## **Specifications**

#### Power:

AC voltages: 100-240 VAC Frequency: 50-60 Hz

DC voltages: 12-24 VDC

Consumption: AC: 25W (universal) or 65W (others)

DC: 25W for all models

## **Excitation Voltage:**

 $10 \pm VDC$ 

16 x 350 $\Omega$  or 32 x 700 $\Omega$  load cells per A/D card

### **Analog Signal Input Range:**

-45 mV to +45 mV

## **Analog Signal Sensitivity:**

0.3 µV/graduation minimum at 7.5 Hz 1.0 µV/graduation recommended

### A/D Sample Rate:

7.5 to 960 Hz, software selectable

#### Resolution:

Internal: 8 million counts/8,000,000

Display: 1,000,000

## **System Linearity:**

± 0.01% full scale

#### Digital I/O:

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

#### **Communication Ports:**

Four ports on CPU board support up to 115,200bps Port 1: Full duplex RS-232 Port 2: RS-232 with CTS/RTS; PS/2 keyboard

interface or USB type A and B connectors Port 3: Full duplex RS-232, 20mA Port 4: Full duplex RS-232, 2-wire RS-485, 20mA Optional dual-channel serial expansion boards

Channel A: RS-232, RS-485, 20 mA Channel B: RS-232, 20 mA

#### Display

(W x H) 4.6 in x 3.4 in (116 mm x 86 mm), 320 x 240 pixel LCD module with adjustable contrast. Transmissive display Transflective display (optional)

### **Keys/Buttons:**

27-key membrane panel, tactile feel, PS/2 or USB port for external keyboard connection

## Temperature Range:

Certified: 14°F to 104°F (-10°C to +40°C) Operating: 14°F to 122°F (-10°C to +50°C)

#### Weight:

Universal enclosure: 9.5 lb (4.3 kg) Wall mount enclosure: 23.0 lb (10.4 kg) Panel mount enclosure: 8.5 lb (3.9 kg) Deep universal: 11 lb (5.0 kg)

### Rating/Material:

NEMA Type 4X, Type 12, IP66, stainless steel

## Warranty:

Two-year limited warranty

## **EMC Immunity:**

EN 50082 Part 2 IEC EN 61000-4-2, 3, 4, 5, 6, 8, and 11

## **Approvals:**

NTEP CC 01-088, Class III/IIIL 10,000d
Measurement Canada AM-5426,
Class III/III HD 10,000d
OIML approved 6,000/10,000, TC11584
UL/CUL Listed (universal, deep and wall mount)
UL/CUL Recognized (panel mount)
UL/CUL Listed 508A (custom wall mount)
CE Marked



# Approvals



Measurement Canada Approved









## **Standard Features**

- LCD display, (W x H) 4.6 in x 3.4 in
- Selectable character sizes from 0.25 in to 1.2 in
- 60 configurable operator prompts
- Display up to four scale channels per screen with required Legal for Trade information
- · 32 scale accumulators
- Five softkeys with 10 user-defined, 14 preset functions per screen
- Ten programmable display screens
- Millivolt calibration, five-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
- 64 K user on-board NV RAM
- User programmable 128 K flash memory
- · Reflash memory to upgrade firmware
- Power for 16 350 -ohm load cells per A/D board
- · Local-remote indicators
- · Multi range/interval
- Alibi™ storage
- Audit trail trackingPeak hold
- Rate of change

## **USB Standard Features**

- . USB interface card on Port 2
- The USB card is supported on Rev L CPU boards or later
- The 920i for USB interface requires firmware version 5.0 or higher

#### **Connector Types:**

- Standard Type A: 920i connects to keyboard, ASCII font 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:**

- Sealed receptacle
- · Connectors cables
- · USB cover flash drive and receptacle

# 920i<sup>®</sup> Series

Programmable Weight Indicator/Controller



## 920i Universal Part Number/Price

	-			
Part #	Description	USB	Est. Weight	Price
Single-Cha	nnel			
<b>67527</b> †	115 VAC		10 lb	\$2,175.00
115003 †	115 VAC	USB	10 lb	\$2,275.00
67615 †	230 VAC		10 lb	\$2,175.00
<b>120062</b> †	230 VAC	USB	10 lb	\$2,275.00
69522 ††	230 VAC		10 lb	\$2,175.00
120074 ++	230 VAC	USB	10 lb	\$2,275.00
107713*	12-24 VDC, 25 watt		10 lb	\$2,275.00
120080*	12-24 VDC, 25 watt	USB	10 lb	\$2,375.00
<b>Dual-Chan</b>	nel			
<b>69767</b> †	115 VAC		10 lb	\$2,275.00
<b>120086</b> †	115 VAC	USB	10 lb	\$2,375.00
<b>69772</b> †	230 VAC		10 lb	\$2,275.00
<b>120090</b> †	230 VAC	USB	10 lb	\$2,375.00
69774 ++	230 VAC		10 lb	\$2,275.00
120096 ††	230 VAC	USB	10 lb	\$2,375.00
No A/D Ch	annel			
<b>77790</b> †	115 VAC		10 lb	\$2,025.00
<b>120100</b> †	115 VAC	USB	10 lb	\$2,125.00
<b>77791</b> ††	230 VAC		10 lb	\$2,025.00
120104 ++	230 VAC	USB	10 lb	\$2,125.00

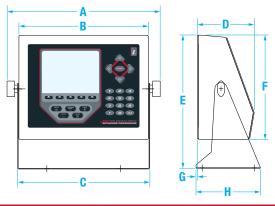
<sup>\*</sup>DC/DC converter installed option, not UL approved



† US plug (NA) - Type B



†† Euro Plug - Type E



920i Universal Dimensions						
Α	12.50 in (318 mm)	D	4.61 in (117 mm)	G	0.14 in (3.5 mm)	
В	10.56 in (268 mm)	Е	10.87 in (276 mm)	Н	5.25 in (206 mm)	
С	10.90 in (277 mm)	F	8.50 in (216 mm)			



# 920i Deep Universal Part Number/Price

Part #	Description	USB	Est. Weight	Price
Single-Cha	nnel			
<b>82455</b> †	115 VAC		12 lb	\$2,375.00
115004 <i>†</i>	115 VAC	USB	12 lb	\$2,475.00
<b>82457</b> †	230 VAC		12 lb	\$2,375.00
<b>120064</b> †	230 VAC	USB	12 lb	\$2,475.00
82459 ††	230 VAC		12 lb	\$2,375.00
120075 ++	230 VAC	USB	12 lb	\$2,475.00
107714*	12-24 VDC, 25 watt		12 lb	\$2,475.00
120081*	12-24 VDC, 25 watt	USB	12 lb	\$2,495.00
<b>Dual-Chan</b>	nel			
<b>82456</b> †	115 VAC		12 lb	\$2,475.00
<b>120087</b> †	115 VAC	USB	12 lb	\$2,575.00
<b>82458</b> †	230 VAC		12 lb	\$2,475.00
120092 †	230 VAC	USB	12 lb	\$2,575.00
82460 ††	230 VAC		12 lb	\$2,475.00
120097 ++	230 VAC	USB	12 lb	\$2,575.00
No A/D Cha	annel			
93243 †	115 VAC		12 lb	\$2,225.00
120101 <i>†</i>	115 VAC	USB	12 lb	\$2,325.00
93244 ††	230 VAC		12 lb	\$2,225.00
<b>120105</b> ††	230 VAC	USB	12 lb	\$2,325.00

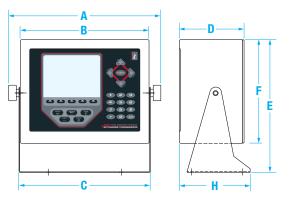
\*DC/DC converter installed option, not UL approved



† US plug (NA) - Type B



†† Euro Plug - Type E



920i Deep Universal Dimensions							
Α	12.50 in (318 mm)	D	5.36 in (216 mm)	F	8.50 in (216 mm)		
В	10.76 in (273 mm)	Е	10.87 in (276 mm)	Н	5.88 in (149 mm)		
С	10.90 in (277 mm)						



# 920i Wall Mount Part Number/Price

Part #	Description	USB	Est. Weight	Price
Single-Ch	annel			
<b>69763</b> †	115 VAC		23 lb	\$2,775.00
115005 †	115 VAC	USB	23 lb	\$2,875.00
<b>69765</b> †	230 VAC		23 lb	\$2,775.00
<b>120066</b> †	230 VAC	USB	23 lb	\$2,875.00
<b>72133</b> ††	230 VAC		23 lb	\$2,775.00
120078 ++	230 VAC	USB	23 lb	\$2,875.00
107715*	12-24 VDC, 25 watt		23 lb	\$2,875.00
120082*	12-24 VDC, 25 watt	USB	23 lb	\$2,895.00
<b>Dual-Char</b>	nnel			
69770 <i>†</i>	115 VAC		23 lb	\$2,875.00
<b>120088</b> †	115 VAC	USB	23 lb	\$2,975.00
<b>69776</b> †	230 VAC		23 lb	\$2,875.00
120093 †	230 VAC	USB	23 lb	\$2,975.00
<b>72134</b> ††	230 VAC		23 lb	\$2,875.00
120098 ++	230 VAC	USB	23 lb	\$2,975.00
No A/D Ch	annel			
<b>77794</b> †	115 VAC		23 lb	\$2,625.00
<b>120102</b> †	115 VAC	USB	23 lb	\$2,725.00
<b>77795</b> ††	230 VAC		23 lb	\$2,625.00
<b>120106</b> ##	230 VAC	USB	23 lb	\$2,725.00

\*DC/DC converter installed option, not UL approved

† US plug (NA) - Type B



†† Euro Plug - Type E



## 920i Panel Mount Part Number/Price

Part #	Description	USB	Est. Weight	Price
Single-Cha	annel			
69764 †	115 VAC		9lb	\$2,175.00
115006 †	115 VAC	USB	9lb	\$2,275.00
69766 †	230 VAC		9lb	\$2,175.00
120069 †	230 VAC	USB	9lb	\$2,275.00
<b>72137</b> ††	230 VAC		9lb	\$2,175.00
120079 ##	230 VAC	USB	9lb	\$2,275.00
107716*	12-24 VDC, 25 watt		9lb	\$2,275.00
120083*	12-24 VDC, 25 watt	USB	9lb	\$2,375.00
Dual-Chan	nel			
69771 †	115 VAC		9lb	\$2,275.00
120089 †	115 VAC	USB	9lb	\$2,375.00
69777 †	230 VAC		9lb	\$2,275.00
120095 †	230 VAC	USB	9lb	\$2,375.00
<b>72138</b> ††	230 VAC		9lb	\$2,275.00
120099 ††	230 VAC	USB	9lb	\$2,375.00
No A/D Ch	annel			
77792 †	115 VAC		9lb	\$2,025.00
120103 <i>†</i>	115 VAC	USB	9lb	\$2,125.00
77793 ++	230 VAC		9lb	\$2,025.00
120107 ++	230 VAC	USB	9lb	\$2,125.00

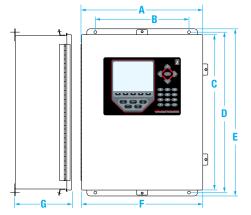
\*DC/DC converter installed option, not UL approved



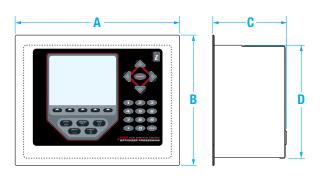
 $\dagger$  US plug (NA) - Type B



†† Euro Plug - Type E



92	920i Wall Mount Dimensions						
Α	14.30 in (363 mm)	D	18.84 in (479 mm)	F	14.30 in (363 mm)		
В	11.00 in (279 mm)	E	19.63 in (499 mm)	G	6.75 in (171 mm)		
С	18.20 in (462 mm)						



920	Oi Panel Mount Dimensions			
Α	11.56 in (294 mm)	С	5.20 in (132 mm)	
В	9.16 in (233 mm)	D	7.95 in (202 mm)	

# 920i® Series

Programmable Weight Indicator/Controller

## **Options/Accessories**

Part #	Description	Price
	•	Price
Option Card		\$300.00
68533	A/D, single-channel A/D, dual-channel	\$450.00
67600	Memory, 1 MB NV RAM	\$285.00
67601	Digital I/O, 24-channel TTL output	\$285.00
67602	Analog output: selectable 0-10 V, 0-20 mA	\$310.00
103138	Analog output, dual-channel 0-10 V, 0-20 mA	\$535.00
67603	Pulse input, single-channel	\$285.00
67604	Serial port card, dual-channel, RS-232 and RS-485	\$335.00
87697	Analog input +/-10 VDC, 0-20 mA and thermocouple	\$600.00
Network Ca	, , ,	φοσοισσ
65383	Ethernet Thin Server (external)	\$295.00
71986	Ethernet TCP/IP 10/100 module (internal) page 567	\$400.00
98057	Wireless LAN module 802.11 b/g page 567	\$650.00
87803	EtherNet/IP® page 566	\$800.00
68539	Remote I/O interface page 564	\$675.00
68540	Profibus® DP interface page 564	\$675.00
187816	Profinet* I/O interface page 564	\$800.00
68541	DeviceNet <sup>™</sup> interface page 565	\$675.00
103136	. 0	· ·
100100	ControlNet* interface page 566	\$1,000.00
Expansion 69782	Two-slot expansion board (wall mount)	\$300.00
	Two-slot expansion board (wall mount)  Two-slot expansion board (panel mount and	
71743	deep universal)	\$300.00
179488	Two-slot expansion board (wall mount DC powered)	\$300.00
180047	Two-slot expansion board (deep universal and panel mount, DC powered)	\$300.00
69783	Six-slot expansion board (wall mount)	\$400.00
Hardware		
83569	Clear protective overlay (package of 5)	\$75.00
70056	Cable, DB9M to DB9F, Straight Cable	\$35.00
99149	Keyboard, QWERTY 109-key USB, flexible, washable	\$135.00
77788	Fiber optic board, installed in 920i	\$200.00
92777	Filter, PreVent <sup>™</sup> vent kit PG 7 cord grip	\$30.00
19368	Start/stop controls without box, for use on wall mount	\$395.00
19369	Start/stop switch with FRP box	\$395.00
	nd Software	
69781	iRev™ scale software	\$95.00
72809	920i interchange® database software	\$295.00
67887	Additional installation manual	\$35.00
67888	Additional programming reference	\$35.00
	omponent Parts	<b>#075.00</b>
186272*** 186275***	CPU board assembly for LED backlight, (blue color) Display board, LED back light, transmissive	\$975.00 \$275.00
186276***	Display board, LED back light, transflective	\$275.00
67613	AC power supply, 25 watt for universal	\$275.00
71333	AC power supply, 65 watt for deep, panel and wall mount	\$175.00
132791	Power supply 12-24VDC, 25 watt	\$195.00
66502	Switch panel membrane	\$68.00
	ange in 2018 to LED backlight display. See replacement parts for CC	· ·

<sup>\*\*\*</sup>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) 189424 (DC); Two-slot expansion panel for deep universal 188717 (AC) 189425 (DC); Six-slot expansion for wall 188774 (AC).

To have your option factory installed, please specify when placing your order.

## **Options/Accessories**

Opiloi	is/Accessories	:				
Part #	Description	Coi	nec	tor Ty	pe	Price
USB Cable	Options	Sea	iled	Unse	aled	
Note: Con	nector is a male plug	Α	В	Α	В	
79074	Unsealed connectors USB-A to USB-B, 2 m cable			Х	Х	\$30.00
124700	Sealed connectors, USB-A to USB-B, 3 m IP68 cable	Χ	Х			\$85.00
126477	Sealed connector USB-A to unsealed connector USB-A, 3 m IP68 cable	X		Х		\$85.00
124701	Sealed connector USB-A to unsealed connector USB-B, 3 m IP68 cable	Х			Х	\$85.00
124702	Sealed connector USB-B to unsealed connector USB-A, 3 m IP68 cable		Х	Х		\$85.00
124695	Panel plug 1.125 in diameter					\$6.00
USB Rece Note: Rec	ptacles eptacle is a socket	Sea	led	Unse	aled	
126476	Sealed receptacle USB-A for wall mount, 0.5 m cable	Χ		Х		\$85.00
124703	Sealed receptacle USB-A to unsealed connector USB-B , 0.5 m cable	Χ			X	\$85.00
124704	Sealed receptacle USB-B to unsealed connector USB-B , 0.5 m cable		Х		Х	\$85.00
125998*	Sealed receptacle USB-A to five-pin connector, 0.28 m cable (internal to 920i)	Х				\$85.00
125999*	Sealed receptacle USB-B to five-pin connector, 0.28 m cable (internal to 920i)	Х				\$85.00
124694	Cover for sealed receptacles					\$12.00
124689	Cover for flash driver mounts on seal	ed rec	eptac	le		\$23.00
125077	Rice Lake USB flash drive, 1 GB					\$20.00
Ethernet (	ables	Sea	led	Unse	aled	
124706	Sealed to sealed, 3 m cable	)	(			\$85.00
124707	Sealed to unsealed connector, 3 m cable		(	<b>)</b>		\$85.00
Ethernet F	eceptacles	Sea	led	Unse	aled	
126353*	RJ-45 receptacle sealed, 0.28 m internal to 920i (requires Ethernet TCP/IP option installed)	>	(			\$85.00
	no roquiro o millad book plata which boo to					

\*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)

To have your option factory installed, please specify when placing your order.

## Unsealed Connectors



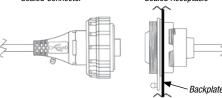
Туре В



## Type A

Sealed Connector

## Sealed Receptacle



# **Grayhill Relays and Racks**

Part #	Description	Price
52332	Two-channel input relay, 2.5-28 VDC	\$45.00
52318	Two-channel input relay, 120 VAC	\$45.00
52319	Two-channel input relay, 240 VAC	\$45.00
52331	Two-channel input relay, 10-32 VDC	\$45.00
52316	Two-channel output relay, 120-140 VAC at 2 amp	\$45.00
52317	Two-channel output relay, 240-280 VAC at 7 amp	\$45.00
71376	Two-channel output relay, 3-60 VDC at 1 amp	\$65.00
71377	Two-channel output relay, 0-200 VDC/VAC at 1.5 A/10 W (dry contact)	\$85.00
84698	Two-channel output relay, inductive load, 120-140 VAC at 2A	\$65.00
84699	Two-channel output relay, inductive load, 240-280 VAC at 2A	\$65.00
54215	Fuse, 3.15 amp, Grayhill	\$4.00
52312	Eight-channel relay rack, panel mount and wall mount, requires 50-pin flat or round ribbon cable - 4 slots	\$165.00
52314	16-channel relay rack, panel mount and wall mount, requires 50-pin flat or round ribbon cable - 8 slots	\$245.00
52315	24-channel relay rack, panel mount and wall mount, requires 50-pin flat or round ribbon cable - 12 slots	\$375.00
46189	Jumper strap, 10 position for Grayhill	\$5.00
108396	Digital input 5 VDC, 15-30 VAC/10-32 VDC	\$35.00
108397	Digital output 5VDC, 3-60 VDC	\$35.00
70780	Cable, 50-Pin flat ribbon for digital I/O, 24 in	\$50.00
70779	Cable, 50-Pin round ribbon for digital I/O with cord grip, 60 in	\$155.00
72442	Cable, 50-Pin round ribbon for digital I/O without cord grip, 60 in	\$150.00
93577	Cable, 50-Pin flat ribbon for digital I/O, 31 in	\$65.00
94384	Cable, 50-Pin flat ribbon for digital I/O, 50 in	\$65.00



8-channel relay rack PN 52312



16-channel relay rack PN 52314

# OPTO 22 Relays and Racks

Part #	Description	Price
15969	G4IDC5 10-32VDC input relay module, white (N/0)	\$35.00
15970	G40DC5R dry contact 100 VDC/1.5A output, red (N/O)	\$35.00
22848	G40DC5R5 dry contact 100 VDC/1.5 A output, red (N/C)	\$35.00
15971	G40AC5 115 VAC output relay module, black (N/O)	\$35.00
15972	G4IAC5 115 VAC input relay module, yellow (N/O)	\$35.00
22847	G40AC5A5 115/230 VAC output relay module, black (N/C)	\$35.00
36632	G40AC5A 115/230 VAC output relay module, black (N/O)	\$35.00
36631	G4IAC5A 230 VAC input relay module, yellow (N/O)	\$35.00
16478	Quencharc arc suppressor	\$11.00
101923	FRP enclosure with Opto four-channel rack	\$235.00
15973	Four-channel relay rack, 3.25 x 3.25 in	\$100.00
45408	Four-channel relay rack 6.1 x 1.2 in	\$150.00
33206	16-channel relay rack	\$185.00
33205	24-channel relay rack	\$315.00
99032	Adapter plate, for four-channel Opto rack 33490	\$5.00
26834	Fuse, 1A 250V (for PN 15970 and PN 22848)	\$7.50
21735	Fuse, 4A 250V (for PN 15971, PN 22847 and PN 36632)	\$10.00



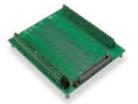
24-channel relay rack PN 52315



OPTO 22 G4 PN-15973



OPTO 22 16-channel relay rack



OPTO 22 24-channel relay rack



OPTO 22 G4 PN-45408