

Overview



Instrument variants

PAC3100

PAC3200

PAC4200

Functional overview

Basic measurement variables				
Voltage, current		✓	✓	✓
Neutral conductor current		✓	--	✓
Apparent power, active power, reactive power		✓	✓	✓
Power factor		✓	✓	✓
Power factor of the fundamental wave		--	--	✓
Frequency	Of the reference phase	✓	✓	✓
Min/max values	Slave pointer function With date & time	✓ --	✓ --	✓ ✓
Power measurement				
Apparent energy		--	✓	✓
Active energy, reactive energy	Input Output Balance	✓ ✓ ✓	✓ ✓ --	✓ ✓ --
Number of tariffs	Apparent, active and reactive energy	1	2	2
Daily energy values for 365 days	Apparent, active and reactive energy	--	--	✓
Power averages of the last measurement period	Active and reactive power average with min / max value	✓	✓	✓
Load profile record		--	--	✓ max. 3840 entries ¹⁾
E-counter for S_0 signal at a digital input	Electrical energy Any energy	-- --	✓ --	✓ ✓
Accuracy class for active energy	According to IEC 62053-21 / 62053-22	Class 1	Class 0.5S	Class 0.2S
Accuracy class for reactive energy	According to IEC 62053-23	Class 3	Class 2	Class 2
Monitoring of state of the plant and quality of the network				
Configurable displays	For presenting up to 4 measured quantities	--	--	4
Operating hours counter	Operating hours of loads	--	✓	✓
Sliding mean values	U, I, S, P, Q, LF	--	--	✓
THD voltage, current		--	THD-R	THD
Distortion current strength		--	--	✓
Phase angle, phase displacement angle		--	--	✓
Unbalance	Voltage Current	--	$U_{nba} I_{nba}^{2)}$	$U_{nb} I_{nb}^{3)}$
Harmonics in voltage, current		--	--	3rd to 31st
Limit value monitoring	Max. number of limit values	--	6	12
Boolean logic	For limit values Inputs	-- --	✓ --	✓ ✓
Event memory for operation, control and system-related events	Including time stamp	--	--	✓
Battery backup for min / max values		--	--	✓
System integration and communication				
Ethernet (integrated)		--	10 Mbit/s	10/100 Mbit/s
• Protocol	Modbus TCP	--	✓	✓
• Gateway	Ethernet <--> RS485 (Modbus)	--	--	✓
PROFIBUS DP (V1)		--	Expansion module optional	
RS485		Integrated	Expansion module optional	
• Protocol	Modbus RTU	✓	✓	✓
Number of expansion modules		--	1	2
Integrated digital inputs	Number Multifunctional	2 --	1 ✓	2 ✓
Integrated digital outputs	Number Multifunctional	2 ✓	1 ✓	2 ✓
Installation plan				
Dimensions (L x W x D)	In mm	96 x 96 x 56	96 x 96 x 56	96 x 96 x 82
Mounting depth	PAC PAC with expansion module (in mm)	51 --	51 73	77 99
Panel cut-out (L x W)	In mm	92 x 92	92 x 92	92 x 92
Standards and approvals				
CE / cULus / C-Tick / GOST		✓	✓	✓
IEC 61557-12		✓	--	✓

¹⁾ This corresponds for example to a duration of 40 days with a measurement period length of 15 minutes.

✓ Available

-- Not available

²⁾ U_{nba}, I_{nba} - Unbalance with regard to amplitude

³⁾ U_{nba}, I_{nba} - Unbalance with regard to amplitude and phase