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.

⊗ Iskra®

CLASS A · **CLASS A**

HARMONICS

REPORTING

VOLTAGE QUALITY

ALARM MANAGEMENT

RESIDUAL CURRENT MONITORING · **RCM**

POWER QUALITY PARAMETERS AT YOUR FINGERTIPS

POWER QUALITY ANALYSIS
ACCORDING TO EN50160 WITH AUTOMATIC PQ REPORT GENERATION

USER FRIENDLY **SETTING AND ANALYSIS SOFTWARE** MiQen

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

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	✓

Yes!

AUTOMATIC EN 50160 REPORT GENERATION

WAVEFORM & TRANSIENT RECORDING

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.

ALARMS & TRIGGERS

ALARM

OVERHEAD TRANSMISSION LINES BREAKDOWN

ALARM

ALARM

ALARM

POWER QUALITY ANALIZER BREAKDOWN

TRANSFORMERS SUBSTATION CONTROL ACCESS

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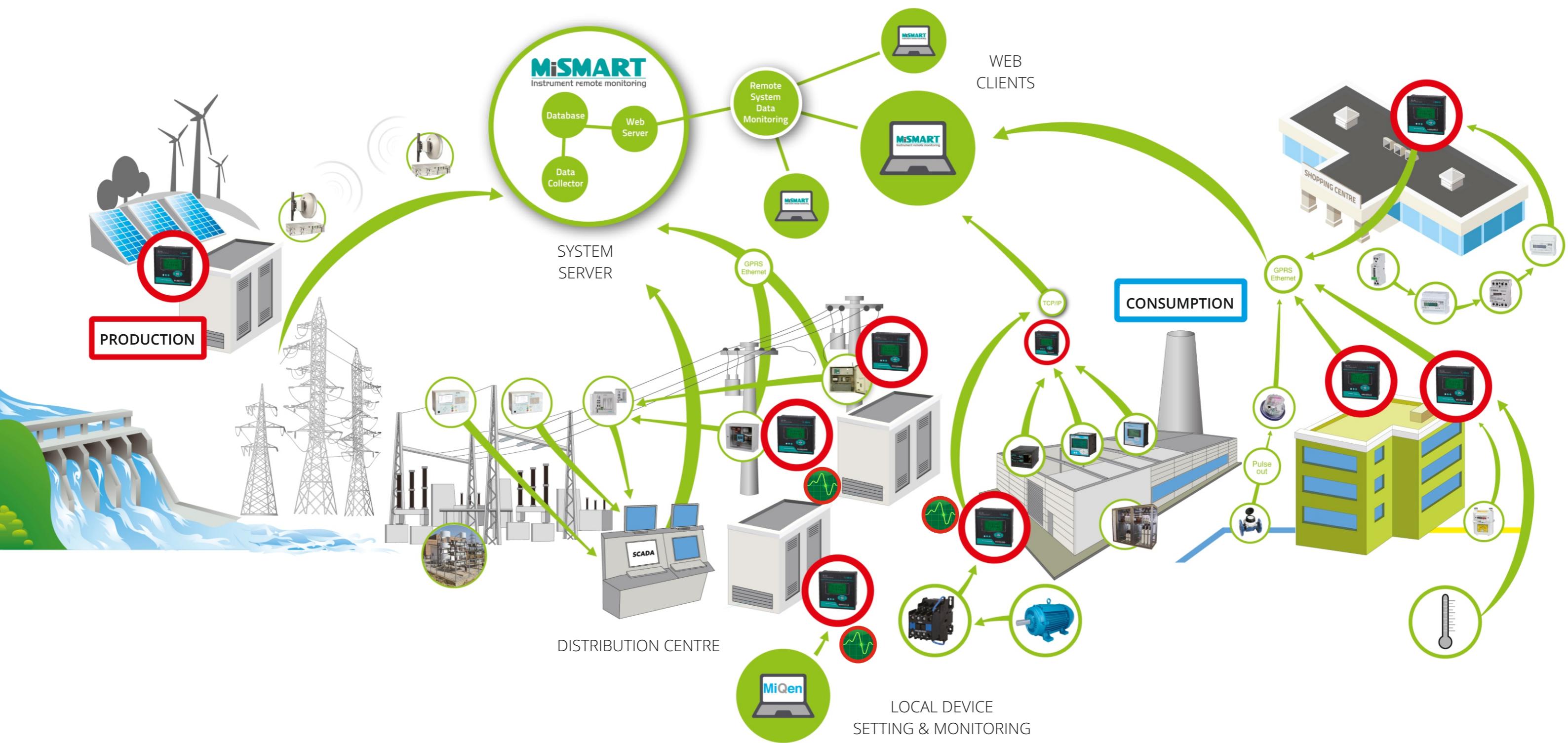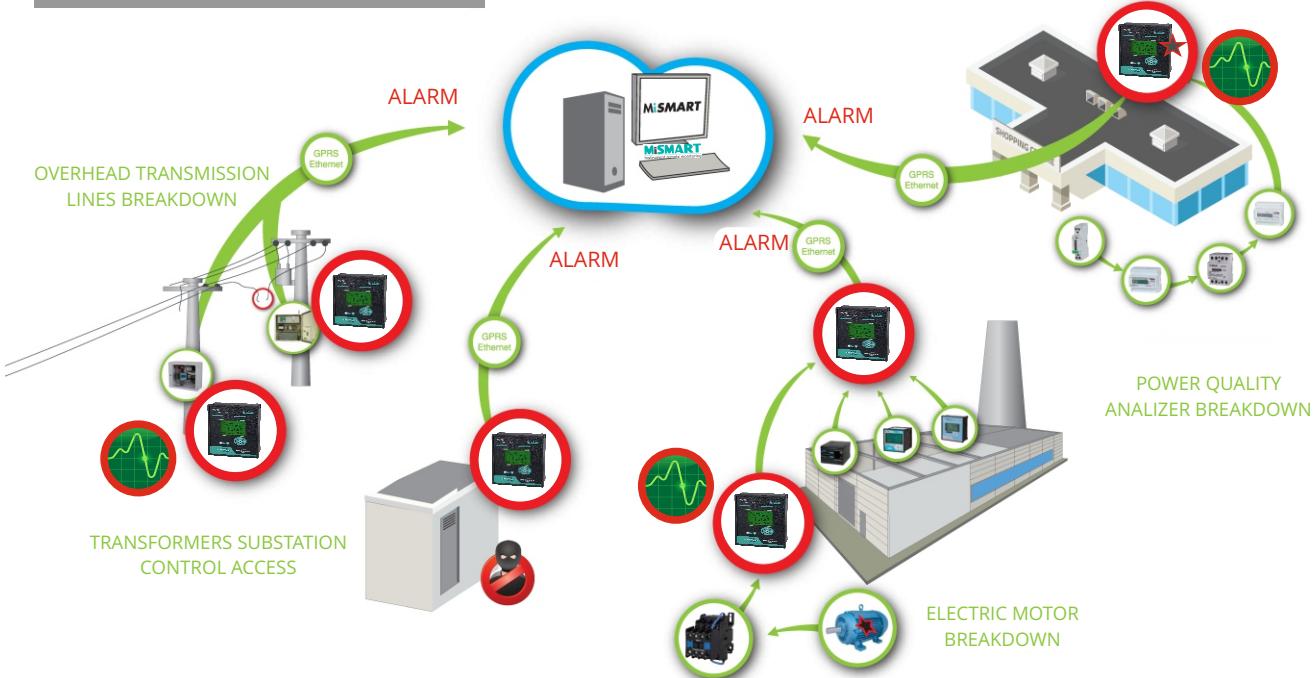
- POWER QUALITY ANALYZER FUNCTIONS
- UP TO 32 ALARMS
- TRANSIENT, PQ EVENT, EXTERNAL & COMBINED TRIGGERS
- COMTRADE/PQDIF DATA RECORDS (OPTIONAL)

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

ENERGY MONITORING

ENERGY PRODUCTION AND CONSUMPTION ANALYSIS

TARRIF CLOCK SIGNALS

CONSUMPTION

SHOPPING MALLS AND DWELLINGS

ELECTRIC ENERGY PRODUCTION

INDUSTRY
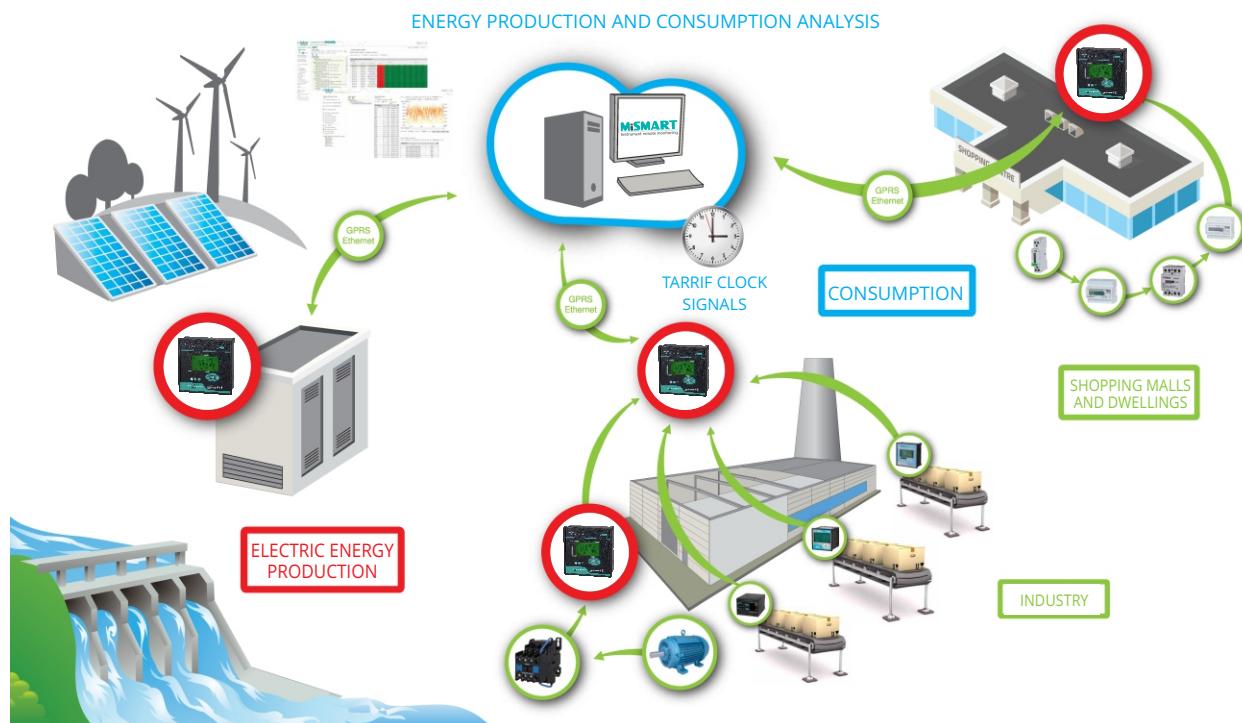
- HIGH ACCURACY CONSUMPTION METERING

- EIGHT ENERGY COUNTERS FOR FOUR-QUADRANT METERING

CONTROL

ENERGY PRODUCTION AND CONSUMPTION ANALYSIS

LIGHTNING PROTECTION

TRANSFORMER SUBSTATION CONTROL ACCESS

POWER PEAK SAVINGS

DISTRIBUTION

OVERVOLTAGE PROTECTION

SWITCHING OFF

ELECTRIC ENERGY PRODUCTION

CONSUMPTION

SWITCHING OFF

ELECTRIC MOTOR BREAKDOWN

GPRS Ethernet
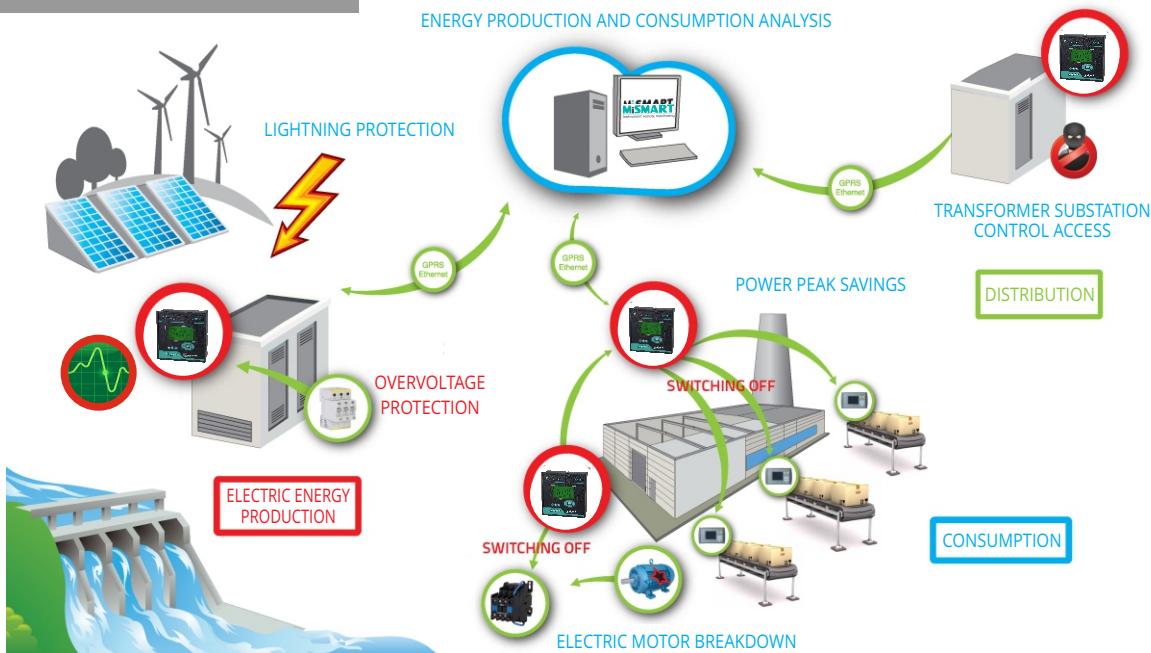
- INPUT SIGNALS FROM PLC
- SECONDARY PROTECTION FUNCTIONS
- SUBSTATION ACCESS CONTROL

AUXILIARY INPUTS

HEATING DATA

CONSUMPTION

ELECTRIC ENERGY PRODUCTION

WEATHER DATA
(WIND, SOLAR RADIATION)

WATER CONSUMPTION DATA

GAS CONSUMPTION DATA

GPRS Ethernet
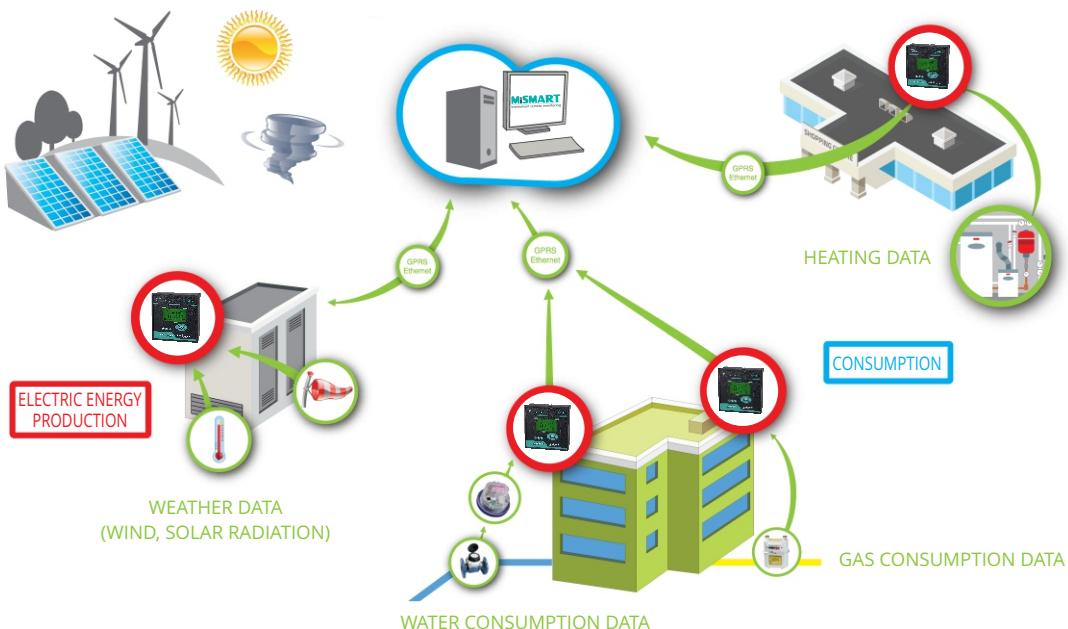
- MEASUREMENT OF WATER, HEAT, GAS ETC. CONSUMPTION VIA PULSE INPUTS
- MEASUREMENT OF SOLAR RADIATION, TRANSFORMER STATION TEMPERATURE, WIND SPEED ETC.