

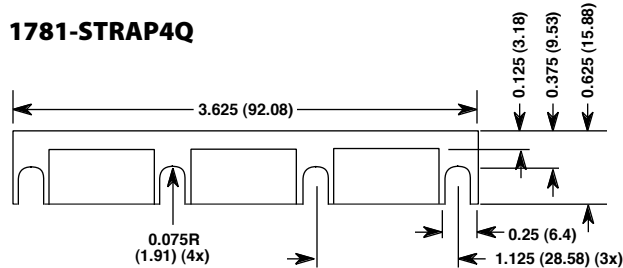
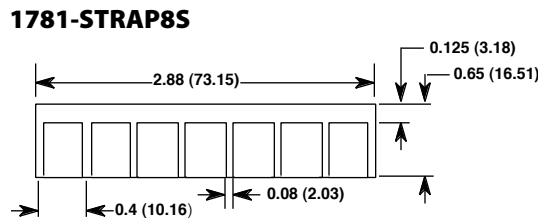
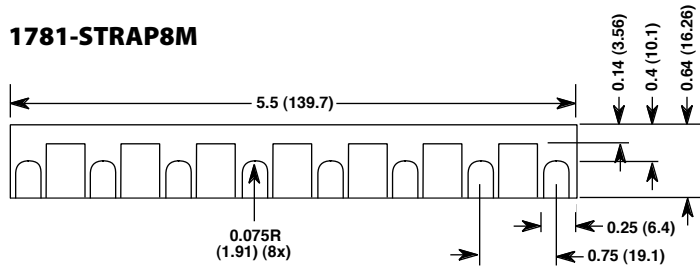
## Jumpers for digital mounting boards

**1781-STRAPxx** series of jumpers for digital mounting boards are tin plated copper. They are used to connect the common terminals of digital mounting boards. All jumpers are made from 0.031 ±0.002" thick copper and plated with bright tin.

**1781-STRAP8M** is used with the standard-size series of mounting boards including the 1771-JMB, 1771-JMBH, 1771-JMB8, 1781-A4R, the 1781-A4T and the 1781-JMBX.

**1781-STRAP8S** is used with the Slim Line series of single point I/O mounting boards, 1781-A8A and up.

**1781-STRAP4Q** is used with the quad point I/O mounting boards.



## Fuses

Fuses are provided in packages of 10 fuses for the rating specified.

**1781-FUSE1** is a one-amp, very quick blow fuse used with mounting boards and various adapters. Littlefuse type 251001 or equivalent.

**1781-FUSE3** is a three-amp, very quick blow fuse used with SmartMux. Littlefuse type 251003 or equivalent.

**1781-FUSE4** is a four-amp, very quick blow fuse used with analog mounting boards. Littlefuse type 251004 or equivalent.

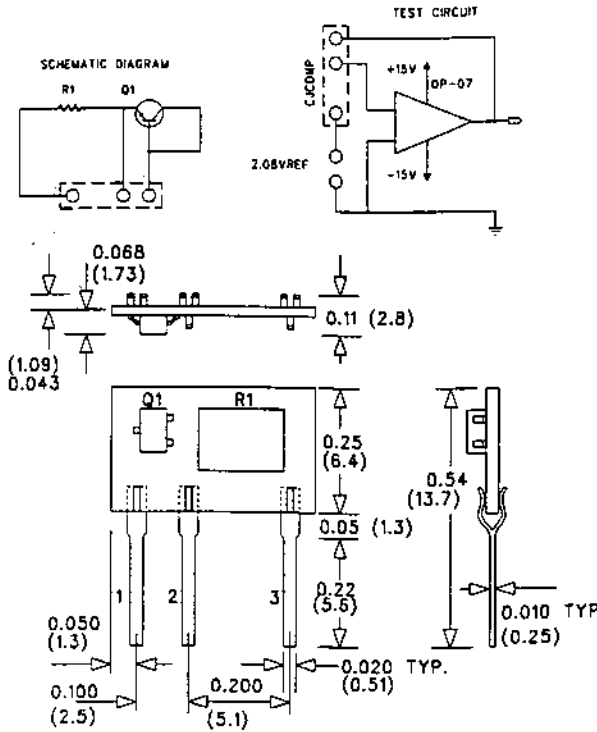
**1781-FUSE5** is a five-amp, very quick blow fuse used with 1781 I/O module mounting boards. Littlefuse type 251005 or equivalent.

**WRC4-FUSE1** is a one-amp, very quick blow round fuse used with WRC4 mounting boards and various adapters. Wickman 19373K.1A or equivalent.

**WRC4-FUSE4** is a four-amp, very quick blow fuse used with WRC4 I/O modules and some 1781 mounting boards. Wickman 19373K.4A or equivalent.

**WRC4-FUSE5** is a five-amp, very quick blow fuse used with WRC4 I/O modules and some 1781 mounting boards. Wickman 19373K.5A or equivalent.

**WRC1361 Cold Junction Temperature Sensor**



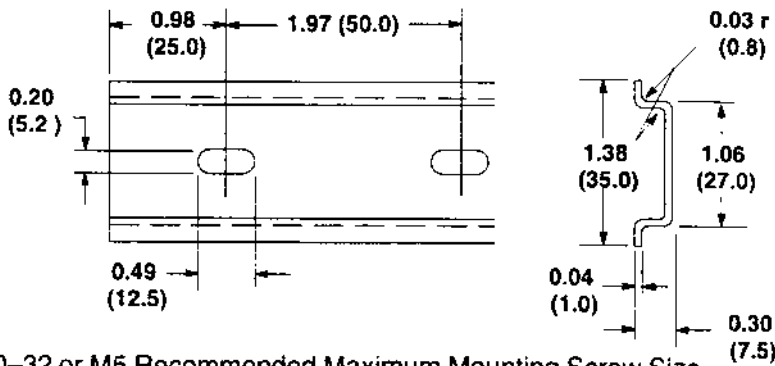
The WRC1361 is an integrated hybrid component used to sense ambient temperature. It is the component used in WRC 1781 and 1782 Series 5Bxx analog mounting boards to provide cold-junction compensation for the 1781-5B37 and 1781-5B47 thermocouple input modules. When connected in a mounting board with the above 1781-5B thermocouple modules, the voltage output of the sensor is:  $V_{1-2} = 0.510 - 0.0025 * (T-25)$  volts

V1-2 is the voltage measured from pin 1 to pin 2 and T is the ambient temperature in Centigrade.

The accuracy of the WRC1361 is:

at 25°C:	0.3°C
+5°C to +45°C:	0.7°C
+0°C to +60°C:	1.0°C

**WRC50022 DIN mounting rail**



**Description**

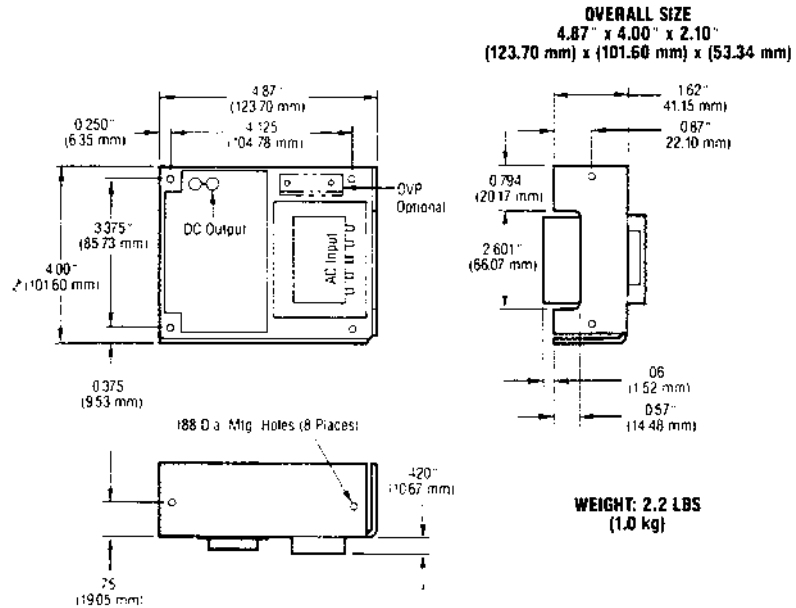
- Symmetrical Rail
- 35 mm x 7.5 mm
- 3.28' (1m long)
- Zinc Plated, Yellow Chromated Steel

#10-32 or M5 Recommended Maximum Mounting Screw Size

The 1781-PSx series of power supplies accept ac main power to supply the necessary regulated dc power to the SmartMux adapters and I/O. Select the power supply appropriate for the SmartMux adapter.

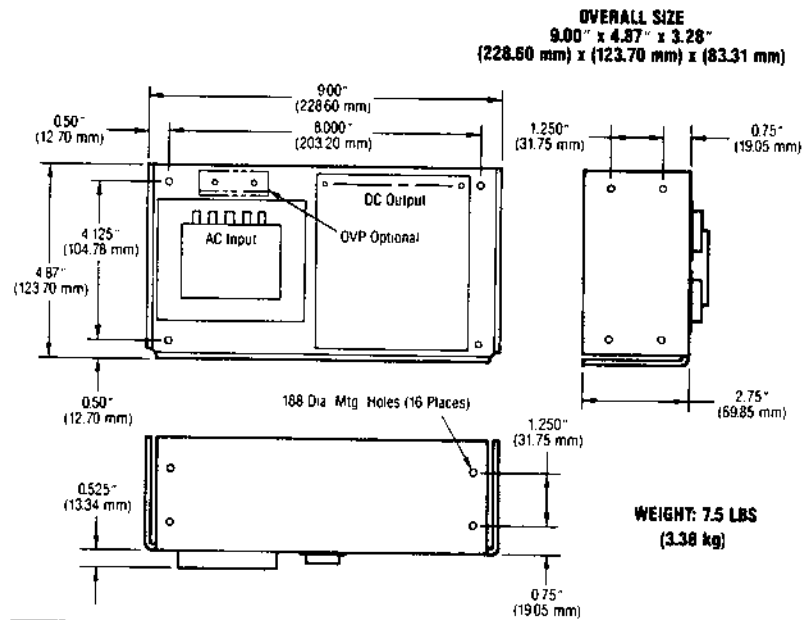
**1781-PS1**

- **1781-PS1** Single Output Linear Power Supply:  
 5 V dc @ 3 A  
 For use with 1781-JxB adapters.

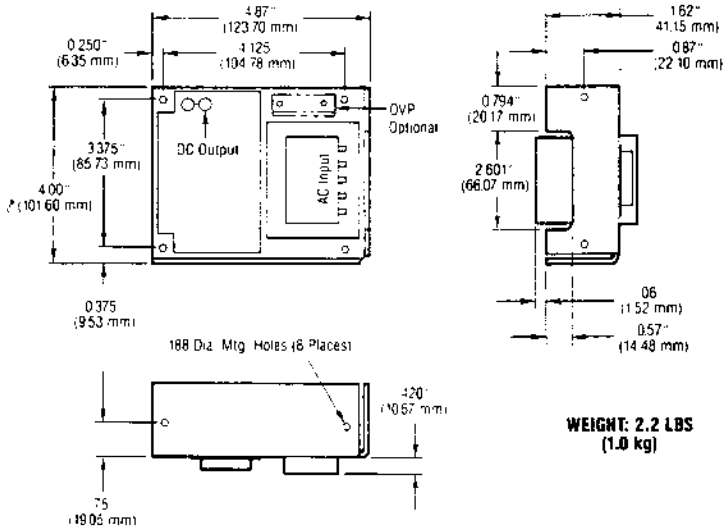


**1781-PS2**

- **1781-PS2** Triple Output Linear Power Supply:  
 5 V dc 6 A and ±12 V dc @ 1 A  
 For use with 1781-JxA adapters

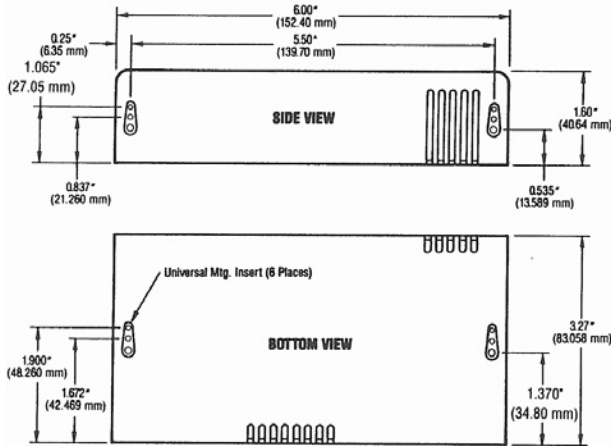


**OVERALL SIZE**  
**4.87" x 4.00" x 2.10"**  
**(123.70 mm) x (101.60 mm) x (53.34 mm)**



**1781-PS4**

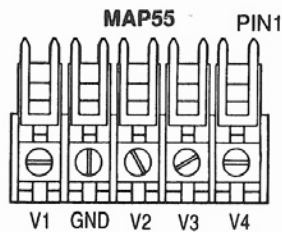
- **1781-PS4** Single Output Linear Power Supply:  
 24 V dc @ 1.2 A  
 For use with 1781-7B series analog I/O and 1781-JPA7 SmartPMux adapter, as well as all DeviceNet applications.



**1781-PS7-55**

- **1781-PS7-55** Quad Output Switcher Power Supply:  
 +5 V dc @ 6 A  
 ±12 V dc @ .5 A  
 +24 V dc @ 2.5 A

For use with 1781-JxA7 SmartPMux adapters.



**SINGLE OUTPUT MODELS USE THE V1 PIN(S).**  
**MATES WITH MOLEX SERIES 2139 OR 6442**

**Common Specifications**

AC input voltage	Automatically adjusts from 90-264 Vac
Line regulation	±0.2% for a 10% line change
Load regulation	2% for a 50% load change
Output ripple	5 V dc: 3.0 mV peak-to-peak
Short circuit & overload protection	Automatic current limit/foldback with automatic recovery. Internal ac fuse provided.
Overvoltage	6.2 V ±0.4 V (on 5 V outputs only protection)
Operating temperature	0°C to 50°C full-rated, derated linearly to 50% from 50°C to 70°C
Storage temp.	-55°C
Temperature coefficient	0.03%/°C typical, 0.03%/°C maximum
Efficiency	75%
Shock & vibration	2 cG peak acceleration, 10 Hz to 2 KHz, 6.15 grms (3 axis)
Approvals	CE, cUL, EN, IEC, TUV, UL

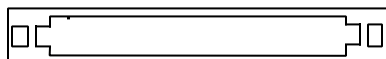
Ribbon cables are used to connect analog and discrete mounting boards to SmartMux, SmartMux-Plus, SmartPMux, 1781-PxBxxx, Data acquisition boards and other devices. Select the cable from the choices below.

CABLE P/N	NUMBER OF	CONNECTOR	CONNECTOR	COMMENT	TYPICAL USES
1781-CxEE	50	Edge – F	Edge – F	Non-Polarized	Digital I/O board to controller
1781-CxEH	50	Edge – F	Header – F	Polarized	Digital I/O board to SmartMux, 1781-PxBxxx
1781-CxED	50	Edge – F	D-shell	Polarized	
1781-CxHH	50	Header – F	Header – F	Polarized	Digital I/O board to controller
1781-CxDD	50	D-shell	D-shell	Polarized	
1781-CxHD	50	Header – F	D-shell	Polarized	
1781-5Cx(y)*	26	Header – F	Header – F	(2)	Analog I/O board to SmartMux
1781-C7x	26	Header – F	25 D-shell (P)	Polarized – used with 1781-7B I/O	Analog I/O board to SmartMux
1781-C7xDD	25	25 D-shell (P)	25 D-shell (P)	Use with WRC1	Analog I/O board to SmartMux-Plus
1781-CSD	6	RJ11	25 D-shell (P)	Use with WRC1	ASCII port for SmartMux-Plus, 6-foot long

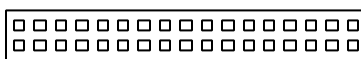
**NOTES:**

- (1) x = cable length (default = 1)
- (2) 1781-5Cx,y is a 26-conductor ribbon cable, each end equipped with a non-polarized, female header connector.  
 Used with WRC's SmartMux analog adapters and analog mounting boards. A single 1781-5Cx,y cable is required when a using 2 1781-5B08 or 1781-5B16 mounting boards. Specify connector location for each connector from the SmartMux end using suffixes as needed.  
 x,y = cable length, default is 1 foot (For example, a 1781-5C3,2 is 3 feet long with an additional connector 2 feet from the SmartMux end.)
- \* Previously supplied as 1781-5B01-Cx(y).

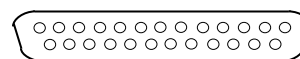
**EDGE CONNECTOR**



**HEADER CONNECTOR**



**D-SHELL CONNECTOR**



DIN-Rail mounted termination assemblies provide a convenient way to terminate ribbon cables using a screw termination for each conductor.

**1782-fbk26**

1782-FBK26 is used with 26-conductor ribbon cable for applications such as 1781-5B08T, 1781-5B16T, or 1781-JxA7 SmartMux adapters.

**1782-fbk50**

1782-FBK50 is used with 50 conductor ribbon cable such as used with any of the digital I/O mounting boards or to connect panel mount solid state relays to SmartMux adapters.

D-93-S12 is a steel mounting bracket designed to fit a standard 19" rack and to facilitate easy assembly and mounting of WRC products. Provision is made for attaching one of the following WRC discrete I/O mounting boards:

- 1771-JMB
- 1771-JMBJ
- 1771-JMBH
- 1771-JMBHJ
- 1781-A24A
- 1781-A16A
- 1781-A16AJ
- 1781-A8A

In addition, provision is made for mounting a 1781-PS1 power supply.

**MOUNTING DIMENSIONS**

