# AZ20

## Digital LED Display- and Control Unit for Panel Mounting 5 Digit



- **for all standard signals**
- **individually programmable**
- **alarm functions**
- **limit value outputs**
- **min/max-memory**
- **totaliser function**
- **frequency analogue converter**
- **characteristic adaption**
- **red, orange, green, blue or tricolor LEDs**

**Description:**

The panel mounted devices of the AZ20 series are designed for the display and evaluation of standard signals common in industry. Input modules for voltage, current, Pt100, thermocouples and frequency are available. Thanks to optional sensor supply and additional analogue output, the devices are suitable for almost all application areas. Additional serial interfaces according to the RS232 or RS485 specification give the AZ20 additional flexibility. An individual characteristics adaption with up to 30 interpolation points allows the use even in difficult cases of measurement and control technology. All settings can be easily programmed via the membrane keypad on the device or via software from PC or laptop on site. The optional tricolor LEDs provide a clearly visible visualization of the respective operating status, especially when set limit values are exceeded, even over long distances.

**Typical applications:**

Due to the large variety of combinations of input signals and output configurations, the AZ20 has practically no limits in industrial and laboratory applications.

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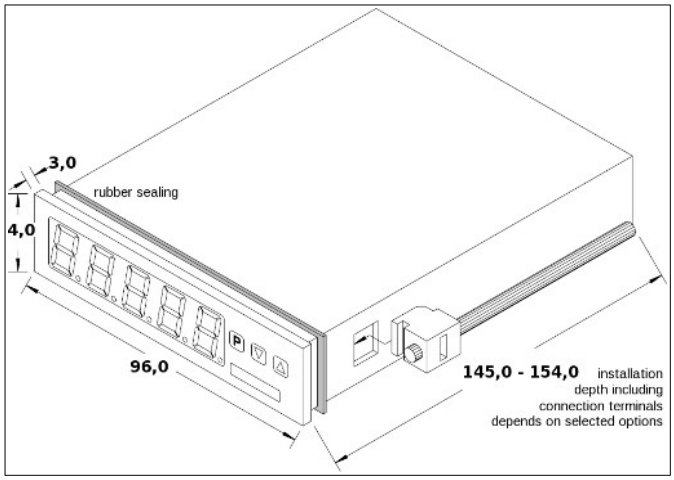
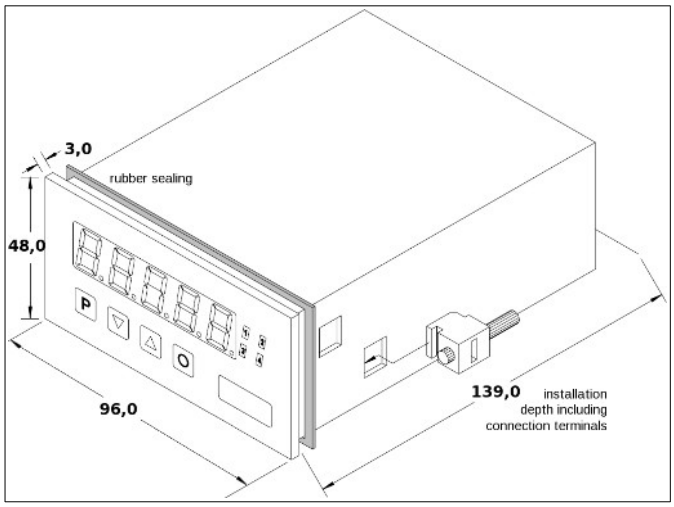
20191010
Subject to technical changes

## Models:

**AZ20.2:**
96 x 24 mm, for panel cut-out 92,0 x 22,2 mm:




**AZ20.4**
96 x 48 mm, for panel cut-out 92,0 x 45,0 mm:




## Technical Data:

**Display:** 5 digit LED display, optionally red, orange, green, blue or tricolor (green ↑ orange ↑ red, depending on operating status), 14 mm high
range: -19999 … 99999
integration time: 0,1 … 10 seconds

**Housing:** polycarbonate black
gasket EPDM black

**Protection class:** front side IP65 standard
rear side IP00

**Temperature:**
operating temperature: 0 … +50 °C
storage temperature: -20 … +80 °C

**Input signals:**

voltage: 0 … 10 VDC (-12 … +12 VDC max)
Ri approx. 200 kΩ
accuracy 0,1 % of range,
±1 digit; 100 ppm/K temperature drift

current: 0 (4) … 20 mA (-22 … 24 mA max)
Ri approx. 100 Ω
accuracy 0,1 % of range
±1 digit; 100 ppm/K temperature drift

frequency: 0,01 Hz … 999,99 kHz
pulse input, TTL, Namur,
3-wire initiator PNP/NPN
Ri at 24 V approx. 4 kΩ
high/low level > 15 V / < 4 V
TTL: > 4,6 V / < 1,9 V
accuracy 0,05 % of range
±1 Digit

Pt100: -200 … 850 °C, resolution 0,1 °C
accuracy 0,1 % of range
±1 Digit; 100 ppm/K temperature drift

thermocouple:

| | | | |
|---|---|---|---|
| type B | 80 | … | 1820 °C |
| type E | -270 | … | 1000 °C |
| type J | -210 | … | 1200 °C |
| type K | -270 | … | 1372 °C |
| type L | -200 | … | 900 °C |
| type N | -270 | … | 1300 °C |
| type S | -50 | … | 1768 °C |
| type T | -270 | … | 400 °C |
| type R | -50 | … | 1768 °C |

resolution 0,1 °C
accuracy 2 K, ±1 digit
100 ppm/K temperature drift
characteristic error < ±1 K

resistance chain: 3-wire potentiometer 0...100 %
measuring span: 1 kΩ…1 MΩ

digital input: galvanically isolated
< 2,4 V OFF, 10 V ON, 30 V max
Ri approx. 5 kΩ

**Analogue output:** 4(0) … 20 mA; 0 … 10 V
16 bit resolution

**Switching output:**
relay: SPDT contact, 250 V / 5 AAC,
30 V / 5 ADC
> 30000 switch. cycles at 30 V / 5 A ohms, > 1000000 mechanical
Foto MOS-Fet: N/O contact,
30 VDC/AC, 400 mA

**Sensor supply:** 24 VDC, 50 mA; 10 VDC, 20 mA

**Interfaces:**
RS232: 9600 baud, no parity, 8 data, 1 stop
max 3 m cable length
RS485: 9600 baud, no parity, 8 data, 1 stop
max 1000 m cable length

**Supply:** adapter 230 VAC, max 20 VA
10 … 30 VDC, max 8 VA
galvanically isolated

**Memory:** EEPROM, date retention > 100 years



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## Order Code:

| Order number: | AZ20. | 4. | I. | 1. | A. | R2. | 2. | 0. | R |
|---|---|---|---|---|---|---|---|---|---|

**Digital LED display- and control unit for panel mounting, 5 digits**

**Models:**
2 = installation dimension 24 x 96 mm
4 = installation dimension 48 x 96 mm

**Input signals:**
I = 0(4) … 20 mA; 0 … 10 V
F = frequencv – pulses
T = thermocouple
P = Pt100
W = resistance measuring chain

**Power supply:**
1 = 230 VAC
2 = 10 … 30 VDC

**Analogue output signal:**
0 = without output signal
A = analogue output 0(4)…20 mA; 0…10 V
AA = 2 analogue outputs 0(4)…20 mA; 0…10 V
(only for version 48 x 96 mm)

**Switching outputs:**
0 = without switching output
R2 = with 2 relay outputs
R4 = with 4 relay outputs
(only for version 48 x 96 mm)
M8 = with 8 photo MOSFET outputs
( only for version 48 x 96 mm)

**Sensor supply:**
0 = without
1 = with 10 VDC
2 = with 24 VDC

**Interface:**
0 = without
S2 = serial interface RS232
S4 = serial interface RS485

**Display color:**
R = red LEDs
Y = yellow.orange LEDs
G = green LEDs
B = blue LEDs
T = tricolor LEDs (green ↑ orange ↑ red, acc. to operating status)

**Options (combinable):**
0 = without
S = software for parameterisation
U = USB cable for PC connection
D = digital input (included with sensor supply)

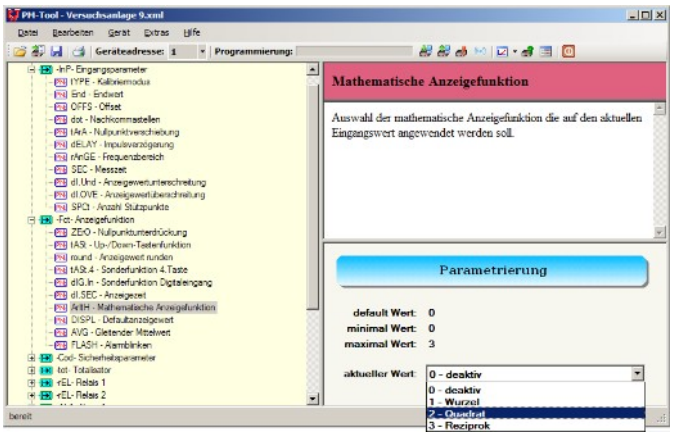
Please state the advertisement label in plain text.

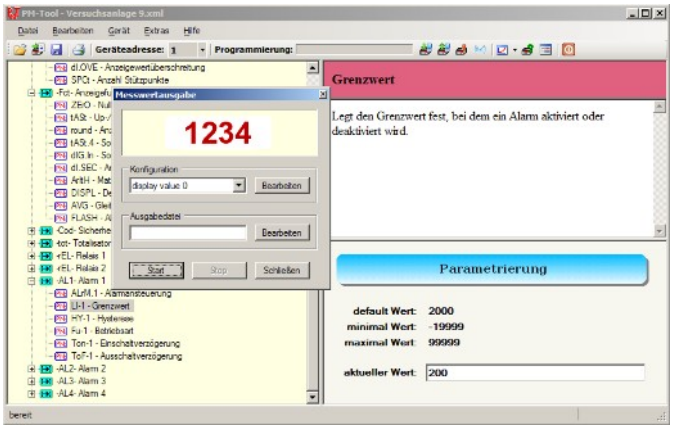
### Please note:

With 48 x 96 mm version and 230 VAC supply (types AZ20.4.x.1....) not all combinations of output signals and relay outputs are possible due to the increased space requirements of the power supply unit.
For example, the combination of 1 x analogue output and encoder supply is possible, but a second analogue output is no longer possible.

## Accessories: Programming Software

With the programming software, all device parameters can be read out, adapted and transferred back to the device. The PC is connected to the AZ20 via a USB cable, which is also available as an accessory. The complete parameter set can be saved in XML format and read in again if required. Thus, an AZ20 can be quickly converted for various projects and measurement tasks by simply reading in another parameter set.
In addition to the display and scaling settings, mathematical functions can also be applied to the measured value and – depending on the instrument version -the limit values for the alarm and relay outputs can be set. Furthermore, the measured values can also be recorded and saved as a file on the PC
A characteristic curve with up to 30 calibration points can be programmed, especially for adaption to different sensors.




The software is currently only available for Windows©-operating systems.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