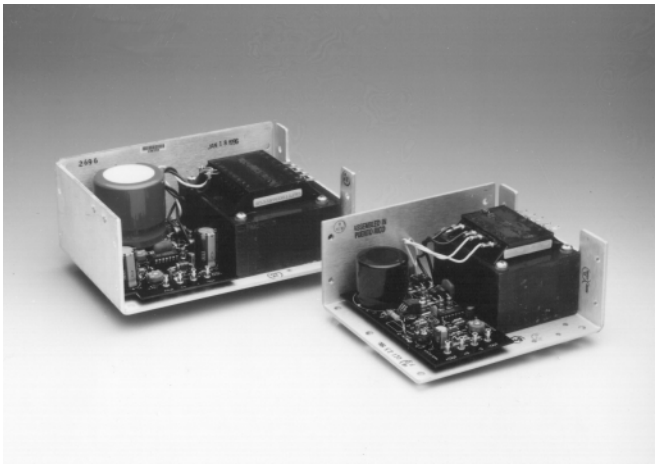
MANNESMANN REXROTH

Power Supply 24 V and ±15 V

RA 30 151/06.98

Replaces: 05.96

- Output 24 VDC single polarity models
- Output ±15 VDC or ±12 VDC bi-polar models
- Voltage regulation ±0.05%
- Low output ripple <5 mV peak to peak
- Short circuit and overload protection
- Input voltage 100, 120, 220, 230–240 VAC
- Frequency input 47 to 63 Hz
- UL recognized, CSA certified, also IEC, VDE, BPO, ECMA, CEE



24 V Power Supply

Regulated power supply units are used for proportional amplifiers, servos, transducers, and instrumentation. All supply outputs are foldback current limited, if a short circuit or excess load is applied. Output voltage may be adjusted within ±5%. The power supplies are open-frame designs that can be panel mounted. Standoffs are generally recommended to allow air circulation.

Order by Rexroth Part Number

Output Voltage	Output Current [1])	Rexroth Part No.
24 VDC	2.4 A	**US00 887 102**
24 VDC	3.6 A	**US00 887 103**
24 VDC	4.8 A	**US00 887 104**
±15 VDC	0.8, 0.8 A	**US00 887 105**
±15 VDC	1.5, 1.5 A	**US00 887 106**

[1]) Output current @58–63 Hz, derated all by 10% below 58 Hz.

Technical data

Input voltage (supplied as 120, unless noted)	VAC	87 … 110 104.4 … 132 191.4 … 242 207 … 264
Input frequency	Hz	47 … 63
Efficiency, typical @120 V – 60 Hz	%	55
Output current @58–63 Hz*	Amp	
US00 887 102 (HC24-2.4-A)		2.4
US00 887 103 (HN24-3.6-A)		3.6
US00 887 104 (HD24-4.8-A)		4.8
US00 887 105 (HAA15-0.8-A)		0.8, 0.8
US00 887 106 (HBB15-1.5-A)		1.5, 1.5
*derated all by 10% below 58 Hz		
Output voltage adjustment range	%	±5
Voltage regulation @ 10% line change	%	±0.05
Voltage regulation @ 50% load change	%	±0.05

Output ripple	24 V models ±15 V models	mV_{p-p}	<3 <5
Operating temperature – above 50 °C, 12 CFM fan recommended – for convection cooling, 50 … 70 °C derate linearly 0 … 40%		°F (°C)	0 … 122 (0 … 50)
Storage temperature		°F (°C)	–47 … 132 (–44 … 85)
Weight		lbs (kg)	
US00 887 102	(HC24-2.4-A)		4.4 (2.0)
US00 887 103	(HN24-3.6-A)		6.8 (3.1)
US00 887 104	(HD24-4.8-A)		7.9 (3.6)
US00 887 105	(HAA15-0.8-A)		2.5 (1.1)
US00 887 106	(HBB15-1.5-A)		4.4 (2.0)

Connections, jumpers and fuse

Input voltage range	VAC	87 … 110	104.4 … 132	191.4 … 242	207 … 264
AC to terminals on transformer [1])		5, 1	4, 1	5, 1	4, 1
Jumper terminals on transformer		1 to 3, 2 to 4	1 to 3, 2 to 4	2 to 3	2 to 3
DC from terminals on circuit board					
	24 V 0 V	+15 V 0 V –15 V	+OUT COM –OUT	+OUT COM –OUT	+OUT COM –OUT	+OUT COM –OUT
Jumper terminals on circuit board (24 V)					
		24 V [2]) 0 V [2])	+OUT to +S –OUT to –S	+OUT to +S –OUT to –S	+OUT to +S –OUT to –S	+OUT to +S –OUT to –S
Jumper terminals on circuit board (±15 V)		+15 V [3]) 0 V [3]) –15 V [3])	+OUT to +S COM to ±S –OUT to –S	+OUT to +S COM to ±S –OUT to –S	+OUT to +S COM tp ±S –OUT to –S	+OUT to +S COM to ±S –OUT to –S
Fuse – slow acting, 250 V for AC input [4])					
US00 887 102	(HC24-2.4-A)		1.5 A	1.5 A	0.75 A	0.75 A
US00 887 103	(HN24-3.6-A)		2 A	2 A	1 A	1 A
US00 887 104	(HD24-4.8-A) [5])		2 A	2 A	1 A	1 A
US00 887 105	(HAA15-0.8-A) [6])		0.75 A	0.75 A	0.375 A	0.375 A
US00 887 106	(HBB15-1.5-A) [6])		1 A	1 A	0.5 A	0.5 A

[1]) 700 °C soldering iron recommended for input connections.
Connect supply chassis to earth ground.

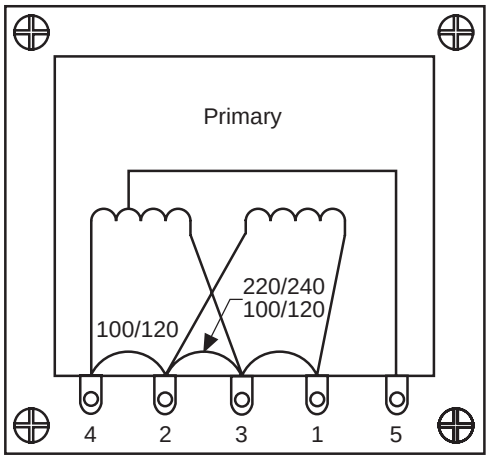
[2]) Connect **+S** to **+OUT** (for local sensing).
Connect **–S** to **–OUT**.

[3]) Connect **+S** that is next to **+OUT**.
Connect **+S** and **–S** that are next to **COM**.
Connect **–S** that is next to **–OUT**.
Connect wires for DC power to **+OUT, –OUT, COM** (output terminals).
Do not connect wires for DC power to **+/–S** (sense terminals).

[4]) External fuse in AC line must be installed by user.

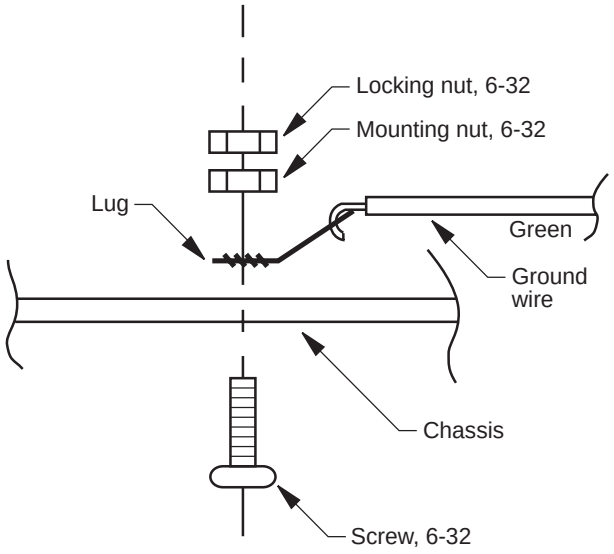
[5]) Two solder terminals are provided for DC output (**+OUT, +OUT, –OUT, –OUT**).

[6]) For ±15 VDC, jumpers **JW1 and JW2** must be removed on circuit board.
For ±12 VDC, jumpers **JW1 and JW2** shipped installed, unless noted.



AC Input, 47–63 Hz				
For use at	100 VAC	120 VAC	220 VAC	230/240 VAC
Jumper	1 & 3 2 & 4	1 & 3 2 & 4	2 & 3	2 & 3
Apply AC	1 & 5	4 & 1	1 & 5	4 & 1

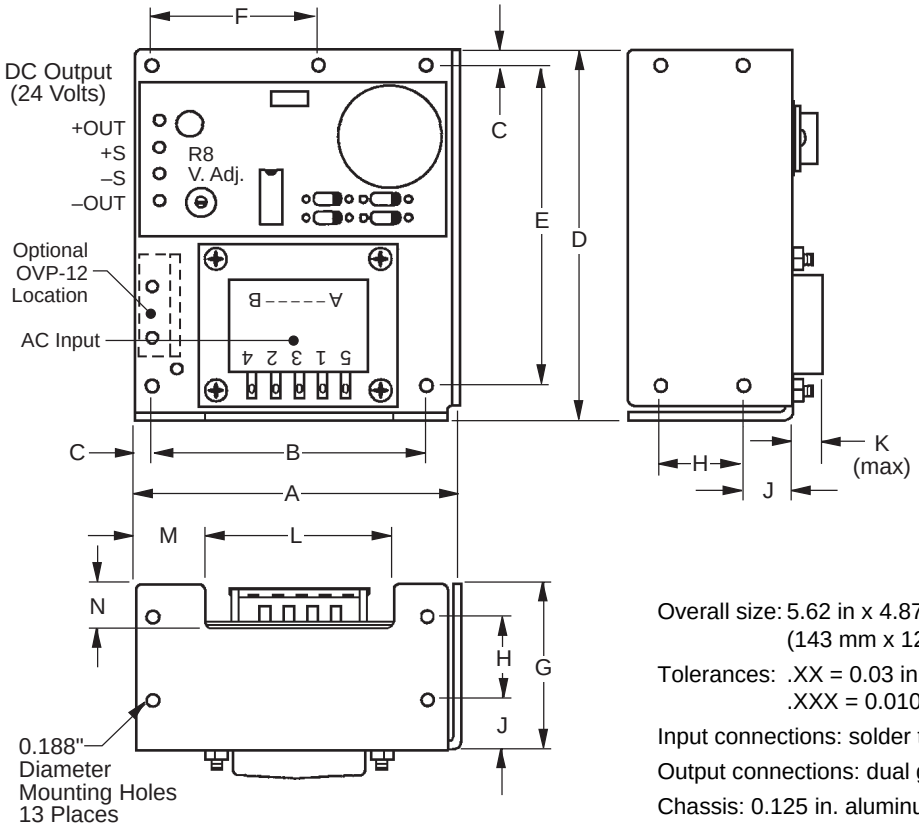
External fuse required for safety.



Chassis ground for safety. Use any empty hole on the power supply chassis, preferably close to the transformer input for ease of wiring. Hardware not provided.

Mechanical dimensions: dimensions in inches (millimeters)

US00 887 102 (HC24-2.4-A)



	Inch	mm
A	4.87	123.70
B	4.125	104.78
C	0.25	6.35
D	5.62	142.75
E	4.875	123.83
F	2.475	62.87
G	2.50	63.50
H	1.250	31.75
J	0.75	19.05
K	0.45	11.43
L	2.85	72.39
M	1.025	26.04
N	0.665	16.89

Overall size: 5.62 in x 4.87 in x 2.95 in
(143 mm x 124 mm x 75 mm)

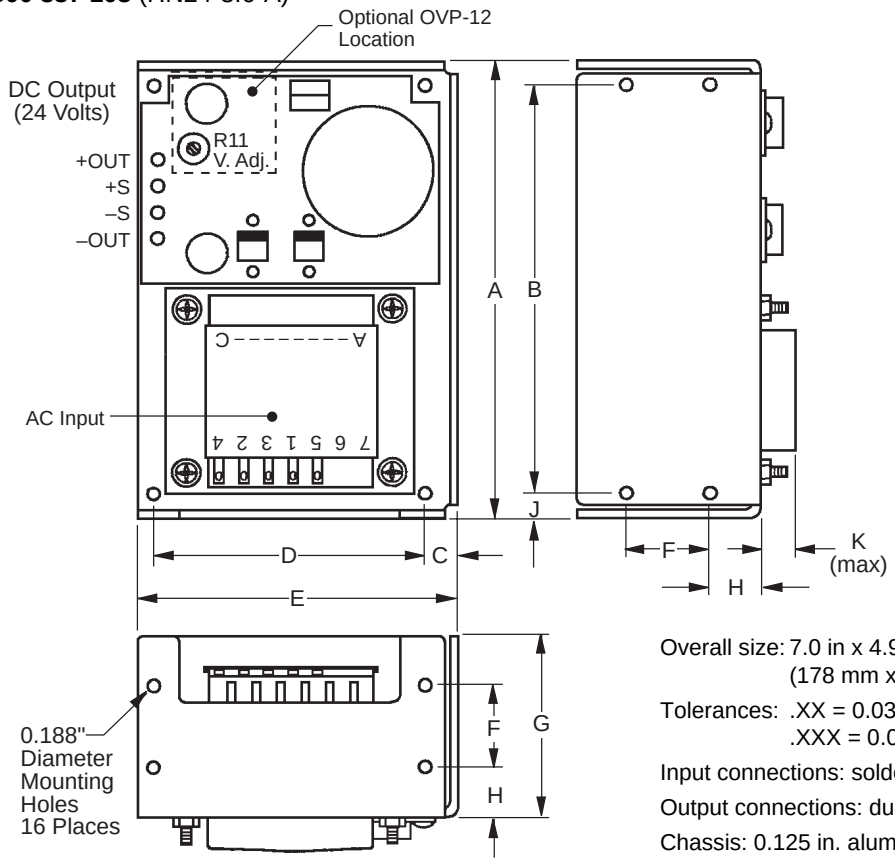
Tolerances: .XX = 0.03 in (.76 mm)
.XXX = 0.010 in (.25 mm)

Input connections: solder terminals on the transformer.

Output connections: dual gauge solder turrets on the PCB.

Chassis: 0.125 in. aluminum alloy, with clear anodized finish.

US00 887 103 (HN24-3.6-A)



	Inch	mm
A	7.00	177.80
B	6.250	158.75
C	0.50	12.70
D	4.125	104.78
E	4.87	123.70
F	1.250	31.75
G	2.75	69.85
H	0.75	19.05
J	0.38	9.53
K	0.53	13.46

Overall size: 7.0 in x 4.9 in x 3.3 in
(178 mm x 124 mm x 84 mm)

Tolerances: .XX = 0.03 in (.76 mm)
.XXX = 0.010 in (.25 mm)

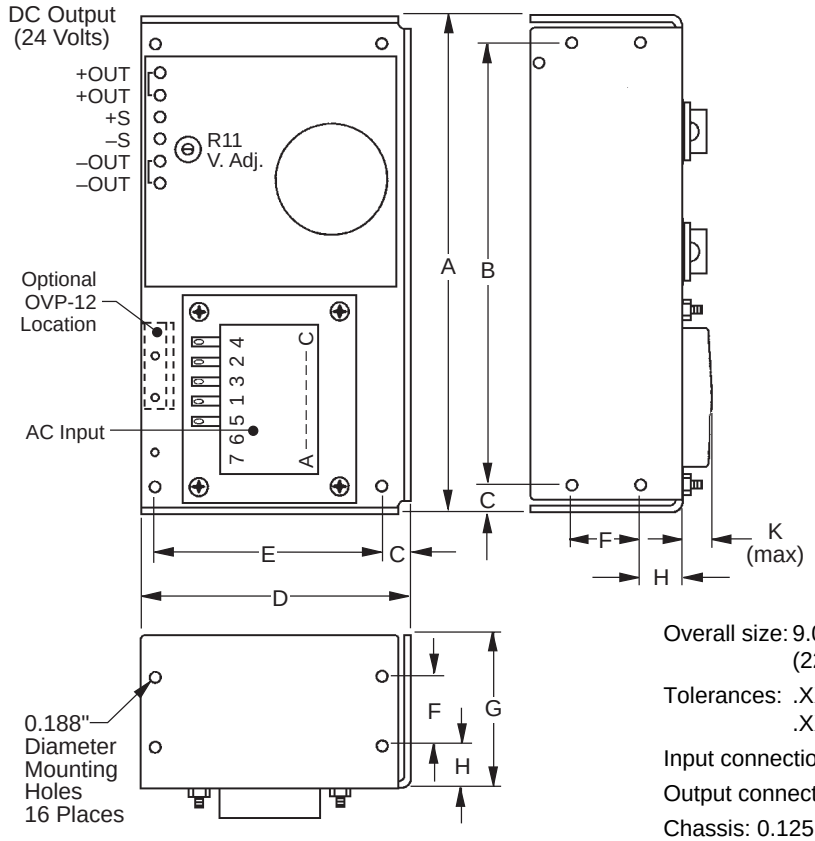
Input connections: solder terminals on the transformer.

Output connections: dual gauge solder turrets on the PCB.

Chassis: 0.125 in. aluminum alloy, with clear anodized finish.

Mechanical dimensions: dimensions in inches (millimeters)

US00 887 104 (HD24-4.8-A)



	Inch	mm
A	9.00	228.60
B	8.000	203.20
C	0.50	12.70
D	4.87	123.70
E	4.125	104.78
F	1.250	31.75
G	2.75	69.85
H	0.75	19.05
K	0.53	13.46

Overall size: 9.0 in x 4.9 in x 3.3 in
(229 mm x 124 mm x 84 mm)

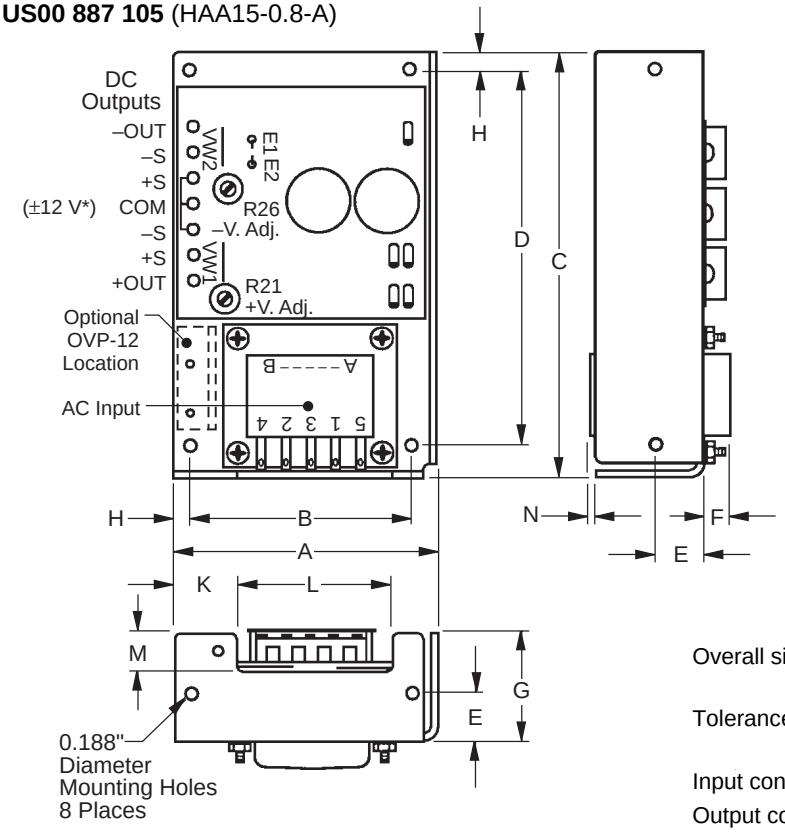
Tolerances: .XX = 0.03 in (.76 mm)
.XXX = 0.010 in (.25 mm)

Input connections: solder terminals on the transformer.

Output connections: dual gauge solder turrets on the PCB.

Chassis: 0.125 in. aluminum alloy, with clear anodized finish.

US00 887 105 (HAA15-0.8-A)



	Inch	mm
A	4.00	101.60
B	3.375	85.73
C	6.50	165.10
D	5.750	146.05
E	0.75	19.05
F	0.42	10.67
G	1.62	41.15
H	0.25	6.35
K	0.955	24.26
L	2.37	60.20
M	0.57	14.48
N	0.06	1.52

Overall size: 6.5 in x 4.0 in x 2.1 in
(165 mm x 102 mm x 53 mm)

Tolerances: .XX = 0.03 in (.76 mm)
.XXX = 0.010 in (.25 mm)

Input connections: solder terminals on the transformer.

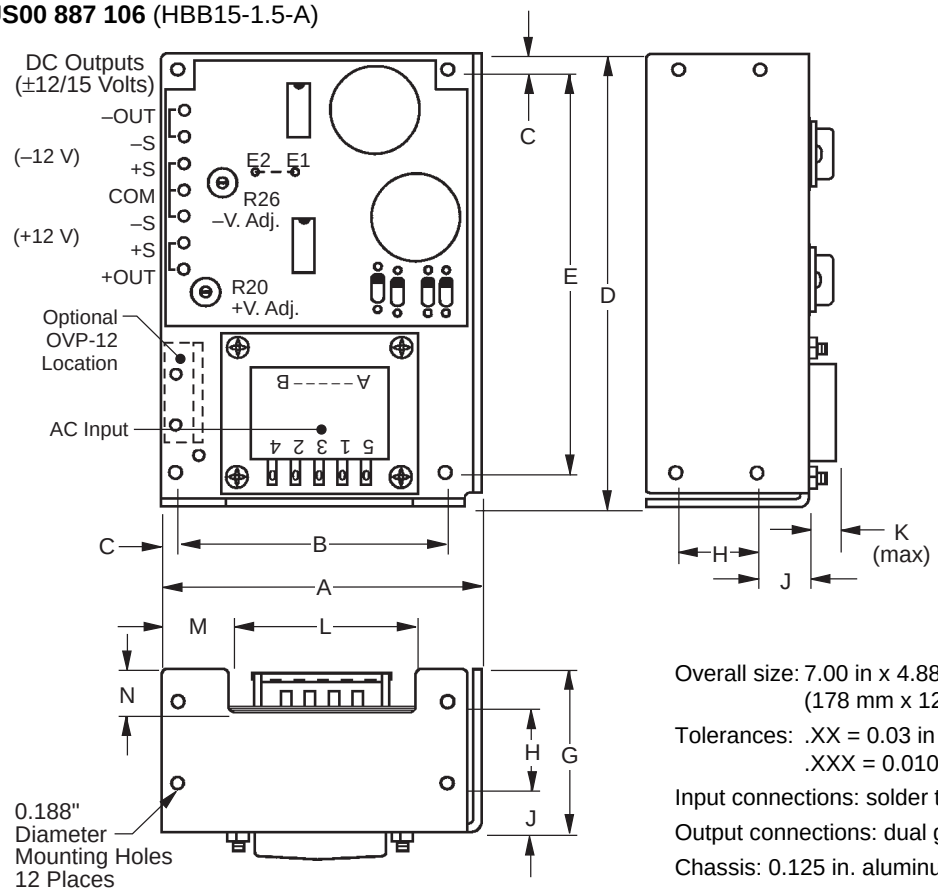
Output connections: dual gauge solder turrets on the PCB.

Chassis: 0.090 in. aluminum alloy, with clear anodized finish.

* For ±15 V operation remove jumpers VW1 and VW2.

Mechanical dimensions: dimensions in inches (millimeters)

US00 887 106 (HBB15-1.5-A)



	Inch	mm
A	4.88	123.95
B	4.125	104.78
C	0.25	6.35
D	7.00	177.80
E	6.250	158.75
G	2.50	63.50
H	1.250	31.75
J	0.75	19.05
K	0.45	11.43
L	2.85	72.39
M	1.025	26.04
N	0.665	16.89

Overall size: 7.00 in x 4.88 in x 2.95 in
(178 mm x 123 mm x 75 mm)

Tolerances: .XX = 0.03 in (.76 mm)
.XXX = 0.010 in (.25 mm)

Input connections: solder terminals on the transformer.

Output connections: dual gauge solder turrets on the PCB.

Chassis: 0.125 in. aluminum alloy, with clear anodized finish.

Notes

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