

ATMOCE

Data Sheet

# M-Combiner PRO

MC100PRO-S / MC100PRO-T





# Key Features

## Reliability

- IP65 indoor & outdoor protection
- 0 ms seamless switching

## Scalability

- Pre-installed & pre-wired for easy installation
- Diesel generator and 3rd-party PV compatibility

## Safety

- Reinforced insulation for improved safety
- Cybersecure communication architecture

## Smart

- Remote home energy management
- Bi-directional device-cloud communication





| Items                                  | Unit            | MC100PRO-T                                                   | MC100PRO-S                                   |
|----------------------------------------|-----------------|--------------------------------------------------------------|----------------------------------------------|
| <b>What's in the Combiner Pro</b>      |                 |                                                              |                                              |
| M-Gateway                              |                 |                                                              | 1 × MG100                                    |
| M-Relay                                |                 | 1 × MR100-T                                                  | 1 × MR100-S                                  |
| SPD                                    |                 | 1 × unit, In: 20 kA, 4-pole                                  | 1 × unit, In: 20 kA, 2-pole                  |
| SPD breaker                            |                 | /                                                            | 1 × unit, 25 A, 2-pole                       |
| Gateway breaker                        |                 | 1 × unit, 10 A, 4-pole                                       | 1 × unit, 10 A, 2-pole                       |
| PV breaker <sup>a</sup>                |                 | 2 × unit, 20 A, 4-pole                                       | 3 × units, 20 A, 2-pole                      |
| Battery breaker                        |                 | 1 × unit, 63 A, 4-pole                                       | 1× unit, 63 A, 2-pole                        |
| Backup load breaker                    |                 | 1 × unit, 63 A, 3-pole                                       | 1 x unit,63 A, 2-pole                        |
| Non-backup terminal                    |                 | 1 × unit, 63 A, 4-pole                                       | 1 × unit, 63 A, 2-pole                       |
| Grid breaker                           |                 | 1 × unit, 63 A, 4-pole                                       | 1 × unit, 63 A, 2-pole                       |
| PV CT                                  |                 | 1 × three phase 80A CT                                       | 2 × 80 A CTs, accurate up to 0.5%            |
| Battery CT                             |                 | 1 × three phase 80A CT                                       | 1 × 80 A CTs, accurate up to 0.5%            |
| Consumption CT interface               |                 | 1 × three phase 80A CT                                       | 1 × CT signal interface, accurate up to 0.5% |
| Backup contactor                       |                 |                                                              | 1 x unit                                     |
| Backup controller                      |                 |                                                              | 1 × unit                                     |
| RCD                                    |                 | 1 × unit, 300 mA, 4-pole                                     | 1 × unit, 300mA                              |
| <b>Electrical parameters</b>           |                 |                                                              |                                              |
| Grid setup                             |                 | Three-phase                                                  | Single-phase                                 |
| Nominal voltage                        | V               | 380/400/415 Va.c.                                            | 220/230/240 Va.c.                            |
| Operating voltage range (L to N)       | V               |                                                              | 176 to 276                                   |
| Nominal frequency                      | Hz              |                                                              | 50/60                                        |
| Extended frequency range               | Hz              |                                                              | 45 to 65                                     |
| Overvoltage category                   |                 | III                                                          | III                                          |
| <b>Mechanical parameters</b>           |                 |                                                              |                                              |
| Dimensions (W × H × D)                 | mm              | 660 × 500× 135                                               | 389 × 616 × 127                              |
| Weight                                 | kg              | 17.5                                                         | 9.6                                          |
| Ambient temperature range <sup>a</sup> | °C              |                                                              | -30 to 50                                    |
| Storage temperature range              | °C              |                                                              | -40 to 70                                    |
| Relative humidity range                | %               |                                                              | 4 to 100, condensing                         |
| Cooling                                |                 |                                                              | Natural convection                           |
| Enclosure environmental rating         |                 |                                                              | Outdoor, IP65                                |
| Wire sizes <sup>b</sup>                | mm <sup>2</sup> | PV side: 4 to 6   Grid side: 6 to 16   Battery side: 6 to 16 |                                              |
| Communication cable sizes              | mm <sup>2</sup> |                                                              | 0.25 to 0.75                                 |
| Noise                                  | dB              |                                                              | <25                                          |
| Altitude                               | m               |                                                              | 3000                                         |

a. No current derating from -30°C to 40°C ambient temperature. From 40°C to 50°C ambient temperature, the PV and battery currents are linearly derated from 40 A to 30 A, while the grid and backup currents are linearly derated from 50 A to 40 A.

b. Refer to the local electrical regulations to select the cable size.



| Items                    | Unit        | MC100PRO-T                                    | MC100PRO-S |
|--------------------------|-------------|-----------------------------------------------|------------|
| Protection class         |             | II                                            |            |
| Pollution degree         |             | III                                           |            |
| Communication            |             | Wi-Fi, BLE, ETH, CAN, RS485, Digital I/O      |            |
| Communication interfaces |             |                                               |            |
| PV side                  | Wireless    | Support                                       |            |
| Battery side             | CAN         | Support                                       |            |
| Load side                | ETH         | 1 × interface, 100 Mb/10 Mb auto-adaptability |            |
|                          | Digital I/O | 4 × 12 V DO, 3 × DI                           |            |
|                          | RS485       | 1 × interface                                 |            |
| ATMOCE-Cloud             | Wi-Fi       | 2.4 GHz                                       |            |
|                          | ETH         | 1 × interface, 100 Mb/10 Mb auto-adaptability |            |
| Atmozen app              | BLE         | 2.4 GHz                                       |            |
| Generator                | Digital I/O | 1 × DO, 1 x DI                                |            |
|                          | RS485       | 1 × interface                                 |            |
| Indicators               |             | 5 × LEDs (3 for gateway & 2 for backup part)  |            |
| Compliance               |             |                                               |            |
| Safety                   |             | EN 61439-1/-2                                 |            |
| Health                   |             | EN 62311                                      |            |
| EMC                      |             | EN 301 489-1/-17, EN IEC 61000-6-1/-3         |            |
| Radio spectrum           |             | EN 300 328                                    |            |