DATAPAK 700 Resistance Welding Process Monitor

BF ENTRON

**Versatile resistance welding monitor
and data logger/recorder**

Advanced monitoring for the welding professional

The Datapak 700 can be used as a general-purpose weld meter or as a machine process monitor. By measuring current, time and force and having the capability to interface with individual welding stations, it can supplement and enhance legacy installations or replace existing meters. One of the important advantages of the Datapak is that it provides independent weld monitoring which is not affected by possible malfunctions within welding controls which may otherwise result in welding errors. Up to 64 selectable monitoring programs and a teach facility allow easy set-up. Flexible inputs and outputs allow connection to a wide range of welding control systems. Data from up to 24,500 welds can be stored in memory and all measurements are time and date stamped. Data can be exported via the RS-232 port.

Datapak 700 is suitable for the following Applications:-

Spot
All types of spot welding, including single, repeat, pulsation, single electrode, multi-electrode, and series welding.
Projection
All types of projection welding including multi-projection, annular-ring (spud), single projection and weld nut, including multi-electrode management and dressing.
Seam
A special seam welding derivative (DATAPAK 700S) is available specifically for continuous seam welding applications
Roll-Spot
Most types of roll – spot welding.
Pulsation
Pulsation welding for thick materials.
Micro Welding
Alternate half cycle.
Multi-weld and Cross Wire
Simple multi-welding, low cost and small size allows one control per transformer.
Robot Welding
Suitable for most robot welding applications where Fieldbus or Communications Networks are not required.

Headline Features:

Vacuum-Fluorescent Display	:	High visibility
Illuminated push button	:	Easy to use
Compact Rugged Enclosure	:	Machine mountable or semi-portable
Lockable operation	:	Secure set up conditions.
Multi-point calibration	:	Accurate
Weld or component count	:	Process quality control
AC/DC/CD, primary or secondary	:	Versatile monitor methods
64 programs	:	Separate settings for all your components.
Time and date stamped data logging	:	Traceable records.
Serial Port	:	RS232 as standard.

DATAPAK 700 Resistance Weld Monitor — Feature Table

Standard Features

Display: 4 x 20 character VFD

Indicators:
- Fault
- Warn
- Pass
- Count

Touch sensitive membrane keypad:
8 keys and 3 indicators

Key switch:
- Position 1 - Bypass
- Position 2 - Normal
- Position 3 - Reset/Edit

Air valve connections:
- 380 –480V 50/60 Hz
- 100-120V 50/60 Hz
- or 24v DC

Weld on/off   optional—24VDC

Toroid sensitivity: 100 to 2,000 mV/kA

CT ratio: 800:1

Pressure transducer: 0…...10 V dc

Communications Port: RS232

Real time clock: h:m:s dd:mm:yyyy

Data Memory: 24,570 welds
Consisting of:
- Current
- Time
- Force
- Program
- Counter
- Status
- Time
- Date

Monitor Programs x 64

Monitor/Teach

Current	0…60kA
With adapter	0..200kA
Force	0…10 volts
Time	0…99 cycles
or	0…999 ms
Current monitor	On/Off
Force monitor	On/Off
Time monitor	On/Off
Current low limit	0…99%
Current pre-limit	0…99%
Current high limit	0…99%
Pre-limit count	0…99%
Pressure / high limit	0…99%

Actual weld count (0…9999)

Terminal count   (0…9999)

Continue/Stop at end

Part checking (On/Off)

Count all or passes only

General Information

Blanking On / Off

Primary or Secondary current feedback

Pressure/(2 points, kN / V)

Program select - internal default
- external binary

Global Parameters

Configuration:
- Mode (AC, DC or CD)
- Frequency 50/60 Hz
- AC blanking On/Off
- DC threshold 0…99%
- Sensor (Toroid/CT)
- Toroid test (On/Off)
- Toroid Scale factor (1…4)
- Force units (kN/lbf)

Calibration:
- Toroid (100-2000mV/kA
- CT S/P ratio (1:1…199:1)
- CT S/P offset (-1kA…+1kA)
- Force (2 points, kN/V)
- Analogue output (10V=0…60kA

Printer:
- Lines per page
- Format (Table/CSV)
- 'Print on' condition:
  - All
  - Pass Only
  - Fail Only
  - Off

Clock:
- Date
- Time

Inputs

Weld On/Off

Toroid	100-2000mV/kA
CT	800:1
Force Input	0…10V

Program 1 select

Program 2 select

Program 4 select

Program 8 select

Program 16 select

Program 32 select

Air Valve Trigger Input:
- A. 380-480 volts @ 50/60 Hz
- B. 100 - 120 V @ 50/60 Hz
- C. 24 V DC

Current Trigger via CT or Toroid

Outputs

Machine interlock voltage free contact

Analogue output of current

Printer (RS232)