



Programmable digital indicator for process values with advanced functions ZED 545

- Application** Display of pressure and other process values, Alarm contact switching when the current signal value goes below or above the programmed setpoint value. Indication of min./max. values and advanced computing possibilities for the dual input signal instrument.
- Housing and display** Panel mounting housing, PC/ABS-Blend, colour black, 4 1/2 digits LED display, red.
- Input signals** 0 ... 20 mA, 4 ... 20 mA, 0 ... 5 V or 0 ... 10 V. The instruments will be configured at factory, according to your ordering.
- Measuring range** Input signal and measuring range as well as setpoints could be adjusted at any time by a new programming and by selecting the signal connection on the screw terminal block.
- Programming** Through the front panel soft keys. Measuring range, setpoints, analog output (when available), computing functions (with dual input) and display time could be adjusted. The programming function could be denied.
- Setpoints** Maximum 8 programmable setpoints.
- Advanced functions** Min./Max. memory, 20 points linearisation function.



Selection Chart

Ordering example:	ZED 545 /	1	1	2	1	2	1	/...
System design	ZED 545	↑	↑	↑	↑	↑	↑	↑
Dimensions	96 x 48 144 x 72	1 5						
Power supply	230 V AC with pressure transmitter supply 115 V AC with pressure transmitter supply 24 V DC with pressure transmitter supply ³⁾ 230 V AC without pressure transmitter supply 115 V AC without pressure transmitter supply 24 V DC without pressure transmitter supply ³⁾	1 2 3 5 6 7						
Input signals	0 ... 20 mA 4 ... 20 mA 0 ... 5 V 0 ... 10 V 2 x 0 ... 20 mA ¹⁾ 2 x 4 ... 20 mA ¹⁾ 2 x 0 ... 5 V ¹⁾ 2 x 0 ... 10 V ¹⁾	1 2 5 4 A B C D						
Output signal	none 0 ... 20 mA 4 ... 20 mA 0 ... 10 V DC RS 232 RS 422	0 1 2 4 6 7						
Setpoints	none 1 Relay output 2 Relays output 4 Relays output 8 open collector output	0 1 2 4 8						
Protection (front panel) and signal connection	IP 40 + screw terminal IP 54 + screw terminal IP 65 + screw terminal IP 40 + plug in terminal IP 54 + plug in terminal IP 65 + plug in terminal	1 2 3 5 6 7						
Measured units	bar, mbar, psi, hPa, mH ₂ O, etc.							
Options	Min./Max. memory (peak values memory) ²⁾ 20 points linearisation (baseline programming) according to customer request ²⁾	2031 9813						

¹⁾ with dimension 96 x 48 are the math. functions included

²⁾ with dual input not available

³⁾ Galvanically separated



Technical Data

Input	Measuring range	0 ... 10 V, 0 ... 5 V, 0 ... 20 mA, 4 ... 20 mA
	Input resistance	All ranges are selectable via connection terminal Ri with 10 V = 83 K Ω 20 mA = 100 Ω
Output	Sensor supply	24 V DC/50 mA
	Relay outputs	Max. 4 change-over contacts Charge 230 V AC / 2 A-120 V DC / 0,5 A
	Open collector	8 outputs Supply by customer ($U_B = 5-50 V$ / $I_{max} = 400 mA$)
	Analog output	0 ... 10 V DC (12 Bit) <i>With supply AC and (DC galvanically separated), the analog output is separated from measuring input by galvanic separation!</i> 0 ... 20 mA (12 Bit)-load 500 Ohm 4 ... 20 mA (12 Bit)-load 500 Ohm
	Digital output Connection	RS 232 / RS 422-9600 Baud, no parity, 8 Data bit, 1 Stopbit At the rear side via terminal up to 2,5 mm ²
Accuracy	Resolution	± 19999 digit
	Nonlinearity	$\pm 0,1\%$ of measuring, $\pm 0,05\%$ of final value
	Temp. drift	50 ppm/K
Power unit	Measuring principle	Dual-Slope-Integration
	Supply voltage Power consumption	230 / 155 V AC $\pm 10\%$ (50-60 Hz), 24 V DC (20-30 V) galvanically separated max. 5 VA
Indication	Display	LED with seven segments, 14 mm high (20 mm, with ZED 545/5), red 4 $\frac{1}{2}$ digit - display 19999
	Overflow Measuring time	Indication of four transversal bars Adjustable from 0,1 up to 10,0 sec.
Ambient conditions	Operating temperature	0 up to +60°C
	Storage temperature	-20 up to +80°C
CE-sign	For unlimited use of the instrument within the directives for electromagnetic compatibility 89/335/EC, analog input wires have to be used with shielded cable and cable's shield connected to earth ground at one end only.	
Math. functions	(with dual input)	
	1.	$E1 + E2$
	2.	$E1 - E2$
	3.	$E1 \times E2$
	4.	$\frac{E1}{E2}$ Limited available!
	5.	$\frac{E1 \times E2}{100} + E1$
6.	$\frac{(E1 + E2)}{E1} \times 100$	

Electrical connection

ZED Type

1	2	3	4	5	6	7	8	9	10	11	12	13	14

ZED 545/1

Inputs							Transmitter excitation		Analog/Digital-output		Supply		
5/10 VDC	NC	NC	NC	0/4-20 mA	NC	GND	-	+	-	+	NC	-	+

ZED 545/5

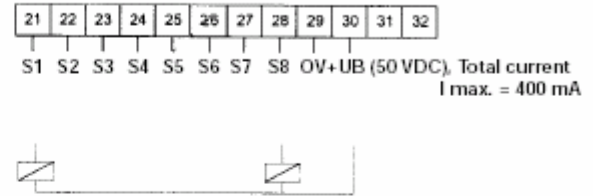
Input 1			Input 2				Transmitter excitation		Analog/Digital-output		Supply		
5/10 VDC	0/4-20 mA	GND	NC	5/10 VDC	0/4-20 mA	GND	-	+	-	+	NC	-	+



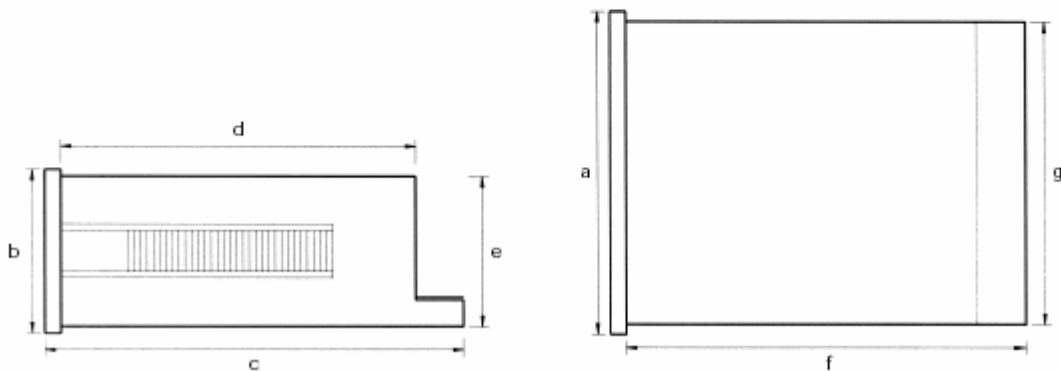
Relay contacts (presentation not energized)



Open Collector output



Housing



ZED Type	Dimensions (mm)							Assembly cut out	Weight (kg)
	a	b	c	d	e	f	g		
ZED 545/1	96	48	131 134 with screw terminal 148 with plug in terminal	111	43	126	89	92 ^{-0.1} x 45 ^{+0.1}	ca. 0,450
ZED 545/5	144	72	131 134 with screw terminal 148 with plug in terminal	110	66	127	136	138 ^{-1.0} x 68 ^{-0.6}	ca. 0,450

Fastening Special quick plastic clamp proper to fix in wall thickness up to 50 mm, (ZED 545/5 special clamp Form B DIN 43835)

Frontview ZED 545

