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I/O module for IoT application

DigiRail OEE

DigiRail OEE is an I/O module for IoT application designed for OEE (Overal Equipment Effectiveness) and MES (Manufactu ring Execution System) industrial systems.

Reliable and stable connectivity for data transmission

DigiRail OEE has the main industrial approvals, in order to assure monitoring reliability in harsh environments. Its internal memory buffer capability grants data retention and integrity in an eventual downlink, keeping the data logging seamlessly.

Native compatibility with main cloud providersice

Provided with secure MQTT protocol, **DigiRail OEE** transmits data natively to Google Cloud, Microsoft Azure, Amazon AWS, NOVUS Cloud, or any other compatible IoT cloud platform.

Allows remote settings and diagnosis

System diagnosis and maintenance become very easy thanks to the remote configuration and viewing functions. **DigiRail OEE** allows to send MQTT and Modbus TCP commands to read status and to set device parameters.

Intuitive software designed for easy commissioning

NXperience software provides a user-friendly configuration interface, allowing input simulation and output forcing, locally through USB port and remotely through Modbus TCP.

Inputss:
- 6 digital
- 2 analogs

Outputs:
- 2 digital

Communication interface:
- Ethernet: 10/100 Mb/s, IEEE standard 802.3 or Wi-Fi 802.11 b/g/n 2.4 GHz

NAME	SIMBOL	STATUS	DESCRIPTION
STATUS		Off	Device off
		On	Device on
		Blinking	Device in firmware actualization module
INDICATOR OF WI-FI CONNECTION ETHERNET		On	The connection has been established
		Blinking	Data is been trasmitted
		Off	The connection hasn't been established
INDICATOR OF CONNECTION WITH THE MQTT BROKER		On	The connection has been established
		Blinking	Data is been trasmitted
		Off	The connection is disabled or failed to initialize

Technical Specifications

Inputs	6 digital, 2 analogs
Outputs	2 digital
Analog signals	0-5 V, 0-10 V, 0-20 mA and 4-20 mA
Digital signals	NPN, PNP, and dry contact
Analog input Impedance	mA: 15 Ω + 1.5 V V: 1 MΩ
Analog Resolution	Analog Inputs: 15 bits (65.000 levels)
Digital input Features	Logical level " 0 " < 0,5 V Logical level " 1 " > 3 V Maximum voltage : 30 V Input Impedance: 270 kΩ Input current: @ 30 Vdc (típico) 0,15 mA Maximum frequency (square wave): Dry contact: 10 Hz PNP: 3 kHz NPN: 3 kHz
Minimum pulse duration	Dry contact: 50 ms PNP: 150 us NPN: 150 us
Digital output characteristics	2 NPN digital outputs Maximum current that can switch the outputs 700 mA

Communication interface	USB Ethernet: 10/100 Mb/s or Wi-Fi 802.11 b/g/n 2.4 GHz RS485
Software	NXperience
Power supply	Voltage: 10 Vdc to 36 Vdc
Wi-Fi model	Typical Consumption: 70 mA @ 24V Maximum Consumption: 160 mA @ 12V
Ethernet model	Typical Consumption: 50 mA @ 24V Maximum Consumption: 120 mA @ 12V
Operation Conditions	Temperature: -20 a 60° C (-4 to 140°F) Humidity: 5 to 95% RH, non-condensing
Battery	CR2032 for internal clock retention
Assembly	DIN rail or screw mounting
Degree of Protection	IP20
Enclosure	ABS + PC
Buffer Capacity	1800 logs with all inputs enabled 7000 logs with 1 input enabled