

## Specifications

### Power:

Line voltages: 230 VAC  
Frequency: 50 or 60 Hz  
Power consumption: 340 mA,  
maximum at 115 VAC (26 W)  
240 mA at 230 VAC (26 W)

### Excitation Voltage:

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

### Analog Signal Input Range:

-10 mV to +45 mV

### Analog Signal Sensitivity:

0,3 µV/graduation minimum at 7,5 Hz  
1,0 µV/graduation typical at 120 Hz  
4,0 µV/graduation typical at 960 Hz

### A/D Sample Rate:

7,5 to 960 Hz, software selectable

### Resolution:

Internal resolution: 8 million counts  
Weight display resolution: 9.999.999

### System Linearity:

± 0,01% full scale

### Digital I/O:

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

### Circuit Protection:

RFI, EMI, ESD protection

### 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: USB Type A and Type B connectors

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

Port 4: full duplex RS-232, two-wire RS-485,  
20 mA output

### Display (W x H):

116 x 86 mm, 320 x 240 pixel VGA Liquid Crystal  
Display (LCD) module with adjustable contrast  
Transmissive display - standard  
Transflective display - option

### Keyboard:

27-key membrane panel, tactile feel

### Operating Temperature:

Legal: -10° C to 40° C  
Industrial: -10° C to 50° C

### Weight:

Universal enclosure: 4,3 kg  
Wall mount enclosure: 10,4 kg  
Panel mount enclosure: 3,9 kg  
Deep universal: 5,0 kg

### Rating/Material:

NEMA 4X/IP66, stainless steel

### Warranty:

Two-year limited warranty

### Approvals:

OIML UK 2658, 6.000/10.000  
CE marked



## Approvals



Board information:  
previous version CPU board is green in color  
current version CPU board is blue in color

## Standard Features

- Graphical, LCD display
- Selectable character sizes from 6 mm to 30 mm
- 60 configurable operator prompts
- Display up to four scale channels per screen with required Legal for Trade information
- 32 scale accumulators
- Ten programmable display screens
- Five softkeys with 10 user-defined keys or 14 preset functions per screen
- Millivolt calibration, 5-point linearization and geographical calibration
- NEMA Type 4X/IP66 stainless steel enclosure
- Selectable A/D measurement rate up to 960/second
- 100 setpoints, 30 configurable setpoint types
- Two slots for option cards
- 1,000-ID truck register for in/out weighing
- 64K user on-board NV RAM
- User programmable 128K flash memory
- Reflash memory to upgrade firmware
- Power for 16 (350ohm) load cells per A/D board
- Local-remote indicators
- Multi range/interval
- Alibi storage
- Audit trail tracking
- Peak hold
- Rate of change

## USB Standard Features

- USB interface card on Port 2
- USB replaces RS-232 and PS/2 interface

### Connector Types:

- Standard Type A: 920i connects to keyboard, ASCII font label ticket printers and flash drives
- Standard Type B: 920i connects to PC

### USB Interface Functions:

- Supports weigh mode and configuration mode functions
- Supports upload of databases and .920 configuration file
- Supports download of databases, .920 configuration file, iRite, COD file and firmware file
- Sanity checks for command errors

### Flash Drives:

- Supports USB 2.0
- Create sub directories by unit ID and database name
- Use the root directory for generic files

### Optional Washdown Connectors page 146

- Sealed receptacle mounted externally
- Sealed cables
- Receptacle covers

Additional models are available with the approvals shown below.  
Please consult the factory for part numbers.



Measurement  
Canada  
Approved



# 920i® Series

Programmable Weight Indicator/Controller



## 920i Universal Part Number/Price

| Part #                | Description           | USB | Est.Weight | Price   |
|-----------------------|-----------------------|-----|------------|---------|
| <b>Single-Channel</b> |                       |     |            |         |
| 69522                 | 230 VAC <sup>††</sup> |     | 5 kg       | Consult |
| 120074                | 230 VAC <sup>††</sup> | USB | 5 kg       | Consult |
| 107713 *              | 12-24 VDC, 25 watt    |     | 5 kg       | Consult |
| 120080 *              | 12-24 VDC, 25 watt    | USB | 5 kg       | Consult |
| <b>Dual-Channel</b>   |                       |     |            |         |
| 69774                 | 230 VAC <sup>††</sup> |     | 5 kg       | Consult |
| 120096                | 230 VAC <sup>††</sup> | USB | 5 kg       | Consult |
| <b>No A/D Channel</b> |                       |     |            |         |
| 77791                 | 230 VAC <sup>††</sup> |     | 5 kg       | Consult |
| 120104                | 230 VAC <sup>††</sup> | USB | 5 kg       | Consult |

\*DC/DC converter installed option, not UL approved or CE marked

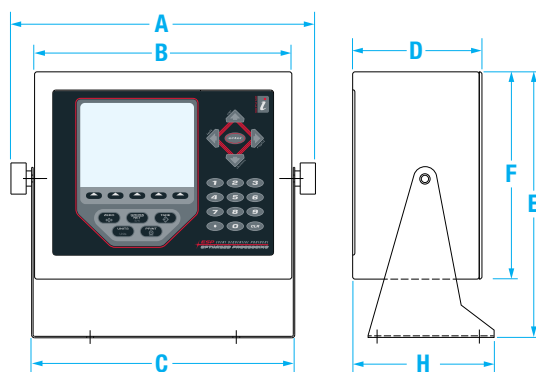
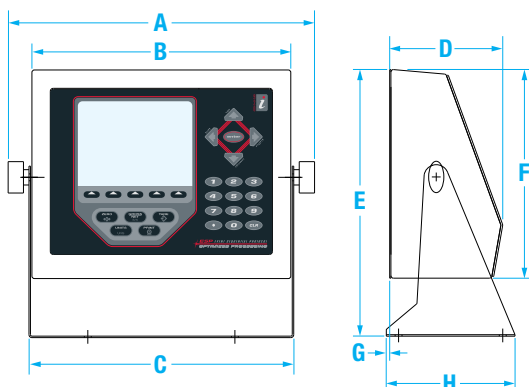
 †† CEE 7/7 plug (Euro)

## 920i Deep Universal Part Number/Price

| Part #                | Description           | USB | Est. Weight | Price   |
|-----------------------|-----------------------|-----|-------------|---------|
| <b>Single-Channel</b> |                       |     |             |         |
| 82459                 | 230 VAC <sup>††</sup> |     | 5 kg        | Consult |
| 120075                | 230 VAC <sup>††</sup> | USB | 5 kg        | Consult |
| 107714 *              | 12-24 VDC, 25 watt    |     | 5 kg        | Consult |
| 120081 *              | 12-24 VDC, 25 watt    | USB | 5 kg        | Consult |
| <b>Dual-Channel</b>   |                       |     |             |         |
| 82460                 | 230 VAC <sup>††</sup> |     | 5 kg        | Consult |
| 120097                | 230 VAC <sup>††</sup> | USB | 5 kg        | Consult |
| <b>No A/D Channel</b> |                       |     |             |         |
| 93244                 | 230 VAC <sup>††</sup> |     | 5 kg        | Consult |
| 120105                | 230 VAC <sup>††</sup> | USB | 5 kg        | Consult |

\*DC/DC converter installed option, not UL approved or CE marked

 †† CEE 7/7 plug (Euro)



### 920i Universal Dimensions

|   |        |   |        |   |        |
|---|--------|---|--------|---|--------|
| A | 318 mm | D | 117 mm | G | 3,5 mm |
| B | 268 mm | E | 276 mm | H | 206 mm |
| C | 277 mm | F | 216 mm |   |        |

### 920i Deep Universal Dimensions

|   |        |   |        |   |        |
|---|--------|---|--------|---|--------|
| A | 318 mm | D | 216 mm | F | 216 mm |
| B | 273 mm | E | 276 mm | H | 149 mm |
| C | 277 mm |   |        |   |        |

# 920i® Series

Programmable Weight Indicator/Controller



INDICATORS / CONTROLLERS

## 920i Wall Mount Part Number/Price

| Part #                | Description           | USB | Est. Weight | Price   |
|-----------------------|-----------------------|-----|-------------|---------|
| <b>Single-Channel</b> |                       |     |             |         |
| 72133                 | 230 VAC <sup>††</sup> |     | 10 kg       | Consult |
| 120078                | 230 VAC <sup>††</sup> | USB | 10 kg       | Consult |
| 107715 *              | 12-24 VDC, 25 watt    |     | 10 kg       | Consult |
| 120082 *              | 12-24 VDC, 25 watt    | USB | 10 kg       | Consult |
| <b>Dual-Channel</b>   |                       |     |             |         |
| 72134                 | 230 VAC <sup>††</sup> |     | 10 kg       | Consult |
| 120098                | 230 VAC <sup>††</sup> | USB | 10 kg       | Consult |
| <b>No A/D Channel</b> |                       |     |             |         |
| 77795                 | 230 VAC <sup>††</sup> |     | 10 kg       | Consult |
| 120106                | 230 VAC <sup>††</sup> | USB | 10 kg       | Consult |

\*DC/DC converter installed option, not UL approved or CE marked

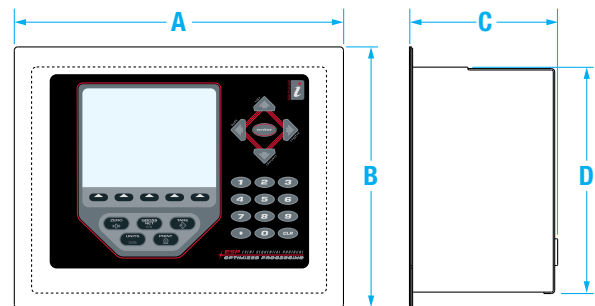
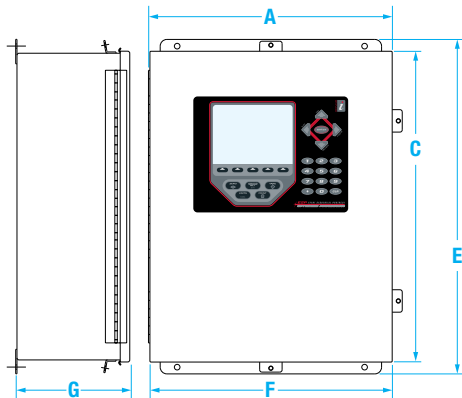
 †† CEE 7/7 plug (Euro)

## 920i Panel Mount Part Number/Price

| Part #                | Description           | USB | Est. Weight | Price   |
|-----------------------|-----------------------|-----|-------------|---------|
| <b>Single-Channel</b> |                       |     |             |         |
| 72137                 | 230 VAC <sup>††</sup> |     | 4 kg        | Consult |
| 120079                | 230 VAC <sup>††</sup> | USB | 4 kg        | Consult |
| 107716 *              | 12-24 VDC, 25 watt    |     | 4 kg        | Consult |
| 120083 *              | 12-24 VDC, 25 watt    | USB | 4 kg        | Consult |
| <b>Dual-Channel</b>   |                       |     |             |         |
| 72138                 | 230 VAC <sup>††</sup> |     | 4 kg        | Consult |
| 120099                | 230 VAC <sup>††</sup> | USB | 4 kg        | Consult |
| <b>No A/D Channel</b> |                       |     |             |         |
| 77793                 | 230 VAC <sup>††</sup> |     | 4 kg        | Consult |
| 120107                | 230 VAC <sup>††</sup> | USB | 4 kg        | Consult |

\*DC/DC converter installed option, not UL approved or CE marked

 †† CEE 7/7 plug (Euro)



### 920i Wall Mount Dimensions

|   |        |   |        |   |        |
|---|--------|---|--------|---|--------|
| A | 363 mm | D | 479 mm | F | 363 mm |
| B | 279 mm | E | 499 mm | G | 171 mm |
| C | 462 mm |   |        |   |        |

### 920i Panel Mount Dimensions

|   |        |   |        |
|---|--------|---|--------|
| A | 294 mm | C | 132 mm |
| B | 233 mm | D | 202 mm |

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**RICE LAKE**

# 920i® Series

Programmable Weight Indicator/Controller

## Options/Accessories

| Part #                         | Description   | Price   |
|--------------------------------|---|---------|
| <b>Option Cards</b>            |   |         |
| 68532                          | A/D, single-channel   | Consult |
| 68533                          | A/D, dual-channel   | Consult |
| 67600                          | Memory, 1 MB NV RAM   | Consult |
| 67601                          | Digital I/O, 24-channel TTL output                                    | Consult |
| 67602                          | Analog output: selectable 0-10 V, 0-20 mA                             | Consult |
| 103138                         | Analog output, dual-channel 0-10 V, 0-20 mA                           | Consult |
| 67603                          | Pulse input, single-channel   | Consult |
| 67604                          | Serial port card, dual-channel, RS-232 and RS-485                     | Consult |
| 87697                          | Analog input +/-10 VDC, 0-20 mA and thermocouple                      | Consult |
| <b>Network Cards</b>           |   |         |
| 65383                          | Ethernet Thin Server (external)                                       | Consult |
| 71986                          | Ethernet TCP/IP 10/100 module (internal) page 181                     | Consult |
| 98057                          | Ethernet TCP/IP, wireless LAN module 802.11 b/g page 181              | Consult |
| 87803                          | EtherNet/IP® page 181   | Consult |
| 68540                          | Profibus® DP interface page 180                                       | Consult |
| 187816                         | Profinet® I/O interface page 181                                      | Consult |
| <b>Expansion Cards</b>         |   |         |
| 69782                          | Two-slot expansion board (wall mount)                                 | Consult |
| 71743                          | Two-slot expansion board (panel mount and deep universal)             | Consult |
| 179488                         | Two-slot expansion board (wall mount DC powered)                      | Consult |
| 180047                         | Two-slot expansion board (deep universal and panel mount, DC powered) | Consult |
| 69783                          | Six-slot expansion board (wall mount)                                 | Consult |
| <b>Hardware</b>                |   |         |
| 83569                          | Clear protective overlay (package of 5)                               | Consult |
| 70056                          | Cable, DB9M to DB9F, Straight Cable                                   | Consult |
| 99149                          | Keyboard, QWERTY 109-key USB, flexible, washable                      | Consult |
| 77788                          | Fiber optic board, installed in 920i                                  | Consult |
| 19368                          | Start/stop controls without box, for use on wall mount                | Consult |
| 19369                          | Start/stop switch with FRP box  | Consult |
| <b>Manuals and Software</b>    |   |         |
| 69781                          | iRev™ scale software  | Consult |
| 72809                          | 920i interchange™ database software                                   | Consult |
| 67887                          | Additional installation manual  | Consult |
| 67888                          | Additional programming reference                                      | Consult |
| <b>Primary Component Parts</b> |   |         |
| 186272 ***                     | CPU board assembly for LED backlight, (blue color)                    | Consult |
| 186275 ***                     | Display board, LED back light, transmissive                           | Consult |
| 186276 ***                     | Display board, LED back light, transmissive                           | Consult |
| 67613                          | AC power supply, 25 watt for universal                                | Consult |
| 71333                          | AC power supply, 65 watt for deep, panel and wall mount               | Consult |
| 132791                         | Power supply 12-24VDC, 25 watt  | Consult |
| 66502                          | Switch panel membrane   | Consult |

\*\*\*Design change in 2018 to LED backlight display. See replacement parts for CCFL backlight display and green CPU board Rev N or older.

The LED backlight display can be used with green CPU board Rev N or older by replacing the power supply cable. Universal 186464 (AC) 186464 (DC); Deep universal 186278 (AC) 187603 (DC); Panel 186278 (AC) 187603 (DC); Wall 186760 (AC) 188345 (DC); Two-slot expansion for wall 188716 (AC) 189724 (DC); Two-slot expansion panel for deep universal 188717 (AC) 189725 (DC); Six-slot expansion for wall 188774 (AC).

## Options/Accessories

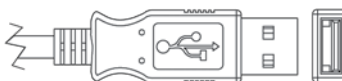
| Part #                                | Description  | Connector Type |   |           |   | Price   |
|---------------------------------------|--|----------------|---|-----------|---|---------|
|                                       |  | Sealed         |   | Un-sealed |   |         |
| USB Cable Options                     |  | A              | B | A         | B |         |
| <b>Note: Connector is a male plug</b> |  |                |   |           |   |         |
| 79074                                 | Unsealed connectors USB-A to USB-B, 2 m cable  |                |   | X         | X | Consult |
| 124700                                | Sealed connectors, USB-A to USB-B, 3 m IP68 cable  | X              | X |           |   | Consult |
| 126477                                | Sealed connector USB-A to unsealed connector USB-A, 3 m IP68 cable                           | X              |   | X         |   | Consult |
| 124701                                | Sealed connector USB-A to unsealed connector USB-B, 3 m IP68 cable                           | X              |   |           | X | Consult |
| 124702                                | Sealed connector USB-B to unsealed connector USB-A, 3 m IP68 cable                           |                | X | X         |   | Consult |
| 124695                                | Panel plug 1.125 in diameter   |                |   |           |   | Consult |
| <b>USB Receptacles</b>                |  |                |   |           |   |         |
| <b>Note: Receptacle is a socket</b>   |  |                |   |           |   |         |
|                                       |  | Sealed         |   | Un-sealed |   |         |
| 126476                                | Sealed receptacle USB-A for wall mount, 0.5 m cable  | X              |   | X         |   | Consult |
| 124703                                | Sealed receptacle USB-A to unsealed connector USB-B, 0.5 m cable                             | X              |   |           | X | Consult |
| 124704                                | Sealed receptacle USB-B to unsealed connector USB-B, 0.5 m cable                             |                | X |           | X | Consult |
| 125998 *                              | Sealed receptacle USB-A to five-pin connector, 0.28 m cable (internal to 920i)               | X              |   |           |   | Consult |
| 125999 *                              | Sealed receptacle USB-B to five-pin connector, 0.28 m cable (internal to 920i)               | X              |   |           |   | Consult |
| 124694                                | Cover for sealed receptacles   |                |   |           |   | Consult |
| 124689                                | Cover for flash driver mounts on sealed receptacle   |                |   |           |   | Consult |
| 125077                                | Rice Lake USB flash drive, 1 GB  |                |   |           |   | Consult |
| <b>Ethernet Cables</b>                |  |                |   |           |   |         |
|                                       |  | Sealed         |   | Un-sealed |   |         |
| 124706                                | Sealed to sealed, 3 m cable  | X              |   |           |   | Consult |
| 124707                                | Sealed to unsealed connector, 3 m cable  | X              |   | X         |   | Consult |
| <b>Ethernet Receptacles</b>           |  |                |   |           |   |         |
|                                       |  | Sealed         |   | Un-sealed |   |         |
| 126353 *                              | RJ-45 receptacle sealed, 0.28 m internal to 920i (requires Ethernet TCP/IP option installed) | X              |   |           |   | Consult |

\*These options require a milled back plate which has two cutouts. If ordering only one receptacle, a plug (PN 124695) is required for the second cutout. USB enclosure parts with cutout: PN 119891 (Universal) PN 115118 (Universal Deep) PN 126585 (Wall Mount)

Unsealed Connectors



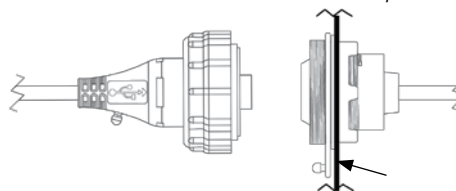
Type B



Type A

Sealed Connector

Sealed Receptacle



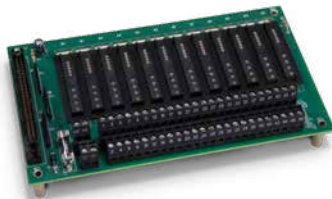
Backplate



8-channel relay rack PN 52312



16-channel relay rack PN 52314



24-channel relay rack PN 52315



OPTO 22 G4 PN-15973



OPTO 22 G4 PN-45408



OPTO 22 16-channel relay rack



OPTO 22 24-channel relay rack

### Grayhill Relays and Racks

| Part # | Description  | Price   |
|--------|--|---------|
| 52332  | Two-channel input relay, 2,5-28VDC   | Consult |
| 52318  | Two-channel input relay, 120 VAC   | Consult |
| 52319  | Two-channel input relay, 240 VAC   | Consult |
| 52331  | Two-channel input relay, 10-32 VDC   | Consult |
| 52316  | Two-channel output relay, 120-140 VAC at 2 amp   | Consult |
| 52317  | Two-channel output relay, 240-280 VAC at 7 amp   | Consult |
| 71376  | Two-channel output relay, 3-60 VDC at 1 amp  | Consult |
| 71377  | Two-channel output relay, 0-200 VDC/VAC at 1,5A/10W (dry contact)  | Consult |
| 84698  | Two-channel output relay, inductive load, 120-140 VAC at 2A  | Consult |
| 84699  | Two-channel output relay, inductive load, 240-280 VAC at 2A  | Consult |
| 54215  | Fuse, 3,15 amp, Grayhill   | Consult |
| 52312  | Eight-channel relay rack, panel mount and wall mount, requires 50-Pin flat or round ribbon cable - 4 slots | Consult |
| 52314  | 16-channel relay rack, panel mount and wall mount, requires 50-Pin flat or round ribbon cable - 8 slots    | Consult |
| 52315  | 24-channel relay rack, panel mount and wall mount, requires 50-Pin flat or round ribbon cable - 12 slots   | Consult |
| 46189  | Jumper strap, 10 position for Grayhill   | Consult |
| 108396 | Digital input 5 VDC, 15-30 VAC/10-32 VDC   | Consult |
| 108397 | Digital output 5VDC, 3-60 VDC  | Consult |
| 70780  | Cable, 50-Pin flat ribbon for digital I/O, 24 in   | Consult |
| 70779  | Cable, 50-Pin round ribbon for digital I/O with cord grip, 60 in   | Consult |
| 72442  | Cable, 50-Pin round ribbon for digital I/O without cord grip, 60 in  | Consult |
| 93577  | Cable, 50-Pin flat ribbon for digital I/O, 31 in   | Consult |
| 94384  | Cable, 50-Pin flat ribbon for digital I/O, 50 in   | Consult |

### OPTO 22 Relays and Racks

| Part # | Description   | Price   |
|--------|---|---------|
| 15969  | G4IDC5 10-32VDC input relay module, white (N/O)       | Consult |
| 15970  | G40DC5R dry contact 100 VDC/1.5A output, red (N/O)    | Consult |
| 22848  | G40DC5R5 dry contact 100 VDC/1.5A output, red (N/C)   | Consult |
| 15971  | G40AC5 115 VAC output relay module, black (N/O)       | Consult |
| 15972  | G4IAC5 115 VAC input relay module, yellow (N/O)       | Consult |
| 22847  | G40AC5A5 115/230 VAC output relay module, black (N/C) | Consult |
| 36632  | G40AC5A 115/230 VAC output relay module, black (N/O)  | Consult |
| 36631  | G4IAC5A 230 VAC input relay module, yellow (N/O)      | Consult |
| 16478  | Quencharc arc suppressor                              | Consult |
| 101923 | FRP enclosure with Opto four-channel rack             | Consult |
| 15973  | Four-channel relay rack, 83 x 83 mm                   | Consult |
| 45408  | Four-channel relay rack 155 x 30 mm                   | Consult |
| 33206  | 16-channel relay rack                                 | Consult |
| 33205  | 24-channel relay rack                                 | Consult |
| 99032  | Adapter plate, for four-channel Opto rack 33490       | Consult |
| 26834  | Fuse, 1A 250V (for PN 15970 and PN 22848)             | Consult |
| 21735  | Fuse, 4A 250V (for PN 15971, PN 22847 and PN 36632)   | Consult |