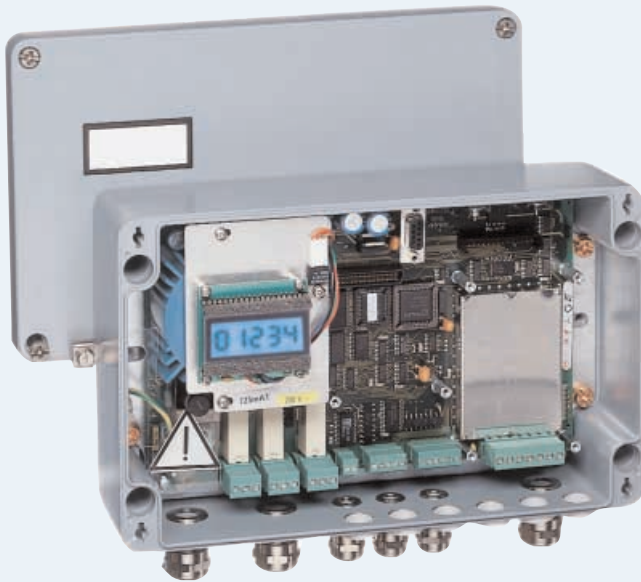


# PR 1720 Fieldbus Transmitter

PROFIBUS, InterBus-S, CAN-Bus or DeviceNet (via PR 1721)  
Several load cells directly connectable (via PR 1722)

global weighing technologies



- Galvanically isolated analogue output (16 bit)
- Accuracy of 3000d class III (acc. EN 45501)
- Serial communication interface (RS 232 or TTY or RS 485/422)
- 5-digit LCD weighing display
- IP 65 field housing
- 3 configurable inputs / 3 configurable outputs
- Userfriendly, menu-prompted configuration
- Calibration without weights (Smart Calibration)

## PRODUCT PROFILE

The new PR 1720 Fieldbus Transmitter has features that guarantee:

- integral process automation to meet highest weighing requirements
- analogue, digital or bus-capable signals for automation systems
- connection of several load cells directly to the transmitter
- the possibility to operate the instrument and to monitor the weighing process locally

In addition different fieldbus and communication protocols, as well as serial interfaces, provide the flexibility needed for easy linkage to various automation systems.

## DESCRIPTION

The PR 1720 transmitter comes in an IP 65 field housing. Via an optional load cell connection sub-unit up to 4 load cells can be directly connected.

The digital inputs and outputs, as well as the 16 bit analogue output, are galvanically isolated which guarantees the highest level of security.

Like the PR 1710 series instruments, its userfriendly, menu-prompted configuration facilitates fast and easy installation. **Smart Calibration** allows the adjustment of the scale without any reference weights. When certified load cells are attached the level of accuracy achieved reaches 'Weights and Measurements' standards.

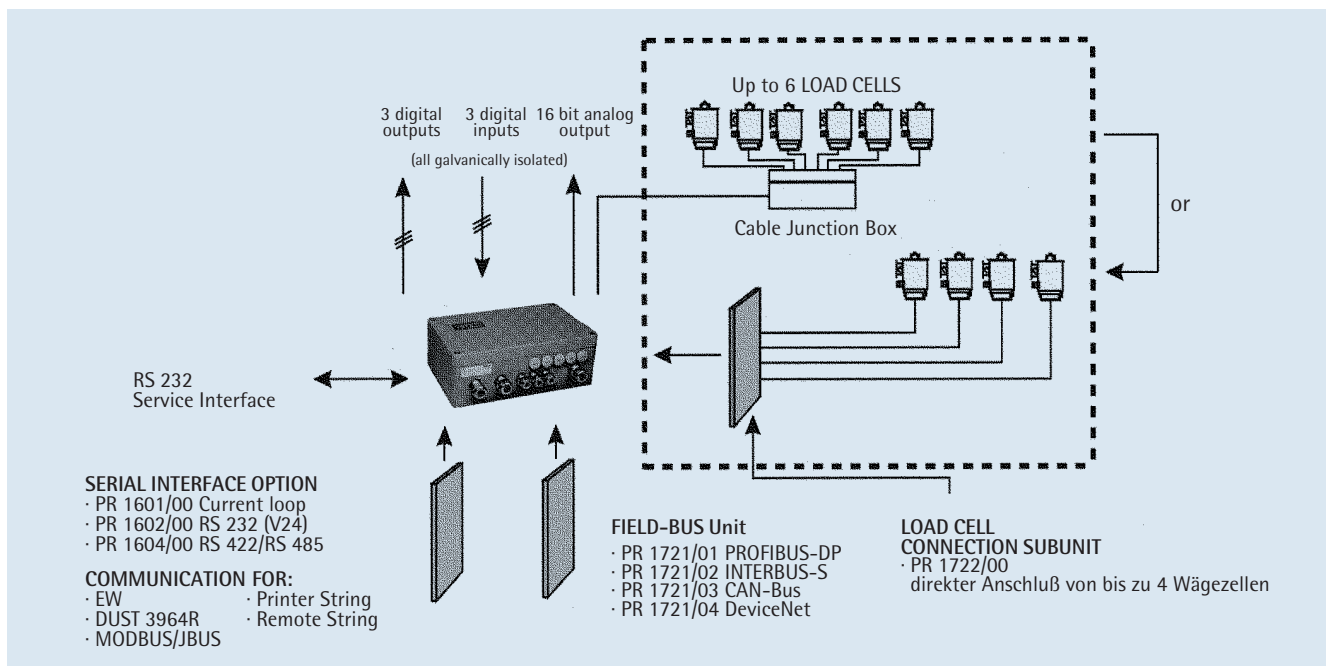
All calibration and configuration parameters are stored in an EEPROM. This gives full protection against the loss of data through a power failure.

Even a back-up on PC is possible.

The RS 232 operating interface can be used for calibration and configuration functions. Alternatively, the whole of the transmitter's operations can be managed via this interface from a remote display. By adding the appropriate interface the PR 1720 can be integrated into a supervisory system. For this different protocols, as well as, fieldbus systems such as PROFIBUS, InterBus-S and CAN-Bus are available.

## BENEFITS

- Improved process performance
- Consistent results
- Higher up-time
- Lower maintenance costs
- Flexibility



## TECHNICAL DATA

### Type of construction

Field housing, protection class IP 65

### Connection

Plugable screwblocks via compression glands

### Configuration/Calibration

Via PC or Terminal, VT 100 compatible

### Power Supply

115/230 V<sub>AC</sub> (+10/-15 %)  
Power Consumption: 14 VA

### Display

Display: 5 digits, 7-segment LCD  
Height: 10.2 mm  
Viewing area: 45.7 x 17.7 mm

### Operating interface

9-pole D-SUB connector RS 232,  
9.6 kB for PC or terminal;  
Functions: calibration, configuration,  
monitoring

### Communication interface

RS 232, RS 422/485 or current loop  
(optional, see order number)  
Maximum Baudrate: 19.2 kB  
(4.8 kB for CL)

### Protocols

EW-Bus, Remote display, Modbus/Jbus,  
Dust 3964R, Siemens 3964R-RK512,  
Fieldbus via PR 1721:

- PROFIBUS-DP or
- InterBus-S or
- CAN-Bus
- DeviceNet

### Analogue output

Resolution: 16 bit, galvanically isolated,  
0/4 to 20 mA, max. burden 500 Ω; confi-  
gurable for various weights (e.g. G, N, T, D)  
Update rate: proportional to the  
measuring time

### 3 Control inputs

Optodecoupled  
0-5 V (status 0); 10 to 31 V<sub>DC</sub>  
(status I)  
(active or passive)

### 3 Control outputs

Via relays,  
Contact duty 250 V<sub>AC</sub> max.  
(Derating for DC)

### Accuracy class

3000 d class III acc. EN 45501  
(resp. OIML R76)

### Load cell connection

All strain gauge load cells,  
6 or 4 wire connection possible;

### Via PR 1722:

up to 4 load cells directly  
connectable

### Load cell supply

12 V<sub>DC</sub>

### Load impedance

min. 87.5 Ω  
e.g. 6 load cells with 600 Ω each or  
4 load cells with 350 Ω each

### Input signal

Total range: 0 to 36 mV

### Minimum span:

≥0.3 mV/V for 3000 d (OIML) or  
≥0.04 mV/V for 3000 counts internal

### Dead load range

36 mV (max. span)

Span and deadload adjustment via  
software during calibration

### Measuring principle

A/D conversion:  
integrating converter,  
ratiometric to LC supply  
Conversion rate: 50 ms  
Measuring time: 50 ms, 100 ms  
or multiples

### Sensitivity (internal)

0.16 μV/count;  
>75.000 counts for 12 mV  
>210.000 counts for 36 mV

### Analogue filter

Active Butterworth, 40 dB/decade,  
2 Hz cut-off frequency

### Linearity error

<0.007 %

### Temperature effects

TK<sub>0</sub> <1 μV/10 K  
TK<sub>spn</sub> <0.006 %/10 K

### Net weight / shipping weight

3.5 kg/4.8 kg

**ENVIRONMENTAL CONDITIONS**

**Vibration safety**

According to IEC 68-2-6, test Fc

**Static discharge**

According to IEC 1000-4-2

**Electromagnetic fields**

According to IEC 1000-4-3

26 MHz to 1 GHz

**Interference on mains and inputs/outputs**

According to IEC 1000-4-4

**Radio noise suppression**

According to EN 55011

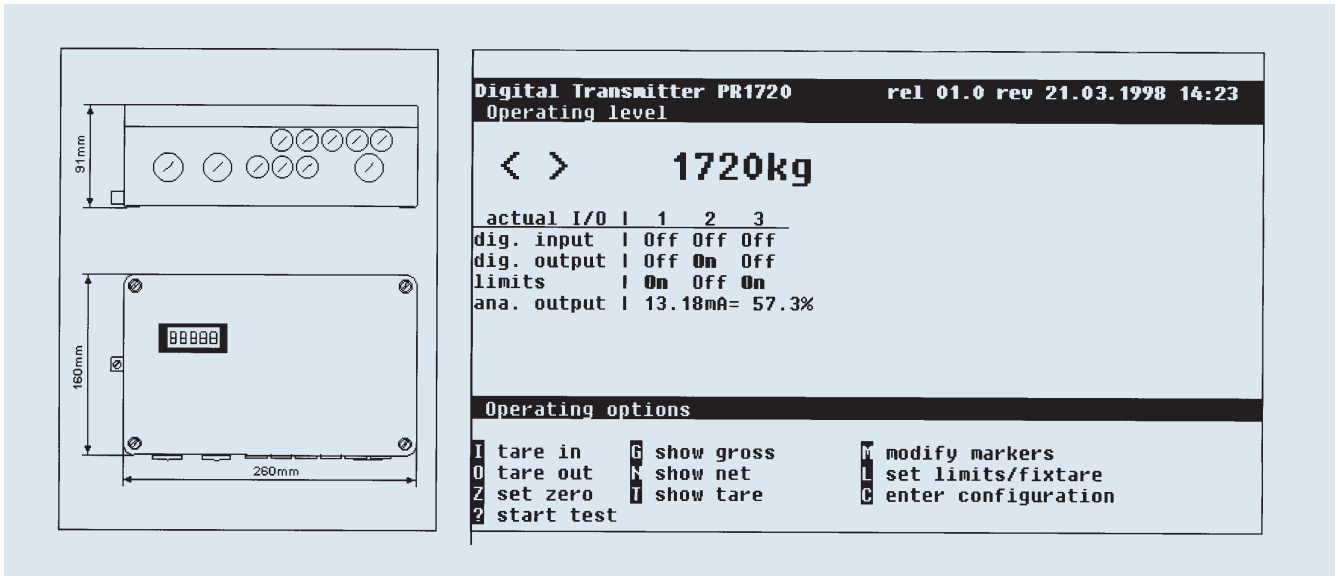
**Electrical safety**

IEC 1010-1

**Temperature range**

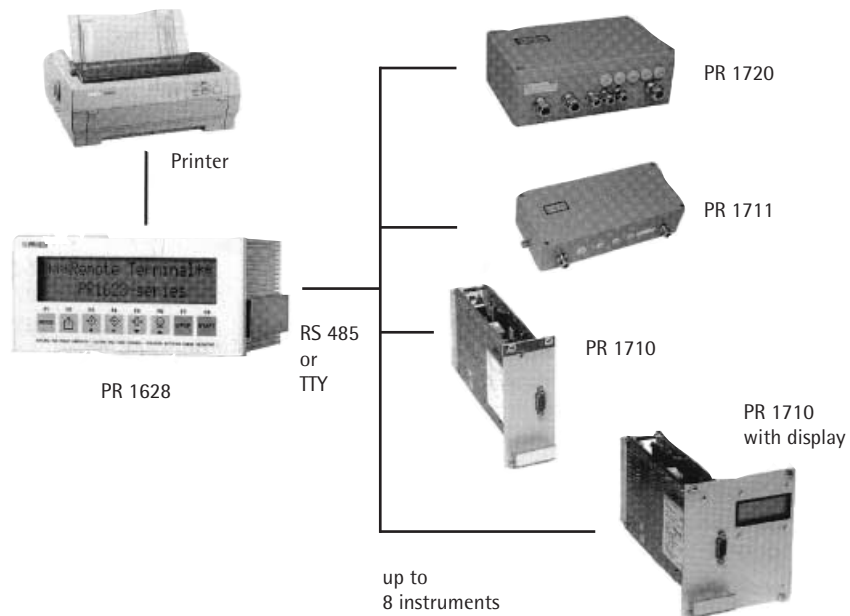
Operation: -10 °C to +55 °C

Storage: -40 °C to +70 °C

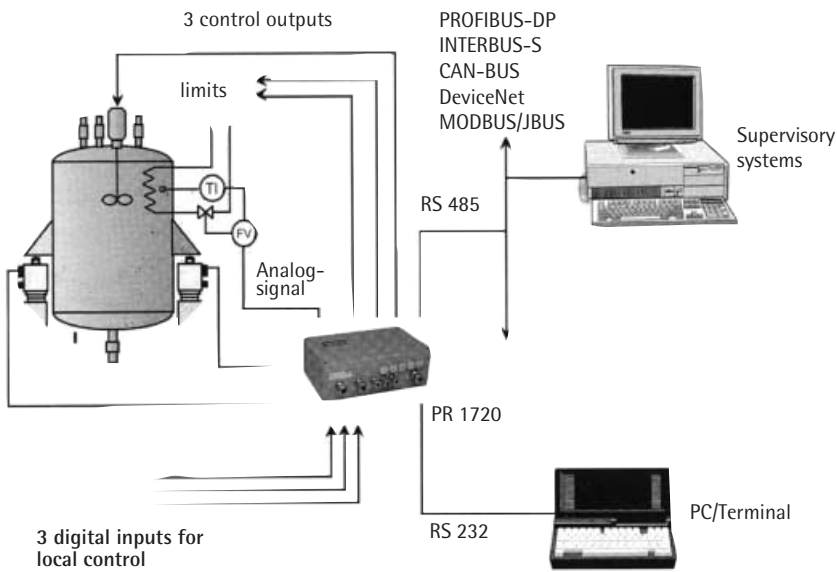


Dimensions PR 1720

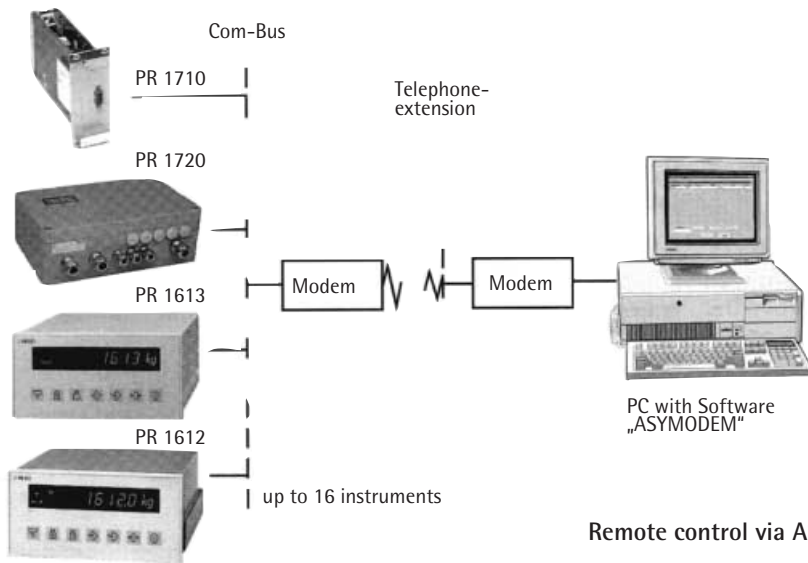
Main screen showing the prompts of the operation level menu



Control of several transmitter via one PR 1628 remote display (up to 8 instruments)



Typical application using a PR 1720/xx



Remote control via ASYMODEM software (up to 16 instruments)

## ORDER NUMBERS

ORDER NUMBERS		Serial Interfaces	
Fieldbus Transmitter	PR 1720/00		
Fieldbus-Interface			
PROFIBUS-DP	PR 1721/01	TTY-current loop	PR 1601/00
InterBus-S	PR 1721/02	RS 432	PR 1602/00
CAN-Bus	PR 1721/03	RS 485/422	PR 1604/00
DeviceNet	PR 1721/04		
Load cell subunit	PR 1722/00		

