INDUSTRIAL - GRADE IOT CONTROLLER

Neo Trinity

Ruggedized IoT hardware for demanding outdoor environments. Built-in LCD, touch keypad, and IP65-rated enclosure for agriculture, water management, and remote infrastructure.



2	2+	IP65
Hardware Variants	Protocol Interfaces	Rated Enclosure

Seamlessly integrated with CORE cloud-native IoT platform

Revision 2.0 | 2026 | Datasheet

1. Inputs | Outputs

Parameter	Specification
Analogue Inputs	4 × configurable 4-20mA | 0- 30 Vdc
Digital Input Type	2 x Digital Input
Input Voltage Range	10 – 60 Vdc
Pulse Counter	Selectable on DI 1-4 (max 500Hz “awake”) | (max 100Hz “asleep”)
Wiegand Interface	1 × Wiegand 26/34 - (“Selectable DI pins”)
Digital Outputs	2 × Push Pull outputs
Output Current	Max 3 A (“Combined Chanels”)

2. Power Input

Parameter	Specification
Input Voltage Range	8 – 60 VDC
Input Current (max)	3A @ (8-60VDC)
Charge Controller	MPPT
Charge Current	3A @ selected battery voltage

3. Power Output

Parameter	Specification
Sensor Power Output	4 × programmable 5-36Vdc (shared 1A max)
Sensor Power Source	Derived from main DC input or battery
Motor Driver Output	1 × DC H bridge motor driver
Motor Voltage	12 / 24 / 48 V DC (battery voltage)
Motor Current (continuous)	30A
Motor Current (peak)	50A (< 10 s)
PWM Frequency	20 kHz (audible-noise-free)
Control Modes	PWM open-loop | Closed-loop speed (tachometer) | Soft-start / soft-stop
Protection	Over-current, over-temperature, short-circuit, stall detection

5. Communication Interfaces & Protocols

Parameter	Specification
Wi-Fi	802.11 b/g/n, 2.4 GHz, STA/AP modes, WPA2-Personalal
Bluetooth	BLE 5.0, beacon
LTE (optional)	Cat-1 / Cat-M1 / NB-IoT, global bands
RS-485	1 × half-duplex, isolated, up to 115.2 kbps
RS-485 Protocols	Modbus RTU (master/slave), Genibus, Serial 485
MQTT	TLS 1.3, QoS 0/1/2, last-will, auto-reconnect
Cloud Platform	ESE Core (device shadow, timeseries, rules engine)
Time Sync	NTP, GNSS (LTE variant), RTC

6. Mechanical & Environmental

Parameter	Specification
Enclosure Material	Die-cast aluminium, powder-coated
Enclosure Rating	IP67 (with M12 connectors fitted)

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