 dots | 72 dots |
| **Exterior Dot-HP Pro** | 21 dots | 41 dots | 21 dots | 40 dots |
| **VDO Sceptron XB** | 3 meters of fixtures | 5 meters of fixtures | 2 meters of fixtures | 5 meters of fixtures |