ION8-1325

A remote I/O unit with its own PLC and PID that carries signals and load cell measurement of a rotating section without cables.

On moving machines it mirrors digital inputs and outputs wirelessly and measures wire tension with two isolated load cell inputs. A web browser is all you need to set it up. It is in field use on buncher machines.

Cable & wire machinery automation since 2001 · electronics & automation since 1994

Why ION8-1325?

Wireless mirroring

Digital inputs are passed to the outputs of the paired unit and its inputs to this unit's outputs. No PLC needed.

Isolated load cell input

2 isolated load cell input channels, 24-bit resolution. Zero and reference-load calibration is done with a wizard in the web interface; settings are kept permanently.

Built-in PLC and PID

Write PLC programs in the browser as a command list (IL), blocks or ladder; load cell values are read directly in the program. 4 independent PID loops drive PWM outputs.

Install-free web interface

Monitoring, setup and commissioning from the browser of a phone, tablet or computer. No software to install.

Wireless update

The device's entire software is updated wirelessly in a single step, without removal.

No lost pulses

With the “High-speed sensor” input type, counter pulses are not lost while being carried to the other side.

Input / output capacity

8	4	8	2
DI · digital inputs	AI · analog inputs 0–10 V	DO · digital outputs	LC · isolated load cell

22 channels in total, 32 signal terminals. Encoder, counter and PWM functions share these channels and do not add more.

Remote I/O mirroring

Unit A ⇄ **Unit B**

inputs → outputs
outputs ← inputs

~33 ms	~27–29 ms	10 ms	24 bit
Range mode, typical latency	Balanced, Fast and Very fast modes	Stable-level filter on dry-contact inputs	Load cell measurement resolution

Mirroring runs from digital inputs to digital outputs; analog and load cell measurements are carried as monitoring data. When the link is lost, mirrored outputs are switched off. Wireless link modes: Range (default), Balanced, Fast, Very fast. Latency values are typical and vary with the environment.

Built-in PLC and PID

- Write, run and stop PLC programs with the command-list (IL), visual block and ladder editors.
- Load cell net values can be read in the program (L6, L7).
- 4 independent PID loops that run apart from the PLC program; settings are stored permanently.
- PWM with adjustable frequency and pulse/direction output for an external step drive.

Install-free web interface

- The device opens its own wireless network: ION8_1325_XXXXXX (XXXXXX = 6 characters unique to the device).
- Connect and type http://192.168.4.1 in the browser; no extra software is needed.
- Calibration wizard for the load cells; unit, zero, divisor and filter per channel.
- A live connection indicator shows at once when access is lost; the build signature is shown on screen.

Applications

- Inputs and outputs of the rotating section on stranding and buncher machines
- Wire tension and load monitoring
- Length, speed and product counting with an encoder on drawing, take-up and spooling lines
- Pulse/direction command to an external step drive

Technical summary

Model	**ION8-1325**
Digital inputs / outputs	**8 / 8**
Analog inputs	**4 (0–10 V)**
Load cell inputs	**2 channels, isolated, 24 bit**
Total channels / signal terminals	**22 / 32**
Built-in PLC / PID	**IL, blocks, ladder / 4 PID loops**
Remote I/O latency (typical)	**~33 ms Range, ~27–29 ms other modes**
Supply	**24 V DC nominal (10–30 V DC)**

Let us define the right configuration for your site together. We have worked in cable & wire machinery automation since 2001 and in electronics & automation since 1994; ION8 is designed for cable machines and runs at many cable plants.

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