

920i Programmable Indicator/Controller



Measurement
Canada
Approved



The 920i features a large display screen, configured with selectable weight character sizes, bar graphs, icons, prompts, messages and soft keys that can be customized for any application. Front panel configuration is simplified with menus and navigation arrows. Bridging the gap between front panel configuration and programming, iRev™ scale software allows you to use your PC to create and store configuration files. For complete customization, the 920i can be programmed using the iRite™ programming language. It's event-driven and uses real-world terms, so little programming experience is necessary. Template programs are also available.

The 920i processes data from single and multi-scale systems faster than any other instrument. Features like selectable A/D of up to 960 updates/second, a 70mp microprocessor, and fully-compiled code provide optimum efficiency. In addition, Event Sequential Protocol (ESP) identifies and prioritizes processing tasks which are then efficiently executed by event handlers.

Truly flexible, the 920i can be easily configured to your customers' application requirements. It can display up to four Legal-for-Trade scales simultaneously, or up to 32 channels that can include individual scales and any combination of totalized scales. Standard models include 128K programming memory, and 64K data storage. Additional databases are possible with up to 14, 1MB option cards. On-board connectivity includes four serial ports and four selectable digital I/O, with the ability to expand to up to 32 serial ports, 14 analog outputs, and 14 pulse inputs available. Each unit allows up to 100 setpoints, and can be expanded to 340 digital I/O. Or, for industrial automation networks, choose from optional Allen-Bradley® Remote I/O, DeviceNet™, Profibus® DP or Ethernet interfaces.

SINGLE CHANNEL PART #	DUAL CHANNEL PART #	DESCRIPTION
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115 VAC

67527	69767	920i Universal, stainless steel
67528	69768	920i Desktop, stainless steel
69763	69770	920i Wall Mount, stainless steel
69764	69771	920i Panel Mount, stainless steel bezel

230 VAC

67615	69772	920i Universal w/USA 3-pin plug*
67616	69773	920i Desktop w/USA 3-pin plug*
69765	69776	920i Wall Mount, stainless steel
69766	69777	920i Panel Mount, stainless steel bezel

230 VAC WITH EURO PLUG

69522	69774	920i Universal w/Euro 2-pin plug**
69523	69775	920i Desktop w/Euro 2-pin plug**
72133	72134	920i Wall Mount w/Euro 2-pin plug**
72137	72138	920i Panel Mount w/Euro 2-pin plug**

* NEMA 5-15 plug pattern

** CEE 7/7 plug pattern



Applications

- Custom solutions
- Graphical display operations
- Setpoints, special feature applications
- Multi-scale operations
- High-speed weighing
- Data acquisition

Standard Features

- Large (4.6" W x 3.4" H, 320 x 240 pixel) back-lit LCD graphical display
- Selectable character sizes from .25" to 1.2"
- 60 configurable operator prompts
- Display up to four scale channels per screen with required Legal-for-Trade information
- 32 scale accumulators
- Five soft keys with 10 user-defined, 14 preset functions per screen
- 10 programmable display screens
- Front panel or serial configuration/calibration
- Millivolt calibration, 5-point linearization and geographical calibration
- NEMA 4X/IP66 stainless steel enclosure
- Selectable A/D measurement rate up to 960/second
- Four bidirectional communication ports
- PS/2 keyboard port
- Four digital I/O
- 100 setpoints, 30 configurable setpoint types
- Two slots for option cards
- 1000-ID truck register for in/out weighing
- Programmable ticket formats
- 64K user on-board NV RAM
- ESP event-driven processing
- User programmable 128K flash memory
- Reflash memory to upgrade firmware
- Power for 16, 350Ω load cells per A/D board

See back side of page for Options/Accessories.

Options/Accessories

68532 A/D, single channel
 68533 A/D, dual channel
 67600 Memory, 1MB NV RAM
 67601 Digital I/O, 24-channel
 67602 Analog output: selectable 0-10V, 0-20 mA
 67604 Serial, dual channel
 67603 Pulse input, single channel
 68541 DeviceNet™ interface
 68539 Allen-Bradley® Remote I/O interface
 68540 Profibus® DP interface
 71986 Ethernet TCP/IP 10/100 Base-T module (internal)

65383 Ethernet Thin Server (external)
 69782*** .. Two-slot expansion board (wall mount)
 71743** ... Two-slot expansion board (panel mount)
 69783*** .. Six-slot expansion board (wall mount)
 N/A* Expansion cards (external cased)
 70056 Cable, DB9M to DB9F, Straight Cable
 69781 iRev Scale Software
 72809 902i interchange™
 67887 Installation Manual
 67888 Programming Reference

LINE VOLTAGES:

115 or 230 VAC, high pot test

FREQUENCY:

50 or 60 Hz

POWER CONSUMPTION:

340 mA, maximum @ 115 VAC (26 W)
 240 mA @ 230 VAC (26 W)

FUSING:

115 VAC: 2 x 400 mA TR5 subminiature fuses Wickman Time-Lag 19374 Series. UL Listed, CSA Certified and Approved
 230 VAC/North American: 2 x 315 mA TR5 subminiature fuses Wickman Time-Lag 19372 Series. UL Listed, Semco and VD Approved

FULL SCALE INPUT SIGNAL:

Up to 70 mV

EXCITATION VOLTAGE:

10 ± 0.5 VDC, 16 x 350Ω or 32 x 700Ω load cells per A/D card

SENSE AMPLIFIER:

Differential amplifier with 4 and 6 wire sensing

ANALOG SIGNAL INPUT RANGE:

-10 mV to +70 mV

ANALOG SIGNAL SENSITIVITY:

0.3 μV/graduation minimum @ 7.5 Hz
 1.0 μV/graduation typical @ 120 Hz
 4.0 μV/graduation typical @ 960 Hz

A/D SAMPLE RATE:

7.5 to 960 Hz, software selectable

INPUT IMPEDANCE:

>35MΩ typical

INTERNAL RESOLUTION:

8,000,000 counts/8,000,000 23 bit

WEIGHT DISPLAY RESOLUTION:

9,999,999

INPUT SENSITIVITY:

10 nV per internal count

SYSTEM LINEARITY:

± 0.01% full scale

ZERO STABILITY:

± 150 nV/°C, maximum

SPAN STABILITY:

± 3.5ppm/°C, maximum

CALIBRATION METHOD:

Software, contents stored in flash memory

INPUT VOLTAGE DIFFERENTIAL:

± 800mV referenced to earth ground

INPUT OVERLOAD:

Load cell signal lines +/- 10V continuous, ESD protected

RFI/EMI PROTECTION:

Signal, excitation and sense lines protected

* Separate enclosure for expanding beyond two option card slots (universal and desktop)

** Includes flat ribbon cable and power supply cable to CPU board (panel mount)

*** Includes flat ribbon cable and power supply cable to CPU board (wall mount)

ANALOG OUTPUT:

Option card, 16 bit resolution DAC
 Load resistance: 1.1KΩ minimum
 Voltage output: 0 – 10 VDC
 Current output: 0 – 20 mA
 External loop resistance: 840Ω maximum

MICROCOMPUTER:

Motorola ColdFire® MCF5307 main processor @ 90 MHz

DIGITAL I/O:

Four I/O channels on CPU board; optional 24-channel I/O expansion boards available

DIGITAL FILTER:

Software selectable: 1–256, enhanced Rattletrap® hybrid digital filtering

SERIAL PORTS:

Four ports on CPU board support up to 115,200 bps; optional dual-channel serial expansion boards available

Port 1: Full duplex RS-232

Port 2: RS-232 with CTS/RTS; PS/2 keyboard interface via DB-9 connector

Port 3: Full duplex RS-232, 20 mA output

Port 4: Full duplex RS-232, 2-wire RS-485, 20 mA output

DISPLAY:

4.6" W x 3.4" H (116 W x 86mm H), 320 x 240 pixel VGA Liquid Crystal Display (LCD) module with adjustable contrast, 75 Hz scan rate 26,000 cd/m² brightness

KEYBOARD:

27-key membrane panel, PS/2 port for external keyboard connection

OPERATING TEMPERATURE:

Legal: 14°F to 104°F (-10°C to +40°C)

Industrial: 14°F to 122°F (-10°C to +50°C)

STORAGE TEMPERATURE:

14°F to 158°F (-10°C to +70°C)

HUMIDITY:

0-95% relative humidity

DIMENSIONS:

Universal: 10.5" W x 11.5" H x 4.5" D (266 W x 215 H x 114mm D)

Desktop: 10.5" W x 4.5" H x 8.5" D (266 W x 114 H x 215 D)

Wall Mount: 14.0" W x 16.0" H x 6.75" D (355 W x 406 H x 171 D)

Panel Mount: 11.6" W x 9.1" H x 5.0" D (294 W x 231 H x 127mm D)

WEIGHT:

Universal enclosure: 9.5 lb (4.3 kg)

Desktop enclosure: 7.8 lb (3.5 kg)

Wall Mount enclosure: 23.0 lb (10.4 kg)

Panel Mount enclosure: 8.5 lb (3.9 kg)

RATING/MATERIAL:

NEMA 4X/IP66, stainless steel

APPROVALS:

NTEP certified per H-44 at 10,000 Divisions, Class III/IIIL, CC# 01-088; Measurement Canada: CE marked pending; TUV; UL & CUL listed (Universal & Desktop) (Wall Mount approved for 508A industrial control panel) (Panel Mount recognized)

WARRANTY:

Two year limited warranty