

Data sheet | Item number: 789-622  
Current signal conditioner; Current input signal: 50 AAC; Modbus RTU;  
Supply voltage: 24 VDC; Module width: 35 mm

[www.wago.com/789-622](http://www.wago.com/789-622)



|                                 |           |
|---------------------------------|-----------|
| 789-622                         |           |
| RJ-45-Connector Pin Assignment: |           |
| Pin                             | Function  |
| 1                               | Ub        |
| 2                               | n.c.      |
| 3                               | n.c.      |
| 4                               | A (Data+) |
| 5                               | B (Data-) |
| 6                               | n.c.      |
| 7                               | n.c.      |
| 8                               | GND       |

|                            |                               |
|----------------------------|-------------------------------|
| Communication Description: |                               |
| Modbus® Function           | Read Holding Registers (0x03) |
| Address of Measured Value  | 0x0004                        |
| Data Type=Measurement      | Integer                       |

|                |                            |
|----------------|----------------------------|
| Error Numbers: |                            |
| Id             | Description                |
| 01             | Illegal Function           |
| 03             | Illegal Data               |
| 101            | Overflow (Current > +83 A) |
| 102            | Underflow (Current < -3 A) |

DIP Switch Adjustability • = ON

| Address | 2 | 3 | 4 | 5 | 6 | Terminating Resistor | DIP Switch 1 |
|---------|---|---|---|---|---|----------------------|--------------|
| 1       |   |   |   |   |   | 150 Ohm              | •            |
| 2       |   |   |   |   |   |                      |              |
| 3       |   |   |   |   |   |                      |              |
| 4       |   |   |   |   |   |                      |              |
| 5       |   |   |   |   |   |                      |              |
| 6       |   |   |   |   |   |                      |              |
| 7       |   |   |   |   |   |                      |              |
| 8       |   |   |   |   |   |                      |              |
| 9       |   |   |   |   |   |                      |              |
| 10      |   |   |   |   |   |                      |              |
| 11      |   |   |   |   |   |                      |              |
| 12      |   |   |   |   |   |                      |              |
| 13      |   |   |   |   |   |                      |              |
| 14      |   |   |   |   |   |                      |              |
| 15      |   |   |   |   |   |                      |              |
| 16      |   |   |   |   |   |                      |              |
| 17      |   |   |   |   |   |                      |              |
| 18      |   |   |   |   |   |                      |              |
| 19      |   |   |   |   |   |                      |              |
| 20      |   |   |   |   |   |                      |              |
| 21      |   |   |   |   |   |                      |              |
| 22      |   |   |   |   |   |                      |              |
| 23      |   |   |   |   |   |                      |              |
| 24      |   |   |   |   |   |                      |              |
| 25      |   |   |   |   |   |                      |              |
| 26      |   |   |   |   |   |                      |              |
| 27      |   |   |   |   |   |                      |              |
| 28      |   |   |   |   |   |                      |              |
| 29      |   |   |   |   |   |                      |              |
| 30      |   |   |   |   |   |                      |              |
| 31      |   |   |   |   |   |                      |              |
| 32      |   |   |   |   |   |                      |              |

NOTICE:  
Only set the Modbus® address in the OFF state.

Item description

Short description:

WAGO's intelligent current sensor monitors AC currents and is mounted on DIN-35 rail.

Data

Technical data

Input

|                   |         |
|-------------------|---------|
| Input signal type | Current |
| Resolution [bit]  | 14 bits |
| Measured variable | Current |

Subject to changes. Please also observe the further product documentation!

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|                        |               |
|------------------------|---------------|
| Input signal (current) | AC 0 ... 50 A |
|------------------------|---------------|

## Output – MODBUS

|                          |                                                  |
|--------------------------|--------------------------------------------------|
| Number of devices (max.) | 32                                               |
| Connector                | RJ-45                                            |
| Bus length (max.)        | 1200 m                                           |
| Terminating resistor     | 150 $\Omega$ (can be activated via DIP switch 1) |

## Communication

|                          |                                                  |
|--------------------------|--------------------------------------------------|
| Communications           | Modbus RTU                                       |
| Interface                | RS-485                                           |
| Transmission channels    | Half duplex; 8-bit data; 1 stop bit              |
| Number of devices (max.) | 32                                               |
| Parity                   | Even                                             |
| Terminating resistor     | 150 $\Omega$ (can be activated via DIP switch 1) |
| Bus length (max.)        | $\leq 1200$ m                                    |
| Transmission rate        | 19.2 kBd                                         |

## Measurement error

|                           |                                                                   |
|---------------------------|-------------------------------------------------------------------|
| Transmission error (typ.) | 1 % (typ.); 3 % (max.) of upper-range value (at room temperature) |
| Temperature coefficient   | $\leq 0.01$ %/K                                                   |

## Power supply

|                                               |             |
|-----------------------------------------------|-------------|
| Nominal supply voltage $U_S$                  | DC 24 V     |
| Current consumption at nominal supply voltage | $\leq 8$ mA |

## Safety and protection

|                 |      |
|-----------------|------|
| Protection type | IP20 |
|-----------------|------|

## Connection data

|                                       |                     |
|---------------------------------------|---------------------|
| Feedthrough for measurement conductor | $\varnothing 15$ mm |
| Connector                             | RJ-45               |

## Physical data

|       |                      |
|-------|----------------------|
| Width | 35 mm / 1.378 inches |
|-------|----------------------|

Subject to changes. Please also observe the further product documentation!



|                                   |                      |
|-----------------------------------|----------------------|
| Height                            | 90 mm / 3.543 inches |
| Depth from upper-edge of DIN-rail | 55 mm / 2.165 inches |

### Mechanical data

|                |                          |
|----------------|--------------------------|
| Mounting type  | DIN-35 rail              |
| Housing design | DIN-rail-mount enclosure |

### Material data

|           |          |
|-----------|----------|
| Fire load | 0.283 MJ |
| Weight    | 77.2 g   |

### Environmental requirements

|                                 |                |
|---------------------------------|----------------|
| Ambient temperature (operation) | -20 ... +70 °C |
| Ambient temperature (storage)   | -40 ... +85 °C |

### Standards and specifications

|                              |              |
|------------------------------|--------------|
| Conformity marking           | CE           |
| EMC immunity to interference | EN 61000-6-2 |
| EMC emission of interference | EN 61000-6-4 |
| Standards/specifications     | DIN EN 50178 |

### Commercial data

|                       |                          |
|-----------------------|--------------------------|
| Product Group         | 6 (INTERFACE ELECTRONIC) |
| eCl@ss 10.0           | 27-21-01-23              |
| eCl@ss 9.0            | 27-21-01-23              |
| ETIM 9.0              | EC002475                 |
| ETIM 8.0              | EC002475                 |
| Recupel Type          |                          |
| ECCN                  | NO DATA                  |
| PU (SPU)              | 1 pcs                    |
| Packaging type        | Box                      |
| Country of origin     | DE                       |
| Customs tariff number | 85437090300              |

### Environmental Product Compliance

|         |           |
|---------|-----------|
| CAS-No. | 1303-86-2 |
|---------|-----------|

Subject to changes. Please also observe the further product documentation!



1317-36-8

693-98-1

7439-92-1

75980-60-8

79-94-7

|                                           |                                                                                                                                                                          |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REACH Candidate List Substance            | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol<br>2-methylimidazole<br>Diboron trioxide<br>Lead<br>Lead monoxide<br>Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)- |
| RoHS Compliance Status                    | Compliant, With Exemption                                                                                                                                                |
| RoHS Exemption                            | 6(c)<br>7(a)<br>7(c)-I<br>7(c)-II                                                                                                                                        |
| SCIP notification number (Austria)        | bb694884-3b75-466d-b25c-d1508336f8c8                                                                                                                                     |
| SCIP notification number (Belgium)        | 9608bd87-8285-473d-9ae7-f40452779e22                                                                                                                                     |
| SCIP notification number (Bulgaria)       | bff72e14-4f7f-464d-aeb1-9ae6795be378                                                                                                                                     |
| SCIP notification number (Czech Republic) | 2e7080d2-3286-4942-b074-2c2d040cfab3                                                                                                                                     |
| SCIP notification number (Denmark)        | a2a89f30-d51c-4f3f-a9cc-67a8c17949c6                                                                                                                                     |
| SCIP notification number (Finland)        | c6281fb7-616a-4a12-8929-e5946ee21b69                                                                                                                                     |
| SCIP notification number (France)         | e227b69f-504c-4880-bed4-bfc29c2e0b53                                                                                                                                     |
| SCIP notification number (Germany)        | ed27cc37-e5e7-4e8f-886b-da3f5392e4d6                                                                                                                                     |
| SCIP notification number (Hungary)        | b7d62313-a72e-467e-9fd4-b28c10aeffbc                                                                                                                                     |
| SCIP notification number (Italy)          | 69fd3825-e613-4b1f-9375-abd05d68b9ce                                                                                                                                     |
| SCIP notification number (Netherlands)    | 4bcea46f-9970-43bc-b839-af586e763f40                                                                                                                                     |
| SCIP notification number (Poland)         | effb8a89-418f-419f-ae7d-852495d291b2                                                                                                                                     |
| SCIP notification number (Romania)        | 976b857e-0e78-4294-a00e-1d66170150f9                                                                                                                                     |
| SCIP notification number (Sweden)         | 02f0ffe5-8218-4b40-a4df-b24cfa363753                                                                                                                                     |

## Standards and specifications

|                          |              |
|--------------------------|--------------|
| Standards/specifications | DIN EN 50178 |
|--------------------------|--------------|

## Commercial data

|                       |
|-----------------------|
| eCl@ss 9.0            |
| ETIM 9.0              |
| ETIM 8.0              |
| Customs tariff number |

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## Technical data

### Input

|                        |               |
|------------------------|---------------|
| Input signal type      | Current       |
| Input signal (current) | AC 0 ... 50 A |

### Power supply

|                      |               |
|----------------------|---------------|
| Supply voltage range | 12 ... 34 VDC |
|----------------------|---------------|

### Mechanical data

|               |             |
|---------------|-------------|
| Mounting type | DIN-35 rail |
|---------------|-------------|

## Approvals / Certificates

### General approvals

| Logo                                                                              | Approval                   | Additional Approval Text | Certificate name |
|-----------------------------------------------------------------------------------|----------------------------|--------------------------|------------------|
|  | EAC<br>GZO Almaty Standart | TP TC 020/2011           | EAC CoC<br>03083 |

## Optional accessories

### Interface module

|                  |
|------------------|
| Interface module |
|------------------|



Item no.: 289-965

Interface module; 2xRJ-45; PCB terminal blocks, double-row; in mounting carrier

[www.wago.com/289-965](http://www.wago.com/289-965)



Item no.: 289-966

Interface module; 2xRJ-45; PCB terminal blocks, double-row; in mounting carrier; with shield connection

[www.wago.com/289-966](http://www.wago.com/289-966)

### Cables and pluggable connectors

|                |
|----------------|
| Connector plug |
|----------------|



Item no.: 750-975

ETHERNET RJ-45 connector, IP20; ETHERNET 10/100 Mbit/s; for field assembly

[www.wago.com/750-975](http://www.wago.com/750-975)

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## Downloads

### Documentation

#### Bid Text

|              |              |         |          |
|--------------|--------------|---------|----------|
| 789-622      | Jul 18, 2019 | docx    | Download |
| docx - Datei |              | 16.2 kB |          |

|             |              |        |          |
|-------------|--------------|--------|----------|
| 789-622     | Jul 18, 2019 | xml    | Download |
| X81 - Datei |              | 4.8 kB |          |

#### Instruction Leaflet

|                         |  |        |          |
|-------------------------|--|--------|----------|
| Stromsensor, AC 0...50A |  | pdf    | Download |
|                         |  | 1.7 MB |          |

#### Additional Information

|                                                           |              |        |          |
|-----------------------------------------------------------|--------------|--------|----------|
| Disposal and Recycling                                    | V 1.1.0      | pdf    | Download |
| Electrical and electronic equipment, Batteries, Packaging | Aug 18, 2022 | 2.2 MB |          |

## CAD/CAE-Data

### CAE data

|                           |     |          |
|---------------------------|-----|----------|
| EPLAN Data Portal 789-622 | URL | Download |
|---------------------------|-----|----------|

|                      |     |          |
|----------------------|-----|----------|
| ZUKEN Portal 789-622 | URL | Download |
|----------------------|-----|----------|

|                        |     |          |
|------------------------|-----|----------|
| WSCAD Universe 789-622 | URL | Download |
|------------------------|-----|----------|

### CAD data

|                      |     |          |
|----------------------|-----|----------|
| 2D/3D Models 789-622 | URL | Download |
|----------------------|-----|----------|

#### Asset Administration Shell

|                                    |     |          |
|------------------------------------|-----|----------|
| Asset Administration Shell 789-622 | URL | Download |
|------------------------------------|-----|----------|

## Environmental Product Compliance

### Compliance Search

|                                          |     |          |
|------------------------------------------|-----|----------|
| Environmental Product Compliance 789-622 | URL | Download |
|------------------------------------------|-----|----------|

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Current signal conditioner; Current input signal: 50 AAC; Modbus RTU; Supply voltage: 24 VDC; Module width: 35 mm

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## Installation Notes

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