



ISKRA iMC 784 / MC 784 ADVANCED POWER QUALITY ANALYZER CLASS A ACCURACY CERTIFIED

- **RELEVANT FOR** PQ MONITORING DEVICE FOR DETECTION AND ANALYSIS OF LOCAL PQ DEVIATIONS, TRANSIENTS, ALARMS AND PERIODIC MEASUREMENTS.

KEY PROPERTIES



POWER QUALITY PARAMETERS AT YOUR FINGERTIPS

POWER QUALITY ANALYSIS

ACCORDING TO EN50160 WITH AUTOMATIC PQ REPORT GENERATION

USER FRIENDLY **SETTING AND ANALYSIS SOFTWARE** MiGen

INTERNAL MEMORY (UP TO 8 GB)

FOR RECORDING ALL MEASURED PARAMETERS, DISTURBANCES, WAVEFORMS, ALARMS, PQ REPORTS AND TIME-STAMPED DETAILS ABOUT ANOMALIES.

MEASUREMENT OF 4 VOLTAGES AND 4 CURRENTS

WITH 32 kHz SAMPLING TIME

UP TO 20 INPUT AND OUTPUT MODULES

FOR CONTROL PURPOSES AND MONITORING OF OTHER PHYSICAL PARAMETERS (TEMP., WIND SPEED, PRESSURE...)

COMPREHENSIVE 0.2S ENERGY MEASUREMENT FEATURE

(4 QUADRANT ENERGY MEASUREMENT, 8 COUNTERS, UP TO 4 TARIFFS, TARIFF CLOCK, PULSE OUTPUTS...)

HIGH ACCURACY (0.1%)

AS REQUIRED WITHIN **EN61000-4-30 Ed. 3 CLASS A**

WAVEFORM AND TRANSIENT RECORDER

WITH PROGRAMMABLE SAMPLING TIME (> 600 SAMPLES / PERIOD), PRE-TRIGGER AND POST-TRIGGER TIME

AUTOMATIC MEASURING RANGE

UP TO 1000 VRMS, 12.5 A DIRECT CONNECTION

SERIAL, USB AND ETHERNET COMMUNICATION

MODBUS, DNP3, FTP AND IEC61850 Ed.2 COMMUNICATION PROTOCOLS

STANDARDIZED PQDIF AND COMTRADE FORMAT

SUPPORT FOR STORING RECORDER DATA

AVAILABLE WITH STANDARD **128 X 128 PIXEL DISPLAY** OR **5,7" COLOR TFT DISPLAY** (OPTION)

WIDE FREQUENCY MEASUREMENT RANGE 16 – 400 Hz

FEATURES EXPLANATION

VOLTAGE QUALITY EVALUATION

PHENOMENA	PQ PARAMETERS
FREQUENCY VARIATIONS	FREQUENCY DISTORTION
VOLTAGE VARIATIONS	VOLTAGE FLUCTUATION VOLTAGE UNBALANCE
VOLTAGE CHANGES	RAPID VOLTAGE CHANGES FLICKER
VOLTAGE EVENTS	VOLTAGE DIPS VOLTAGE INTERRUPTIONS VOLTAGE SWELL, INRUSH CURRENT
HARMONICS & THD	THD INTERHARMONICS SIGNALLING VOLTAGE



TECHNICAL DATA

MEASUREMENT INPUTS

NOMINAL FREQUENCY RANGE	50 - 60 Hz
MEASURING FREQUENCY RANGE	16 - 400 Hz

CURRENT MEASUREMENTS

NUMBER OF CHANNELS	4
SAMPLING RATE	31 kHz
NOMINAL VALUE (I_{NOM})	1 A, 5 A

VOLTAGE MEASUREMENTS

NUMBER OF CHANNELS	4 ⁽¹⁾
SAMPLING RATE	31 kHz
MIN. VOLTAGE FOR SYNC.	1 V _{rms}
NOMINAL VALUE (U_N)	500 V _{LN} ; 866 V _{LL}

⁽¹⁾ 4th CHANNEL IS USED FOR MEASURING $U_{EARTH-NEUTRAL}$

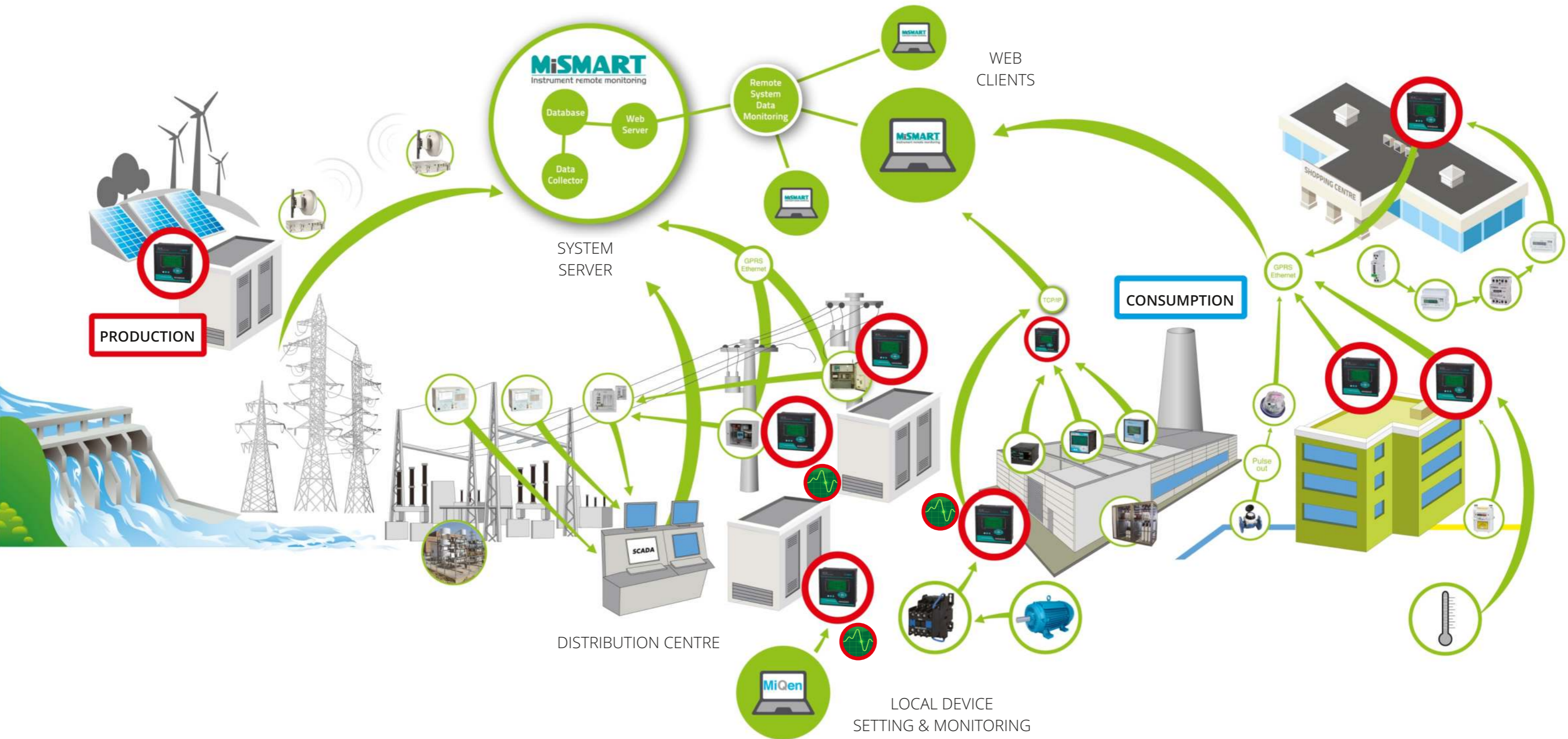
BASIC ACCURACY

MEASURAND	ACCURACY	
VOLTAGE L-N, L-L	± 0.1%	ACC. TO EN 61557-12
CURRENT	± 0.1%	ACC. TO EN 61557-12
ACTIVE POWER ($I_N = 5 A$)	± 0.2%	ACC. TO EN 61557-12
ACTIVE POWER ($I_N = 1 A$)	± 0.5%	ACC. TO EN 61557-12
ACTIVE ENERGY	CLASS 0.2S	ACC. TO EN 62053-22
REACTIVE ENERGY	CLASS 0.5S	ACC. TO EN 62053-24
FREQUENCY (f)	± 0.01 Hz	ACC. TO EN 61557-12
POWER FACTOR (PF)	± 0.5%	ACC. TO EN 61557-12
THD (U)	± 0.3%	ACC. TO EN 61557-12
THD (I)	± 0.3%	ACC. TO EN 61557-12
REAL TIME CLOCK (RTC)	< ± 1s / DAY	ACC. TO EN 61000-4-30
TDD	< ± 0.3 %	ACC. TO IEEE-519

TRIGGERS & RECORDERS

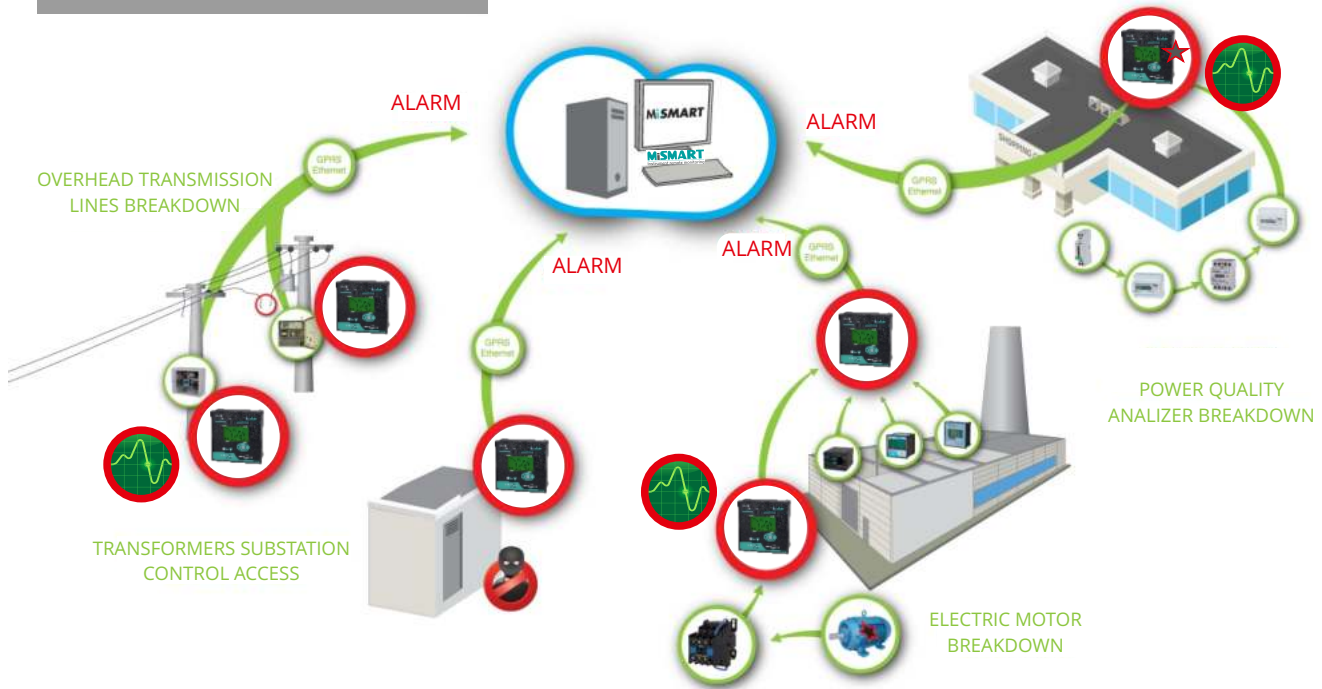
PQDIF/COMTRADE DATA FORMAT
8 GB OF INTERNAL MEMORY
625 SAMPLES/CYCLE RECORDING
RECORDERS: WAVEFORM, DISTURBANCE, PQ EVENT, PERIODIC TREND
TRIGGERS: EXTERNAL DEVICE, LOGICAL/DIGITAL INPUT, COMBINED, TRANSIENT, PQ EVENT

THE QUALITY ANALYZER CAN BE USED IN ELECTRICITY (DISTRIBUTION AND TRANSMISSION SUBSTATION) AND INDUSTRIAL (PRODUCTION AND INDUSTRIAL ENERGY CONSUMPTION) SEGMENTS AT LOW-VOLTAGE, MEDIUM-VOLTAGE AND HIGH-VOLTAGE LEVELS.



USE OF INPUT/OUTPUT MODULES & APPLICATION

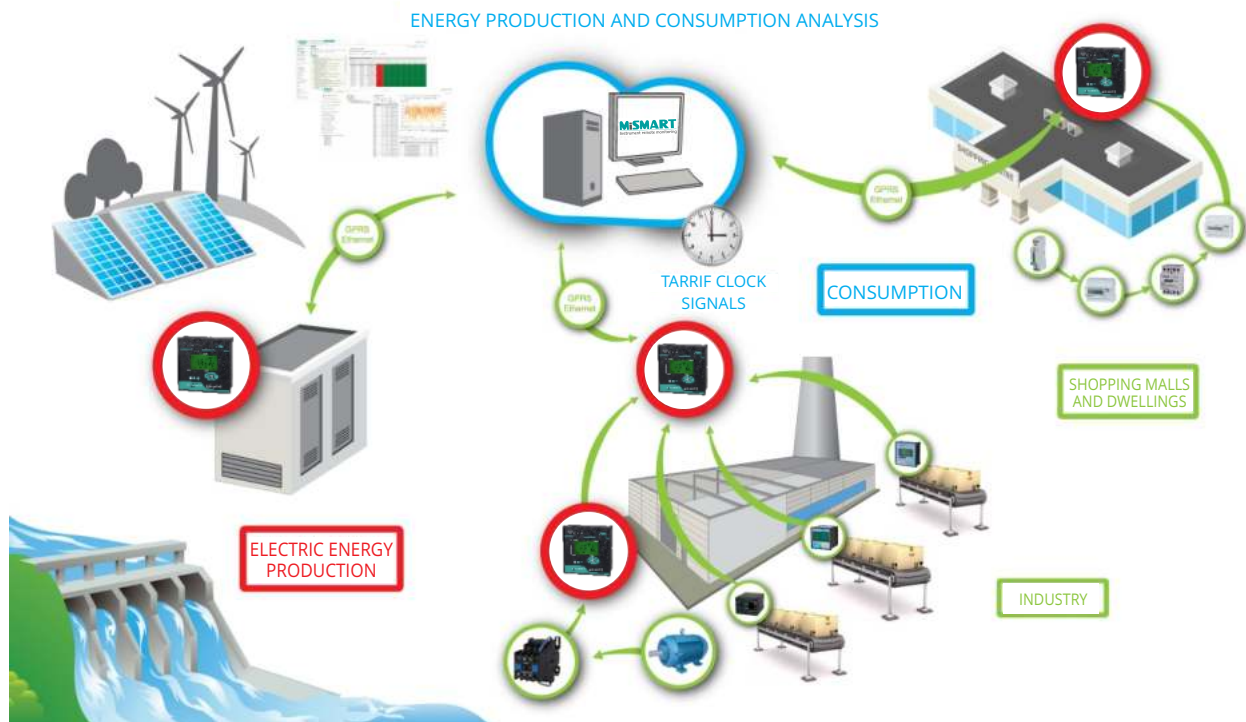
ALARMS & TRIGGERS



- POWER QUALITY ANALYZER FUNCTIONS
- UP TO 32 ALARMS
- TRANSIENT, PQ EVENT, EXTERNAL & COMBINED TRIGGERS
- COMTRADE/PQDIF DATA RECORDS (OPTIONAL)

- FAST NOTIFICATION OF FAULTS IN A SYSTEM CAN BE VIEWED ON DEVICE OR DOWNLOADED
- WAVEFORM, DISTURBANCE, PQ AND TREND RECORDS

ENERGY MONITORING

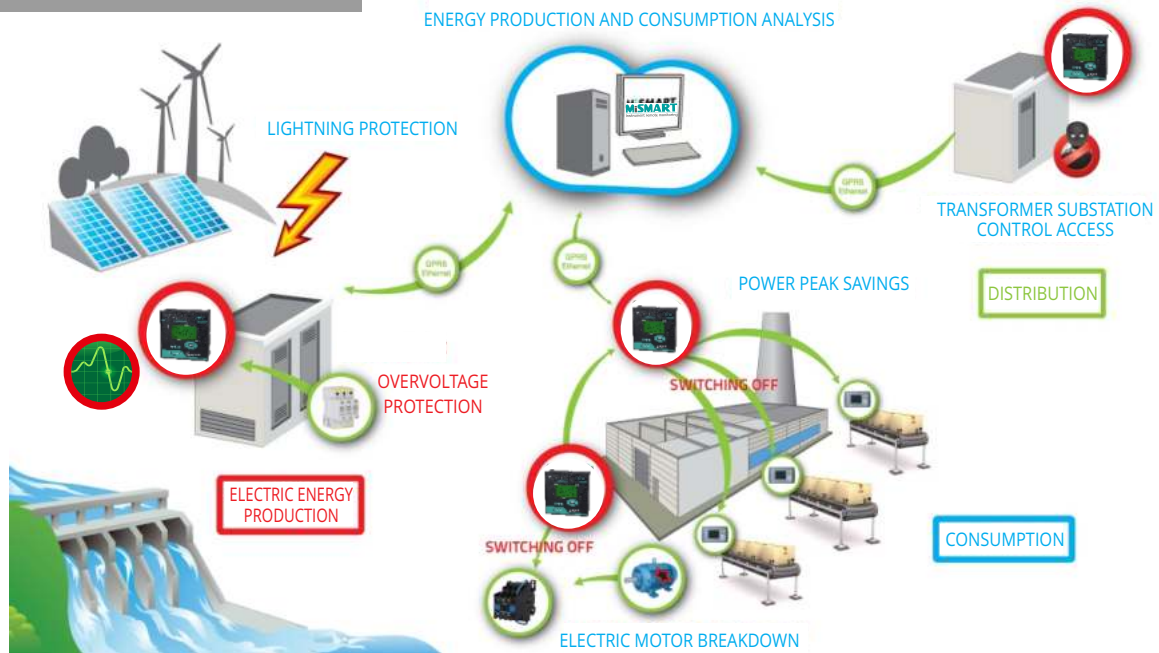


- HIGH ACCURACY CONSUMPTION METERING

- EIGHT ENERGY COUNTERS FOR FOUR-QUADRANT METERING

INPUT/OUTPUT MODULES USE

CONTROL

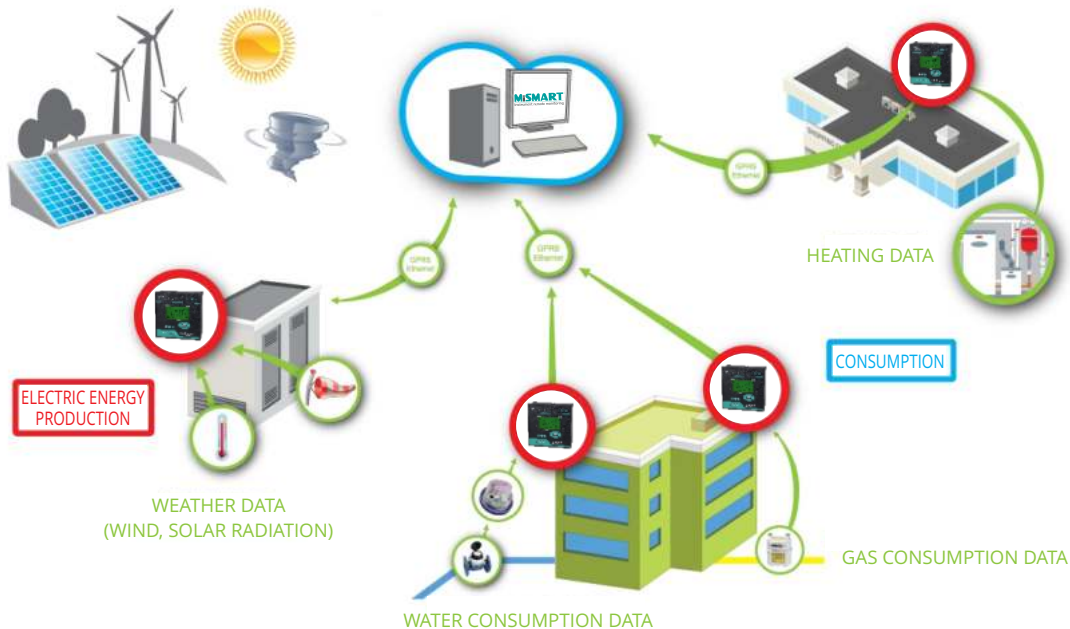


• INPUT SIGNALS FROM PLC

• SECONDARY PROTECTION FUNCTIONS

• SUBSTATION ACCESS CONTROL

AUXILIARY INPUTS



• MEASUREMENT OF WATER, HEAT, GAS ETC. CONSUMPTION VIA PULSE INPUTS

• MEASUREMENT OF SOLAR RADIATION, TRANSFORMER STATION TEMPERATURE, WIND SPEED ETC.