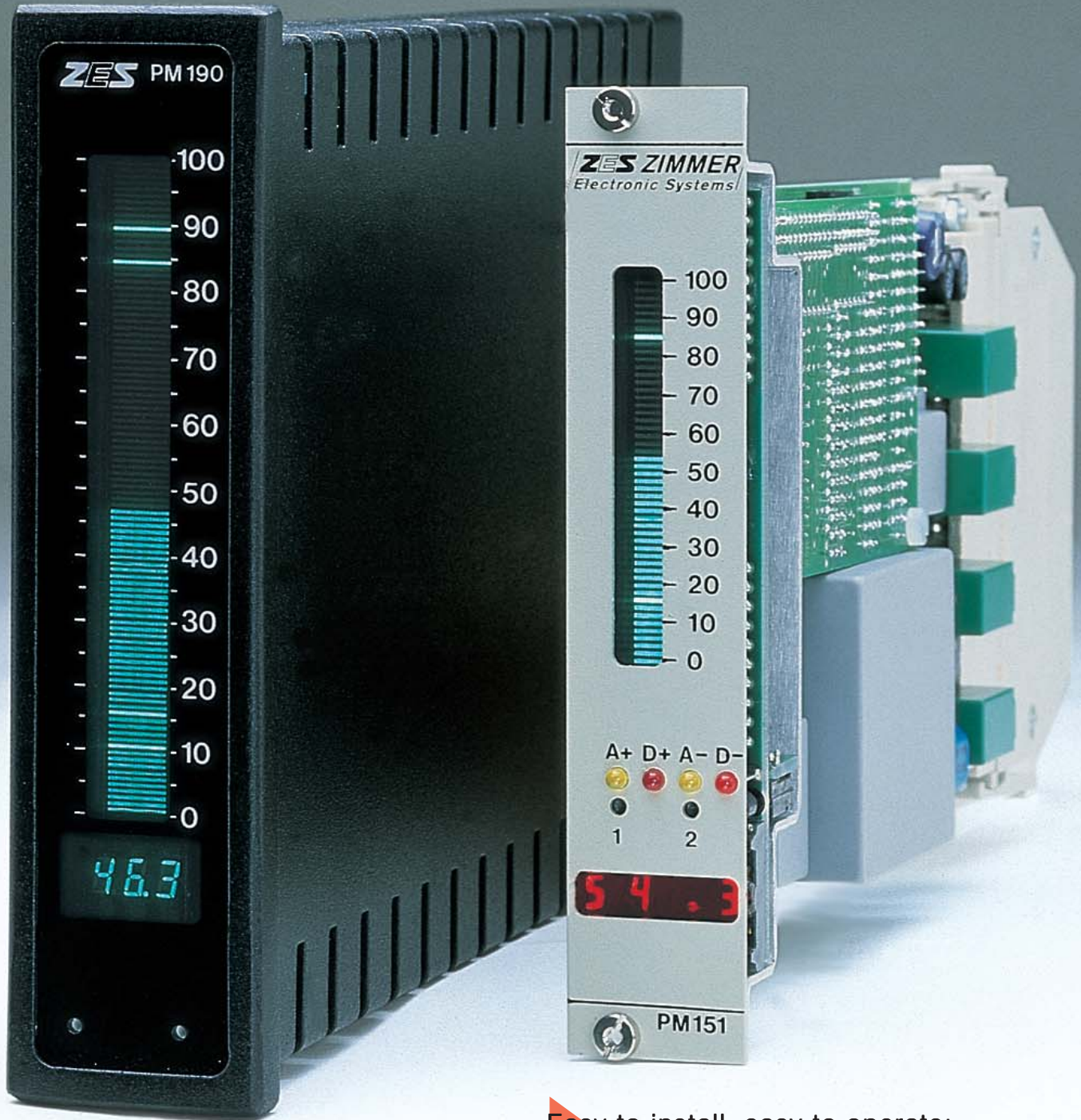


Panel Meter PM190/PM151

Limit monitor with bar-graph and digital display
Intelligent configuration to various applications



Easy to read:

Simultaneous analogue indication of measuring and limit values, digital display for the 0,1%-precise setting and evaluation

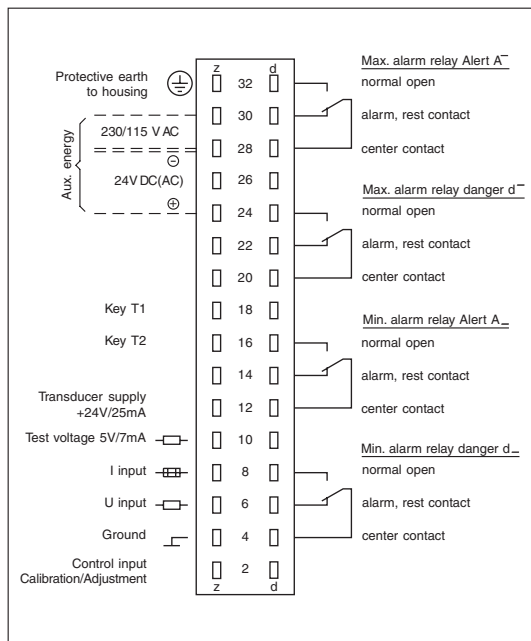
Easy to install, easy to operate:
230/115/24V auxiliary energy,
standard inputs 0-10V, 0(4)-20mA,
4 alarm relays 250V/5A,
supply for 2-wire transducers etc.

PM190/PM151

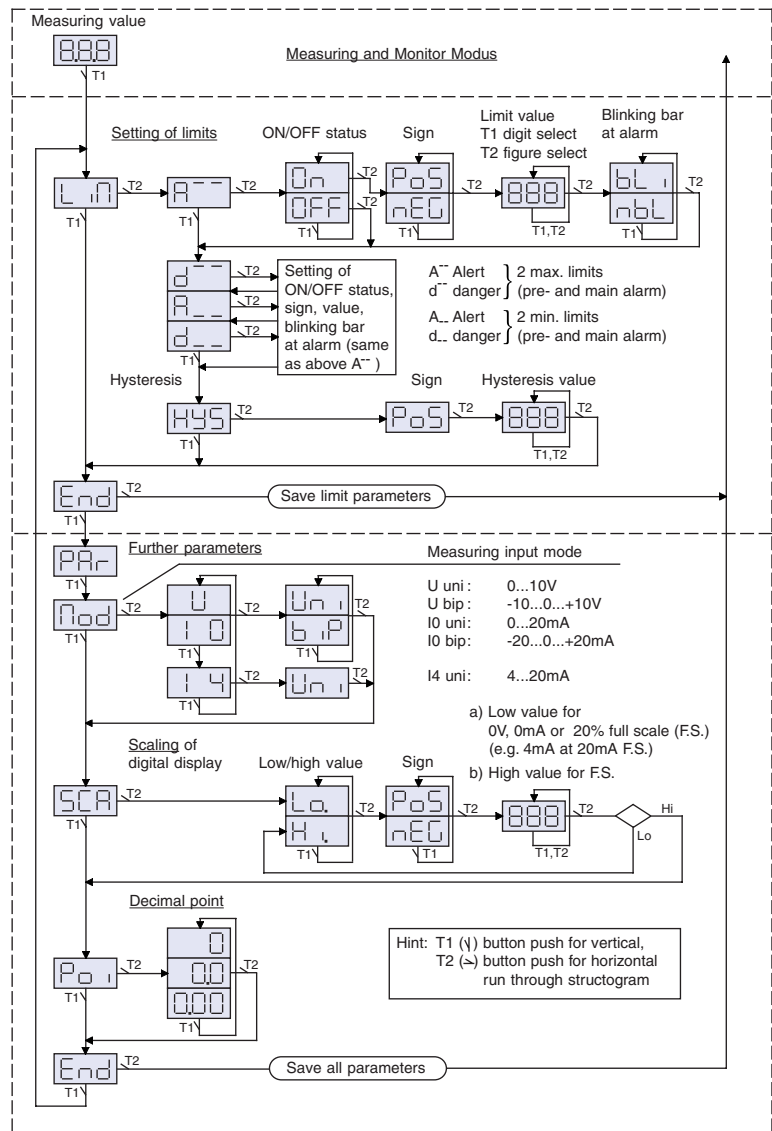
Design	meter for panel mounting, sheet-steel, frame 36 x 144mm, mounting depth 200mm, panel hole acc. DIN43700 33 ^{+0.6} x 138 ^{+1.0} mm, protection class I acc. IEC348, VDE0411	compact plug-in module for racks according to DIN41494 (19"), front: height 3HU, width 5PU (1"), board: 160 x 100mm
Display	quasianalogue, vacuum-fluorescent bar-graph of 100 segments, 84mm length	quasianalogue, vacuum-fluorescent bar-graph of 51 segments, 50mm length
Analogue display	3 digits, alphanumeric, 7-segment vacuum-fluorescent -1099 to +1099, displaying for 1000..1099: 000.099	4 digits, alphanumeric, 16-segment-LED character height 6mm, -1099 to +1099
Digital display	0,1% of measuring value ± 1 digit	0,1% of measuring value ± 1 digit
Accuracy	for 1- und 2-digit numbers in the free leading digit, otherwise determinable by the analogue display programmable like 000; 0.00; 00.0	for 1- to 3-digit numbers in the free leading digit, otherwise determinable by the analogue display programmable like 000; 0.00; 00.0
Negativ sign	special characters in the digital display: □□□/□□□□ display values programmable for 0V resp. 0(4)mA and for full range (e.g. 10V resp. 20mA)	special characters in the digital display: + + + + / - - - display values programmable for 0V resp. 0(4)mA and for full range (e.g. 10V resp. 20mA)
Decimal point	flashing of bar-graph (can be deactivated)	flashing of bar-graph (can be deactivated), additional 2 yellow LEDs for 'alert' and 2 red LEDs for 'danger'
Over-/under range indication	0 to 100 with white characters on black background	0 to 100 with black characters on bright background
Numerical range		
Indication of alarm		
Standard scale		

Inputs and Outputs	0...10V (Ri1≥MΩ), 0(4)...20mA (Ri≤65Ω), selectable by setup, but not both at the same time	
Measuring value inputs	2 minimum- and 2 maximum set points, individually programmable with front keys or connector terminals T1, T2	
Limits	alarm relays with change-over contacts 250V/5A for each limit, 4 pieces altogether	
Digital outputs	24V/25mA for external transducers, 5V/7mA test voltage	
Supply outputs	dual-slope-integration, approximately 30 conversions/sec., resolution 13bits	
Measuring method	max. 40ms when passing limit value	
Alarm response time	by applying a calibration source of 5,000V ... 10,000V resp. 10,000 ... 20,000mA for full scale adjust	
Adjustment	all parameters can be set by user with 2 front keys or external signals at connector terminals T1, T2	
Instrument setup	these parameters are stored nonvolatile	

Further data	PM190, PM151	PM190-1, PM151-1	PM190-2, PM151-2
Auxiliary energy	230VAC ± 20%, 45..450Hz, 5W	115VAC ± 20%, 45..450Hz, 5W	24VDC(AC) ± 20%, 4W
Fuse	Si 0, 1A/250V slow	Si 0,1A/250V slow	Si 0,5A/250V slow
Electrical connections	32-pin male connector, DIN41612, design F		
Operating temperature	0 to 50 °C		



Pin assignment of electrical connector PM190/PM151



Flow chart for reading and setup

Subject to technical changes, especially to improve the products, at any time without prior notification.