

# signo 727.1



## APPLICATION FIELDS

## DISPLAY

## PROGRAMMING

# Position Indicator with/without Limit Values

- Large, 6-digit, 14 mm high LED display
- Prescaler
- 2 variable limit values
- Easy direct selection by 2 function keys
- Relay output with two change-over contacts
- Connection by plug-in screw terminals
- Chain value or absolute value indication
- Small compact design in DIN dimensions 48 x 96 mm
- Electronic value retention, non polluting – no battery
- npn/pnp programming of inputs
- Optional with RS 232/RS 485 interface

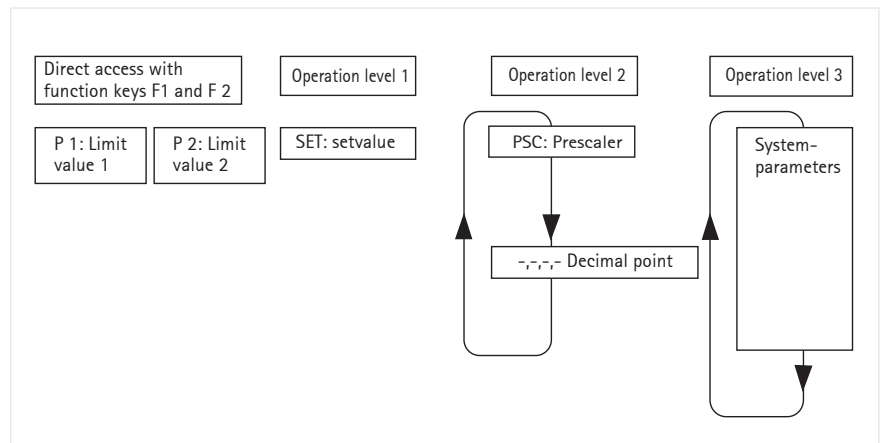
Indication of infeed values, lengths, support- or machine positions, totalizing values etc. The coupling to the machine may be effected e. g. with an incremental shaft encoder from the wide and comprehensive Hengstler program of types RI 30 to RI 58.

6-digit LED display with 14 mm high digits, easy to read, decimal point can be programmed



**Section A:** shows the actual count value when in counting mode, and the changeable parameters when in programming mode.

**Section B:** LED indicators showing the active output signal, and in programming mode indicating the changeable parameter.



Programming of signo 727 is possible by direct access and in the 3 operation levels.

**Direct access:** Limit value 1, Limit value 2 are set with the function keys F1, F2

**Operation level 1:** Set value

**Operation level 2:** Includes prescaler and decimal point

**Operation level 3:** Includes system parameters, which are normally programmed during start-up procedure only.

Unauthorized programming of the signo 727 is prevented by a control input, which can lock the operation levels.

## TECHNICAL DATA

|                            |   |
|----------------------------|---|
| Display                    | 7-segment LED, 6 digits, suppression of leading zeros, programmable decimal point |
| Digit Height               | 14 mm   |
| Power Supply Voltage $U_b$ | 12 ... 24 VDC or 115/230 VAC, depending on version*                               |
| Current Consumption        | 12 ... 24 VDC < 250 mA,<br>115/230 VAC < 60 mA                                    |
| Sensor Supply              | AC operation: 12 ... 24 VDC,<br>DC operation: $U_b - 2$ V,<br>$I_{max.} = 60$ mA  |
| Data Retention             | non-volatile memory > 10 years  |
| Operating Temperature      | 0 ... 50 °C   |
| Storage Temperature        | -20 ... +70 °C  |
| Electrical Connection      | plug-in terminals, cable length < 30 m  |
| Mounting                   | with clamping frame   |
| Protection Class (IEC 144) | front side IP 54, terminals IP 20   |
| Noise Immunity EMC         | severity according to IEC 801, part 2 + part 4                                    |
| Vibro Stability            | 10 m/s <sup>2</sup> (10 ... 150 Hz) according to IEC 68-part 2-6                  |
| Shock Stability            | 100 m/s <sup>2</sup> (18 ms) according to IEC 68-part 2-27                        |
| General Rating             | according to EN 61010-1, EN 50178, protection class II                            |

\* Not to be connected to a DC-Network. For further information see manual.

### Inputs:

|                      |   |
|----------------------|---|
| Switching Level      | < 2 V and > 8 V, max. 40 VDC  |
| Active Edge          | positive when pnp input<br>negative when npn input  |
| Pulse Shape          | any (square 1:1 at max. frequency)  |
| Input Resistance     | approx. 5 kΩ (static)   |
| Count Input          | with prescaler programmable 0.0005 bis 99.9999<br>– as phase discriminator input with single, double or quadruple evaluation<br>– as differential input<br>– as up/down input |
| Pulse Duration       | 12,5 μs (40 kHz), 17 ms (30 Hz)   |
| Count Frequency max. | 40 kHz or 30 Hz   |

### Control Input:

|  |  |
|--|--|
| Application Input 1                          | static, pulse duration > 3 ms            |
| Display-Hold or Reset-enable, (programmable) |  |
| Application Input 2                          | (Reset functions)                        |
| Reset and/or Chain-Reset, (programmable)     | pulse duration > 3 ms or > 17 ms         |
| Gate   | static, pulse duration > 12 μs / > 17 ms |
| Keylock                                      | static, pulse duration > 3 ms            |

### Outputs:

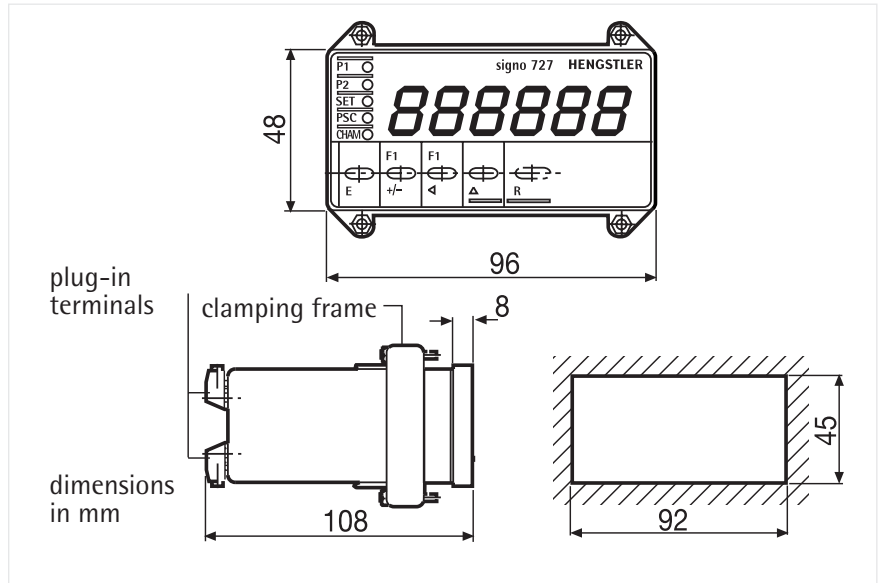
|                   |                                      |
|-------------------|--------------------------------------|
| Relay*            | Out 1 and Out 2                      |
| Contact Type      | changeover relay                     |
| Switching Voltage | max. 250 VAC / 30 VDC, min. 5 VAC/DC |
| Switching Current | max. 1A, min. 10 mA                  |
| Transistor*       | Out 1 and Out 2, PNP, 10 mA          |

\* for versions with limit value only

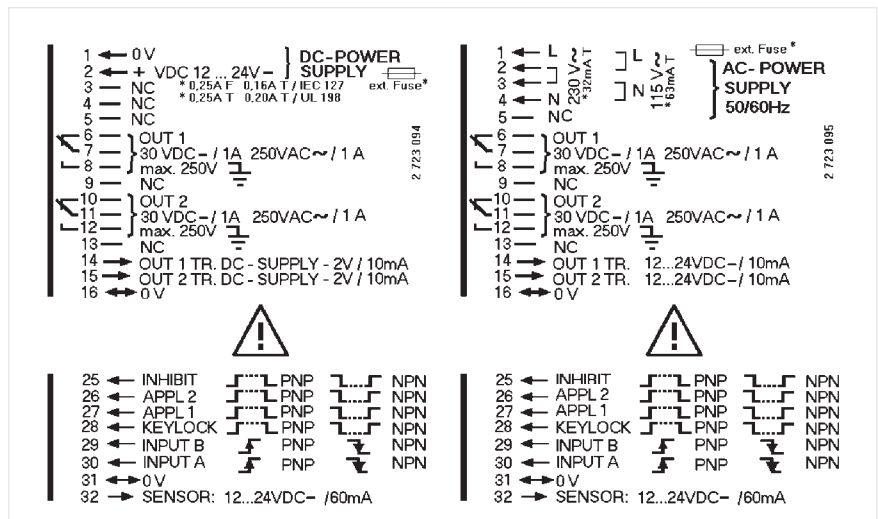
# signo 727.1

## Technical data

### DIMENSIONS



### CONNECTION DIAGRAM



(here with Limit values)

### ORDER INFORMATION

| Type                           | Supply        | Ordering code |
|--------------------------------|---------------|---------------|
| signo 727 without limit values | 12 ... 24 VDC | 0 727 101     |
| signo 727 without limit values | 115/230 VAC   | 0 727 102     |
| signo 727 with 2 limit values  | 12 ... 24 VDC | 0 727 121     |
| signo 727 with 2 limit values  | 115/230 VAC   | 0 727 122     |

This counter is available with several interfaces.

# Variable Preset Counter and Position indicator with Interface RS 485 / RS 232

signo 723

signo 727



## TECHNICAL DATA

- Large 6 digit LED display, 14 mm
- Up-/down counter, 6 digits, with different count modes and prescaler
- 2 preset values or 2 limit values
- Transistor outputs (PNP) and relay outputs (changeover contacts)
- Compact DIN 48 x 96 mm
- Easy manual operation with function keys
- Interface: RS 485 or RS 232

|                      |  |
|----------------------|--|
| Power Supply Voltage | 12...24 VDC or 115/230 VAC*  |
| Sensor Supply        | AC-operation: 12...24 VDC, DC-operation: Vop=2V, I <sub>max.</sub> = 60 mA |
| Cable length         | < 30 m   |

\* Not to be connected to a DC-Network . For further information see manual(signo 727)

### Inputs:

|                      |   |
|----------------------|---|
| Switching Level      | < 2 V and > 8 V, max. 40 VDC  |
| Active Edge          | positive PNP or negative NPN programmable   |
| Count Input          | with prescaler programmable 0.0005 ... 99.9999<br>- as phase discriminator input with single, double or quadruple evaluation<br>- as differential input<br>- as up/down input |
| Count Frequency max. | 40 kHz or 30 Hz   |
| Control Inputs       | Reset, Gate, Hold and Keylock   |

### Outputs:

|                |  |
|----------------|--|
| Relay          | Out 1 and Out 2 with changeover contact, 1 A, 250 VAC/30 VDC |
| Transistor     | Out 1 and Out 2 with PNP-Output, 10 mA                       |
| Maximum length | 15 m   |

### Input R x D

|                          |        |
|--------------------------|--------|
| Typical input resistance | 5 kOhm |
| Max input voltage        | 30 V   |

### Input T x D

|                     |       |
|---------------------|-------|
| Output voltage      | 8 V   |
| Output current max. | 20 mA |

### Terminals A and B

|                          |   |
|--------------------------|---|
| Typical input resistance | 12 kOhm                                       |
| Max input voltage        | - 7 .. + 12 V                                 |
| Output level             | High: 3.5 V, Low: 1.3 V                       |
| Output current max.      | 60 mA   |
| Maximum bus length       | 2000 m  |
| Data transfer rate       | 1200, 2400, 4800 Baud                         |
| Data format              | 7 bits, even parity<br>8 bits, no parity      |
| Stop bits                | 1   |
| Protocol                 | Hengstler TP3 or ASCII (depending on version) |

For further technical information please refer to the pages describing signo 723.1 and signo 727.1

RS 232

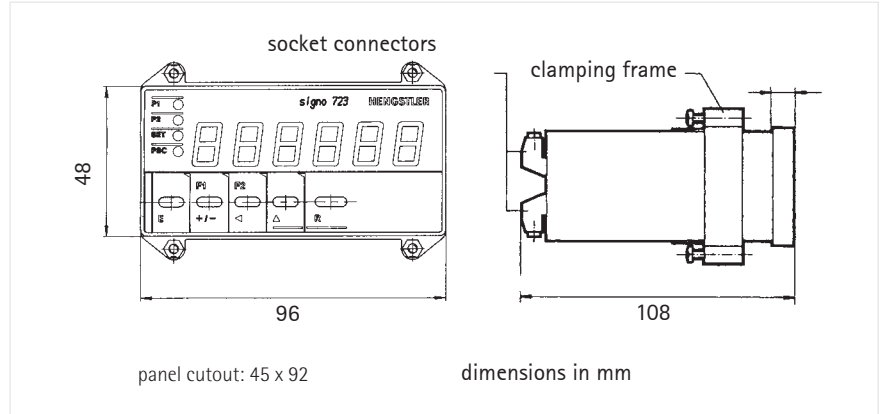
RS 485

Protocol

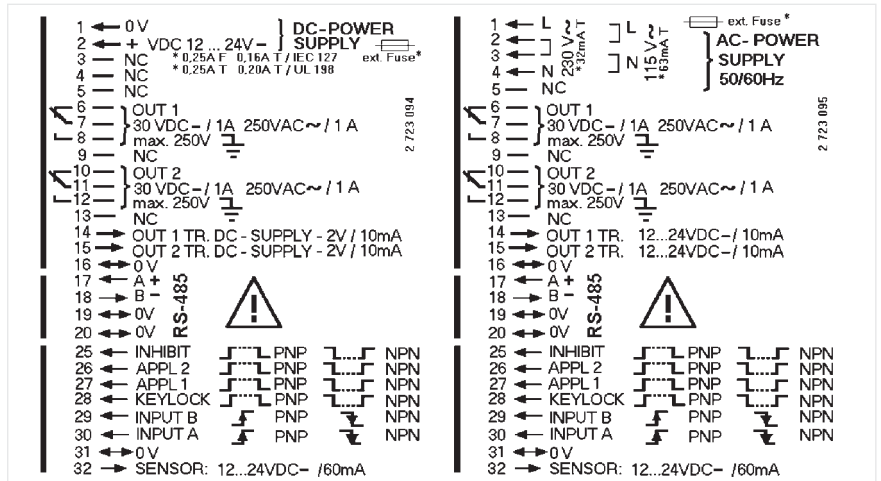
# signo 723 signo 727

## DIMENSIONS

## Technical data



## CONNECTION DIAGRAM



(here with interface RS 485)

## PRINTER PROTOCOL FOR 723.1

|                     |  |
|---------------------|--|
| Protocol            | Standard ASCII   |
| Baudrate            | 1200, 2400, 4800 Baud  |
| Data format         | 7 Bits, even Parity, 1 Stop bit<br>8 Bits, no Parity, 1 Stop bit |
| Line and Form Feeds | programmable before and after printout                           |
| Cutter Control      | programmable   |

## PRINT MASKS

|   |  |
|---|--|
| The counter allows for the programming of 5 different print masks |  |
| Mask 0  | only Count Value   |
| Mask 1  | Counters: <value>  |
| Mask 2  | Counter: <value>   |
| Mask 3  | Counter: <value><br>Preset1: <value><br>Preset2: <value><br>Set: <value><br>Prescaler: <value> |
| Mask 5  | Length: <value> m  |

## Technical data

signo 723

signo 727

### ORDER INFORMATION

#### Counter

|                           |       |             |             |
|---------------------------|-------|-------------|-------------|
| Version with interface    |       | 12...24 VDC | 115/230 VAC |
| signo 723 Printersoftware | RS232 | 0 723 150M1 | 0 723 151M1 |
| signo 723 TP3 Protocol    | RS232 | 0 723 150M3 | 0 723 151M3 |
|                           | RS485 | 0 723 160M3 | 0 723 161M3 |
| signo 727 TP3 Protocol    | RS232 | 0 727 150M3 | 0 727 151M3 |
|                           | RS485 | 0 727 160M3 | 0 727 161M3 |

#### Counter with time counter

|                        |       |           |           |
|------------------------|-------|-----------|-----------|
| signo 723 TP3 Protocol | RS485 | 0 723 125 | 0 723 126 |
|------------------------|-------|-----------|-----------|

#### PC-driversoftware

|                        |  |           |  |
|------------------------|--|-----------|--|
| Windows 2000 / NT / XP |  | 0 723 167 |  |
|------------------------|--|-----------|--|