



Smart Detection™ Servo Pneumatic MFDC and AC Systems

SD System Features / Benefits :

- **Stack height verification.** Easy Reference mode. Program stack height for each weld program.
- **Low force approach - Obstruction detection** before electrode to part contact. Low electrode impact
- **Missing Component Detection** using programmable over travel parameter
- **Dual redundant hardware. Safer command operation**
- **Programmable positions** for retract, mid and weld locations.
- **Programmable weld force**
- **Programmable speed and acceleration** of cylinder motion
- **Part presence confirmation** before weld force is applied. **Dynamic force control.**
- **Head-set function** for electrode alignment and **tip dressing under low force**
- **Weld log** including pre-weld and post-weld position to **record weld data, derive set down and trends**
- **Stack Height Verification. NO External LVDT necessary. Fully integrated solution Plug and Play**

How Resistance Welding Benefits from SMART DETECTION™



SD Videos at:

www.resistanceweldsupplies.com/weld-accessories/smart-detection.html



Complete engineered welding control, self-contained easy to install cabinet, circuit breaker with door interlocking handle, safety screens, power supplies, and earth leakage protection.

The pneumatic servo driven cylinder combines the best of both electric servo and pneumatic cylinders, in a simple design that will lower costs and improve quality on the production floor.

Main System Components :

Complete AC or MFDC Welding control cabinet

Servo Pneumatic control

Ethernet IP Control Interface

Secondary Contact Monitor

Pneumatic Servo cylinder

Netflash / ENLINK PC Programming software

Hand Held programming pendant

Communication Cables

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PRODUCTION ENGINEERING

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MFDC and AC Systems

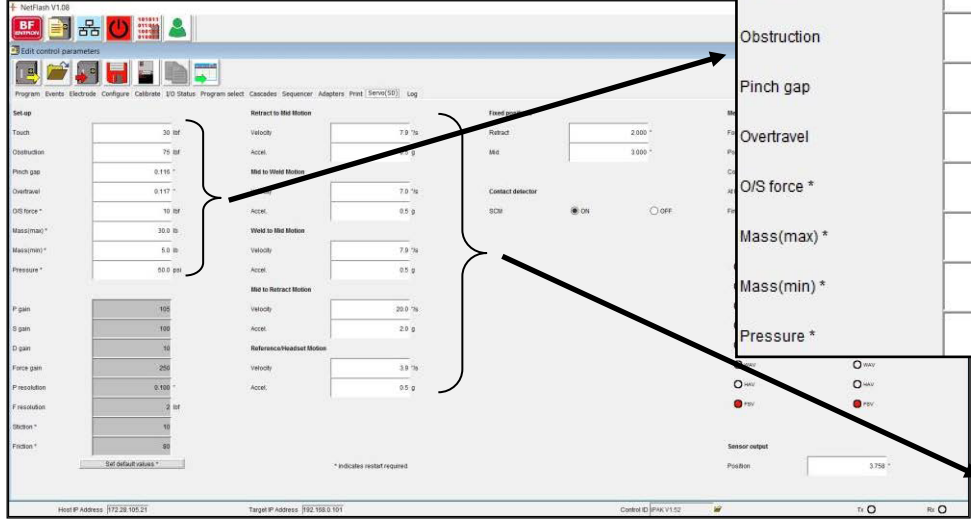
MULTIPLE COMMUNICATIONS OPTIONS : Ethernet IP, RS232

MULTIPLE CONTROL OPTIONS: Discrete 16-I/16-O, Ethernet IP, Ethernet TCP/IP(Modbus)

PROGRAMMING OPTIONS : Pendant through RS232, or PC Software through Ethernet Interface

DATA-LOGGING : Data-logging on Netflash can be set to record to text based CSV file

Programming options



The screenshot shows the NetFlash V1.08 software interface with various parameters for motion and force. Arrows point from specific sections of the interface to detailed parameter lists on the right.

Set-up

Touch	30 lbf
Obstruction	75 lbf
Pinch gap	0.116 "
Overtravel	0.117 "
O/S force *	10 lbf
Mass(max) *	
Mass(min) *	
Pressure *	

Retract to Mid Motion

Velocity	7.9 "/s
Accel.	0.5 g

Mid to Weld Motion

Velocity	7.0 "/s
Accel.	0.5 g

Weld to Mid Motion

Velocity	7.9 "/s
Accel.	0.5 g

Mid to Retract Motion

Velocity	20.0 "/s
Accel.	2.0 g

Reference/Headset Motion

Velocity	3.9 "/s
Accel.	0.5 g

Windows PC software

- ❑ Graphical User Interface
- ❑ Security Levels Permit no programming access to Observer, Low level for Operator, high level to Supervisor, full access to Superuser.
- ❑ Status monitor
- ❑ Backup and Restore Functions for program data
- ❑ Live Data Logging RECORD function.
- ❑ Firmware Update Utility.

Hand Held Programming pendant

- ❑ Practical Hand-Held Programmer through Serial port
- ❑ Access to all Operator parameters is provided
- ❑ Status while operating, Fault reports
- ❑ Direct Diagnostic.



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