

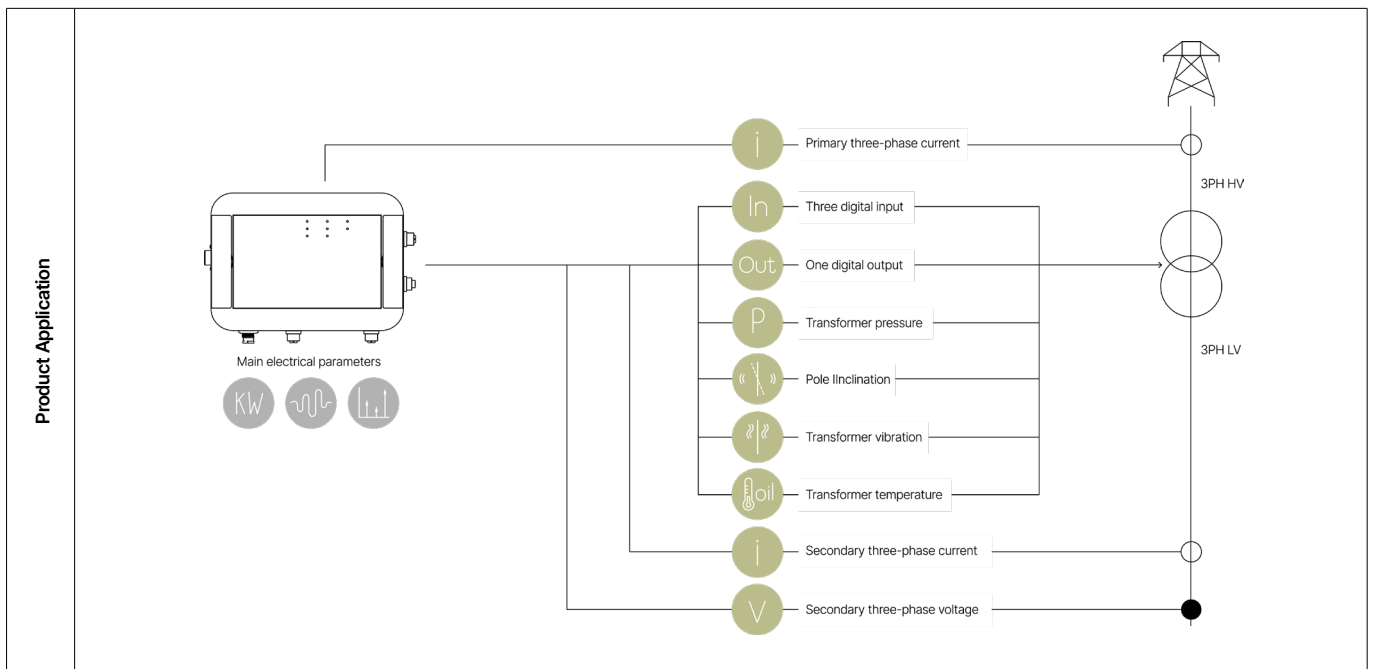
2Grid CommPack PM4 & PM1

Fully autonomous monitoring for pole-mounted substations

2Grid CommPack PM is a compact, rugged, and autonomous monitoring unit designed for direct pole-mounting installations—no cabinet, no auxiliary power, no complexity. Powered from LV phases with native 4G LTE connectivity, it enables full digitalization of pad substations within minutes.

Among other functions it includes:

- Measurement of primary and secondary three-phase currents.
- Transformer/pole vibration and tilting.
- LTE connectivity and self-powering from phases for autonomous operation.



2Grid CommPack PM4 & PM1 Technical Specifications Chart	
Metrics and Calculations	Primary & secondary three-phase current measurement
	Neutral current measurement: direct, calculated and homopolar
	Three-phase secondary voltage measurement
	Derived electrical magnitudes calculation: power, power factor, $\cos\Phi$, active/reactive/apparent power, quadrant-based active energy, symmetrical components, frequency
	Total harmonic distortion (THD) calculation up to the 41st harmonic (21st odd)
	Electrical parameter logging
	Oil temperature and pressure measurement or transformer chasis temperature
	Pole tilt and impact/vibration detection

Safety Features	High cybersecurity standards		
	Encrypted communication protocols: HTTPS (API/WEB), MQTTS, MODBUS TCP TLS		
	Configurable alarms: Overload, short circuit, power failure, oil pressure & temperature, external temperature, digital I/O alarms, user-defined alarms		
	Degree of ingress protection (IEC 60529)	IP65 and IP67	
	Pollution degree	PD2	
	Ratings of insulation of external circuits	Power supply CAT IV 300V / Other ports CAT IV 150V	
	Overvoltage category	CAT IV 300V	
Environmental and Installation Conditions	Installation location	Outdoor	
	Altitude	2000 m	
	Temperature	-20°C up to +55°C	
	Relative humidity	0% up to 97%	
	Main supply voltage fluctuations	View supply voltage range	
Device Features	Quick and easy installation with pre-wired connectors		
	Custom factory configuration option		
	Supply voltage	90...480V AC	
	Frequency	50/60 Hz	
	Power rating	12VA	
	Description of all inputs and outputs	1 × 3PH Power supply and voltage measurement / 1 × 3 digital inputs + digital output / 1 × 3 analog sensors interface / 1 × 3 ethernet port / PM1 : 2 × 3PH current metrology / PM4 : 4 × 3PH current metrology	
	Dimensions (mm)		2Grid Commpack PM4 & PM1
		A	230
B		164	
C		55	
Weight (kg)	0,8		
Comms & logging	4G-LTE mobile communication		
	Internal web server for monitoring and configuration		
	Event logging and statistical data storage		

Measurements Table		
	* Yellow inputs: two additional three-phase current inputs	