WIONIQ™



EC215

Smart EDGE OPLC

Single or dual pump controller with 4G (LTE) connectivity for sewage applications.

Remote monitoring and control

Every drop. Every watt. Every second.

WIONIQ™

Electrical Properties

Power Supply

Operating voltage
20.4 VDC ... 28.8 VDC (max. 10% ripple)
Supply current
Typically 290 mA @ 24 VDC
Power Consumption
7 W (external 0.5 A fuse required)

Mechanical Specification

Outer dimensions
Height: 114 mm
Width: 148 mm
Depth: 72 mm
Cutout dimensions
Height: 96 mm
Width: 120 mm
Min available depth: 65 mm
Max faceplate thickness: 4 mm
Weight
468 gr
Ingress protection
Panel mounted (IP65/NEMA4X)
DIN rail mounted (IP20/NEMA1)

Operating Conditions

Operating temperature
0 °C ... +50 °C
Storage temperature
-20 °C ... +60 °C
Relative humidity
10 % ... 95 % (non condensing)

General

Wireless connectivity
4G (LTE)
Supported cellular bands
Quad Band 4G (LTE) 800/900/1800/2600 MHz, FDD-Band (20,8,3,7)
MicroSIM
Default 5MB / month
Certification
CE, RED, RoHS
Position detection
Optional GPS antenna
Ethernet connection
10/100 Mbps
Ethernet protocol
TeleControlNet XML protocol
IEC 60870-5-104 (IEC104)
Clock (RTC)
Real-time clock functions (date and time)
Battery back-up
7 years typical at 25 °C, battery back-up for RTC and system data, including variable data

Analogue inputs 4-20 mA

Level sensor N1, measured value
Flow (m3/h) for presentation only

Analogue inputs 0-10 VDC

Pump 1 & Pump 2
Current measurement

Digital inputs

Pump 1 & Pump 2
Select auto-mode
Running
Circuit breaker
Thermal failure
Level switch N2
Active, high alarm
Level switch N3
Active, pump(s) on-level
Level switch N4
Active, pump(s) off-level
Cabinet K1
Power supply failure
Door open
Earth failure
Station X1
Pulse power consumption
Reset

Digital outputs

Pump 1 & Pump 2
On/Off
Signal light 'running'
Signal light 'failure'
Station X1
Signal light 'high level alarm'
Signal light 'general failure'
Remote blocked
Reset-command

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Electrical Properties

Digital Output Characteristics

Output type
SPST-NO (Form A)

Isolation
By relay

Type of relay
Tyco PCN-124D3MHZ or compatible

Output current
3 A maximum per output (resistive load); 8 A maximum total for common

Rated voltage
250 VAC/30 VDC

Minimum load
1 mA @ 5 VDC

Life expectancy
100k operations at maximum load

Response time
10 ms (typical)

Contact protection
External precautions required

Analogue input characteristics

AN0 and AN1
Input range 0-20 mA, 4-20 mA
Input impedance 154 Ω
Maximum input rating 30 mA

AN2 and AN3
Input range 0-10 VDC
Input impedance 20 KΩ
Maximum input rating 28.8 V

Galvanic isolation
None

Conversion method
Successive approximation

Resolution
10-bit (0 to 1023)

Conversion time
All analogue inputs are updated every 8 PL scans, regardless of how many inputs are actually configured

Precision
± 2%

Status indication
Yes, if an analogue input deviates above the permissible range, its value will be 1024

Input cable length
Up to 30 meters, shielded twisted pair

Digital Input Characteristics

Input type
PNP (source) or NPN (sink)

Galvanic isolation
None

Input voltage

PNP (source)
0-5 VDC for Logic '0'; 17-28.8 VDC for Logic '1'

NPN (sink)
17-28.8 VDC for Logic '0'; 0-5 VDC for Logic '1'

I0-I15
Input current 3.7 mA @ 24 VDC - Response time 10 ms typical

I16-I17
Input current 1.2 mA @ 24 VDC - Response time - 20 ms typical

Input cable length
Up to 100 meters, unshielded

High speed inputs
Specifications below apply when wired as H.S.C

Frequency
10 kHz maximum

Minimum pulse width
40 µs

Display

Display type
STN LCD

Illumination backlight
LED, yellow-green, software controlled (LCD backlight enables the display to be viewed in the dark)

Display size
2 lines, 16 characters long

Character size
5 x 8 matrix, 2.95 x 5.55 mm

Keyboard

Number of keys
16

Key type
Metal dome, sealed membrane switch

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Software

Data collection/recording

- High water floater status (active / not active)
- Level measurement
- Calculated flow (m3) based on pump capacity
- Optional real time flow (m3/h)
- Daily flow value (m3)
- Daily energy consumption (kWh)

Pump 1 & Pump 2

- Pump runtime including start/stop time
- Daily pump totals (runtime + switches)
- Pump totals since installation
- Pump status (on/off/standby/failure)
- Pump current

Remote Settings / Commands

- Single/dual pump control strategy
- Alternating pump operation or pump selection on preference
- Pump control strategy based on level switch / sensor
- Pump switch levels on/off
- Alarm levels LL-L-H-HH
- Distributed control strategy (RTC)
- Max. runtime blocking on/off
- Pump capacity
- IO signal inversion

Pump 1 & Pump 2

- Counter reset pump runtime
- Counter reset pump switches
- Pump alarm reset
- Max. pump runtime
- Run-on time

Alarms

- High water level (floater)
- Water level LL-L-H-HH
- High water and no pump running
- Location offline
- No data received during last 24h
- Power failure
- CPU battery failure
- Cabinet door open
- Watchdog error

Pump 1 & Pump 2

Current out of range P1 / P2
Clixon P1 / P2

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