



**Dynacel**  
Valve Regulated

## Type EMF-R

Railroad Signal and  
Communication Storage  
Batteries

### ⇒ Features

\*80 A.H. to 710 A.H.

\*10 sizes available

### ⇒ Epoxy Coated Steel Tray

\*Rugged design

\*Convenient lifting handles

### ⇒ Sealed Construction

\*Totally leak-proof to prevent acid spills

\*No watering requirements

### ⇒ Gas Recombinant

\*Ventilation NOT required

\*Special battery rooms NOT required

\*Can be used in close proximity to sensitive electronics

### ⇒ Local Service

\*Sold, serviced, and backed by EnerSys Inc.

### ⇒ Gelled Electrolyte

\*Proven technology 35 years of development

\*Safe for office environments and CEV's

\*No acid stratification

### ⇒ Tubular Positive Plates

\*Proven best for outstanding cycling capability

\*Up to 20 year life cycle

\*High energy density

\*Active material locked inside tubes

### ⇒ Calcium negative plates

\*Extremely low self-discharge rates

\*Low float current

### ⇒ Charging

\*Constant voltage, temperature compensated charging recommended

### ⇒ ISO-9001:2001 Certified



## Specifications

**Plates:** Positive – Tubular, w/ low antimony alloy spines  
Negative – Flat plate, pasted, w/ calcium alloy grid

**Cover and Container:** Polypropylene, encased in steel

**Connector:** Insulated lead-plated copper connections with stainless steel hardware

**Float Voltage:** Recommended: 2.23 VPC @ 77°

**Maximum Charge Voltage:** 2.40 VPC @ 77°

**Separators:** Microporous polyethylene

**Electrolyte:** Diluted Sulfuric Acid immobilized in Thixotropic gel

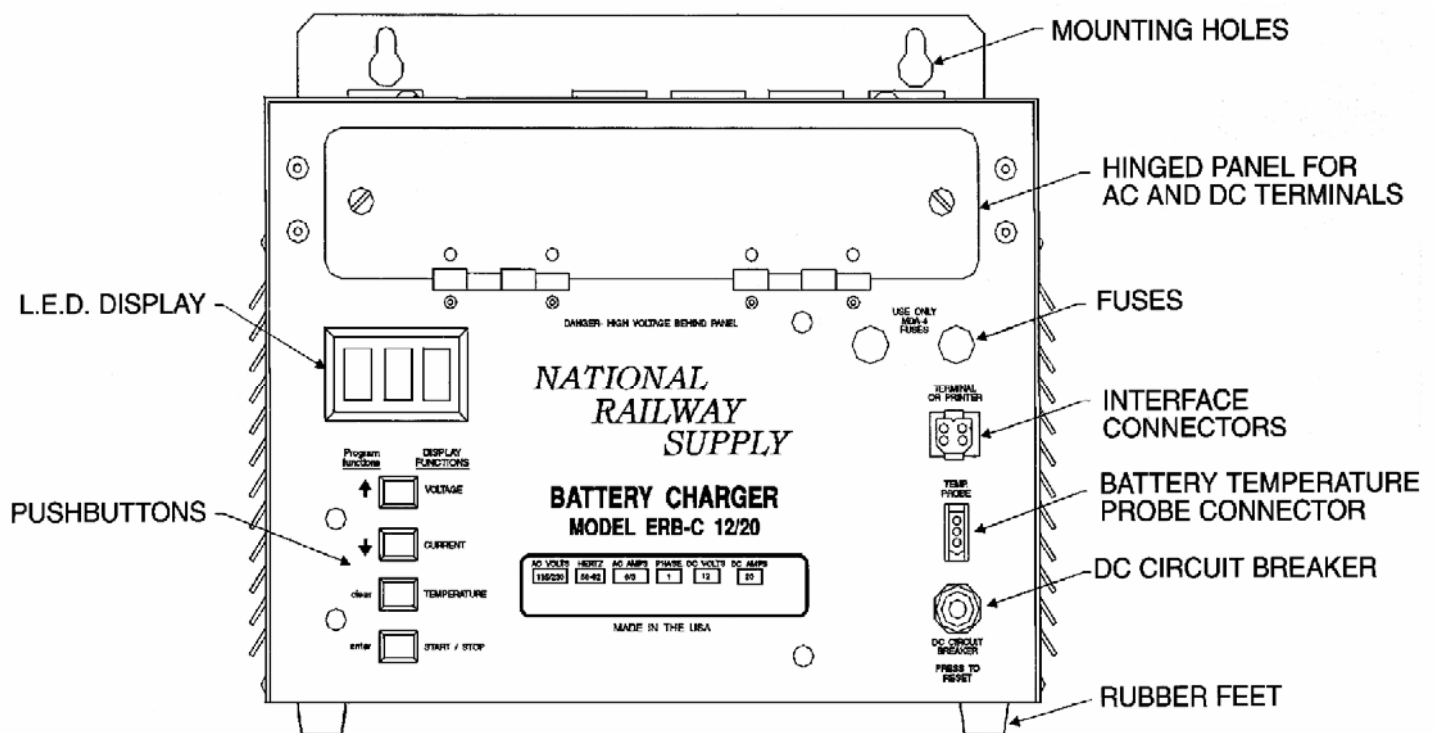
**Posts:** EMF-80R to 240R single post flag terminals  
EMF-340R to 710R double post flag terminals

# Capacities / Dimensions / Weights

Type	Nom Ah Cap	Overall Dimensions						Weights			
		Length		Width		Height		Unpacked		Domestic Packed	
		In	mm	In	mm	In	mm	Lbs.	Kg.	Lbs.	Kg.
EMF-80R	80	4.00	101.6	6.48	164.6	10.95	278.1	27	12.0	28	12.5
EMF-120R	120	4.00	101.6	6.48	164.6	10.95	278.1	31	13.8	32	14.3
EMF-160R	160	4.00	101.6	6.48	164.6	14.25	362.0	41	18.7	42	19.1
EMF-200R *	200	4.75	120.7	6.48	164.6	14.25	362.0	48	21.9	49	22.4
EMF-240R	240	5.50	139.7	6.48	164.6	14.25	362.0	55	24.9	56	25.3
EMF-340R	340	7.54	191.5	6.75	171.5	14.25	362.0	76	34.6	77	35.0
EMF-425R	425	8.30	210.8	6.75	171.5	14.25	362.0	91	41.4	92	41.9
EMF-500R	500	9.80	248.9	6.75	171.5	14.25	362.0	108	48.8	109	49.3
EMF-620R	620	11.30	287.0	6.75	171.5	14.25	362.0	125	56.6	126	57.1
EMF-710R	710	12.80	325.1	6.75	171.5	14.25	362.0	141	63.9	142	64.4

\*Flame retardant (EMF-200RFR) available by special order

# Suggested Charger for Dynacel Type EMF-R



# Average Cell Performance Data @ 77° F

Type	8 hr Capacity to 1.75 VPC (AH)	Discharge Current (Amps) to 1.75 VPC					
		8 Hr.	5 Hr.	3 Hr.	1 Hr.	30 Min.	15 Min.
EMF-80R	84	10.5	15.8	24.2	53.2	72.6	87.5
EMF-120R	118	14.7	21.4	31.9	71.0	97.4	117.0
EMF-160R	179	22.4	33.5	49.5	96.0	131.3	160.0
EMF-200R	223	28.0	41.9	61.8	120.0	164.2	200.0
EMF-240R	268	33.6	50.3	74.2	144.0	197.0	240.0
EMF-340R	358	44.8	67.0	98.9	192.0	262.7	320.0
EMF-425R	448	56.0	83.8	123.7	240.0	328.3	400.0
EMF-500R	537	67.2	100.5	148.4	288.0	394.0	480.0
EMF-620R	626	78.4	117.3	173.1	336.0	459.7	560.0
EMF-710R	716	89.6	134.0	197.8	384.0	525.4	640.0

Type	8 hr Capacity to 1.90 VPC (AH)	Discharge Current (Amps) to 1.90 VPC					
		8 Hr.	5 Hr.	3 Hr.	1 Hr.	30 Min.	15 Min.
EMF-80R	68	8.6	13.0	19.3	36.0	46.2	53.3
EMF-120R	92	11.5	17.4	25.8	48.0	61.5	71.0
EMF-160R	147	18.4	27.5	40.3	72.0	87.4	95.3
EMF-200R	183	23.0	34.4	50.4	90.0	109.2	119.2
EMF-240R	220	27.6	41.3	60.5	108.0	131.1	143.0
EMF-340R	294	36.8	55.0	80.7	144.0	174.7	190.7
EMF-425R	368	46.0	68.8	100.9	180.0	218.4	238.3
EMF-500R	441	55.2	82.6	121.0	216.0	262.1	286.0
EMF-620R	514	64.4	96.3	141.2	252.0	305.8	333.7
EMF-710R	588	73.6	110.1	161.4	288.0	349.5	381.3

## Additional Features:

- ⇒ Explosion resistant
- ⇒ Operates at low internal pressures
- ⇒ 100% recyclable
- ⇒ Up to 20 year life in float service
- ⇒ Deep cycle ability – 1200 cycles @ 50% DOD @ 77°

# The ERB-C

## A Small, Lightweight, and Programmable charger packed with benefits.

### **Temperature Compensation:**

This temperature feature has been installed to eliminate charger problems, battery failure due to extreme temperatures, therefore prolonging battery life.

### **Self-Diagnostics:**

The ERB-C is a smart charger that has the capability to detect charger or battery problems.

### **Delayed Power-Up:**

Many chargers blow fuses causing power-up surges. To eliminate this failure, the ERB-C charger has a delayed power-up (5-10 sec.).

### **SCR Regulation:**

SCR regulation allows the charger to provide charge by Constant Current or Constant Voltage methods.

### **Sample and Hold:**

Output voltage compensates for voltage drops due to cable lengths.

### **Selectable Float Voltage:**

Depending on battery type, the float voltage can be programmed.

## The Standard features of this Charger have sent other Manufacturers back to the drawing board.

### **Selectable Password:**

To prevent unauthorized entry into the charger program, a code number must be entered. This code number is selectable by the operator.

### **Displays Last Power Fault:**

Remote locations often lose power. In order to keep track of these power outages, the charger counts power fault and records how long the power has been out.

### **External Temperature Probe:**

Many battery failures are caused by excessive heat and water loss. To eliminate this problem the charger monitors the battery temperature, which prolongs battery life and reduces maintenance.

### **Temperature Scale:**

Temperature can be displayed in Celsius or Fahrenheit.

### **Selectable Current:**

Minimum and Maximum currents are programmable.

### **Print Interval:**

Data from the battery and charger can be collected at 15 Min. or 1 hr. intervals. The maximum amount of information is 4 days at 15 min. or 16 days at 1 hr.

### **Terminal Option:**

A keyboard connection allows the operator to run, monitor, or program the charger from an external keyboard.

### **Log by Load Change:**

Every time the battery requires a higher current, it is recorded. This feature will also record each time a train passes.

### **Dual Voltage Transformer:**

The charger's transformer has been designed for either 115 or 230 vac. Selection is done by a simple tap change.

### **Modem Option:**

The Charger has the ability to talk via the phone lines for remote monitoring.

### **Memory Capability:**

All programmed information is maintained during power failures.

### **3 Digit LED Display:**

Displays charger information – Voltage, Current, Temperature, Error messages.



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