

# i13.5 String Optimizer

## 750V Systems

maximum output **13.5A**

| Vxxx-i13.5-13.5 Models                        |      | V650      | V675      | V700   | V725      | V750      |
|---|------|-----------|-----------|--|-----------|-----------|
| <b>Electrical</b>                             |      |           |           |  |           |           |
| <b>Input</b>                                  |      |           |           |  |           |           |
| Maximum voltage per input <sup>1</sup>        | V    | 750       | 750       | 750  | 750       | 750       |
| Maximum current (Imp) per input <sup>2</sup>  | A    | 12.8      | 12.8      | 12.8   | 12.8      | 12.8      |
| Maximum short-circuit current (Isc) per input | A    | 13.5      | 13.5      | 13.5   | 13.5      | 13.5      |
| MPP tracking voltage range                    | V    | 190 - 700 | 190 - 700 | 190 - 700  | 190 - 700 | 190 - 700 |
| Startup voltage per input                     | V    | 400       | 400       | 400  | 400       | 400       |
| Number of inputs                              |      | 2         | 2         | 2  | 2         | 2         |
| <b>Output</b>                                 |      |           |           |  |           |           |
| Output voltage range                          | V    | 0 - 650   | 0 - 675   | 0 - 700  | 0 - 725   | 0 - 750   |
| Output voltage at full power                  | V    | 560       | 585       | 610  | 635       | 660       |
| Output voltage at zero power                  | V    | 650       | 675       | 700  | 725       | 750       |
| Maximum output current                        | A    | 13.5      | 13.5      | 13.5   | 13.5      | 13.5      |
| Maximum continuous output power               | kWdc | 7.4       | 7.7       | 8.0  | 8.3       | 8.7       |
| Efficiency (max / CEC / Euro)                 | %    |           |           | 99.5 / 99.3 / 99.2   |           |           |
| <b>Mechanical</b>                             |      |           |           |  |           |           |
| Input & output connector                      |      |           |           | Amphenol H4  |           |           |
| Dimensions                                    |      |           |           | 10.71" x 8.66" x 3.94"<br>(272 mm x 220 mm x 100 mm)   |           |           |
| Weight  |      |           |           | 9.0 lbs. (4.1 kg)  |           |           |
| Ambient temperature operating range           |      |           |           | -40 °F to +122 °F<br>(-40 °C to +50 °C)  |           |           |
| Cooling                                       |      |           |           | Convection   |           |           |
| <b>Environmental</b>                          |      |           |           |  |           |           |
| Environmental category                        |      |           |           | Outdoor  |           |           |
| Pollution degree                              |      |           |           | 2  |           |           |
| Maximum operating altitude <sup>3</sup>       |      |           |           | 9843 ft (3000 m)   |           |           |
| Overvoltage category                          |      |           |           | OVII   |           |           |
| Ingress protection                            |      |           |           | IP66 / 4X  |           |           |
| <b>General</b>                                |      |           |           |  |           |           |
| Compliance                                    |      |           |           | ETL to UL 1741;<br>IEC 61000-6-1, 61000-6-3, 62109; CE;<br>Giteki 2-1-19; FCC Part 15, class A |           |           |

1. Voc at coldest design temp. Follow Ampt's design guidelines to determine the number of modules per input and max. system voltage.
2. Maximum Imp of modules on the input at standard test condition (STC) - irradiation level of 1000 W/m<sup>2</sup> at 25°C.
3. Optimizer derates above this altitude.

# i13.5 String Optimizer

## 750V Systems

maximum output **12.8A**

| Vxxx-i13.5-12.8 Models                        |  | V650               | V675      | V700      | V725      | V750      |
|---|--|--------------------|-----------|-----------|-----------|-----------|
| <b>Electrical</b>                             |  |                    |           |           |           |           |
| <b>Input</b>                                  |  |                    |           |           |           |           |
| Maximum voltage per input <sup>1</sup>        | V  | 750                | 750       | 750       | 750       | 750       |
| Maximum current (Imp) per input <sup>2</sup>  | A  | 12.8               | 12.8      | 12.8      | 12.8      | 12.8      |
| Maximum short-circuit current (Isc) per input | A  | 13.5               | 13.5      | 13.5      | 13.5      | 13.5      |
| MPP tracking voltage range                    | V  | 190 - 700          | 190 - 700 | 190 - 700 | 190 - 700 | 190 - 700 |
| Startup voltage per input                     | V  | 400                | 400       | 400       | 400       | 400       |
| Number of inputs                              |  | 2                  | 2         | 2         | 2         | 2         |
| <b>Output</b>                                 |  |                    |           |           |           |           |
| Output voltage range                          | V  | 0 - 650            | 0 - 675   | 0 - 700   | 0 - 725   | 0 - 750   |
| Output voltage at full power                  | V  | 565                | 590       | 615       | 640       | 665       |
| Output voltage at zero power                  | V  | 650                | 675       | 700       | 725       | 750       |
| Maximum output current                        | A  | 12.8               | 12.8      | 12.8      | 12.8      | 12.8      |
| Maximum continuous output power               | kWdc   | 7.0                | 7.3       | 7.7       | 8.0       | 8.3       |
| Efficiency (max / CEC / Euro)                 | %  | 99.5 / 99.3 / 99.2 |           |           |           |           |
| <b>Mechanical</b>                             |  |                    |           |           |           |           |
| Input & output connector                      | Amphenol H4  |                    |           |           |           |           |
| Dimensions                                    | 10.71" x 8.66" x 3.94"<br>(272 mm x 220 mm x 100 mm)   |                    |           |           |           |           |
| Weight  | 9.0 lbs. (4.1 kg)  |                    |           |           |           |           |
| Ambient temperature operating range           | -40 °F to +122 °F<br>(-40 °C to +50 °C)  |                    |           |           |           |           |
| Cooling                                       | Convection   |                    |           |           |           |           |
| <b>Environmental</b>                          |  |                    |           |           |           |           |
| Environmental category                        | Outdoor  |                    |           |           |           |           |
| Pollution degree                              | 2  |                    |           |           |           |           |
| Maximum operating altitude <sup>3</sup>       | 9843 ft (3000 m)   |                    |           |           |           |           |
| Overvoltage category                          | OVII   |                    |           |           |           |           |
| Ingress protection                            | IP66 / 4X  |                    |           |           |           |           |
| <b>General</b>                                |  |                    |           |           |           |           |
| Compliance                                    | ETL to UL 1741;<br>IEC 61000-6-1, 61000-6-3, 62109; CE;<br>Giteki 2-1-19; FCC Part 15, class A |                    |           |           |           |           |

1. Voc at coldest design temp. Follow Ampt's design guidelines to determine the number of modules per input and max. system voltage.
2. Maximum Imp of modules on the input at standard test condition (STC) - irradiation level of 1000 W/m<sup>2</sup> at 25°C.
3. Optimizer derates above this altitude.

# i13.5 String Optimizer

## 750V Systems

maximum output **12A**

| Vxxx-i13.5-12 Models                          |  | V650               | V675      | V700      | V725      | V750      |
|---|--|--------------------|-----------|-----------|-----------|-----------|
| <b>Electrical</b>                             |  |                    |           |           |           |           |
| <b>Input</b>                                  |  |                    |           |           |           |           |
| Maximum voltage per input <sup>1</sup>        | V  | 750                | 750       | 750       | 750       | 750       |
| Maximum current (Imp) per input <sup>2</sup>  | A  | 12.3               | 12.3      | 12.3      | 12.3      | 12.3      |
| Maximum short-circuit current (Isc) per input | A  | 13                 | 13        | 13        | 13        | 13        |
| MPP tracking voltage range                    | V  | 190 - 700          | 190 - 700 | 190 - 700 | 190 - 700 | 190 - 700 |
| Startup voltage per input                     | V  | 400                | 400       | 400       | 400       | 400       |
| Number of inputs                              |  | 2                  | 2         | 2         | 2         | 2         |
| <b>Output</b>                                 |  |                    |           |           |           |           |
| Output voltage range                          | V  | 0 - 650            | 0 - 675   | 0 - 700   | 0 - 725   | 0 - 750   |
| Output voltage at full power                  | V  | 570                | 595       | 620       | 645       | 670       |
| Output voltage at zero power                  | V  | 650                | 675       | 700       | 725       | 750       |
| Maximum output current                        | A  | 12                 | 12        | 12        | 12        | 12        |
| Maximum continuous output power               | kWdc   | 6.6                | 6.9       | 7.2       | 7.5       | 7.8       |
| Efficiency (max / CEC / Euro)                 | %  | 99.5 / 99.3 / 99.2 |           |           |           |           |
| <b>Mechanical</b>                             |  |                    |           |           |           |           |
| Input & output connector                      | Amphenol H4  |                    |           |           |           |           |
| Dimensions                                    | 10.71" x 8.66" x 3.94"<br>(272 mm x 220 mm x 100 mm)   |                    |           |           |           |           |
| Weight  | 9.0 lbs. (4.1 kg)  |                    |           |           |           |           |
| Ambient temperature operating range           | -40 °F to +122 °F<br>(-40 °C to +50 °C)  |                    |           |           |           |           |
| Cooling                                       | Convection   |                    |           |           |           |           |
| <b>Environmental</b>                          |  |                    |           |           |           |           |
| Environmental category                        | Outdoor  |                    |           |           |           |           |
| Pollution degree                              | 2  |                    |           |           |           |           |
| Maximum operating altitude <sup>3</sup>       | 9843 ft (3000 m)   |                    |           |           |           |           |
| Overvoltage category                          | OVII   |                    |           |           |           |           |
| Ingress protection                            | IP66 / 4X  |                    |           |           |           |           |
| <b>General</b>                                |  |                    |           |           |           |           |
| Compliance                                    | ETL to UL 1741;<br>IEC 61000-6-1, 61000-6-3, 62109; CE;<br>Giteki 2-1-19; FCC Part 15, class A |                    |           |           |           |           |

1. Voc at coldest design temp. Follow Ampt's design guidelines to determine the number of modules per input and max. system voltage.
2. Maximum Imp of modules on the input at standard test condition (STC) - irradiation level of 1000 W/m<sup>2</sup> at 25°C.
3. Optimizer derates above this altitude.