NASH

ADVANCED MICROPROCESSOR WELD CONTROLLER
NASH 960

● 64 Programs ● Password Setting ● Triple Heat Sequence ● Slopes
● Constant Current primary/secondary ● Seam Welding Mode ● Proportional Vave output
● Steppers ● Inputs for Automation Purpose and Robotic Welding ● Chain Sequencing
● Networking - Ethernet/Profibus Connectivity ● Option of Single/Dual/Triple Gun Operation

Built-in Programming Module

Remote Programming

Capsule Model
Vertical and Horizontal

Key Features

- Easy to use
- Conduction Angle / Constant current for excellent Quality of weld.
- Inbuilt Programmer or Detachable Programmer
- 50/ 60 Hz operation Auto Detection
- 64 programs for store settings for different materials and thicknesses
- Hilift / Retract facility suitable for all types of gun operation Standard / Hilift + / Hilift –
- Counter functions (spot count , Job count, Tip Dress count, Tip Change Count, Total Weld Counts)
- Weld current monitoring Display
- Proportionate Valve output to control welding force. Pressure monitoring Display
- Sequence - Spot , Roll spot , seam

Optional

- MCCB ELR (Earth Leakage Relay)
- Reset Box

Specifications 960

Constant Current Primary or Secondary Feedback
Power: 415V AC + 10% - 15% 50 Hz AC
Data Storage: FRAM memory, 45 years of Data Retention
Control Range

Firing angle 30 ~ 150	Primary Current 50 ~ 1500A
Secondary Current 2 ~ 60 kA	Turns Ratio 1.0 ~ 200.0

Reset Box with LCD display & without LCD display

Reset Box is provided with every controller to reset the errors and to monitor the data. It is available in two type Electronic reset box & Mechanical reset box

Features: Electronic Reset Box

● 2 line 16 character Blue display
● 5 keys, Mode key : change weld / no weld and force test mode with LED indication, separate key for stepper reset
● INC / DEC Key : For 64 program selection
● Reset key : Reset the error and change the main screen
● Toggle s/w for coated and non coated program Selection
● Control ON / OFF Switch for control power On / Off

Fault detection function (All errors are displayed in description form)
* No Air, No Water * No current. * Job count reached. * Spot count reached. * SCR Short. * SCR overheat. * Solenoid cable short detection * Weld transformer overheat. * Extremely low current * Low current limit. * High current limit. * Communication fault. * Tip Dress, Tip Change * Air Pressure Limits * SEAM Drive Error * Low / High Conduction Angle * No ZCD * Initiation Switch Short

Operation :

64 Programs weld parameters

Parameter	Value
Presqueeze	0-250 cycles
Squeeze	1-250 cycles
Upslope	0-30 cycles
Weld 1	0-99 cycles
Cool 1	0-99 cycles
Weld 2	0-99 cycles
Cool 2	0-99 cycles
Weld 3	0-99 cycles
Cool3	0-99 cycles
Down slope	0-30 cycles
Pulses	1-9
Hold	0-250 Cycles
Off	1-250 cycles
Pressure	0-9 Bar
Heat 1	0-99%
Heat 2	0-99%
Heat 3	0-99%
Current 1	2-60 kA
Current 2	2-60 kA
Current 3	2-60 kA

Monitoring parameter

Parameter	Value
Current monitor	ON/OFF
Weld 1, Weld 2, Weld 3 High limit	0-50%
Weld 1 Weld 2, Weld 3 Low limit	0-50%
Pressure/ Force Monitor	ON/OFF
Pressure / Force - High/Low limit	± 50%
Conduction Angle Monitor	ON/OFF
Conduction High/Low limit	0-180 Deg.

Input signal specification

Parameter	Value
Program selection	6 Numbers
Fault Reset	1 Number
Steeper reset	1 Number
Thermostat	1 Number
Weld / No Weld	1 Number
Foot Switch	1 Number
Retract Switch	1 Number
Air Switch	1 Number
Water	1 Number
Initiation 2	1 Number
Tip Dress/Tip change Reset	1 Number
Spot/Job count Reset	1 Number
Open Circuit Voltage	24V DC
Short Circuit current	10mAmp

Output signal specification

Transistorized output 24 VDC (Total output current should not exceed 500mA)

Initiation Solenoid, Retract Solenoid, Weld complete, Fault, Stepper Complete, Ready, Tip Dress/Tip change, Spot/Job Count complete for Seam mode drive run output

Configuration Common parameters

Torrid selection – Primary or Secondary

Current setting Range – 2 KA to 60KA

Calibration parameters

Parameter	Value
Torrid sensitivity	100..2000 mV/kA
CT Secondary Ratio	1.0
CT Primary Ratio	1.1 - 200
Pressure / Force	Bar / Kg

(Optional) Lab view based NASH make PC software for Programming and monitoring.
(pl. ask for a separate catalogue for networking details)

Data Monitoring System

Parameter Setting
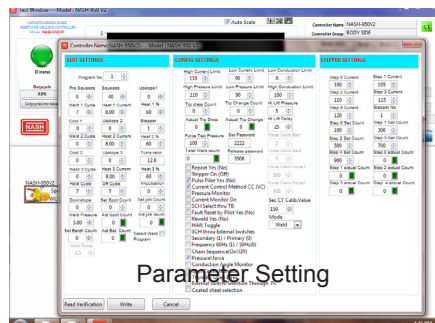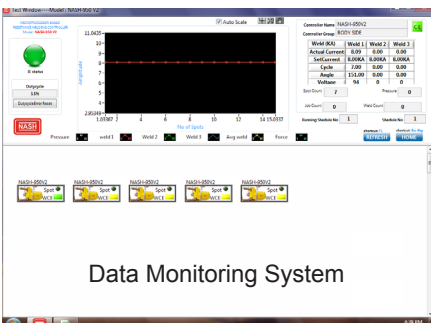
Networking Features
Networking card is optional and can be interfaced at later date.

Live SPC graph facility
At any given time for any number of spots 'X' chart 'R' chart & Histogram can be viewed on the PC & printout can be taken.

Vehicle Spot History
Spot history of every controller day, datewise will be stored in the PC.

Mean X Chart

Histogram

Range R Chart
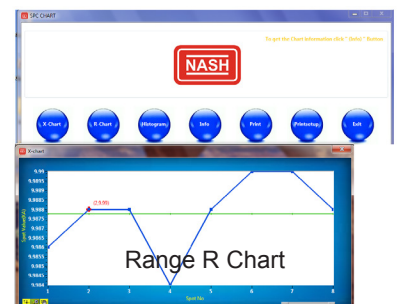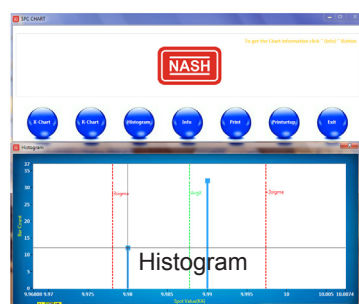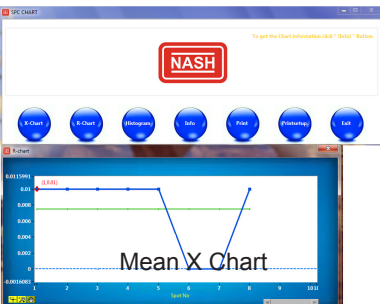
The Process Capability indexes are automatically calculated to motor industry standards. With a simple understanding of SPC it is possible to identify trends in real time.

NASH reserves the right to change specifications and appearance without prior notice.

ISO 9001 Company

NASH

V1 1000 0812