



### Main features

- Graphical display with backlight
- Showing errors and limits by steady or flashing colours
- Fits Baumer *CombiSerie™* (80 mm)
- Hygienic design
- Option: Two configurable relay outputs
- Programmable by touch screen
- Easy and fully programmable with FlexProgrammer 9701

### Applications

- Remote display fits for all 4 - 20 mA transmitter

### Technical Data

#### Input

Measuring range 3.5...23 mA (normal working range 4...20 mA)

Connections 2 screw terminals for power (loop)  
4 screw terminals for relay outputs

Accuracy  $\leq \pm 0.1\%$  of input span within -10...70 °C  
 $\leq \pm 0.2\%$  of input span within -30...-10 °C / 70...80 °C

Loop voltage drop Two levels depending on chosen backlight brightness @ 20 mA:  
- Low bright backlight (<40%) : Max. 4V @23 °C  
- High bright backlight (>40%): Max. 6.5V @23 °C

Sample time  $\leq 1$  second. Typical 0.3 second

Start-up time  $\leq 5$  second

#### User-configurable data

Measuring range 4...20 mA

Error/warning indication Individually configurable display and backlight indication in white, green or red colour, steady or flashing light. Configurable limits between 3.5 and 23 mA

Zoom on range Minimum 2 mA of input span

Damping 0...30 seconds

Linearization table 2 to 30 points

Measuring unit (standard selectable) °C, °F, °K  
bar, mbar, kPa, MPa, psi, kg/cm<sup>2</sup>, mmHg, mH<sub>2</sub>O, atm, "Hg, mHg, "H<sub>2</sub>O, %, l/h, Ton, m<sup>3</sup>, m<sup>3</sup>/h, Hz, mS, mV, V, ohm, Hz, sec, %, mA, or user defined (programmable with FlexProgrammer)

User defined unit 8 x 20 pixels matrix  
Dec. point position xxxxx, xxx.x, xxx.xx, xx.xxx, x.xxxx, .xxxxx, AUTO

#### Relay

Contacts 2 solid state relays

Voltage 60 Vp

Load Current 75 mA

Max On resistance 10 Ohm  
The built in relays are not activated as standard.  
They can be activated at purchase or SW activation code can be purchased later.

#### Display

Type FSTN Graphically LCD

Measuring range -9999...99999

Digit height Max. 22 mm

#### EMC data

Immunity EN 61326

Emission EN 61326

EMC immunity Influence  $\leq \pm 1\%$  of input FS

#### Communication

FlexProgrammer 2-way communication for configuration.

#### Test conditions

Operating temperature 23°C  $\pm$  2 °C

#### Approval Ex ia IIC T4/T5, ATEX II 1G (Preliminary)

Internal inductivity Li < 10  $\mu$ H

Internal capacity Ci < 25 nF

Barrier data U < 30 Vdc ; I < 0.1 A ; P < 0.75 W

Temperature class T1...T5

**Environmental conditions**

Optimal readability	-10...70 °C
Operating temperature	-30...80 °C
Storage temperature	-40...85 °C
Humidity	max. 98% RH, condensing
Vibrations	According to IEC 68-2-6
Mechanical tolerances	ISO 2768-m

**Mechanical data**

Dimensions	See dimensional drawing
Material	Polycarbonate plastic
Enclosure	ø 80 mm housing and front ring stainless steel, AISI 304
Protection class	IP 10 on terminals IP 67 in ø 80 mm housing
Weight	100 g - display alone 170 g - display incl. front ring 475 g - display in ø 80 mm housing for wall mounting

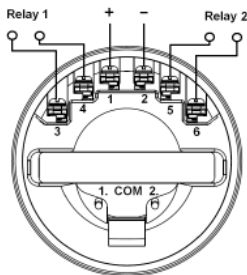
**Other data**

Temperature drift	≤ 0,001%/10K (inside optimal readability temperature range) ≤ 0,0015%/10K (outside optimal readability temperature range)
Power up time	≤ 15 sec.

**Disposal of product and packing**

According to national laws or by returning to Baumer.

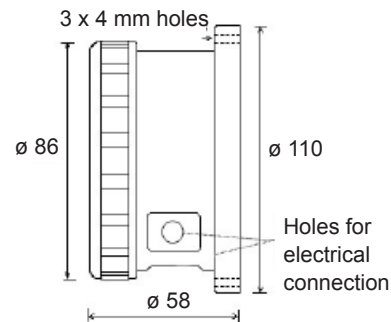
**Electrical connections**



- Terminal 1 - Supply +
- Terminal 2 - Supply -
- Terminal 3 - Relay 1
- Terminal 4 - Relay 1
- Terminal 5 - Relay 2
- Terminal 6 - Relay 2

**Drawings / Dimensions in mm**

DFON xxx11x



**Selectable views**



**Value**  
Small / Large



**Analog**  
w. Bar graph / Value



**Bar graph**  
Vertical / horizontal



**Tank illustration**  
Tank / Bottle

**Visual alert**



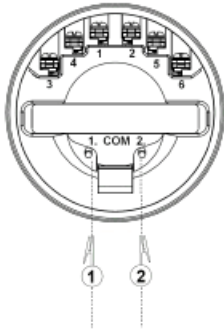
**Status ok**



**Alert status**

## Programming

Connect the FlexProgrammer to the *CombiView™*, DFON as per below.



It is not necessary to disconnect the power to the *CombiView™*, DFON display

**The FlexProgrammer 9701 is a dedicated tool to Configure all Baumer configurable products.**



FlexProgrammer, No. : 9701.0001

The FlexProgrammer interface unit will be delivered complete including

- CD with FlexProgram software
- Product drivers (DTM-files)
- cables

**The *CombiView™*, DFON can also be programmed by the touch bottoms on the display. Please see "Operating instructions for *CombiView™*, DFON".**

**Ordering details**

	-					
<b>Model</b>	DFON					
<i>CombiView™</i>						
<b>Safety</b>						
Standard		1				
ATEX ia (pending) <sup>(1)</sup>		2				
ATEX tD (pending) <sup>(1)</sup>		3				
ATEX nA (pending) <sup>(1)</sup>		4				
<b>Relays</b>						
Not activated		1				
Activated		2				
<b>Configuration</b>						
None			0			
Configured according to customer specification			1			
<b>Front ring</b>						
None				0		
For ø 80 mm SS housing (FlexBar + <i>CombiTemp®</i> )				1		
<b>Housing</b>						
None					0	
ø 80 mm SS housing for wall mounting					1	
<b>Electrical connection on housing</b>						
None						0
1 x M16 nickel plated brass cable gland						1
2 x M16 nickel plated brass cable gland						2
1 x M16 plastic cable gland						3
2 x M16 plastic cable gland						4
<b>Accessories, Software for relays</b>						
Activation code for relays (for instruments with not activated relays)						DFO-SW

<sup>(1)</sup> ATEX approvals is pending - expected Q1-13