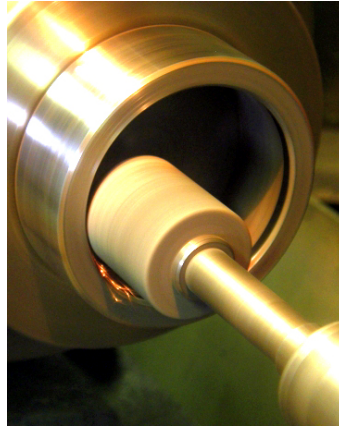


## Contact detection Tool / Part

**WattPilote Contact** is a system designed to detect the contact between tool and part via power measurement.

This system is easily installed on all types of machines and it automates actions that have required human intervention in the past: verifying spark formation during grinding, regulating pressure during planing or brushing, adjusting contour during deburring operations, detecting the beginning of machining on balancing drills, etc...



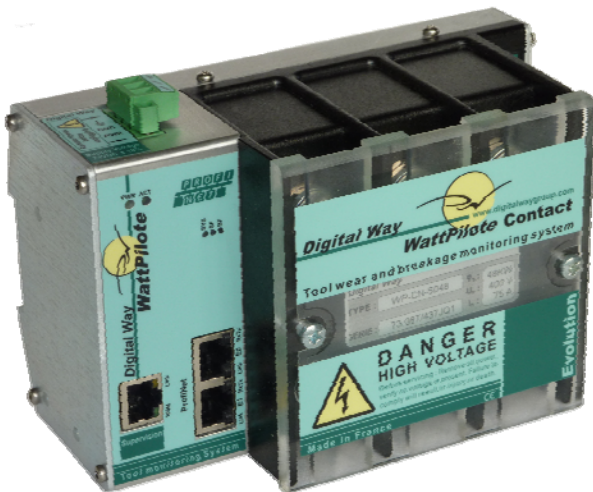
### Human safety

With WattPilote Contact an operator never needs to approach the process for a visual inspection to verify tool / part contact. Contact detection happens automatically and is very repeatable: the part quality does not change.

### Shorten machining time, increase productivity

WattPilote allows the gap between the tool and the part to be traversed much faster than at machining speed. As soon as the tool touches the part, WattPilote alerts the machine and machining speed is activated immediately.

WattPilote also detects the end of machining in order to stop the machine cycle as soon as the tool leaves the material.



Instantaneous detection

Power control

Contact tool / part  
Detect end of machining  
Missing tool

Instantaneous detection

Derivative control

Contact tool / part  
Detect end of machining

### No sensors are installed in the machining environment

One box containing sensing elements and the software is mounted within the electrical control cabinet. The system is compact, easy to install, and insensitive to environmental effects (oil, chips, temperature, mechanical vibrations, electromagnetic noise, etc.).

### Adjust system parameters and monitor the process

System parameters and process curves are displayed by the WP-Visu-C software

- configuration mode allows parameter adjustment
- monitoring mode displays power curves and system status in real-time.

WP-Visu-C has a graphical interface that allows you to see subtle changes in the manufacturing process. It is easy to optimize cutting parameters to increase the part quality and reduce cycle times.

Once you have finished the adjustments, the PC can be disconnected and WattPilote Contact will run completely automatically.

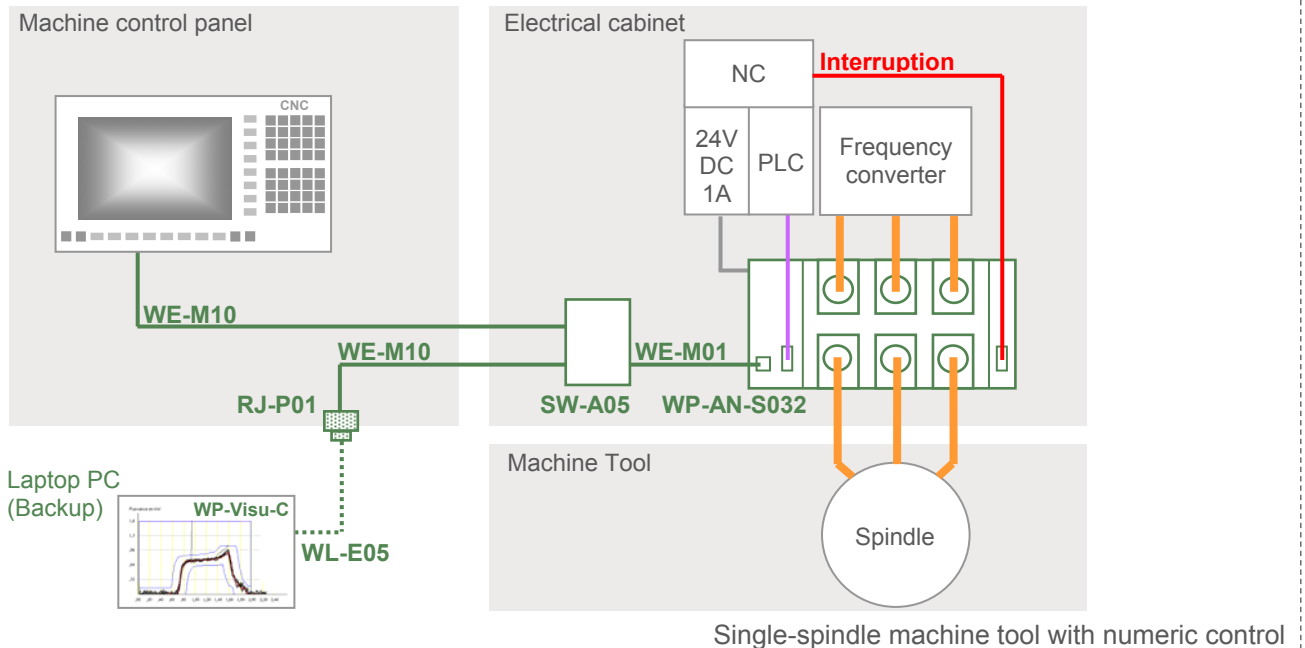




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# Contact

## Evolution Model range



### Grinding

Contact detection  
Mould/part

Optimization of the  
feed rate

### Polishing

Contact detection  
polishing tool/part

Optimization of the  
feed rate

### Brushing

Contact detection  
brush/part

Pressure  
management

### Boring

Contact detection  
tool/part

Detection of the  
finished boring

## General characteristics Evolution

Max number of different machining cycles	120
Minimum machining cycle time	0.07 sec.
Maximum machining cycle time	50 minutes
Reaction speed	0.005 sec.
Saved machining cycle curves	last 30
Saved faults	last 30
Saved wear rate	last 65,000
Power, derivative, energy control	Simultaneous
Measurement accuracy	0.01 ‰

## Technical characteristics Contact

Power supply	24 VDC ± 10%, 0.5 A
PLC Protocol - Fieldbus	ProfiNet IO-RT Profibus-DP I/O Slave DeviceNet Slave Ethernet/IP EtherCat Smart (Digital I/O)
Supervision interface	Ethernet - 10/100 Base TX
Fast Inputs	24 VDC type II, 15 mA
Fast Outputs	Work contact static relay 24VDC
Ambient temperature	0 ... 50°C
Assembly	Symmetrical rail DIN EN50 023
Dimensions	L 170 mm, W 105 mm, H 96 mm
Protection rating	IP 20
Weight	1kg 260

## WattPilote Contact Evolution reference Part Nr.

### WP-AX-X 000

ProfiNet IO-RT : **N** **000** : Power rating in kW  
 Profibus DP Slave : **B S** : Three-phase spindle motor  
 DeviceNet Slave : **D H** : High-frequency three-phase spindle motor  
 Ethernet TCP/IP : **E A** : Three-phase axis motor  
 Smart Interface : **S D** : Direct current motor