Data Sheet 10/62-6.15-EN Rev. B

# Multi-loop Process Controller P500 with powerful PLC functionality, extensible with hardware modules

## Intelligent, compact and efficient


**1...4 channel fixed-value, ratio, override and cascade controller**

**Dead time algorithm (Smith predictor)**

**Spray-water protected front panel IP 65**

**Brillant LCD display with color interchange red/green**

**Basic unit with 2 analog inputs, 1 analog output and 4 digital inputs/outputs**

**Universal input for temperature sensor**

**Filtering, linearization and square-rooting of the input signal**

**Ramp rate for set point and output signal**

**Programmer and program controller**

**High and low limitation for set point and output signal**

**Preconfigured input signal connection**

**Analog or switching controller output**

**Self-setting of parameters and parameter control**

**Lock for 'parameter setting' and 'configuration' by means of password or digital input**

**Additional plug-in modules**
— For analog and digital inputs and outputs

**Serial interface**
— For parameterization and configuration as standard

**Buscapable interface**
— For Modbus or PROFIBUS

**Data storage in Flash-EPROM**

## Description

The 1...4 channel process controllers P500 (Protronic 500) and P550 (Protronic 550) are universally usable models of the Protronic series. They can be operated as process specific single units or in a system network with other Protronic controllers or in conjunction with higher-level systems.

The non-upgradable P100 (Protronic 100) is visually identical to the P500 (Protronic 500), described in Data Sheet 10/62-6.11 EN.

The P500 (Protronic 500) and P550 (Protronic 550) models differ only in their front control panels.

**P500 (Protronic 500)**
This front panel distinctly shows the current measured values and operating modes, from a long distance, in illuminated displays. For operation, all information is clearly presented on an LC display.

**P550 (Protronic 550)**
The P550 (Protronic 550) has a graphical front control panel. On a graphical display with 108 x 240 dots a large amount of different information can be shown. By means of keys a parallel display of several control channels or the time-related characteristic of variables can be selected.

**The basic model has ...**

**... a universal input.** Without modification of the unit hardware, thermocouples, Pt100 resistance thermometers, and also standard signals 0/4...20 mA can be connected. When non-linearized temperature transmitters are used, linearization is carried out in the controller. The linearization tables for all standard sensors are stored in the unit.

**... an mA input,** which is usable as a disturbance variable or set point input. In step controllers this input can be used for position feedback signal.

**... an mA output** for the positioning signal or other values, e.g. for set point and actual value.

**... four binary inputs/outputs.** These inputs/outputs are user-configurable as inputs or outputs. They are therefore optionally usable as controller outputs or alarm value outputs, but also as inputs for switchover in the controller (e.g. manual/automatic).

**… a front-panel TTL interface** for connection of a parameter setting and configuration PC. This facilitates the necessary adjustments during commissioning.

**Hardware extensions**
**... 7 module slots** for expansion of the functions
**... 1 slot for memory card** (front panel)

## Front control panel

The front control panel gives information on the state of the process and permits specifically-targeted intervention in the process sequence. Illuminated displays, which can also be seen from a distance, indicate the process state. Digital displays and cleartext information permit precise reading and accurate setting of set point and correction values.

### Programmer

Every unit has a configurable programmer which provides a time-dependent set point. Up to 10 programs with 15 segments each can be stored in the unit.

### Controller outputs

**Two-position controller,** PID characteristic without or with leading contact for high/low/off levelling.

**Controller for heating/off/cooling,** optionally with two switching or one continuous and one switching output.

**Step controller** for motorised valve control.

**Continuous controller,** optionally also split-range output with two continuous positioning signals.

### Parameter setting

After entering a password, the user accesses the parameter setting level by means of a menu key. At the parameter setting level parameters for the available functions, such as controller gain $K_p$ or time constants, can be set.

### Configuration

Configuration can be effected in two ways:

**List configuration**
The menu key accesses the password-protected configuration level. There the standard functions are selected from a list provided in the unit. As an alternative to the user keyboard, the selection can also be made by way of the PC program **IBIS-R**. This especially simplifies the setting procedure if several units are to be set at the same time (see Data Sheet 10/62-6.70 EN).

**Free configuration**
Appropr. prepared models allow for customer-specific configuration, i.e. functions beyond the standard functions of the controller.

The PC program **IBIS-R** enables a graphical programming with function block diagrams for realising any special calculation or PLC functions.

Retrofitting the plug-in Confi IC allows subsequent free configurability.

# Technical data

## Inputs

**Common data:**

without electronical isolation
Resolution ≤ 0.01 %
Accuracy (referred to nominal range) ≤ 0.2 %
Temperature effects ≤ 0.2 %/10 °C
Hardware input filter limit frequency 7 Hz

**Permissible common-mode voltage against device ground**

≤ ± 4 V DC

**Permissible differential-mode voltage $U_{ss}$ (50 Hz):**

50 $mV_{ss}$

**Analog:**
**Universal input AI01**

**used for standard signal**

0/4...20 mA at 50 Ω ±1 %

**Overcurrent/polarity reversal protection**

up to ± 40 mA

**Linearization, square-rooting**

configurable

**at 4...20 mA**

Line break monitoring with configurable reaction

### used for thermocouples

| Types | Temperature range | Voltage range | Typical accuracy |
|---|---|---|---|
| J | -200...1200 °C | 77.43 mV | ≤ 0.2 % |
| E | -200...1000 °C | 85.18 mV | ≤ 0.2 % |
| K | -200...1400 °C | 61.53 mV | ≤ 0.2 % |
| L | -200...1000 °C | 78.21 mV | ≤ 0.2 % |
| U | -200... 600 °C | 40.00 mV | ≤ 0.3 % |
| R | 0...1700 °C | 20.22 mV | ≤ 0.5 % |
| S | 0...1800 °C | 18.72 mV | ≤ 0.5 % |
| T | -200... 400 °C | 26.47 mV | ≤ 0.4 % |
| B | 0...1800 °C | 13.24 mV | ≤ 0.6 % |
| D | 0...2300 °C | 36.92 mV | ≤ 0.4 % |

**Reference junction compensation**

internal or external: 0, 20, 50 or 60 °C

**Internal reference junction**

| | |
|---|---|
| Error limit | ± 1 °C/10 K |
| Reference temperature | 22 °C ± 1 °C |
| Ambient temperature | 0...50 °C |

**Sensor break monitoring**

with configurable reaction

### Used for resistance thermometer Pt100 DIN

**Measuring range**

-200.0...+200.0 °C
-200.0...+800.0 °C

**Measuring current**

≤ 1 mA

**Measuring circuit**

2-wire circuit to 40 Ω line resistance, Line balancing by software

**3-wire circuit**

for symmetrical lines up to 3 x 10 Ω

**4-wire circuit**

sensor short-circuit and break monitoring with configurable reaction

### used for resistance teletransmitter (potentiometer)

**Measuring ranges**

75...200 Ω; 750...2000 Ω

**Measuring current**

≤ 1 mA

other data as resistance thermometer

**Analog input 2 (AI02)**
Input for mA signals, technical data as AI01, but without electronical isolation. 0...10 V as option (see Code No. 310).

**Binary:**
**4 binary inputs/outputs**

Direct/reverse function configurable

| Input DIN 19240 | Rated signal V DC | Voltage range (V) | Current range |
|---|---|---|---|
| Rated level | 24 | 20.4...28.8 | approx. 1 mA |
| 1-signal | 24 | 13.0...30.2 | approx. 1 mA |
| 0-signal | 0 | - 3.0... 5.0 | < 0.2 mA |

| Output DIN 19240 | Rated signal V DC | Voltage range (V) | Current range |
|---|---|---|---|
| Rated level | 24 ext. | 20.4...28.8 | 100 mA |
| 1-signal | 24 | 13.0...30.2 | 0...max. mA |
| 0-signal | 0 | - 3.0... 5.0 | 0...0.15 mA |

Switches off in case of overload. Switching frequency ≤ 8 Hz

## Outputs

**Analog:**
**Control output or retransmission**

0/4...20 mA at max. 750 Ω, short-circuit and open-circuit proof

**Control range**

0...≥ 21 mA

**Load-dependency**

0.1 %/100 Ω

**Resolution**

≤ 0.01 %

**Binary:**
see inputs

## Transmitter feed

**Output voltage**

20...24 V DC, 100 mA, short-circuit proof

**Load monitoring**

Output automatically cuts off on overload

## Programmer

**10 programs can be stored**

each program:
15 segments
Set point in physical units
Segment time 0...99:59:59 hours, four digital tracks

## Serial interfaces

TTL interface accessible after removing front panel module for connection to PC via TTL/RS 232 converter (Catalog Number 62695-0346270) with fixed telegram format matching parameter setting and configuration program IBIS-R (see Data Sheet 10/62-6.70 EN). Bus capable RS 485 interface retrofittable (see modules).

## CPU data

**Measured value and correction value resolution**

≤ 0.01 %

**Cycle time**

Protronic 500 ≥ 45 ms (master setting without add. modules)
Protronic 550 ≥ 50 ms (master setting without add. modules)

**Data backup**

Flash-EPROM; optionally on memory card

## Power supply

**115 to 230 V AC (90...260 V), 47...63 Hz**

| | |
|---|---|
| Power consumption: | |
| Protronic 500 without modules | 9 VA (6 W) |
| Protronic 550 without modules | 12 VA (9 W) |
| Max. component mounting | + 12 VA (9 W) |
| Power failure bridging | ≥ 150 ms at ≥ 180 V AC |

**24 V UC**

| | |
|---|---|
| 24 V DC | -25...+30 %, Residual ripple ≤ ± 3 $V_{ss}$ |
| 24 V AC | -15...+10 %, 47...63 Hz |
| Power consumption: | |
| Protronic 500 without modules | 10 VA (7 W) |
| Protronic 550 without modules | 13 VA (9 W) |
| Max. component mounting | + 13 VA (9 W) |
| Power failure bridging | ≥ 20 ms at 0.85 x $U_{Nenn}$ |

**Power factor**

cosφ = 0.7

**Safety**

The device needs no external safety of power supply

## Environmental conditions

**Climatic class**

3K3 to EN 60721-3-3

**Ambient temperature**

0...50 °C

**Storage and transport temperature**

-20...+70 °C

**Relative humidity**

< 85 %, short-term to 95 %, no condensation

**Minimum atmospheric pressure**

80 kPa

## Electromagnetic compatibility

Meets protection requirements of EMC directive 89/336/EEC

EMC requirements EN 61326/A2:2001

Interference emission referred to: EN 55011, class B

Industry standard to NAMUR NE 21/1998-08

Maximum immunity if assembled in metallic plant

## Connection, case, safety

**Degree of protection to DIN EN 60529**

Front panel: IP 65
Case: IP 20
Terminals: IP 20

### Electrical safety

Class of protection 1 to EN 61010-1/A2:1995 (VDE 0411 T.1/A1)

Clearances and creepage distances as per EN for overvoltage category 3, degree of contamination 2

All inputs and outputs, including the interface and the transmitter feed are functional extra-low voltage circuits to HD384-4-41S2:1996 (IEC 364-4-41 imod.:1992) The safe isolation of these circuits meets the requirements to EN 61140:2001 (VDE 0140 T1).

### Mechanical stress features

**to EN 60068-2-6 and EN 60068-2-27**

Shock 30 g/18 ms
Vibration 2 g/0.15 mm/5...150 Hz

**Case dimensions**

Front panel 72 mm x 144 mm
Installed depth 272 mm

**Panel cutout**

68 mm x 138 mm to DIN 43700

**Mounting**

in panel
Horizontal high-density construction possible
Vertical spacing 36 mm
Fixing with straining screws at top and bottom

### Electrical connections

**Plug-in screw terminals**

for wire or stranded wire to 1.5 $mm^2$, coded

**Power supply**

2.5 $mm^2$

No shielded cables required – except for interface leads

**Mounting orientation**

any

**Weight**

1 kg without modules
each module approx. 40 g,
Relay module approx. 80 g

### Scope of supply and delivery

2 straining screws, operating manual and plug-in screw terminals

## Modules

With few exceptions, the modules can be run at all slots (see table page 11). The controllers identify the inserted modules automatically.

## Analog inputs

### **Module AE4_MA** for standard signals

**4 inputs**
0/4...20 mA with electronical isolation

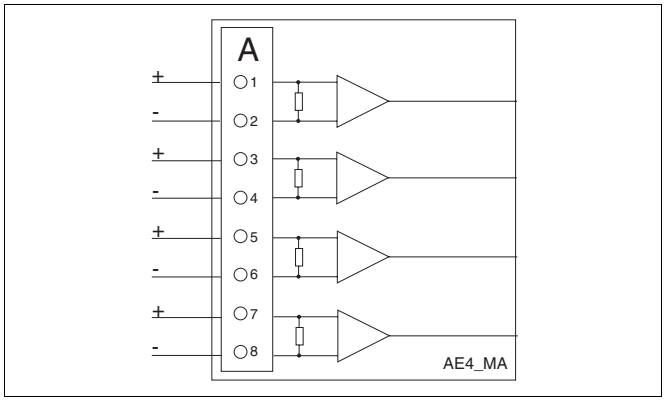
**Input resistance**
approx. 50 Ω

**Signal resolution**
≤ 0.01 % for 20 mA

**Permissible common-mode voltage**
≤ ± 4 V against device ground

**Permissible differential-mode voltage**
50 $mV_{ss}$

**Destruction proof**
Input current < 50 mA
Voltage between input and ground ± 50 V




### **Module AE4_MA-MUS**
for mA or V signals, integrated transmitter feed
(pay attention to maximum power consumption, page 11)

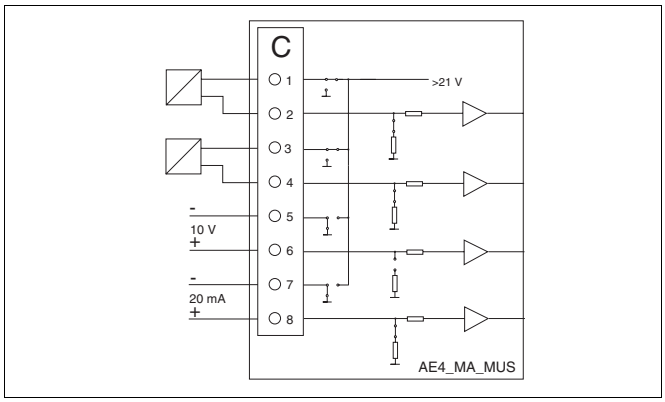
**4 inputs**
0/4...20 mA, indiv. switchable to 0/2...10 V with common ground

**Input resistance at**
mA input: approx. 50 Ω; 10 V input: 20 kΩ

**Transmitter feed:** 20 V, 82 mA

Other data as module 4_MA

Example of an input configuration




### **Module 4_MV** for thermocouples

**4 inputs**
-10...80 mV, with electronical isolation

**Signal resolution:** 20.000 for -10...80 mV

**Input resistance:** approx. 5 MΩ

**Permissible common-mode voltage:** ≤ ± 4 V against device ground

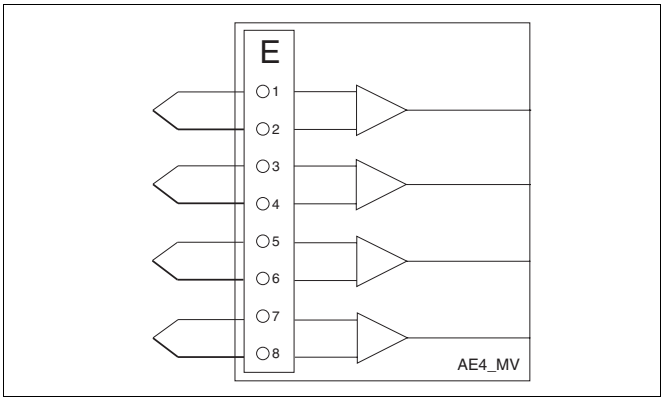
**Permissible differential-mode voltage:** 50 $mV_{ss}$

**Destruction proof**
Voltage at one input ± 10 V
Voltage between input and ground ± 50 V

**Break monitoring**
configurable reaction

**Reference junction compensation**
configurable, internal or external 0, 20, 50 or 60 °C

Linearization configurable like AI01




### **Module AE2_MA/MV-TR**
for mA signals or thermocouple with electrical isolation

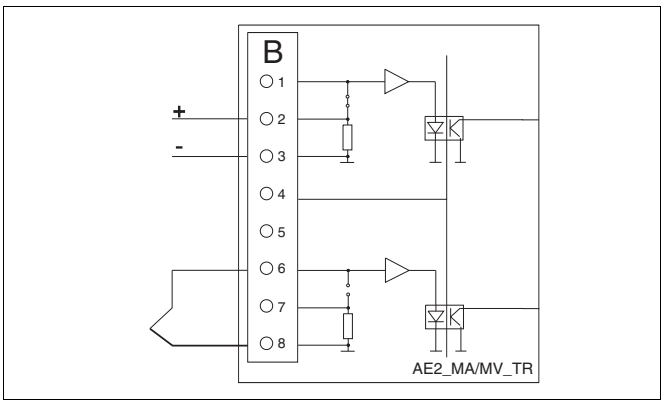
**2 inputs with electrical isolation**
0/4...20 mA or -10...80 mV (changeable by means of jumpers)

**Input resistance at**
20 mA: 25 Ω; -10...80 mV: approx. 5 MΩ

**Dielectric strength of input and output leads against each other and against grounded conductor:**

| | |
|---|---|
| Test voltage | 500 V AC |
| Continuous operation | 45 V AC |

Technical data as modules 4_MV or 4_MA



### **Module AE4_PT_2L** for RTD 2-wires

**4 inputs**
for Pt100 in 2-wire circuit without electrical isolation

**Range**
0...400 Ω

**Permissible differential mode voltage**
100 $mV_{ss}$

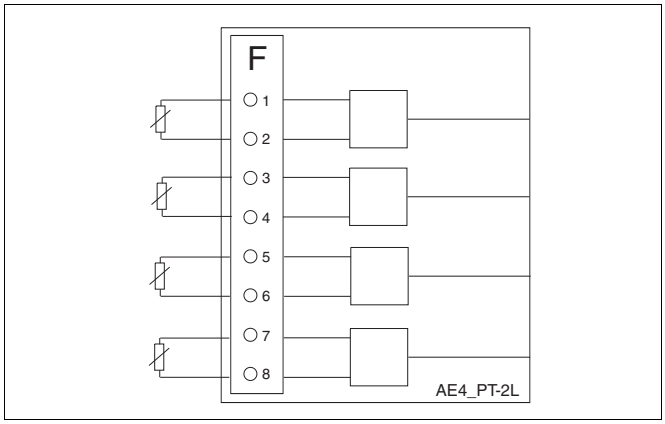
**Signal resolution**
≤ 0.01 % for 400 Ω

**Measuring current**
≤ 1.5 mA

**Measuring range configurable**
-200.0...+200.0 °C
0.0...+450.0 °C
-200.0...+800.0 °C

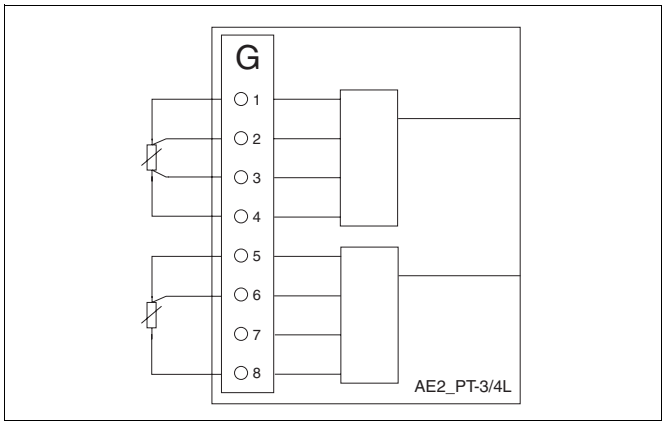
Line balancing by software

**Sensor break and short-circuit monitoring**
configurable reaction




### **Module AE2_PT-3/4L** for RTD 3-/4-wires

**2 inputs**
for Pt100 in 3- or 4-wire circuit or potentiometer




Technical data for Pt100 as module AE4_PT_2_L

**Potentiometer R150**
0...150 Ω

**Series resistance**
0...500 Ω

**Measuring current**
< 1.5 mA

**Potentiometer R1500**
0...1500 Ω

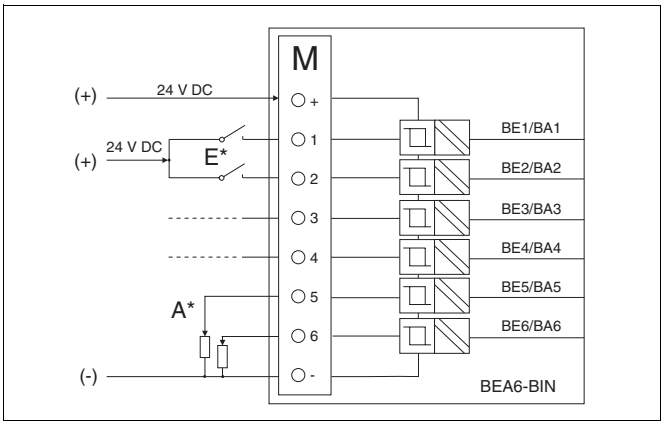
**Series resistance**
0...1500 Ω

**Measuring current**
< 0.5 mA

## Binary inputs/outputs

### Module BEA6-BIN

**6 binary inputs/outputs, electrical isolation**
Function configurable as input or output, direct or reverse action




*) Connection example: I = binary inputs; O = binary outputs

| Input DIN 19240 | Rated signal V DC | Voltage range (V) | Current range |
|---|---|---|---|
| Rated level | 24 | 20.4...28.8 | approx. 3 mA |
| 1-signal | 24 | 13.0...30.2 | approx. 3 mA |
| 0-signal | 0 | -3.0...5.0 | ≤ 0.1 mA |

| Output DIN 19240 | Rated signal V DC | Voltage range (V) | Current range |
|---|---|---|---|
| Rated level | 24 ext | 20.4...28.8 | 100 mA |
| 1-Signal | 24 | 13.0...30.2 | 0...max. mA |
| 0-Signal | 0 | -3.0...5.0 | 0...0.1 mA |

## Real time clock
## Module BEA4_RTC

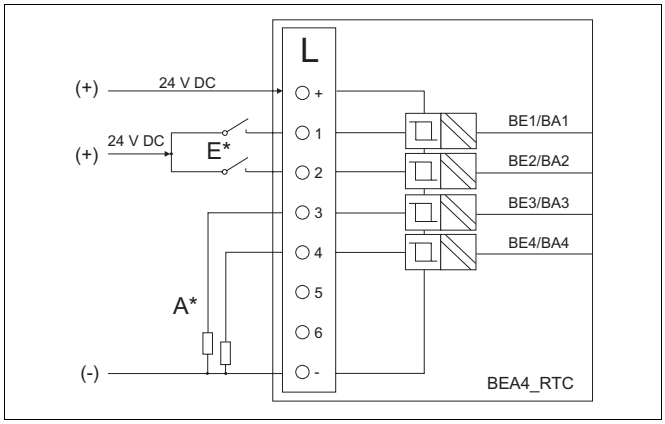
Real time clock with date, weekday and time

Daylight saving time and leap year switching

Synchronisation by digital input

Battery buffer or capacitor buffer (> 72 h)

4 digital I/O, galvanical isolated, function configurable as inputs or outputs (technical data see Module BEA6-BIN)




*) Connection example: I = binary inputs; O = binary outputs

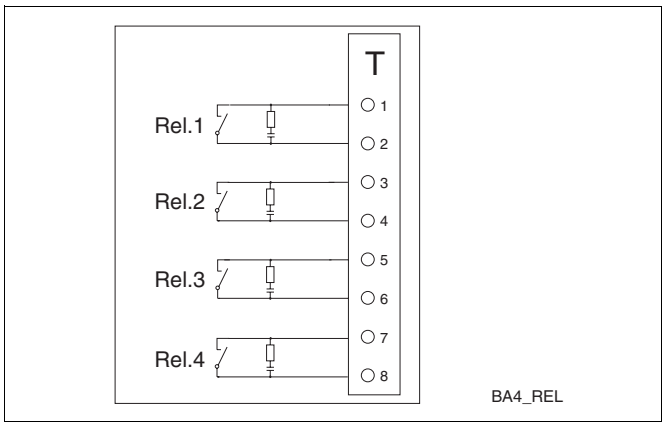
## Module BA4_REL (only usable at slot 6 and 7)

**4 relays**
with NO contact for max. 250 V AC, 1 A resistive load

**Built-in spark-quenching**
0.022 µF + 100 Ω

**For max. 250 V**
max. 1 A at cosφ = 0.9

**Contact material**
AgCdO




## Module AE4_F

**4 inputs for:**
**Frequency (1/4 inputs)**

| | |
|---|---|
| Range 1 input | 0...20 kHz |
| Range 4 inputs | 0...10 kHz |
| Signal resolution | 1 Hz |

**Periode (1-4 inputs)**

| | |
|---|---|
| Range | 0...20 s |
| Signal resolution | 1 ms |

**Impulses (1-4 inputs)/incremental angle (2 inputs)**
Range: 0...20.000 impulses/cycletime
min. impulse length: 50 µs

**Absolute incremental angle (1 input)**
Range: 0...20.000 impulses
min. impulse length: 50 µs

**Types of input signals:**
**Max. 2 Namur inputs according to DIN 19234**

| | |
|---|---|
| Open circuit voltage | $U_i$ = 9.5 V |
| Internal resistance | $R_i$ = 1 kΩ |
| Signal range | L = 0...1.2 mA/H = 2.1...4.0 mA |

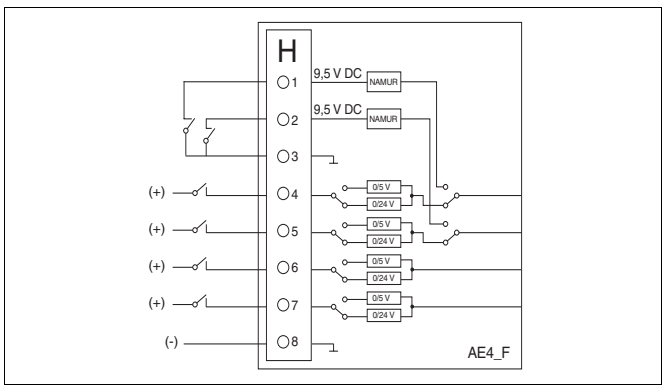
**Max. 4 digital inputs according to DIN 19240 (0/24 V DC)**

| | |
|---|---|
| Input resistance | $R_E$ > 6 kΩ |
| Signal range | L = -3...5 V/H = 13...20.2 V |

**Max. 4 digital inputs TTL (0/5 V DC)**

| | |
|---|---|
| Input resistance | $R_E$ > 6 kΩ |
| Signal range | L = 0...0.8 V/H = 3.5...24 V |

**Accuracy**
± 0.1 %



## Analog outputs

### Module AA3_MA

(pay attention to maximum power consumption, page 10)

**Triple current output**

0/4...20 mA at 750 Ω

**Signal resolution**

≤ 0.02 % for 20 mA

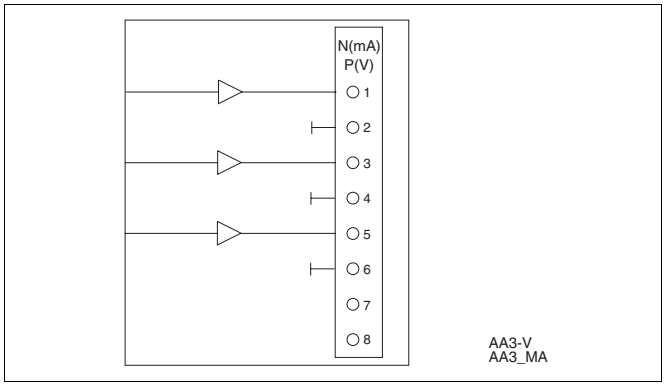
**Load dependency**

0.1 %/100 Ω

Output monitoring, reaction configurable

### Module AA3_V

Triple voltage output 0/2...10 V ≥ 5 kΩ

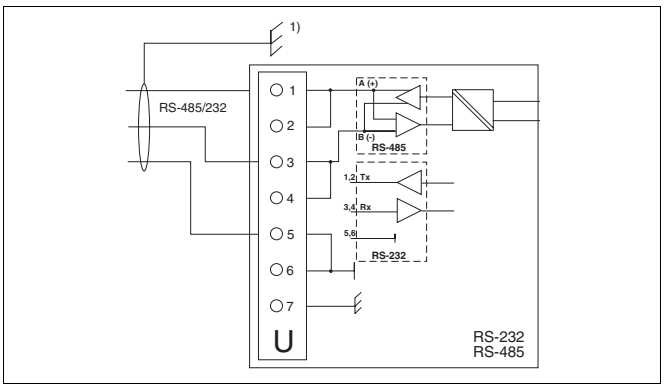



## Interface modules

### Module RS 485 or RS 232

(can only be used in slot 2)

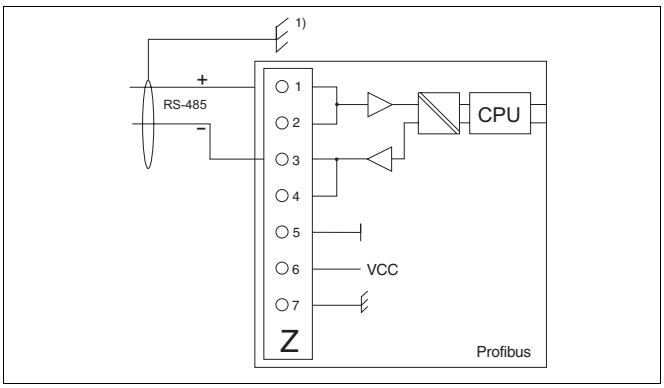
Interface module in accordance with RS 485 or RS 232 specification. Electrically isolated. Not dependent on protocol (the protocol used is configured in the controller. Standard protocol: MODBUS RTU. The RS 485 module also allows rapid, direct data exchange for lateral communication between up to 6 devices. Thus it is possible to expand the basis for inputs/outputs and also realise redundancy with to controllers in simple fashion. Transmission rate up to 187.5 kBaud.



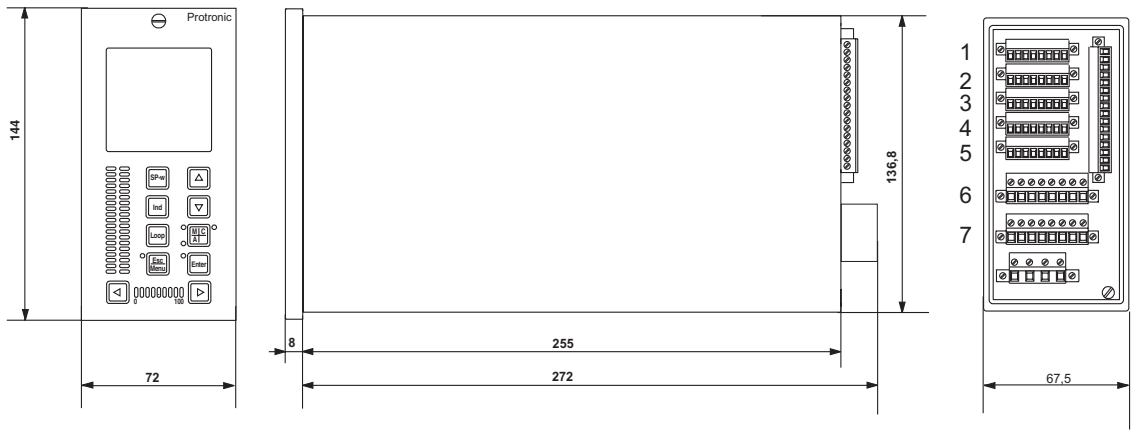

### Module PROFIBUS-DP/DPV1 (Slave)

Can be used in all slots 1...7. Module with the full functional capabilities of DIN 19245, parts 1 to 4. Maximum 1 module can be used in the device. Transmission rate up to 1.5 MBaud.

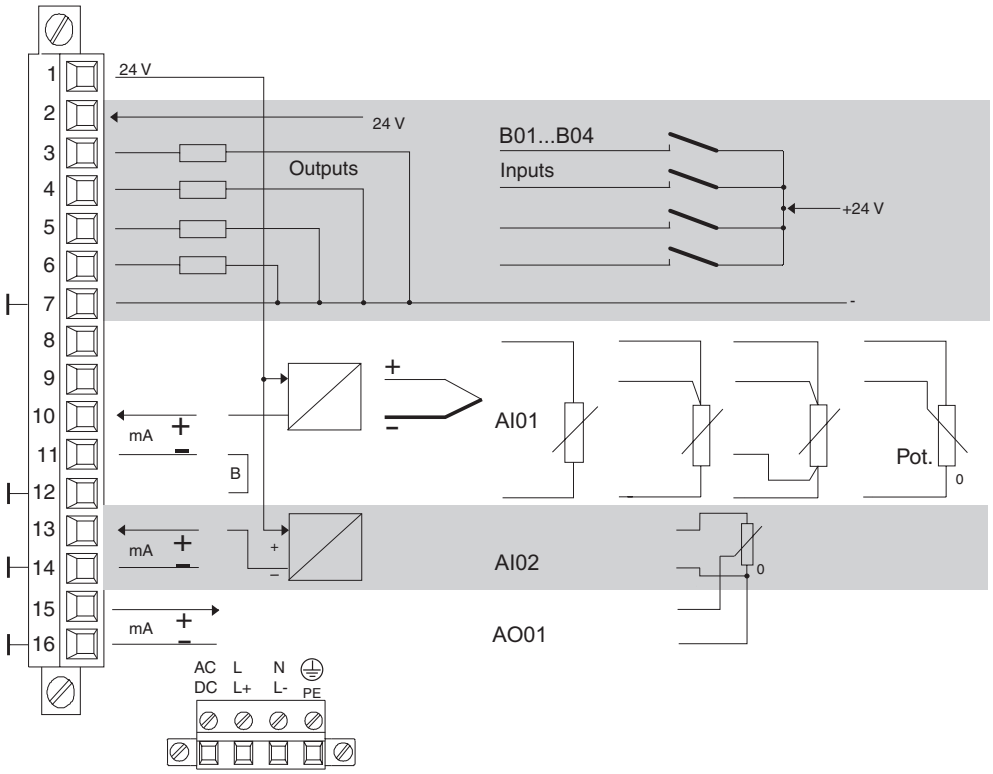
Bus terminating adapter is possible as accessory, Catalog number 62619-0346488.



## Dimensional drawings




## Connection diagrams of basic models




**Connection diagram**

| | |
|---|---|
| AI01 | Universal input |
| AI02 | Additional current input |
| B01...B04 | Binary inputs or outputs, function configurable |
| AO01 | Analog output 1 (20 mA) |
| 24 V | Feed for 2-wire transmitter and/or binary inputs and outputs |
| B | Jumper only if transmitter feed from terminal 1 is used |

## Ex stock versions

| | | Catalog No. | | |
|---|---|---|---|---|
| **Standard model P500, P550 without modules, without memory card**<br>pre-configured as single-channel continuous controller | | | | |
| **List configuration:** | | | | |
| P500 (Protronic 500) | 115-230 V AC | V62615A-1101110 | | |
| | 24 V UC | V62615A-1401110 | | |
| P550 (Protronic 550) | 115-230 V AC | V62615A-2101110 | | |
| | 24 V UC | V62615A-2401110 | | |
| **Free configuration:** | | | | |
| P500 (Protronic 500) | 115-230 V AC | V62615A-1111110 | | |
| | 24 V UC | V62615A-1411110 | | |
| P550 (Protronic 550) | 115-230 V AC | V62615A-2111110 | | |
| | 24 V UC | V62615A-2411110 | | |

From these basic models, by configuration and, as appropriate, installation of modules, all functions can be realized (for units with memory card see page 9).

The freely configurable units can be functionally expanded specific to customer requirements with the configuration program IBIS-R. The functions and functional modules available in the configuration program are based on Freelance 2000, and comply with IEC 1131-3.

## Ordering information

| | Catalog No. | | | | | | | Code | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Standard model without modules**<br>pre-configured as single-channel continuous controller | **V62615A-** | | | | **1** | **1** | **1** | | | |
| **Model** | | | | | | | | | | |
| P500 (Protronic 500) | | 1 | | | | | | | | |
| P550 (Protronic 550) | | 2 | | | | | | | | |
| **Power supply** | | | | | | | | | | |
| 115-230 V AC | | | 1 | | | | | | | |
| 24 V UC | | | 4 | | | | | | | |
| **Freely configurable** | | | | | | | | | | |
| without (only list configuration possible) | | | | 0 | | | | | | |
| with | | | | 1 | | | | | | |
| **Front colours** | | | | | | | | | | |
| Grey, RAL 7032 with keys in yellow, green and grey | | | | | | | 0 | | | |
| Llight grey, RAL 9002 with blue-white keys | | | | | | | 1 | | | |
| Modul(s) installed in item ... of the current order | | | | | | | | 300 | | |
| entered at position of current order | | | | | | | | 301 | | |

## Special features

| | | Code | | |
|---|---|---|---|---|
| Input 2 (AE02) for 0/2...10 V instead of 0/4...20 mA | | 310 | | |
| Express handling for non-stock orders<br>(controllers equiped with modules) within 3 workdays) | | 400 | | |
| **Approvals** | | | | |
| with approval to DIN 3440 | | 780 | | |
| with approval VdTÜV, TRD water level | | 775 | | |
| Instrument without display unit<br>for wall mounting on DIN rail | Code No. on request | | | |
| **Operating Manual**[1)] | | | | |
| German | | Z2D | | |
| English | | Z2E | | |
| French | | Z2F | | |

[1)] 1 copy in German included in the basic supply; no specification required; extra Operating Manuals must be paid (please specify number)

Documentation on the configuration is in German, other languages on request!

## Ordering information

**Modules (add-on)**
**When fitting or planning the module equipment of the controller, it is neccessary to ensure that the sum of the individual module power parameters does not exceed 220. The project verification of the process controller or the hardware editor in IBIS-R monitors the power limit and prevents an overload.**

**Accessories**

| Part | Designation | Catalog No. | | |
|---|---|---|---|---|
| GSD | Device master data file for PROFIBUS DP, diskette | 62695-3601109 | | |
| Bus terminating adapter PROFIBUS DP | | 62619-0346488 | | |

| Type of modules | Designation | Mod. power para. | Code | available slots 1 | 2 | 3 | 4 | 5 | 6 | 7 | Catalog No. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Inputs** | | | | | | | | | | | | | |
| AE4_mV | 4fold thermocouple | 0 | E | x | x | x | x | x | x | x | 62619-0346280 | | |
| AE2_mA/mV_TR | 2fold thermocouple or mA with electrical isolation | 0 | B | x | x | x | x | x | x | x | 62619-0346250 | | |
| AE4_PT_2L | 4fold Pt100 in 2-wire circuit | 0 | F | x | x | x | x | x | x | x | 62619-0346255 | | |
| AE2_PT_3/4L | 2fold Pt100 in 3/4-wire circuit | 0 | G | x | x | x | x | x | x | x | 62619-0346281 | | |
| AE4_F[3] | 4fold frequency input | 50 | H | x | x | x | x | x | x | x | 62619-0346444 | | |
| AE4_mA_MUS | 4fold 0/4…20 mA / 0/2…10 V with transmitter feed | 84 | C | x[1] | x[1] | x[1] | x[1] | x[1] | x[1] | x[1] | 62619-0346441 | | |
| AE4_mA | 4fold 0/4…20 mA with electrical isolation | 0 | A | x | x | x | x | x | x | x | 62619-0346254 | | |
| **Binary inputs/outputs** | | | | | | | | | | | | | |
| BEA6_BIN | 6fold binary inputs/outputs | 0 | M | x | x | x | x | x | x | x | 62619-0346282 | | |
| **Real time clock** | | | | | | | | | | | | | |
| BEA4_RTC-B[2][4] | Real time clock with battery 4fold binary input/output | 0 | L | x | x | x | x | x | x | x | 62619-0318634 | | |
| BEA4_RTC-C[2][4] | Real time clock with capacit. 4fold binary input/output | 0 | L | x | x | x | x | x | x | x | 62619-0318635 | | |
| **Outputs** | | | | | | | | | | | | | |
| AA3_mA | 3fold 0/4...20 mA | 73 | N | x[1] | x[1] | x[1] | x[1] | x[1] | x[1] | x[1] | 62619-0346252 | | |
| AA3_V | 3fold 0/2...10 V | 3 | P | x | x | x | x | x | x | x | 62619-0346253 | | |
| BA4_REL | 4fold relays | 27 | T | | | | | | x | x | 62619-0346263 | | |
| **Interface** | | | | | | | | | | | | | |
| RS 485 | RS 485, not dependent on protocol, bus compatible baud rate up to 187500 bd. | 0 | U | | x | | | | | | 62619-0346257 | | |
| RS 232 | RS 232, not dependent on protocol, not bus compatible | 0 | Y | | x | | | | | | 62619-0346456 | | |
| PROFIBUS[2][3] | PROFIBUS DP/DPV1 (Slave) | 80 | Z | x[1] | x[1] | x[1] | x[1] | x[1] | x[1] | x[1] | 62619-0346470 | | |
| **Code-No. for alle modules:** For subsequent orders of ready-fitted devices, it may be sensible to fit the modules in the works. In such cases, the Catalog No. must be supplemented as follows: Installed in item ... of the current order (state position and item) | | | | | | | | | | | Code-Nr. 300 | | |

[1] Pay attention to the sum of power parameters (≤ 220)
[2] Maximum 1 module can be used in the device
[3] can only be used with devices from firmware version 01.190 (DPV1 from 01.200)
[4] can only be used with devices from firmware version 01.200

## Ordering information

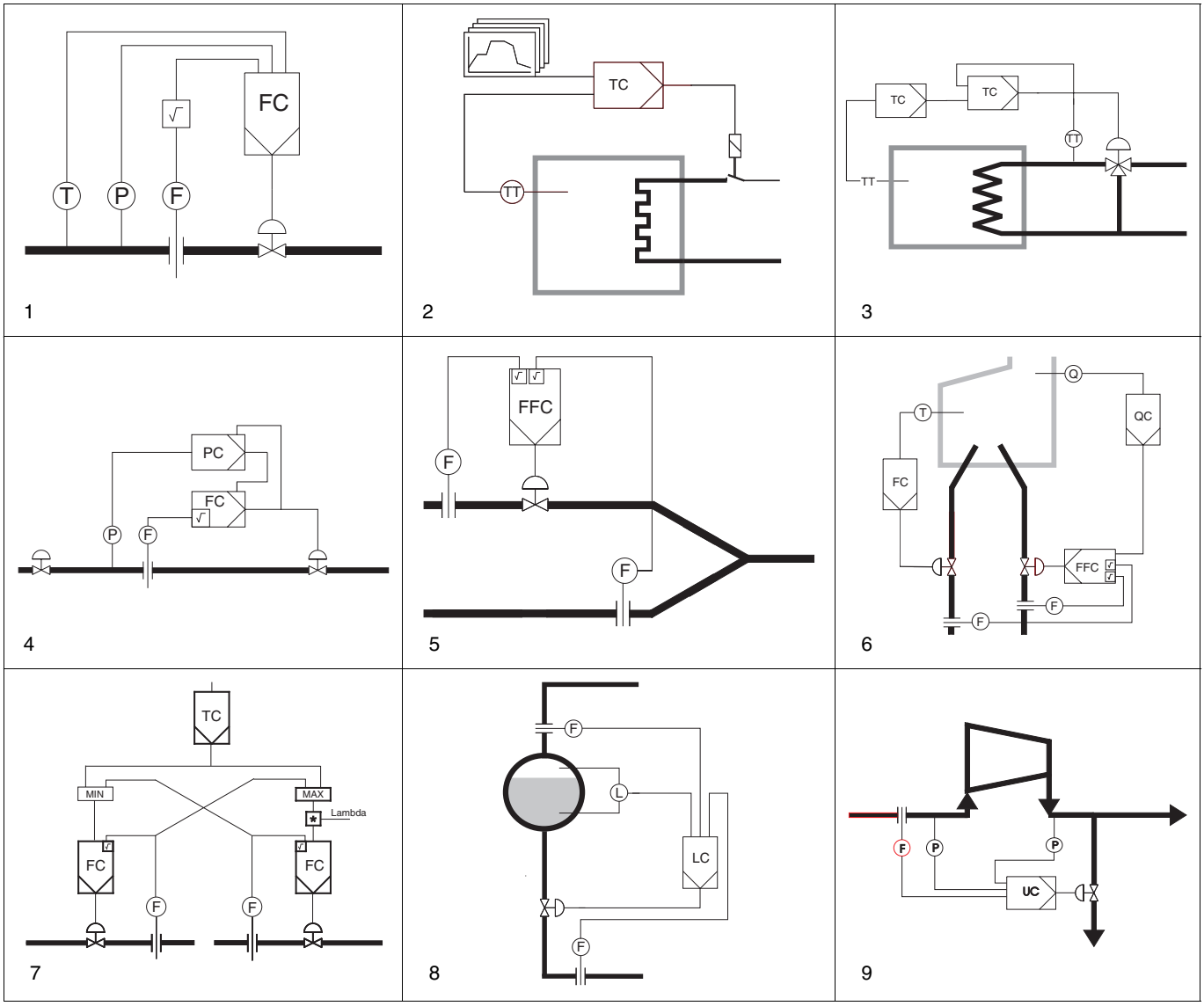
| | Catalog No. | | | | | | | | Code | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Configuration** | **V62675A-** | | | **0** | **0** | **0** | **0** | **0** | | | |
| Customer-specific configuration as separate item<br>(please enclose task definition in clear text) | | | | | | | | | | | |
| **Configuration** | | | | | | | | | | | |
| List configuration | | 1 | | | | | | | | | |
| Free configuration (price according to time and expense) | | 2 | | | | | | | | | |
| Adopted from previous order (see Code No. 302) | | 3 | | | | | | | | | |
| **Delivery** | | | | | | | | | | | |
| Stored in unit (see Code No. 301) | | | 1 | | | | | | | | |
| Disk 3,5" | | | 2 | | | | | | | | |
| Memory card | | | 3 | | | | | | | | |
| by E-Mail | | | 4 | | | | | | | | |
| **Configuration** | | | | | | | | | | | |
| Entered at position of current order (clear text) | | | | | | | | | 301 | | |
| Adopted from order number and position<br>of previous order (clear text) | | | | | | | | | 302 | | |

Documentation on the configuration is in German (1 copy is provided);
other languages on request!

| **Special features** | Catalog No. | Code | | |
|---|---|---|---|---|
| **Accessories** | | | | |
| GSD Device master dafa file for PROFIBUS DP, diskette | 62695-3601109 | | | |
| Bus terminating adapter PROFIBUS DP | 62619-0346488 | | | |
| Memory card | 61619-0745753 | | | |
| Confi IC Retrofit module for free configuration | 62619-0346461 | | | |
| Display unit Protronic 550 | 62619-0762218 | | | |
| Mounting kit for remote display | 62608-0337860 | | | |
| Passive display unit (dummy) | 62608-0337859 | | | |
| **Spare parts** | | | | |
| CPU circuit board with backplane | 62608-0346260 | | | |
| Power supply 230 V AC | 62608-0346474 | | | |
| Power supply 24 V UC | 62608-0346475 | | | |
| Display unit P550 (Protronic 550)<br>(Grey, RAL 7032, with keys in green, yellow and grey) | 62619-0762218 | | | |
| Display unit P550 (Protronic 550)<br>(Light grey, RAL 9002, with keys in blue-white) | 62608-0318655V | | | |
| Display unit P100, P500 (Protronic 100, 500)<br>(Grey, RAL 7032, with keys in green, yellow and grey)[1)] | 62619-0762219 | | | |
| Display unit P100, P500 (Protronic 100, 500)<br>(Light grey, RAL 9002, with keys in blue-white)[1)] | 62608-0318658V | | | |
| Case | 62608-0346285V | | | |
| EPROM set | 62608-0346437 | | | |
| EPROM mounting tool | 62608-0967978 | | | |
| (Further spare parts on request) | | | | |

[1)] Shall only be used for controllers with firmware 1.206 or later.
If the controller has a older firmware it must be upgraded to the actual firmware.

## Applications




1 Fixed value control, e.g. flow control, optionally with flow compensation
2 Program control with up to 10 programs
3 Cascade control
4 Override control
5 Ratio control
6 Air/fuel control
7 Load control
8 Drum water level 3 element control
9 Anti surge control, usually requires additional configurations

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