



Smart  
connections.

Data sheet

PIKO 3.0

3.0

## Technical data PIKO 3.0



- Single-phase feed-in
- Transformerless converting
- Integrated electronic DC switch
- Broad input voltage range
- Standard integrated communication package with data logger, web server, solar portal and the following interfaces: 2x Ethernet, RS485, S0, 4x analogue inputs (e.g. for ripple control receivers or PIKO Sensor)
- Integrated switch contact for self-consumption optimisation
- Smart Home and EEBus compatible

### Input side (DC)

|                                                                                              |     |      |
|----------------------------------------------------------------------------------------------|-----|------|
| Max. PV power                                                                                | kWp | 4.3  |
| Rated input voltage ( $V_{DC,r}$ )                                                           | V   | 400  |
| Max. input voltage ( $V_{DCmax}$ )                                                           | V   | 900  |
| Min. input voltage ( $V_{DCmin}$ )                                                           | V   | 160  |
| Start input voltage ( $V_{DCstart}$ )                                                        | V   | 180  |
| Max. MPP voltage ( $V_{MPPmax}$ )                                                            | V   | 730  |
| Min. MPP voltage with DC rated output in single-tracker operation ( $V_{MPPmin}$ )           | V   | 270  |
| Min. MPP voltage with DC rated output in dual-tracker or parallel operation ( $V_{MPPmin}$ ) |     | –    |
| Max. input current ( $I_{DCmax}$ )                                                           | A   | 12.5 |
| Max. input current with parallel connection                                                  | A   | –    |
| Number of DC inputs                                                                          |     | 1    |
| Number of independent MPP trackers                                                           |     | 1    |

### Output side (AC)

|                                                         |     |               |
|---------------------------------------------------------|-----|---------------|
| Rated output, $\cos \varphi = 1$ ( $P_{AC,r}$ )         | kW  | 3             |
| Max. output apparent power $\cos \varphi, adj$          | kVA | 3             |
| Max. output voltage ( $V_{ACmax}$ )                     | V   | 264.5         |
| Min. output voltage ( $V_{ACmin}$ )                     | V   | 184           |
| Rated output current                                    | A   | 13            |
| Max. output current ( $I_{ACmax}$ )                     | A   | 13.7          |
| Short-circuit current (peak / RMS)                      | A   | 26.4 / 16.9   |
| Grid connection                                         |     | 1N~, AC, 230V |
| Rated frequency ( $f_r$ )                               | Hz  | 50            |
| Max. grid frequency ( $f_{max}$ )                       | Hz  | 51.5          |
| Min. grid frequency ( $f_{min}$ )                       | Hz  | 47.5          |
| Setting range of the power factor $\cos \varphi_{AC,r}$ |     | 0.9...1...0.9 |
| Power factor for rated power ( $\cos \varphi_{AC,r}$ )  |     | 1             |
| Max. total harmonic distortion                          | %   | $\leq 3$      |

### Device properties

|                     |   |     |
|---------------------|---|-----|
| Standby consumption | W | 1.7 |
|---------------------|---|-----|

### Degree of efficiency

|                           |   |      |
|---------------------------|---|------|
| Max. efficiency           | % | 96.2 |
| European efficiency rate  | % | 95.5 |
| MPP adjustment efficiency | % | 99.9 |

### Warranty

|                                     |  |       |
|-------------------------------------|--|-------|
| Warranty (years)                    |  | 5     |
| Warranty extension optional (years) |  | 10/20 |

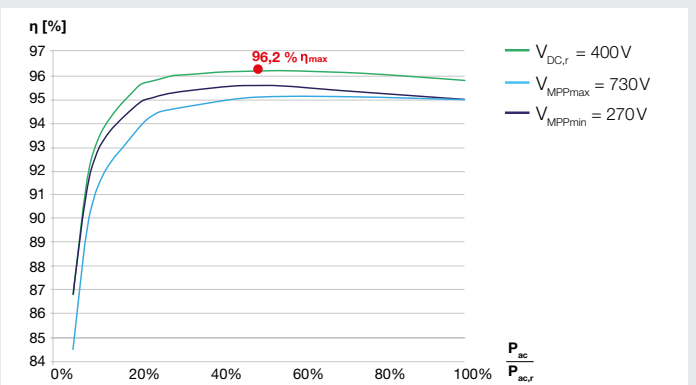
### System data

|                                                                       |                   |                        |
|-----------------------------------------------------------------------|-------------------|------------------------|
| Topology: Without galvanic separation - transformerless               |                   | ✓                      |
| Internal protection according to IEC 60529 housing / fan              |                   | IP 65 / IP 55          |
| Protection class according to IEC 62103                               |                   | I                      |
| Surge category according to IEC 60664-1 Input side (PV generator)     |                   | II                     |
| Surge category according to IEC 60664-1 Output side (grid connection) |                   | III                    |
| Pollution Degree                                                      |                   | 4                      |
| Environmental category (outdoor installation)                         |                   | ✓                      |
| Environmental category (interior installation)                        |                   | ✓                      |
| UV resistance                                                         |                   | ✓                      |
| Minimum cable cross-section of AC connecting line                     | mm <sup>2</sup>   | 2.5                    |
| Minimum cable cross-section of DC connecting line                     | mm <sup>2</sup>   | 4                      |
| Max. fusing on output side                                            |                   | B16, C16               |
| Operator protection (EN 62109-2)                                      |                   | RCMU/RCCB type B       |
| Electronic disconnection device integrated                            |                   | ✓                      |
| Height                                                                | mm                | 385 (15.2 in)          |
| Width                                                                 | mm                | 500 (19.7 in)          |
| Depth                                                                 | mm                | 222 (8.7 in)           |
| Weight                                                                | kg                | 22 (48.5 lb)           |
| Cooling principle - convection                                        |                   | ✓                      |
| Cooling principle - regulated fans                                    |                   | –                      |
| Max. air throughput                                                   | m <sup>3</sup> /h | –                      |
| Max. noise emission                                                   | dBA               | < 33                   |
| Ambient temperature                                                   | °C                | -20...60 (-4...140 °F) |
| Max. installation altitude above sea level                            | m                 | 2000 (6562 ft)         |
| Relative humidity                                                     | %                 | 4...100                |
| Connection technology at input side - MC 4                            |                   | ✓                      |
| Connection technology at output side - spring-loaded terminal strip   |                   | ✓                      |

### Interfaces

|                          |  |   |
|--------------------------|--|---|
| Ethernet RJ45            |  | 2 |
| RS485                    |  | 1 |
| S0                       |  | 1 |
| Analogue inputs          |  | 4 |
| PIKO BA Sensor Interface |  | – |

### Efficiency rate characteristic curves PIKO 3.0



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### Contact

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Data sheet

PIKO 4.2

4.2

## Technical data PIKO 4.2



- 3-phase feed-in
- Transformerless converting
- Integrated electronic DC switch
- Broad input voltage range
- Standard integrated communication package with data logger, web server, solar portal and the following interfaces: 2x Ethernet, RS485, S0, 4x analogue inputs (e.g. for ripple control receivers or PIKO Sensor)
- PIKO BA Sensor can be connected for the measurement of building consumption and for dynamic active power control
- Integrated switch contact for self-consumption optimisation
- Smart Home and EEBus compatible

### Input side (DC)

|                                                                              |     |      |
|------------------------------------------------------------------------------|-----|------|
| Max. PV power ( $\cos \varphi = 1$ )                                         | kWp | 4.6  |
| Rated input voltage ( $V_{DC,r}$ )                                           | V   | 680  |
| Max. input voltage ( $V_{DCmax}$ )                                           | V   | 1000 |
| Min. input voltage ( $V_{DCmin}$ )                                           | V   | 160  |
| Start-up input voltage ( $V_{DCstart}$ )                                     | V   | 180  |
| Max. MPP voltage ( $V_{MPPmax}$ )                                            | V   | 800  |
| Min. MPP voltage for DC rated output in single tracker mode ( $V_{MPPmin}$ ) | V   | 400  |
| Min. MPP voltage for DC rated output in two-tracker mode ( $V_{MPPmin}$ )    | V   | –    |
| Max. input current ( $I_{DCmax}$ )                                           | A   | 11   |
| Max. input current with parallel connection                                  | A   | –    |
| Number of DC inputs                                                          |     | 1    |
| Number of independent MPP trackers                                           |     | 1    |

### Output side (AC)

|                                                         |     |                 |
|---------------------------------------------------------|-----|-----------------|
| Rated output, $\cos \varphi = 1$ ( $P_{AC,r}$ )         | kW  | 4.2             |
| Max. output apparent power, $\cos \varphi, adj$         | kVA | 4.2             |
| Max. output voltage ( $V_{ACmax}$ )                     | V   | 264.5           |
| Min. output voltage ( $V_{ACmin}$ )                     | V   | 184             |
| Rated output current                                    | A   | 6.1             |
| Max. output current ( $I_{ACmax}$ )                     | A   | 6.1             |
| Short-circuit current (peak / RMS)                      | A   | 9.5 / 6.7       |
| Grid connection                                         |     | 3N~, AC, 400V   |
| Rated frequency ( $f_r$ )                               | Hz  | 50              |
| Max. grid frequency ( $f_{max}$ )                       | Hz  | 51.5            |
| Min. grid frequency ( $f_{min}$ )                       | Hz  | 47.5            |
| Setting range of the power factor $\cos \varphi_{AC,r}$ |     | 0.80...1...0.80 |
| Power factor for rated power ( $\cos \varphi_{AC,r}$ )  |     | 1               |
| Max. total harmonic distortion                          | %   | 3               |

### Device properties

|                     |   |     |
|---------------------|---|-----|
| Standby consumption | W | 1,8 |
|---------------------|---|-----|

### Efficiency

|                           |   |      |
|---------------------------|---|------|
| Max. efficiency           | % | 97.5 |
| European efficiency       | % | 96.1 |
| MPP adjustment efficiency | % | 99.9 |

### Warranty

|                                     |  |       |
|-------------------------------------|--|-------|
| Warranty (years)                    |  | 5     |
| Warranty extension optional (years) |  | 10/20 |

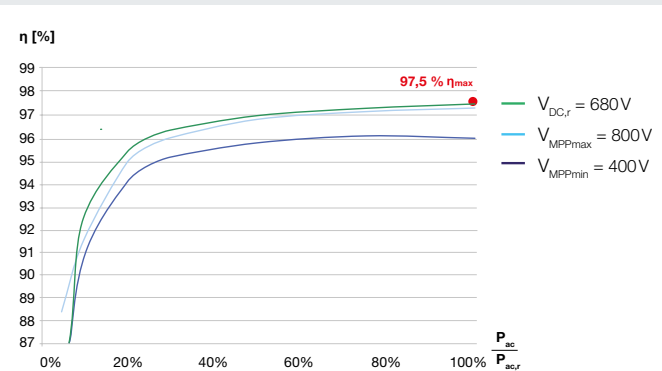
### System data

|                                                                             |                   |                        |
|-----------------------------------------------------------------------------|-------------------|------------------------|
| Topology: Without galvanic separation - transformerless                     |                   | ✓                      |
| Internal protection according to IEC 60529 housing / fan                    |                   | IP 65 / IP 55          |
| Protective class according to IEC 62103                                     |                   | I                      |
| Overvoltage category according to IEC 60664-1 Input side (PV generator)     |                   | II                     |
| Overvoltage category according to IEC 60664-1 Output side (grid connection) |                   | III                    |
| Pollution Degree                                                            |                   | 4                      |
| Environmental category (outdoor installation)                               |                   | ✓                      |
| Environmental category (interior installation)                              |                   | ✓                      |
| UV resistance                                                               |                   | ✓                      |
| Minimum cable cross-section of AC connecting line                           | mm <sup>2</sup>   | 1,5                    |
| Minimum cable cross-section of DC connecting line                           | mm <sup>2</sup>   | 4                      |
| Max. fusing on output side                                                  |                   | B16, C16               |
| Operator protection (EN 62109-2)                                            |                   | RCMU/RCCB Typ B        |
| Electronic disconnection device integrated                                  |                   | ✓                      |
| Height                                                                      | mm                | 385 (15.16 in)         |
| Width                                                                       | mm                | 500 (19.69 in)         |
| Depth                                                                       | mm                | 236 (9.29 in)          |
| Weight                                                                      | kg                | 24 (52.91 lb)          |
| Cooling principle - convection                                              |                   | ✓                      |
| Cooling principle - regulated fans                                          |                   | –                      |
| Max. air throughput                                                         | m <sup>3</sup> /h | –                      |
| Max. noise emission                                                         | dBA               | 43                     |
| Ambient temperature                                                         | °C                | -20...60 (-4...140 °F) |
| Max. installation altitude above sea level                                  | m                 | 2000 (6562 ft)         |
| Relative humidity                                                           | %                 | 4...100                |
| Connection technology at input side - MC 4                                  |                   | ✓                      |
| Connection technology at output side - spring-loaded terminal strip         |                   | ✓                      |

### Interfaces

|                          |  |   |
|--------------------------|--|---|
| Ethernet RJ45            |  | 2 |
| RS485                    |  | 1 |
| S0                       |  | 1 |
| Analogue inputs          |  | 4 |
| PIKO BA Sensor Interface |  | 1 |

### Efficiency characteristics of PIKO 4.2



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Data sheet

PIKO 4.6

4.6

# Technical data PIKO 4.6



- 3-phase feed-in
- Transformerless converting
- Integrated electronic DC switch
- Broad input voltage range
- Standard integrated communication package with data logger, web server, solar portal and the following interfaces: 2x Ethernet, RS485, S0, 4x analogue inputs (e.g. for ripple control receivers or PIKO Sensor)
- PIKO BA Sensor can be connected for the measurement of building consumption and for dynamic active power control
- Integrated switch contact for self-consumption optimisation
- Smart Home and EEBus compatible

## Input side (DC)

|                                                                              |     |      |
|------------------------------------------------------------------------------|-----|------|
| Max. PV power ( $\cos \varphi = 1$ )                                         | kWp | 5.1  |
| Rated input voltage ( $V_{DC,r}$ )                                           | V   | 680  |
| Max. input voltage ( $V_{DCmax}$ )                                           | V   | 1000 |
| Min. input voltage ( $V_{DCmin}$ )                                           | V   | 160  |
| Start-up input voltage ( $V_{DCstart}$ )                                     | V   | 180  |
| Max. MPP voltage ( $V_{MPPmax}$ )                                            | V   | 800  |
| Min. MPP voltage for DC rated output in single tracker mode ( $V_{MPPmin}$ ) | V   | 435  |
| Min. MPP voltage for DC rated output in two-tracker mode ( $V_{MPPmin}$ )    | V   | 265  |
| Max. input current ( $I_{DCmax}$ )                                           | A   | 11   |
| Max. input current with parallel connection (input DC1+DC2)                  | A   | 22   |
| Number of DC inputs                                                          |     | 2    |
| Number of independent MPP trackers                                           |     | 2    |

## Output side (AC)

|                                                         |     |                 |
|---------------------------------------------------------|-----|-----------------|
| Rated output, $\cos \varphi = 1$ ( $P_{AC,r}$ )         | kW  | 4.6             |
| Max. output apparent power, $\cos \varphi, adj$         | kVA | 4.6             |
| Max. output voltage ( $V_{ACmax}$ )                     | V   | 264.5           |
| Min. output voltage ( $V_{ACmin}$ )                     | V   | 184             |
| Rated output current                                    | A   | 6.7             |
| Max. output current ( $I_{ACmax}$ )                     | A   | 6.7             |
| Short-circuit current (peak / RMS)                      | A   | 12.5 / 8.8      |
| Grid connection                                         |     | 3N~, AC, 400V   |
| Rated frequency ( $f_r$ )                               | Hz  | 50              |
| Max. grid frequency ( $f_{max}$ )                       | Hz  | 51.5            |
| Min. grid frequency ( $f_{min}$ )                       | Hz  | 47.5            |
| Setting range of the power factor $\cos \varphi_{AC,r}$ |     | 0.80...1...0.80 |
| Power factor for rated power ( $\cos \varphi_{AC,r}$ )  |     | 1               |
| Max. total harmonic distortion                          | %   | 3               |

## Device properties

|                     |   |     |
|---------------------|---|-----|
| Standby consumption | W | 1,8 |
|---------------------|---|-----|

## Efficiency

|                           |   |      |
|---------------------------|---|------|
| Max. efficiency           | % | 97.7 |
| European efficiency       | % | 96.3 |
| MPP adjustment efficiency | % | 99.9 |

## Warranty

|                                     |  |       |
|-------------------------------------|--|-------|
| Warranty (years)                    |  | 5     |
| Warranty extension optional (years) |  | 10/20 |

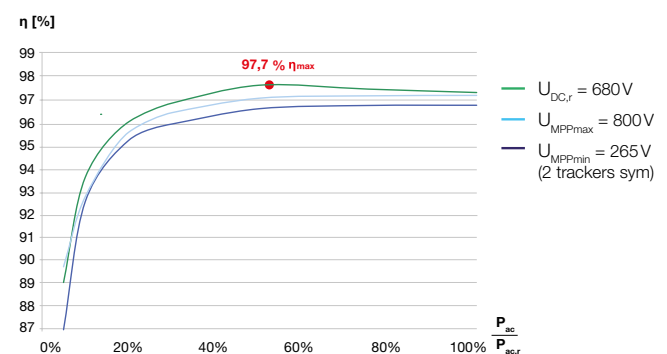
## System data

|                                                                             |                   |                        |
|-----------------------------------------------------------------------------|-------------------|------------------------|
| Topology: Without galvanic separation - transformerless                     |                   | ✓                      |
| Internal protection according to IEC 60529 housing / fan                    |                   | IP 65 / IP 55          |
| Protective class according to IEC 62103                                     |                   | I                      |
| Overvoltage category according to IEC 60664-1 Input side (PV generator)     |                   | II                     |
| Overvoltage category according to IEC 60664-1 Output side (grid connection) |                   | III                    |
| Pollution Degree                                                            |                   | 4                      |
| Environmental category (outdoor installation)                               |                   | ✓                      |
| Environmental category (interior installation)                              |                   | ✓                      |
| UV resistance                                                               |                   | ✓                      |
| Minimum cable cross-section of AC connecting line                           | mm <sup>2</sup>   | 1.5                    |
| Minimum cable cross-section of DC connecting line                           | mm <sup>2</sup>   | 4                      |
| Max. fusing on output side                                                  |                   | B16, C16               |
| Operator protection (EN 62109-2)                                            |                   | RCMU/RCCB Typ B        |
| Electronic disconnection device integrated                                  |                   | ✓                      |
| Height                                                                      | mm                | 385 (15.16 in)         |
| Width                                                                       | mm                | 500 (19.69 in)         |
| Depth                                                                       | mm                | 236 (9.29 in)          |
| Weight                                                                      | kg                | 25.5 (56.22 lb)        |
| Cooling principle - convection                                              |                   | -                      |
| Cooling principle - regulated fans                                          |                   | ✓                      |
| Max. air throughput                                                         | m <sup>3</sup> /h | 84                     |
| Max. noise emission                                                         | dBA               | 52                     |
| Ambient temperature                                                         | °C                | -20...60 (-4...140 °F) |
| Max. installation altitude above sea level                                  | m                 | 2000 (6562 ft)         |
| Relative humidity                                                           | %                 | 4...100                |
| Connection technology at input side - MC 4                                  |                   | ✓                      |
| Connection technology at output side - spring-loaded terminal strip         |                   | ✓                      |

## Interfaces

|                          |  |   |
|--------------------------|--|---|
| Ethernet RJ45            |  | 2 |
| RS485                    |  | 1 |
| S0                       |  | 1 |
| Analogue inputs          |  | 4 |
| PIKO BA Sensor Interface |  | 1 |

## Efficiency characteristics of PIKO 4.6



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## Contact

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Data sheet

PIKO 5.5

5.5

# Technical data PIKO 5.5



- 3-phase feed-in
- Transformerless converting
- Integrated electronic DC switch
- Broad input voltage range
- Standard integrated communication package with data logger, web server, solar portal and the following interfaces: 2x Ethernet, RS485, S0, 4x analogue inputs (e.g. for ripple control receivers or PIKO Sensor)
- PIKO BA Sensor can be connected for the measurement of building consumption and for dynamic active power control
- Integrated switch contact for self-consumption optimisation
- Smart Home and EEBus compatible

## Input side (DC)

|                                                                              |     |      |
|------------------------------------------------------------------------------|-----|------|
| Max. PV power ( $\cos \varphi = 1$ )                                         | kWp | 6.1  |
| Rated input voltage ( $V_{DC,r}$ )                                           | V   | 680  |
| Max. input voltage ( $V_{DCmax}$ )                                           | V   | 1000 |
| Min. input voltage ( $V_{DCmin}$ )                                           | V   | 160  |
| Start-up input voltage ( $V_{DCstart}$ )                                     | V   | 180  |
| Max. MPP voltage ( $V_{MPPmax}$ )                                            | V   | 800  |
| Min. MPP voltage for DC rated output in single tracker mode ( $V_{MPPmin}$ ) | V   | 530  |
| Min. MPP voltage for DC rated output in two-tracker mode ( $V_{MPPmin}$ )    | V   | 265  |
| Max. input current ( $I_{DCmax}$ )                                           | A   | 11   |
| Max. input current with parallel connection (input DC1+DC2)                  | A   | 22   |
| Number of DC inputs                                                          |     | 2    |
| Number of independent MPP trackers                                           |     | 2    |

## Output side (AC)

|                                                         |     |                 |
|---------------------------------------------------------|-----|-----------------|
| Rated output, $\cos \varphi = 1$ ( $P_{AC,r}$ )         | kW  | 5.5             |
| Max. output apparent power, $\cos \varphi, adj$         | kVA | 5.5             |
| Max. output voltage ( $V_{ACmax}$ )                     | V   | 264.5           |
| Min. output voltage ( $V_{ACmin}$ )                     | V   | 184             |
| Rated output current                                    | A   | 8               |
| Max. output current ( $I_{ACmax}$ )                     | A   | 8               |
| Short-circuit current (peak / RMS)                      | A   | 12.5 / 8.8      |
| Grid connection                                         |     | 3N~, AC, 400V   |
| Rated frequency ( $f_r$ )                               | Hz  | 50              |
| Max. grid frequency ( $f_{max}$ )                       | Hz  | 51.5            |
| Min. grid frequency ( $f_{min}$ )                       | Hz  | 47.5            |
| Setting range of the power factor $\cos \varphi_{AC,r}$ |     | 0.80...1...0.80 |
| Power factor for rated power ( $\cos \varphi_{AC,r}$ )  |     | 1               |
| Max. total harmonic distortion                          | %   | 3               |

## Device properties

|                     |   |     |
|---------------------|---|-----|
| Standby consumption | W | 1,8 |
|---------------------|---|-----|

## Efficiency

|                           |   |      |
|---------------------------|---|------|
| Max. efficiency           | % | 97.7 |
| European efficiency       | % | 96.3 |
| MPP adjustment efficiency | % | 99.9 |

## Warranty

|                                     |  |       |
|-------------------------------------|--|-------|
| Warranty (years)                    |  | 5     |
| Warranty extension optional (years) |  | 10/20 |

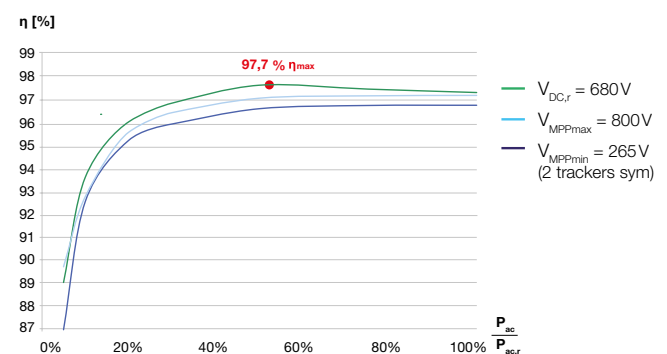
## System data

|                                                                             |                   |                        |
|-----------------------------------------------------------------------------|-------------------|------------------------|
| Topology: Without galvanic separation - transformerless                     |                   | ✓                      |
| Internal protection according to IEC 60529 housing / fan                    |                   | IP 65 / IP 55          |
| Protective class according to IEC 62103                                     |                   | I                      |
| Overvoltage category according to IEC 60664-1 Input side (PV generator)     |                   | II                     |
| Overvoltage category according to IEC 60664-1 Output side (grid connection) |                   | III                    |
| Pollution Degree                                                            |                   | 4                      |
| Environmental category (outdoor installation)                               |                   | ✓                      |
| Environmental category (interior installation)                              |                   | ✓                      |
| UV resistance                                                               |                   | ✓                      |
| Minimum cable cross-section of AC connecting line                           | mm <sup>2</sup>   | 1,5                    |
| Minimum cable cross-section of DC connecting line                           | mm <sup>2</sup>   | 4                      |
| Max. fusing on output side                                                  |                   | B16, C16               |
| Operator protection (EN 62109-2)                                            |                   | RCMU/RCCB Typ B        |
| Electronic disconnection device integrated                                  |                   | ✓                      |
| Height                                                                      | mm                | 385 (15.16 in)         |
| Width                                                                       | mm                | 500 (19.69 in)         |
| Depth                                                                       | mm                | 236 (9.29 in)          |
| Weight                                                                      | kg                | 25.5 (56.22 lb)        |
| Cooling principle - convection                                              |                   | -                      |
| Cooling principle - regulated fans                                          |                   | ✓                      |
| Max. air throughput                                                         | m <sup>3</sup> /h | 84                     |
| Max. noise emission                                                         | dBA               | 52                     |
| Ambient temperature                                                         | °C                | -20...60 (-4...140 °F) |
| Max. installation altitude above sea level                                  | m                 | 2000 (6562 ft)         |
| Relative humidity                                                           | %                 | 4...100                |
| Connection technology at input side - MC 4                                  |                   | ✓                      |
| Connection technology at output side - spring-loaded terminal strip         |                   | ✓                      |

## Interfaces

|                          |  |   |
|--------------------------|--|---|
| Ethernet RJ45            |  | 2 |
| RS485                    |  | 1 |
| S0                       |  | 1 |
| Analogue inputs          |  | 4 |
| PIKO BA Sensor Interface |  | 1 |

## Efficiency characteristics of PIKO 5.5



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## Contact

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Data sheet

PIKO 7.0

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# Technical data PIKO 7.0



- 3-phase feed-in
- Transformerless converting
- Integrated electronic DC switch
- Broad input voltage range
- Standard integrated communication package with data logger, web server, solar portal and the following interfaces: 2x Ethernet, RS485, S0, 4x analogue inputs (e.g. for ripple control receivers or PIKO Sensor)
- PIKO BA Sensor can be connected for the measurement of building consumption and for dynamic active power control
- Integrated switch contact for self-consumption optimisation
- Smart Home and EEBus compatible

## Input side (DC)

|                                                                              |     |      |
|------------------------------------------------------------------------------|-----|------|
| Max. PV power ( $\cos \varphi = 1$ )                                         | kWp | 7.7  |
| Rated input voltage ( $V_{DC,r}$ )                                           | V   | 680  |
| Max. input voltage ( $V_{DCmax}$ )                                           | V   | 1000 |
| Min. input voltage ( $V_{DCmin}$ )                                           | V   | 160  |
| Start-up input voltage ( $V_{DCstart}$ )                                     | V   | 180  |
| Max. MPP voltage ( $V_{MPPmax}$ )                                            | V   | 800  |
| Min. MPP voltage for DC rated output in single tracker mode ( $V_{MPPmin}$ ) | V   | 660  |
| Min. MPP voltage for DC rated output in two-tracker mode ( $V_{MPPmin}$ )    | V   | 330  |
| Max. input current ( $I_{DCmax}$ )                                           | A   | 11   |
| Max. input current with parallel connection (input DC1+DC2)                  | A   | 22   |
| Number of DC inputs                                                          |     | 2    |
| Number of independent MPP trackers                                           |     | 2    |

## Output side (AC)

|                                                         |     |                 |
|---------------------------------------------------------|-----|-----------------|
| Rated output, $\cos \varphi = 1$ ( $P_{AC,r}$ )         | kW  | 7.0             |
| Max. output apparent power, $\cos \varphi, adj$         | kVA | 7.0             |
| Max. output voltage ( $V_{ACmax}$ )                     | V   | 264,5           |
| Min. output voltage ( $V_{ACmin}$ )                     | V   | 184             |
| Rated output current                                    | A   | 10.2            |
| Max. output current ( $I_{ACmax}$ )                     | A   | 10.2            |
| Short-circuit current (peak / RMS)                      | A   | 15.8 / 11.2     |
| Grid connection                                         |     | 3N~, AC, 400V   |
| Rated frequency ( $f_r$ )                               | Hz  | 50              |
| Max. grid frequency ( $f_{max}$ )                       | Hz  | 51.5            |
| Min. grid frequency ( $f_{min}$ )                       | Hz  | 47.5            |
| Setting range of the power factor $\cos \varphi_{AC,r}$ |     | 0.80...1...0.80 |
| Power factor for rated power ( $\cos \varphi_{AC,r}$ )  |     | 1               |
| Max. total harmonic distortion                          | %   | 3               |

## Device properties

|                     |   |     |
|---------------------|---|-----|
| Standby consumption | W | 1,8 |
|---------------------|---|-----|

## Efficiency

|                           |   |      |
|---------------------------|---|------|
| Max. efficiency           | % | 97.6 |
| European efficiency       | % | 96.5 |
| MPP adjustment efficiency | % | 99.9 |

## Warranty

|                                     |  |       |
|-------------------------------------|--|-------|
| Warranty (years)                    |  | 5     |
| Warranty extension optional (years) |  | 10/20 |

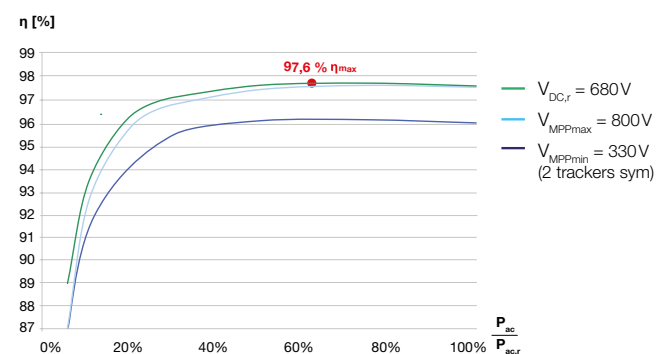
## System data

|                                                                             |                   |                        |
|-----------------------------------------------------------------------------|-------------------|------------------------|
| Topology: Without galvanic separation - transformerless                     |                   | ✓                      |
| Internal protection according to IEC 60529 housing / fan                    |                   | IP 65 / IP 55          |
| Protective class according to IEC 62103                                     |                   | I                      |
| Overvoltage category according to IEC 60664-1 Input side (PV generator)     |                   | II                     |
| Overvoltage category according to IEC 60664-1 Output side (grid connection) |                   | III                    |
| Pollution Degree                                                            |                   | 4                      |
| Environmental category (outdoor installation)                               |                   | ✓                      |
| Environmental category (interior installation)                              |                   | ✓                      |
| UV resistance                                                               |                   | ✓                      |
| Minimum cable cross-section of AC connecting line                           | mm <sup>2</sup>   | 2,5                    |
| Minimum cable cross-section of DC connecting line                           | mm <sup>2</sup>   | 4                      |
| Max. fusing on output side                                                  |                   | B16, C16               |
| Operator protection (EN 62109-2)                                            |                   | RCMU/RCCB Typ B        |
| Electronic disconnection device integrated                                  |                   | ✓                      |
| Height                                                                      | mm                | 385 (15.16 in)         |
| Width                                                                       | mm                | 500 (19.69 in)         |
| Depth                                                                       | mm                | 236 (9.29 in)          |
| Weight                                                                      | kg                | 26.5 (58.42 lb)        |
| Cooling principle - convection                                              |                   | -                      |
| Cooling principle - regulated fans                                          |                   | ✓                      |
| Max. air throughput                                                         | m <sup>3</sup> /h | 84                     |
| Max. noise emission                                                         | dBA               | 52                     |
| Ambient temperature                                                         | °C                | -20...60 (-4...140 °F) |
| Max. installation altitude above sea level                                  | m                 | 2000 (6562 ft)         |
| Relative humidity                                                           | %                 | 4...100                |
| Connection technology at input side - MC 4                                  |                   | ✓                      |
| Connection technology at output side - spring-loaded terminal strip         |                   | ✓                      |

## Interfaces

|                          |  |   |
|--------------------------|--|---|
| Ethernet RJ45            |  | 2 |
| RS485                    |  | 1 |
| S0                       |  | 1 |
| Analogue inputs          |  | 4 |
| PIKO BA Sensor Interface |  | 1 |

## Efficiency characteristics of PIKO 7.0



Smart connections.

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connections.

Data sheet

PIKO 8.5

8.5

## Technical data PIKO 8.5



- 3-phase feed-in
- Transformerless converting
- Integrated electronic DC switch
- Broad input voltage range
- Standard integrated communication package with data logger, web server, solar portal and the following interfaces: 2x Ethernet, RS485, S0, 4x analogue inputs (e.g. for ripple control receivers or PIKO Sensor)
- PIKO BA Sensor can be connected for the measurement of building consumption and for dynamic active power control
- Integrated switch contact for self-consumption optimisation
- Smart Home and EEBus compatible

### Input side (DC)

|                                                                              |     |      |
|------------------------------------------------------------------------------|-----|------|
| Max. PV power ( $\cos \varphi = 1$ )                                         | kWp | 9,4  |
| Rated input voltage ( $V_{DC,r}$ )                                           | V   | 680  |
| Max. input voltage ( $V_{DCmax}$ )                                           | V   | 1000 |
| Min. input voltage ( $V_{DCmin}$ )                                           | V   | 160  |
| Start-up input voltage ( $V_{DCstart}$ )                                     | V   | 180  |
| Max. MPP voltage ( $V_{MPPmax}$ )                                            | V   | 800  |
| Min. MPP voltage for DC rated output in single tracker mode ( $V_{MPPmin}$ ) | V   | -    |
| Min. MPP voltage for DC rated output in two-tracker mode ( $V_{MPPmin}$ )    | V   | 400  |
| Max. input current ( $I_{DCmax}$ )                                           | A   | 11   |
| Max. input current with parallel connection (input DC1+DC2)                  | A   | 22   |
| Number of DC inputs                                                          |     | 2    |
| Number of independent MPP trackers                                           |     | 2    |

### Output side (AC)

|                                                         |     |                 |
|---------------------------------------------------------|-----|-----------------|
| Rated output, $\cos \varphi = 1$ ( $P_{AC,r}$ )         | kW  | 8,5             |
| Max. output apparent power, $\cos \varphi, adj$         | kVA | 8,5             |
| Max. output voltage ( $V_{ACmax}$ )                     | V   | 264,5           |
| Min. output voltage ( $V_{ACmin}$ )                     | V   | 184             |
| Rated output current                                    | A   | 12,3            |
| Max. output current ( $I_{ACmax}$ )                     | A   | 12,5            |
| Short-circuit current (peak / RMS)                      | A   | 17,7 / 12,5     |
| Grid connection                                         |     | 3N~, AC, 400V   |
| Rated frequency ( $f_r$ )                               | Hz  | 50              |
| Max. grid frequency ( $f_{max}$ )                       | Hz  | 51,5            |
| Min. grid frequency ( $f_{min}$ )                       | Hz  | 47,5            |
| Setting range of the power factor $\cos \varphi_{AC,r}$ |     | 0,80...1...0,80 |
| Power factor for rated power ( $\cos \varphi_{AC,r}$ )  |     | 1               |
| Max. total harmonic distortion                          | %   | 3               |

### Device properties

|                     |   |     |
|---------------------|---|-----|
| Standby consumption | W | 1,8 |
|---------------------|---|-----|

### Efficiency

|                           |   |      |
|---------------------------|---|------|
| Max. efficiency           | % | 97,6 |
| European efficiency       | % | 96,5 |
| MPP adjustment efficiency | % | 99,9 |

### Warranty

|                                     |  |       |
|-------------------------------------|--|-------|
| Warranty (years)                    |  | 5     |
| Warranty extension optional (years) |  | 10/20 |

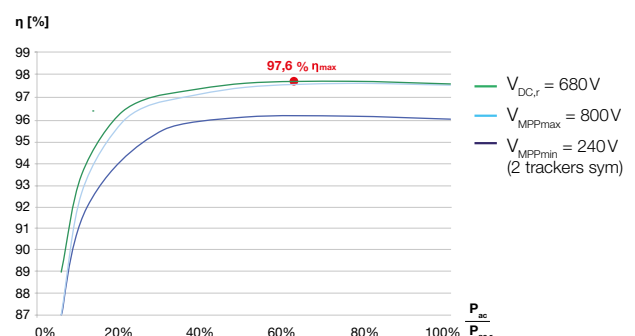
### System data

|                                                                             |                   |                        |
|-----------------------------------------------------------------------------|-------------------|------------------------|
| Topology: Without galvanic separation - transformerless                     |                   | ✓                      |
| Internal protection according to IEC 60529 housing / fan                    |                   | IP 65 / IP 55          |
| Protective class according to IEC 62103                                     |                   | I                      |
| Overvoltage category according to IEC 60664-1 Input side (PV generator)     |                   | II                     |
| Overvoltage category according to IEC 60664-1 Output side (grid connection) |                   | III                    |
| Pollution Degree                                                            |                   | 4                      |
| Environmental category (outdoor installation)                               |                   | ✓                      |
| Environmental category (interior installation)                              |                   | ✓                      |
| UV resistance                                                               |                   | ✓                      |
| Minimum cable cross-section of AC connecting line                           | mm <sup>2</sup>   | 2,5                    |
| Minimum cable cross-section of DC connecting line                           | mm <sup>2</sup>   | 4                      |
| Max. fusing on output side                                                  |                   | B16, C16               |
| Operator protection (EN 62109-2)                                            |                   | RCMU/RCCB Typ B        |
| Electronic disconnection device integrated                                  |                   | ✓                      |
| Height                                                                      | mm                | 385 (15.16 in)         |
| Width                                                                       | mm                | 500 (19.69 in)         |
| Depth                                                                       | mm                | 236 (9.29 in)          |
| Weight                                                                      | kg                | 26,5 (58.42 lb)        |
| Cooling principle - convection                                              |                   | -                      |
| Cooling principle - regulated fans                                          |                   | ✓                      |
| Max. air throughput                                                         | m <sup>3</sup> /h | 84                     |
| Max. noise emission                                                         | dBA               | 52                     |
| Ambient temperature                                                         | °C                | -20...60 (-4...140 °F) |
| Max. installation altitude above sea level                                  | m                 | 2000 (6562 ft)         |
| Relative humidity                                                           | %                 | 4...100                |
| Connection technology at input side - MC 4                                  |                   | ✓                      |
| Connection technology at output side - spring-loaded terminal strip         |                   | ✓                      |

### Interfaces

|                          |  |   |
|--------------------------|--|---|
| Ethernet RJ45            |  | 2 |
| RS485                    |  | 1 |
| S0                       |  | 1 |
| Analogue inputs          |  | 4 |
| PIKO BA Sensor Interface |  | 1 |

### Efficiency characteristics of PIKO 8.5



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Data sheet

PIKO 10

10

# Technical data PIKO 10



- 3-phase feed-in
- Transformerless converting
- Integrated electronic DC switch
- Broad input voltage range
- Standard integrated communication package with data logger, web server, solar portal and the following interfaces: 2x Ethernet, RS485, S0, 4x analogue inputs (e.g. for ripple control receivers or PIKO Sensor)
- PIKO BA Sensor can be connected for the measurement of building consumption and for dynamic active power control
- Integrated switch contact for self-consumption optimisation
- Smart Home and EEBus compatible

## Input side (DC)

|                                                                              |     |                                    |
|------------------------------------------------------------------------------|-----|------------------------------------|
| Max. PV power ( $\cos \varphi = 1$ )                                         | kWp | 10.8                               |
| Rated input voltage ( $V_{DC,r}$ )                                           | V   | 680                                |
| Max. input voltage ( $V_{DCmax}$ )                                           | V   | 1000                               |
| Min. input voltage ( $V_{DCmin}$ )                                           | V   | 160                                |
| Start-up input voltage ( $V_{DCstart}$ )                                     | V   | 180                                |
| Max. MPP voltage ( $V_{MPPmax}$ )                                            | V   | 800                                |
| Min. MPP voltage for DC rated output in single tracker mode ( $V_{MPPmin}$ ) | V   | 527                                |
| Min. MPP voltage for DC rated output in two-tracker mode ( $V_{MPPmin}$ )    | V   | sym: 290 / 290<br>unsym: 390 / 250 |
| Max. input current ( $I_{DCmax}$ )                                           | A   | sym: 18 / 18<br>unsym: 20 / 10     |
| Max. input current with parallel connection (input DC1+DC2)                  | A   | 36                                 |
| Number of DC inputs                                                          |     | 2                                  |
| Number of independent MPP trackers                                           |     | 2                                  |

## Output side (AC)

|                                                         |     |                 |
|---------------------------------------------------------|-----|-----------------|
| Rated output, $\cos \varphi = 1$ ( $P_{AC,r}$ )         | kW  | 10              |
| Max. output apparent power, $\cos \varphi_{adj}$        | kVA | 10              |
| Max. output voltage ( $V_{ACmax}$ )                     | V   | 264.5           |
| Min. output voltage ( $V_{ACmin}$ )                     | V   | 184             |
| Rated output current                                    | A   | 14.6            |
| Max. output current ( $I_{ACmax}$ )                     | A   | 16.2            |
| Short-circuit current (peak / RMS)                      | A   | 25 / 16.6       |
| Grid connection                                         |     | 3N~, AC, 400 V  |
| Rated frequency ( $f_r$ )                               | Hz  | 50              |
| Max. grid frequency ( $f_{max}$ )                       | Hz  | 51.5            |
| Min. grid frequency ( $f_{min}$ )                       | Hz  | 47.5            |
| Setting range of the power factor $\cos \varphi_{AC,r}$ |     | 0.80...1...0.80 |
| Power factor for rated power ( $\cos \varphi_{AC,r}$ )  |     | 1               |
| Max. total harmonic distortion                          | %   | 3               |

## Device properties

|                     |   |     |
|---------------------|---|-----|
| Standby consumption | W | 1,8 |
|---------------------|---|-----|

## Efficiency

|                           |   |      |
|---------------------------|---|------|
| Max. efficiency           | % | 97.7 |
| European efficiency       | % | 97.1 |
| MPP adjustment efficiency | % | 99.9 |

## Warranty

|                                     |  |       |
|-------------------------------------|--|-------|
| Warranty (years)                    |  | 5     |
| Warranty extension optional (years) |  | 10/20 |

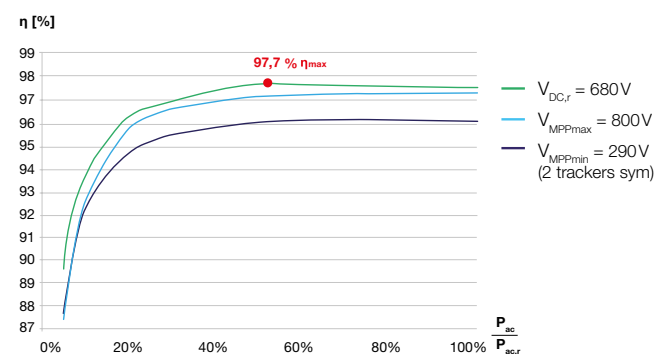
## System data

|                                                                             |                   |                        |
|-----------------------------------------------------------------------------|-------------------|------------------------|
| Topology: Without galvanic separation - transformerless                     |                   | ✓                      |
| Internal protection according to IEC 60529 housing / fan                    |                   | IP 65 / IP 55          |
| Protective class according to IEC 62103                                     |                   | I                      |
| Overvoltage category according to IEC 60664-1 Input side (PV generator)     |                   | II                     |
| Overvoltage category according to IEC 60664-1 Output side (grid connection) |                   | III                    |
| Pollution Degree                                                            |                   | 4                      |
| Environmental category (outdoor installation)                               |                   | ✓                      |
| Environmental category (interior installation)                              |                   | ✓                      |
| UV resistance                                                               |                   | ✓                      |
| Minimum cable cross-section of AC connecting line                           | mm <sup>2</sup>   | 4                      |
| Minimum cable cross-section of DC connecting line                           | mm <sup>2</sup>   | 4                      |
| Max. fusing on output side                                                  |                   | B25, C25               |
| Operator protection (EN 62109-2)                                            |                   | RCMU/RCCB Typ B        |
| Electronic disconnection device integrated                                  |                   | ✓                      |
| Height                                                                      | mm                | 445 (17.52 in)         |
| Width                                                                       | mm                | 580 (22.83 in)         |
| Depth                                                                       | mm                | 248 (9.76 in)          |
| Weight                                                                      | kg                | 37.5 (82.67 lb)        |
| Cooling principle - convection                                              |                   | -                      |
| Cooling principle - regulated fans                                          |                   | ✓                      |
| Max. air throughput                                                         | m <sup>3</sup> /h | 2x48                   |
| Max. Noise emission                                                         | dBA               | 43                     |
| Ambient temperature                                                         | °C                | -20...60 (-4...140 °F) |
| Max. installation altitude above sea level                                  | m                 | 2000 (6562 ft)         |
| Relative humidity                                                           | %                 | 4...100                |
| Connection technology at input side - MC 4                                  |                   | ✓                      |
| Connection technology at output side - spring-loaded terminal strip         |                   | ✓                      |

## Interfaces

|                          |  |   |
|--------------------------|--|---|
| Ethernet RJ45            |  | 2 |
| RS485                    |  | 1 |
| S0                       |  | 1 |
| Analogue inputs          |  | 4 |
| PIKO BA Sensor Interface |  | 1 |

## Efficiency characteristics of PIKO 10



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## Contact

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Data sheet

PIKO 12

12

# Technical data PIKO 12



- 3-phase feed-in
- Transformerless converting
- Integrated electronic DC switch
- Broad input voltage range
- Standard integrated communication package with data logger, web server, solar portal and the following interfaces: 2x Ethernet, RS485, S0, 4x analogue inputs (e.g. for ripple control receivers or PIKO Sensor)
- PIKO BA Sensor can be connected for the measurement of building consumption and for dynamic active power control
- Integrated switch contact for self-consumption optimisation
- Smart Home and EEBus compatible

## Input side (DC)

|                                                                              |     |                                   |
|------------------------------------------------------------------------------|-----|-----------------------------------|
| Max. PV power ( $\cos \varphi = 1$ )                                         | kWp | 12.9                              |
| Rated input voltage ( $V_{DC,r}$ )                                           | V   | 680                               |
| Max. input voltage ( $V_{DCmax}$ )                                           | V   | 1000                              |
| Min. input voltage ( $V_{DCmin}$ )                                           | V   | 160                               |
| Start-up input voltage ( $V_{DCstart}$ )                                     | V   | 180                               |
| Max. MPP voltage ( $V_{MPPmax}$ )                                            | V   | 800                               |
| Min. MPP voltage for DC rated output in single tracker mode ( $V_{MPPmin}$ ) | V   | 626                               |
| Min. MPP voltage for DC rated output in two-tracker mode ( $V_{MPPmin}$ )    | V   | sym: 345 / 345<br>asym: 490 / 250 |
| Max. input current ( $I_{DCmax}$ )                                           | A   | sym: 18 / 18<br>asym: 20 / 10     |
| Max. input current with parallel connection (input DC1+DC2)                  | A   | 36                                |
| Number of DC inputs                                                          |     | 2                                 |
| Number of independent MPP trackers                                           |     | 2                                 |

## Output side (AC)

|                                                         |     |                 |
|---------------------------------------------------------|-----|-----------------|
| Rated output, $\cos \varphi = 1$ ( $P_{AC,r}$ )         | kW  | 12              |
| Max. output apparent power, $\cos \varphi_{adj}$        | kVA | 12              |
| Max. output voltage ( $V_{ACmax}$ )                     | V   | 264.5           |
| Min. output voltage ( $V_{ACmin}$ )                     | V   | 184             |
| Rated output current                                    | A   | 17.4            |
| Max. output current ( $I_{ACmax}$ )                     | A   | 19.3            |
| Short-circuit current (peak / RMS)                      | A   | 27.4 / 16.7     |
| Grid connection                                         |     | 3N~, AC, 400V   |
| Rated frequency ( $f_r$ )                               | Hz  | 50              |
| Max. grid frequency ( $f_{max}$ )                       | Hz  | 51.5            |
| Min. grid frequency ( $f_{min}$ )                       | Hz  | 47.5            |
| Setting range of the power factor $\cos \varphi_{AC,r}$ |     | 0.80...1...0.80 |
| Power factor for rated power ( $\cos \varphi_{AC,r}$ )  |     | 1               |
| Max. total harmonic distortion                          | %   | 3               |

## Device properties

|                     |   |     |
|---------------------|---|-----|
| Standby consumption | W | 1,8 |
|---------------------|---|-----|

## Efficiency

|                           |   |      |
|---------------------------|---|------|
| Max. efficiency           | % | 97.7 |
| European efficiency       | % | 97.1 |
| MPP adjustment efficiency | % | 99.9 |

## Warranty

|                                     |  |       |
|-------------------------------------|--|-------|
| Warranty (years)                    |  | 5     |
| Warranty extension optional (years) |  | 10/20 |

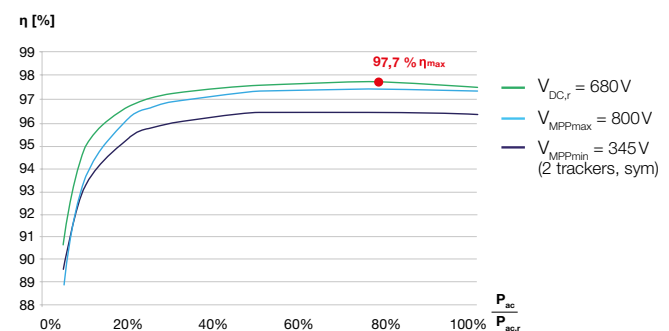
## System data

|                                                                             |                   |                        |
|-----------------------------------------------------------------------------|-------------------|------------------------|
| Topology: Without galvanic separation - transformerless                     |                   | ✓                      |
| Schutzart nach IEC 60529                                                    |                   | IP 65 / IP 55          |
| Gehäuse / Lüfter                                                            |                   | I                      |
| Protective class according to IEC 62103                                     |                   | II                     |
| Overvoltage category according to IEC 60664-1 Input side (PV generator)     |                   | III                    |
| Overvoltage category according to IEC 60664-1 Output side (grid connection) |                   | 4                      |
| Pollution Degree                                                            |                   | ✓                      |
| Environmental category (outdoor installation)                               |                   | ✓                      |
| Environmental category (interior installation)                              |                   | ✓                      |
| UV resistance                                                               |                   | ✓                      |
| Minimum cable cross-section of AC connecting line                           | mm <sup>2</sup>   | 4                      |
| Minimum cable cross-section of DC connecting line                           | mm <sup>2</sup>   | 4                      |
| Max. fusing on output side                                                  |                   | B25, C25               |
| Operator protection (EN 62109-2)                                            |                   | RCMU/RCCB type B       |
| Electronic disconnection device integrated                                  |                   | ✓                      |
| Height                                                                      | mm                | 445 (17.52 in)         |
| Width                                                                       | mm                | 580 (22.83 in)         |
| Depth                                                                       | mm                | 248 (9.76 in)          |
| Weight                                                                      | kg                | 37.5 (82.67 lb)        |
| Cooling principle - convection                                              |                   | -                      |
| Cooling principle - regulated fans                                          |                   | ✓                      |
| Max. air throughput                                                         | m <sup>3</sup> /h | 2x48                   |
| Max. noise emission                                                         | dBA               | 44                     |
| Ambient temperature                                                         | °C                | -20...60 (-4...140 °F) |
| Max. installation altitude above sea level                                  | m                 | 2000 (6562 ft)         |
| Relative humidity                                                           | %                 | 4...100                |
| Connection technology at input side - MC 4                                  |                   | ✓                      |
| Connection technology at output side - spring-loaded terminal strip         |                   | ✓                      |

## Interfaces

|                          |  |   |
|--------------------------|--|---|
| Ethernet RJ45            |  | 2 |
| RS485                    |  | 1 |
| S0                       |  | 1 |
| Analogue inputs          |  | 4 |
| PIKO BA Sensor Interface |  | 1 |

## Efficiency characteristics of PIKO 12



Smart connections.

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Smart  
connections.

Data sheet

PIKO 15

15

# Technical data PIKO 15



- 3-phase feed-in
- Transformerless converting
- Integrated electronic DC switch
- Broad input voltage range
- Standard integrated communication package with data logger, web server, solar portal and the following interfaces: 2x Ethernet, RS485, S0, 4x analogue inputs (e.g. for ripple control receivers or PIKO Sensor)
- PIKO BA Sensor can be connected for the measurement of building consumption and for dynamic active power control
- Integrated switch contact for self-consumption optimisation
- Smart Home and EEBus compatible

## Input side (DC)

|                                                                              |     |                                        |
|------------------------------------------------------------------------------|-----|----------------------------------------|
| Max. PV power ( $\cos \varphi = 1$ )                                         | kWp | 16.9                                   |
| Rated input voltage ( $V_{DC,r}$ )                                           | V   | 680                                    |
| Max. input voltage ( $V_{DCmax}$ )                                           | V   | 1000                                   |
| Min. input voltage ( $V_{DCmin}$ )                                           | V   | 160                                    |
| Start-up input voltage ( $V_{DCstart}$ )                                     | V   | 180                                    |
| Max. MPP voltage ( $V_{MPPmax}$ )                                            | V   | 800                                    |
| Min. MPP voltage for DC rated output in single tracker mode ( $V_{MPPmin}$ ) | V   | –                                      |
| Min. MPP voltage for DC rated output in two-tracker mode ( $V_{MPPmin}$ )    | V   | 390                                    |
| Min. MPP voltage for DC rated output in three-tracker mode ( $V_{MPPmin}$ )  | V   | sym.: 260/260/260, unsym.: 325/325/250 |
| Max. input current ( $I_{DCmax}$ )                                           | A   | sym.: 20/20/20, unsym.: 20/20/10       |
| Max. input current with parallel connection (input DC1+DC2/DC3)              | A   | 40/20                                  |
| Number of DC inputs                                                          |     | 3                                      |
| Number of independent MPP trackers                                           |     | 3                                      |

## Output side (AC)

|                                                         |     |                 |
|---------------------------------------------------------|-----|-----------------|
| Rated output, $\cos \varphi = 1$ ( $P_{AC,r}$ )         | kW  | 15              |
| Max. output apparent power, $\cos \varphi_{adj}$        | kVA | 15              |
| Max. output voltage ( $V_{ACmax}$ )                     | V   | 264.5           |
| Min. output voltage ( $V_{ACmin}$ )                     | V   | 184             |
| Rated output current                                    | A   | 21.7            |
| Max. output current ( $I_{ACmax}$ )                     | A   | 24.2            |
| Short-circuit current (peak/RMS)                        | A   | 42/28.5         |
| Grid connection                                         |     | 3N~, AC, 400 V  |
| Rated frequency ( $f_r$ )                               | Hz  | 50              |
| Max. grid frequency ( $f_{max}$ )                       | Hz  | 51.5            |
| Min. grid frequency ( $f_{min}$ )                       | Hz  | 47.5            |
| Setting range of the power factor $\cos \varphi_{AC,r}$ |     | 0.80...1...0.80 |
| Power factor for rated power ( $\cos \varphi_{AC,r}$ )  |     | 1               |
| Max. total harmonic distortion                          | %   | 3               |

## Device properties

|                     |   |      |
|---------------------|---|------|
| Standby consumption | W | 2.15 |
|---------------------|---|------|

## Efficiency

|                           |   |      |
|---------------------------|---|------|
| Max. efficiency           | % | 98.0 |
| European efficiency       | % | 97.2 |
| MPP adjustment efficiency | % | 99.9 |

## Warranty

|                                     |  |       |
|-------------------------------------|--|-------|
| Warranty (years)                    |  | 5     |
| Warranty extension optional (years) |  | 10/20 |

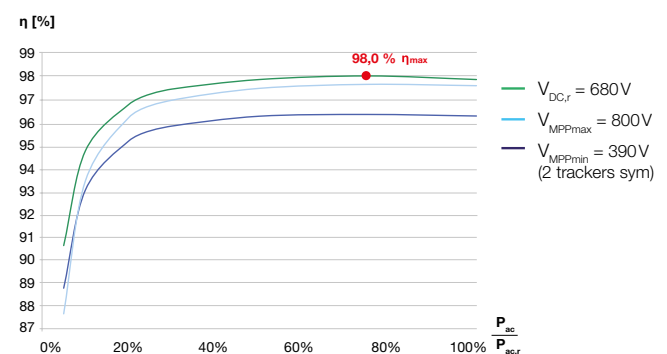
## System data

|                                                                             |                   |                        |
|-----------------------------------------------------------------------------|-------------------|------------------------|
| Topology: Without galvanic separation - transformerless                     |                   | ✓                      |
| Internal protection according to IEC 60529 housing / fan                    |                   | IP 65 / IP 55          |
| Protective class according to IEC 62103                                     |                   | I                      |
| Overvoltage category according to IEC 60664-1 Input side (PV generator)     |                   | II                     |
| Overvoltage category according to IEC 60664-1 Output side (grid connection) |                   | III                    |
| Pollution Degree                                                            |                   | 4                      |
| Environmental category (outdoor installation)                               |                   | ✓                      |
| Environmental category (interior installation)                              |                   | ✓                      |
| UV resistance                                                               |                   | ✓                      |
| Minimum cable cross-section of AC connecting line                           | mm <sup>2</sup>   | 6                      |
| Minimum cable cross-section of DC connecting line                           | mm <sup>2</sup>   | 4                      |
| Max. fusing on output side                                                  |                   | B32, C32               |
| Operator protection (EN 62109-2)                                            |                   | RCMU/RCCB Typ B        |
| Electronic disconnection device integrated                                  |                   | ✓                      |
| Height                                                                      | mm                | 540 (21.26 in)         |
| Width                                                                       | mm                | 700 (27.56 in)         |
| Depth                                                                       | mm                | 265 (10.43 in)         |
| Weight                                                                      | kg                | 48.5 (106.9 lb)        |
| Cooling principle - convection                                              |                   | –                      |
| Cooling principle - regulated fans                                          |                   | ✓                      |
| Max. air throughput                                                         | m <sup>3</sup> /h | 2x84                   |
| Max. noise emission                                                         | dBA               | 56                     |
| Ambient temperature                                                         | °C                | -20...60 (-4...140 °F) |
| Max. installation altitude above sea level                                  | m                 | 2000 (6562 ft)         |
| Relative humidity                                                           | %                 | 4...100                |
| Connection technology at input side - MC 4                                  |                   | ✓                      |
| Connection technology at output side - spring-loaded terminal strip         |                   | ✓                      |

## Interfaces

|                          |  |   |
|--------------------------|--|---|
| Ethernet RJ45            |  | 2 |
| RS485                    |  | 1 |
| S0                       |  | 1 |
| Analogue inputs          |  | 4 |
| PIKO BA Sensor Interface |  | 1 |

## Efficiency characteristics of PIKO 15



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Data sheet

PIKO 17

17

# Technical data PIKO 17



- 3-phase feed-in
- Transformerless converting
- Integrated electronic DC switch
- Broad input voltage range
- Standard integrated communication package with data logger, web server, solar portal and the following interfaces: 2x Ethernet, RS485, S0, 4x analogue inputs (e.g. for ripple control receivers or PIKO Sensor)
- PIKO BA Sensor can be connected for the measurement of building consumption and for dynamic active power control
- Integrated switch contact for self-consumption optimisation
- Smart Home and EEBus compatible

## Input side (DC)

|                                                                              |     |                                        |
|------------------------------------------------------------------------------|-----|----------------------------------------|
| Max. PV power ( $\cos \varphi = 1$ )                                         | kWp | 19.2                                   |
| Rated input voltage ( $V_{DC,r}$ )                                           | V   | 680                                    |
| Max. input voltage ( $V_{DCmax}$ )                                           | V   | 1000                                   |
| Min. input voltage ( $V_{DCmin}$ )                                           | V   | 160                                    |
| Start-up input voltage ( $V_{DCstart}$ )                                     | V   | 180                                    |
| Max. MPP voltage ( $V_{MPPmax}$ )                                            | V   | 800                                    |
| Min. MPP voltage for DC rated output in single tracker mode ( $V_{MPPmin}$ ) | V   | –                                      |
| Min. MPP voltage for DC rated output in two-tracker mode ( $V_{MPPmin}$ )    | V   | 440                                    |
| Min. MPP voltage for DC rated output in three-tracker mode ( $V_{MPPmin}$ )  | V   | sym.: 290/290/290, unsym.: 375/375/250 |
| Max. input current ( $I_{DCmax}$ )                                           | A   | sym.: 20/20/20, unsym.: 20/20/10       |
| Max. input current with parallel connection (input DC1+DC2/DC3)              | A   | 40/20                                  |
| Number of DC inputs                                                          |     | 3                                      |
| Number of independent MPP trackers                                           |     | 3                                      |

## Output side (AC)

|                                                         |     |                 |
|---------------------------------------------------------|-----|-----------------|
| Rated output, $\cos \varphi = 1$ ( $P_{AC,r}$ )         | kW  | 17              |
| Max. output apparent power, $\cos \varphi_{adj}$        | kVA | 17              |
| Max. output voltage ( $V_{ACmax}$ )                     | V   | 264.5           |
| Min. output voltage ( $V_{ACmin}$ )                     | V   | 184             |
| Rated output current                                    | A   | 24.6            |
| Max. output current ( $I_{ACmax}$ )                     | A   | 27.4            |
| Short-circuit current (peak/RMS)                        | A   | 41.3/29         |
| Grid connection                                         |     | 3N~, AC, 400 V  |
| Rated frequency ( $f_r$ )                               | Hz  | 50              |
| Max. grid frequency ( $f_{max}$ )                       | Hz  | 51.5            |
| Min. grid frequency ( $f_{min}$ )                       | Hz  | 47.5            |
| Setting range of the power factor $\cos \varphi_{AC,r}$ |     | 0,80...1...0,80 |
| Power factor for rated power ( $\cos \varphi_{AC,r}$ )  |     | 1               |
| Max. total harmonic distortion                          | %   | 3               |

## Device properties

|                     |   |      |
|---------------------|---|------|
| Standby consumption | W | 2.15 |
|---------------------|---|------|

## Efficiency

|                           |   |      |
|---------------------------|---|------|
| Max. efficiency           | % | 98.0 |
| European efficiency       | % | 97.3 |
| MPP adjustment efficiency | % | 99.9 |

## Warranty

|                                     |  |       |
|-------------------------------------|--|-------|
| Warranty (years)                    |  | 5     |
| Warranty extension optional (years) |  | 10/20 |

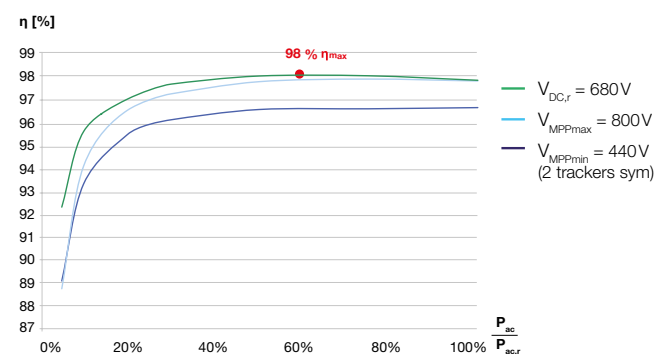
## System data

|                                                                             |                   |                        |
|-----------------------------------------------------------------------------|-------------------|------------------------|
| Topology: Without galvanic separation - transformerless                     |                   | ✓                      |
| Internal protection according to IEC 60529 housing / fan                    |                   | IP 65 / IP 55          |
| Protective class according to IEC 62103                                     |                   | I                      |
| Overvoltage category according to IEC 60664-1 Input side (PV generator)     |                   | II                     |
| Overvoltage category according to IEC 60664-1 Output side (grid connection) |                   | III                    |
| Pollution Degree                                                            |                   | 4                      |
| Environmental category (outdoor installation)                               |                   | ✓                      |
| Environmental category (interior installation)                              |                   | ✓                      |
| UV resistance                                                               |                   | ✓                      |
| Minimum cable cross-section of AC connecting line                           | mm <sup>2</sup>   | 6                      |
| Minimum cable cross-section of DC connecting line                           | mm <sup>2</sup>   | 4                      |
| Max. fusing on output side                                                  |                   | B32, C32               |
| Operator protection (EN 62109-2)                                            |                   | RCMU/RCCB Typ B        |
| Electronic disconnection device integrated                                  |                   | ✓                      |
| Height                                                                      | mm                | 540 (21.26 in)         |
| Width                                                                       | mm                | 700 (27.56 in)         |
| Depth                                                                       | mm                | 265 (10.43 in)         |
| Weight                                                                      | kg                | 48.5 (106.9 lb)        |
| Cooling principle - convection                                              |                   | –                      |
| Cooling principle - regulated fans                                          |                   | ✓                      |
| Max. air throughput                                                         | m <sup>3</sup> /h | 2x84                   |
| Max. noise emission                                                         | dBA               | 56                     |
| Ambient temperature                                                         | °C                | -20...60 (-4...140 °F) |
| Max. installation altitude above sea level                                  | m                 | 2000 (6562 ft)         |
| Relative humidity                                                           | %                 | 4...100                |
| Connection technology at input side - MC 4                                  |                   | ✓                      |
| Connection technology at output side - spring-loaded terminal strip         |                   | ✓                      |

## Interfaces

|                          |  |   |
|--------------------------|--|---|
| Ethernet RJ45            |  | 2 |
| RS485                    |  | 1 |
| S0                       |  | 1 |
| Analogue inputs          |  | 4 |
| PIKO BA Sensor Interface |  | 1 |

## Efficiency characteristics of PIKO 17



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Data sheet

PIKO 20

20

## Technical data PIKO 20



- 3-phase feed-in
- Transformerless converting
- Integrated electronic DC switch
- Broad input voltage range
- Standard integrated communication package with data logger, web server, solar portal and the following interfaces: 2x Ethernet, RS485, S0, 4x analogue inputs (e.g. for ripple control receivers or PIKO Sensor)
- PIKO BA Sensor can be connected for the measurement of building consumption and for dynamic active power control
- Integrated switch contact for self-consumption optimisation
- Smart Home and EEBus compatible

### Input side (DC)

|                                                                              |     |                                        |
|------------------------------------------------------------------------------|-----|----------------------------------------|
| Max. PV power ( $\cos \varphi = 1$ )                                         | kWp | 22.6                                   |
| Rated input voltage ( $V_{DC,r}$ )                                           | V   | 680                                    |
| Max. input voltage ( $V_{DCmax}$ )                                           | V   | 1000                                   |
| Min. input voltage ( $V_{DCmin}$ )                                           | V   | 160                                    |
| Start-up input voltage ( $V_{DCstart}$ )                                     | V   | 180                                    |
| Max. MPP voltage ( $V_{MPPmax}$ )                                            | V   | 800                                    |
| Min. MPP voltage for DC rated output in single tracker mode ( $V_{MPPmin}$ ) | V   | –                                      |
| Min. MPP voltage for DC rated output in two-tracker mode ( $V_{MPPmin}$ )    | V   | 515                                    |
| Min. MPP voltage for DC rated output in three-tracker mode ( $V_{MPPmin}$ )  | V   | sym.: 345/345/345, unsym.: 450/450/250 |
| Max. input current ( $I_{DCmax}$ )                                           | A   | sym.: 20/20/20, unsym.: 20/20/10       |
| Max. input current with parallel connection (input DC1+DC2/DC3)              | A   | 40/20                                  |
| Number of DC inputs                                                          |     | 3                                      |
| Number of independent MPP trackers                                           |     | 3                                      |

### Output side (AC)

|                                                         |     |                 |
|---------------------------------------------------------|-----|-----------------|
| Rated output, $\cos \varphi = 1$ ( $P_{AC,r}$ )         | kW  | 20              |
| Max. output apparent power, $\cos \varphi_{adj}$        | kVA | 20              |
| Max. output voltage ( $V_{ACmax}$ )                     | V   | 264.5           |
| Min. output voltage ( $V_{ACmin}$ )                     | V   | 184             |
| Rated output current                                    | A   | 29              |
| Max. output current ( $I_{ACmax}$ )                     | A   | 32.2            |
| Short-circuit current (peak/RMS)                        | A   | 51/36.5         |
| Grid connection                                         |     | 3N~, AC, 400V   |
| Rated frequency ( $f_r$ )                               | Hz  | 50              |
| Max. grid frequency ( $f_{max}$ )                       | Hz  | 51.5            |
| Min. grid frequency ( $f_{min}$ )                       | Hz  | 47.5            |
| Setting range of the power factor $\cos \varphi_{AC,r}$ |     | 0.80...1...0.80 |
| Power factor for rated power ( $\cos \varphi_{AC,r}$ )  |     | 1               |
| Max. total harmonic distortion                          | %   | 3               |

### Device properties

|                     |   |      |
|---------------------|---|------|
| Standby consumption | W | 2.15 |
|---------------------|---|------|

### Efficiency

|                           |   |      |
|---------------------------|---|------|
| Max. efficiency           | % | 98.0 |
| European efficiency       | % | 97.3 |
| MPP adjustment efficiency | % | 99.9 |

### Warranty

|                                     |  |       |
|-------------------------------------|--|-------|
| Warranty (years)                    |  | 5     |
| Warranty extension optional (years) |  | 10/20 |

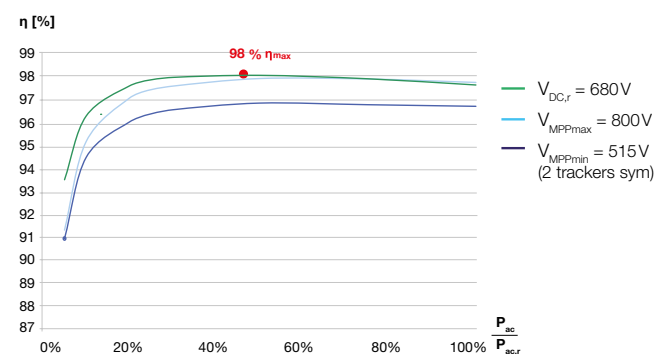
### System data

|                                                                             |                   |                        |
|-----------------------------------------------------------------------------|-------------------|------------------------|
| Topology: Without galvanic separation - transformerless                     |                   | ✓                      |
| Internal protection according to IEC 60529 housing / fan                    |                   | IP 65 / IP 55          |
| Protective class according to IEC 62103                                     |                   | I                      |
| Overvoltage category according to IEC 60664-1 Input side (PV generator)     |                   | II                     |
| Overvoltage category according to IEC 60664-1 Output side (grid connection) |                   | III                    |
| Pollution Degree                                                            |                   | 4                      |
| Environmental category (outdoor installation)                               |                   | ✓                      |
| Environmental category (interior installation)                              |                   | ✓                      |
| UV resistance                                                               |                   | ✓                      |
| Minimum cable cross-section of AC connecting line                           | mm <sup>2</sup>   | 6                      |
| Minimum cable cross-section of DC connecting line                           | mm <sup>2</sup>   | 4                      |
| Max. fusing on output side                                                  |                   | B40, C40               |
| Operator protection (EN 62109-2)                                            |                   | RCMU/RCCB Typ B        |
| Electronic disconnection device integrated                                  |                   | ✓                      |
| Height                                                                      | mm                | 540 (21.26 in)         |
| Width                                                                       | mm                | 700 (27.56 in)         |
| Depth                                                                       | mm                | 265 (10.43 in)         |
| Weight                                                                      | kg                | 48.5 (106.9 lb)        |
| Cooling principle - convection                                              |                   | –                      |
| Cooling principle - regulated fans                                          |                   | ✓                      |
| Max. air throughput                                                         | m <sup>3</sup> /h | 2x84                   |
| Max. noise emission                                                         | dBA               | 56                     |
| Ambient temperature                                                         | °C                | -20...60 (-4...140 °F) |
| Max. installation altitude above sea level                                  | m                 | 2000 (6562 ft)         |
| Relative humidity                                                           | %                 | 4...100                |
| Connection technology at input side - MC 4                                  |                   | ✓                      |
| Connection technology at output side - spring-loaded terminal strip         |                   | ✓                      |

### Interfaces

|                          |  |   |
|--------------------------|--|---|
| Ethernet RJ45            |  | 2 |
| RS485                    |  | 1 |
| S0                       |  | 1 |
| Analogue inputs          |  | 4 |
| PIKO BA Sensor Interface |  | 1 |

### Efficiency characteristics of PIKO 20



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