



789-620

RJ-45 Connector Pin Assignment

| Pin | Function |
|-----|----------|
| 1   | TX       |
| 2   | TX       |
| 3   | TX       |
| 4   | A (Data) |
| 5   | B (Data) |
| 6   | TX       |
| 7   | TX       |
| 8   | TX       |

Communication Description

| Modbus Function           | Read Holding Registers (0x03) |
|---------------------------|-------------------------------|
| Address of Measured Value | 0x0004                        |
| First Time Measurement    | Integer                       |

Error Numbers

|     |                          |
|-----|--------------------------|
| 01  | Description              |
| 02  | Input Function           |
| 03  | Input Data               |
| 101 | Overload Current > +80 A |
| 102 | Underflow Current < -0 A |

DIP Switch-Adjustability

\* = ON

| Address | DIP Switch | 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 DIP switch

Short description:

WAGO's intelligent current sensor monitors solar plants or inverters for DC measurements within a large current measurement range. The sensor is mounted on DIN-35 rail.

|                                               |                                           |                           |                                                    |
|-----------------------------------------------|-------------------------------------------|---------------------------|----------------------------------------------------|
| Technical data                                |                                           |                           |                                                    |
| Input                                         |                                           | Output – MODBUS           |                                                    |
| Input signal type                             | Current                                   | Number of devices (max.)  | 32                                                 |
| Resolution [bit]                              | 15 bits                                   | Connector                 | RJ-45                                              |
| Measured variable                             | Current                                   | Bus length (max.)         | 1200 m                                             |
| Input signal (current)                        | DC 0 ... 80 A                             | Terminating resistor      | 150 Ω (can be activated via DIP switch 1)          |
| Communication                                 |                                           | Measurement error         |                                                    |
| Communication                                 | Modbus RTU                                | Transmission error (typ.) | ≤ 0.5 % of upper-range value (at room temperature) |
| Interface                                     | RS-485                                    | Temperature coefficient   | ≤ 0.01 %/K                                         |
| Transmission channels                         | Half duplex; 8-bit data; 1 stop bit       |                           |                                                    |
| Number of devices (max.)                      | 32                                        |                           |                                                    |
| Parity                                        | Even                                      |                           |                                                    |
| Terminating resistor                          | 150 Ω (can be activated via DIP switch 1) |                           |                                                    |
| Bus length (max.)                             | ≤ 1200 m                                  |                           |                                                    |
| Baud rate                                     | 19.2 kBd                                  |                           |                                                    |
| Power supply                                  |                                           |                           |                                                    |
| Nominal supply voltage U <sub>S</sub>         | DC 24 V                                   |                           |                                                    |
| Current consumption at nominal supply voltage | ≤ 8 mA                                    |                           |                                                    |



| Safety and protection                 |                          |  |
|---------------------------------------|--------------------------|--|
| Protection type                       | IP20                     |  |
|                                       |                          |  |
| Connection data                       |                          |  |
| Feedthrough for measurement conductor | 15 mm                    |  |
| Connector                             | RJ-45                    |  |
|                                       |                          |  |
| Physical data                         |                          |  |
| Width                                 | 35 mm / 1.378 inches     |  |
| 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                                | 80.2 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 8.0                              | EC002475                 |  |
| ETIM 7.0                              | EC002475                 |  |
| PU (SPU)                              | 1 pcs                    |  |
| Packaging type                        | Box                      |  |
| Country of origin                     | DE                       |  |
| Customs tariff number                 | 85437090300              |  |



| Environmental Product Compliance |                         |
|----------------------------------|-------------------------|
| RoHS Compliance Status           | Compliant, No Exemption |

| Approvals / Certificates                                                         |                |                                 |                                                                                                                                                                      |                        |                   |
|----------------------------------------------------------------------------------|----------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------|
| General approvals                                                                |                |                                 | Approvals for marine applications                                                                                                                                    |                        |                   |
|  |                |                                 |   |                        |                   |
| Approval                                                                         | Standard       | Certificate Name                | Approval                                                                                                                                                             | Standard               | Certificate Name  |
| EAC<br>Brjansker Zertifizierungs-<br>stelle                                      | TP TC 020/2011 | EAC RU C-DE.AM02.<br>B.00087/19 | DNV<br>DNV Germany GmbH                                                                                                                                              | DNV-CG-0339, Aug. 2021 | TAA00001D1        |
|                                                                                  |                |                                 | PRS<br>Polski Rejestr Statków                                                                                                                                        | -                      | TE/2186/880590/18 |

| Downloads                                   |                                                                                   |
|---------------------------------------------|-----------------------------------------------------------------------------------|
| Environmental Product Compliance            |                                                                                   |
| Compliance Search                           |                                                                                   |
| Environmental Product<br>Compliance 789-620 |  |

| Documentation |            |                  |                                                                                     |
|---------------|------------|------------------|-------------------------------------------------------------------------------------|
| Bid Text      |            |                  |                                                                                     |
| 789-620       | 18.07.2019 | xml<br>4.74 KB   |  |
| 789-620       | 18.07.2019 | docx<br>15.91 KB |  |

| Application Notes                                                                |                     |                  |                                                                                     |
|----------------------------------------------------------------------------------|---------------------|------------------|-------------------------------------------------------------------------------------|
| Application Note CoDeSys 2.3                                                     |                     |                  |                                                                                     |
| Anbindung eines<br>Stromsensors 789-620<br>an das WAGO-I/O-SYS-<br>TEM (a117000) | 1.0.0<br>22.08.2011 | zip<br>239.40 KB |  |

| CAD/CAE-Data         |                              |
|----------------------|------------------------------|
| CAD data             | CAE data                     |
| 2D/3D Models 789-620 | EPLAN Data Portal<br>789-620 |
|                      | WSCAD Universe<br>789-620    |
|                      | ZUKEN Portal 789-620         |



|                             |
|-----------------------------|
| 1 Compatible Products       |
| 1.1 Optional Accessories    |
| 1.1.1 Cables and connectors |
| 1.1.1.1 Connector plug      |



**Item No.: 750-975**  
ETHERNET RJ-45 connector, IP20;  
ETHERNET 10/100 Mbit/s; for field assembly

|                          |
|--------------------------|
| 1.1.2 Interface module   |
| 1.1.2.1 Interface module |



**Item No.: 289-965**  
Interface module; 2xRJ-45; PCB terminal blocks, double-row; in mounting carrier



**Item No.: 289-966**  
Interface module; 2xRJ-45; PCB terminal blocks, double-row; in mounting carrier; with shield connection