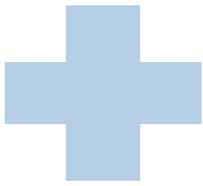
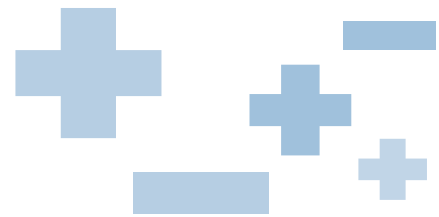


# FIAMM

Industrial Batteries

# FGL

series



## Applications and Key Benefits

- + Designed to achieve optimal performance and to protect from power disturbances
- Ideal for:
  - Emergency lighting
  - Signaling
  - Security & alarm systems
  - Industry & process control
  - UPS application
  - Minor traction
  - Renewable energy storage
- + Optimized for discharge up to 20 hours
- + 10 year design life in float operation in temperature controlled environment
- + VRLA AGM and gas recombination technology with 99% internal recombination
- + Non-spillable and maintenance free
- + Non-hazardous for air/sea/rail/road transportation
- + 100% Recyclable

| Model     | Nominal voltage (V) | Capacity (Ah)                  |                                |                               |                                 | Weight (kg) | Dimensions (mm) |     |     |     | Terminal Type |
|-----------|---------------------|--------------------------------|--------------------------------|-------------------------------|---------------------------------|-------------|-----------------|-----|-----|-----|---------------|
|           |                     | Discharge 20 h rate 1.75V/cell | Discharge 10 h rate 1.75V/cell | Discharge 5 h rate 1.70V/cell | Discharge 1.5 h rate 1.60V/cell |             | L               | W   | H   | TH* |               |
| 12FGL17** | 12                  | 17                             | 15.5                           | 14                            | 12                              | 5.95        | 181             | 76  | 167 | 167 | Round M5      |
| 12FGL27   | 12                  | 27                             | 24                             | 22                            | 18                              | 9.00        | 166             | 175 | 125 | 125 | Round M5      |
| 12FGL33   | 12                  | 33                             | 30                             | 27                            | 22                              | 11.5        | 196             | 130 | 159 | 164 | Round M6      |
| 12FGL42   | 12                  | 42                             | 38                             | 34                            | 29                              | 13.8        | 197             | 165 | 170 | 170 | Round M6      |
| 12FGL55   | 12                  | 55                             | 50                             | 45                            | 37                              | 18.2        | 229             | 138 | 207 | 212 | Round M6      |
| 12FGL70   | 12                  | 70                             | 63                             | 58                            | 49                              | 22.4        | 272             | 166 | 191 | 195 | Round M6      |
| 12FGL70/L | 12                  | 70                             | 62                             | 57                            | 48                              | 22.6        | 350             | 166 | 175 | 175 | Round M6      |
| 12FGL80   | 12                  | 80                             | 73                             | 67                            | 54                              | 25.3        | 259             | 168 | 208 | 213 | Round M8      |
| 12FGL100  | 12                  | 100                            | 94                             | 85                            | 71                              | 32.0        | 329             | 172 | 214 | 221 | Round M6      |
| 12FGL120  | 12                  | 120                            | 112                            | 102                           | 85                              | 37.7        | 407             | 173 | 220 | 225 | Round M8      |
| 12FGL150  | 12                  | 150                            | 141                            | 127                           | 106                             | 44.6        | 483             | 170 | 220 | 220 | Round M8      |
| 12FGL205  | 12                  | 205                            | 190                            | 172                           | 142                             | 62.9        | 500             | 226 | 235 | 235 | Round M8      |

\*TH = total height including terminals

\*\* model made in ABS IEC 707 FV0 flame retardant plastics

## Technical Features

- **Grids:** gravity casted grids with high purity lead calcium tin alloy
- **Separators:** electrolyte fully absorbed in glass mat "AGM" separators with extremely high micro porosity
- **Terminal posts:** threaded inserts provide high conductivity, retain required torque values and allow for easy installation
- **Post seals:** high integrity post seal design prevents acid leakage over a wide temperature range
- **One-way safety valves** allow excess gas to escape when overcharging
- **Flame arrestors** prevent any errant spark or flame from entering the battery
- **Container and cover:** made of thick walled ABS plastics, designed for unsurpassed mechanical strength
- **Shelf life:** < 2% self-discharge per month at 20°C allows 6 months shelf life



## Constant Current discharge table (Amperes)

Final Voltage: 1.67 V/cell - Temperature: 25°C

| Model     | 5 min | 10 min | 15 min | 20 min | 30 min | 45 min | 1 hour | 2 hours | 3 hours | 5 hours | 10 hours | 20 hours |
|-----------|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|----------|----------|
| 12FGL17   | 54.5  | 36.8   | 27.9   | 22.7   | 16.9   | 12.6   | 10.2   | 5.92    | 4.35    | 2.89    | 1.60     | 0.88     |
| 12FGL27   | 86.5  | 61.7   | 47.8   | 39.4   | 29.4   | 21.4   | 17.0   | 9.59    | 6.88    | 4.52    | 2.51     | 1.38     |
| 12FGL33   | 106   | 75.4   | 58.5   | 48.1   | 35.9   | 26.1   | 20.7   | 11.7    | 8.40    | 5.52    | 3.07     | 1.69     |
| 12FGL42   | 141   | 98.2   | 75.3   | 61.2   | 45.9   | 33.4   | 26.2   | 14.5    | 10.5    | 6.96    | 3.88     | 2.15     |
| 12FGL55   | 163   | 122    | 97.2   | 80.3   | 60.2   | 44.0   | 34.7   | 19.4    | 13.9    | 9.14    | 5.09     | 2.81     |
| 12FGL70   | 195   | 150    | 120    | 100    | 75.5   | 55.1   | 43.7   | 24.5    | 17.7    | 11.6    | 6.47     | 3.59     |
| 12FGL70/L | 191   | 147    | 118    | 98.4   | 74.0   | 54.0   | 42.8   | 24.0    | 17.3    | 11.4    | 6.34     | 3.52     |
| 12FGL80   | 243   | 181    | 143    | 119    | 89.8   | 65.4   | 51.5   | 28.7    | 20.4    | 13.3    | 7.58     | 4.05     |
| 12FGL100  | 309   | 230    | 184    | 152    | 113    | 81.6   | 64.5   | 35.9    | 25.5    | 16.7    | 9.45     | 5.07     |
| 12FGL120  | 389   | 284    | 224    | 185    | 135    | 98.1   | 77.3   | 43.1    | 30.6    | 20.1    | 11.4     | 6.08     |
| 12FGL150  | 455   | 334    | 267    | 221    | 165    | 121    | 96.4   | 53.8    | 38.3    | 25.1    | 14.2     | 7.60     |
| 12FGL205  | 617   | 454    | 358    | 296    | 220    | 162    | 129    | 73.6    | 52.2    | 34.1    | 19.3     | 10.3     |

## Constant Power discharge table (Watts per bloc)

Final Voltage: 1.67 V/cell - Temperature: 25°C

| Model     | 5 min | 10 min | 15 min | 20 min | 30 min | 45 min | 1 hour | 2 hours | 3 hours | 5 hours | 10 hours | 20 hours |
|-----------|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|----------|----------|
| 12FGL17   | 547   | 381    | 294    | 244    | 185    | 140    | 115    | 67.7    | 50.3    | 33.6    | 18.7     | 10.3     |
| 12FGL27   | 868   | 637    | 504    | 423    | 321    | 238    | 192    | 110     | 79.3    | 52.5    | 29.2     | 16.2     |
| 12FGL33   | 1061  | 779    | 617    | 517    | 393    | 291    | 235    | 134     | 96.9    | 64.1    | 35.7     | 19.8     |
| 12FGL42   | 1418  | 1011   | 794    | 657    | 502    | 372    | 296    | 166     | 121     | 80.9    | 45.2     | 25.1     |
| 12FGL55   | 1639  | 1268   | 1023   | 862    | 659    | 492    | 393    | 221     | 160     | 106     | 59.3     | 32.9     |
| 12FGL70   | 1960  | 1545   | 1281   | 1076   | 826    | 614    | 493    | 281     | 204     | 135     | 75.4     | 41.9     |
| 12FGL70/L | 1921  | 1514   | 1255   | 1054   | 810    | 602    | 483    | 275     | 200     | 133     | 73.9     | 41.1     |
| 12FGL80   | 2552  | 1935   | 1553   | 1295   | 988    | 725    | 575    | 324     | 231     | 152     | 87.1     | 46.8     |
| 12FGL100  | 3240  | 2462   | 1988   | 1657   | 1240   | 906    | 718    | 405     | 289     | 190     | 109      | 58.5     |
| 12FGL120  | 4085  | 3045   | 2422   | 2011   | 1494   | 1087   | 862    | 486     | 347     | 229     | 131      | 70.2     |
| 12FGL150  | 4772  | 3586   | 2900   | 2408   | 1820   | 1346   | 1075   | 607     | 434     | 286     | 163      | 87.7     |
| 12FGL205  | 6477  | 4862   | 3875   | 3231   | 2426   | 1796   | 1444   | 830     | 593     | 391     | 223      | 120      |

### Electrical Characteristics

#### Recharge methods:

- standby use: 13.50 - 13.80 V/bloc
- initial charge current: 0.20 - 0.25 C<sub>20</sub>

#### Operating temperature ranges:

- recharge: 0° ÷ 40°C
- discharge: -20° ÷ 50°C
- storage: -20° ÷ 50°C

### Applicable Standards

- IEC 60896 Part 21 - VRLA methods of testing
- IEC 60896 Part 22 - VRLA requirements
- UL Recognized
- Eurobat "High Performance" - 10-12 years

### FIAMM Manufacturing

- ISO 9001 - Quality Management System
- ISO 14001 - Environmental Management System
- OHSAS 18001 - Workplace Safety & Health