



[CLICK TO VIEW](#)

[Table of Contents 2](#)

[List of Tables & Charts 3](#)

[Study Overview 4](#)

[Sample Text, Table & Chart 5](#)

[Sample Profile, Table & Forecast 6](#)

[Order Form 7](#)

[About Freedonia, Custom Research, Related Studies, Corporate Use License 8](#)

Circuit Breakers & Fuses

US Industry Study with Forecasts for **2013 & 2018**

Study #2583 | November 2009 | \$4700 | 207 pages

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Table of Contents

EXECUTIVE SUMMARY

MARKET ENVIRONMENT

General	4
Macroeconomic Environment.....	5
Industrial Sector Trends	10
Industrial Production Trends	11
Capital Spending Trends	14
Construction Trends.....	18
Pricing Trends	22
Historical Market Trends	25
Regulations.....	28
Sulfur Hexafluoride	28
Electric Utility Deregulation.....	30
Other	32

TECHNOLOGY

General	35
Basic Electrical & Electronic Properties.....	35
Circuit Protection Device Technology. 37	
Positive Temperature Coefficient Fuses	40
Thin-Film Fuses.....	41
Arc-Fault Circuit Interrupters	42
Complementary Circuit Protection Technologies	44
Thyristors.....	44
Varistors	45
Transient Voltage Surge Suppressors.....	45

OVERVIEW

General	47
Supply & Demand.....	48
International Environment.....	50
World Supply & Demand	51
US Foreign Trade in Circuit Breakers & Fuses	53
Imports	55
Exports	57

CIRCUIT BREAKERS

General	60
Products	60
Molded Case Circuit Breakers	65
Industrial.....	68
Light-Duty.....	69
Specialty.....	71
Power Circuit Breakers.....	74
Parts & Accessories.....	77
Suppliers & Market Share.....	79

FUSES

General	81
Products	82
High-Power Fuses.....	86
Power Fuses & Fuse Links.....	87
Distribution Cutouts	88
Cartridge & Plug Fuses	88
Electronic Fuses	90
Other Fuse Types.....	93
Parts & Accessories.....	95
Suppliers & Market Share.....	96

MARKETS

General	98
Electric Power.....	103
Sector Outlook.....	104
Circuit Breaker & Fuse Demand	106
Nonresidential Building Construction 109	
Sector Outlook.....	110
Circuit Breaker & Fuse Demand	112
Machinery.....	115
Industry Outlook.....	115
Circuit Breaker & Fuse Demand	117
Residential Building Construction	119
Sector Outlook.....	120
Circuit Breaker & Fuse Demand	122
Electronic Equipment.....	125
Industry Outlook.....	126
Circuit Breaker & Fuse Demand	127
Nonautomotive Transportation Equipment	130
Industry Outlook.....	131
Circuit Breaker & Fuse Demand	133

Automotive	135
Industry Outlook.....	136
Circuit Breaker & Fuse Demand	139
Electrical Equipment.....	142
Industry Outlook.....	143
Circuit Breaker & Fuse Demand	144
Other Markets.....	145

INDUSTRY STRUCTURE

General	147
Industry Composition	148
Market Share	151
Competitive Strategies.....	156
Product Development & Manufacturing	157
Marketing & Distribution	159
Financial Requirements	161
Mergers & Acquisitions.....	165

COMPANY PROFILES

ABB Limited.....	168
Bel Fuse Incorporated.....	170
Bourns Incorporated.....	171
Carbone Lorraine.....	172
Carling Technologies.....	174
Cooper Industries.....	175
E-T-A Elektrotechnische Apparate	178
Eaton Corporation	179
Fuji Electric.....	183
G&W Electric	184
General Electric	186
Hubbell Incorporated.....	188
Kyocera Corporation	189
L-3 Communications	191
Littelfuse Incorporated	192
Mitsubishi Electric	195
Powell Industries	197
Schneider Electric	198
Schurter AG	200
Sensata Technologies.....	202
Siemens AG	204
Tyco Electronics.....	206

List of Tables/Charts

EXECUTIVE SUMMARY

1 Summary Table..... 3

MARKET ENVIRONMENT

1 Macroeconomic Indicators..... 10
2 Manufacturers' Shipments 14
3 Private Fixed Investment
by Sector..... 17
4 Construction Expenditures..... 22
5 Circuit Breaker & Fuse
Price Deflators 24
Cht Circuit Breaker & Fuse Price
Deflators, 1998-2018 24
6 Circuit Breaker & Fuse
Market, 1998-2008..... 27
Cht Circuit Breaker & Fuse
Market, 1999-2008..... 28

OVERVIEW

1 Circuit Breaker & Fuse
Supply & Demand 49
2 World Demand for Circuit
Breakers & Fuses by Region 52
3 US Foreign Trade in Circuit
Breakers & Fuses 55
4 US Circuit Breaker & Fuse
Imports by Source 56
Cht US Circuit Breaker & Fuse
Imports by Source, 2008..... 57
5 US Circuit Breaker & Fuse
Exports by Destination 58
Cht US Circuit Breaker & Fuse
Exports by Destination, 2008... 59

CIRCUIT BREAKERS

1 Circuit Breaker Supply & Demand 63
Cht Circuit Breaker Demand
by Type & Market, 2008 64
2 Molded Case Circuit Breaker
Supply & Demand 68

3 Industrial Molded Case Circuit
Breaker Demand 69
4 Light-Duty Molded Case Circuit
Breaker Demand 71
5 Specialty Molded Case Circuit
Breaker Demand 74
6 Power Circuit Breaker
Supply & Demand 77
7 Circuit Breaker Parts & Accessories
Supply & Demand 78
Cht US Circuit Breaker Market Share
by Company, 2008 80

FUSES

1 Fuse Supply & Demand 84
Cht Fuse Demand by Type
& Market, 2008 85
2 High-Power Fuse Demand..... 86
3 Cartridge & Plug Fuse Demand 90
4 Electronic Fuse Demand..... 93
5 Other Fuse Demand..... 95
6 Fuse Parts & Accessories Demand 96
Cht US Fuse Market Share
by Company, 2008 97

MARKETS

1 Circuit Breaker & Fuse Demand
by Market & Application 101
Cht Circuit Breaker & Fuse Demand by
Market & Application, 2008.... 102
Cht Increase in Circuit Breaker
& Fuse Demand by
Market, 2008 to 2013..... 103
2 Electric Power Indicators 106
3 Electric Power Market for
Circuit Breakers & Fuses..... 109
4 Nonresidential Building
Construction Expenditures..... 112
5 Nonresidential Building
Construction Market for
Circuit Breakers & Fuses..... 114

6 Machinery Shipments 117
7 Machinery Market for Circuit
Breakers & Fuses 119
8 Residential Building Construction
Expenditures..... 122
9 Residential Building Market for
Circuit Breakers & Fuses..... 125
10 Computer & Electronic
Product Shipments..... 127
11 Electronic Equipment Market for
Circuit Breakers & Fuses..... 130
12 Nonautomotive Transportation
Equipment Shipments..... 132
13 Nonautomotive Transportation
Equipment Market for
Circuit Breakers & Fuses..... 135
14 Motor Vehicle Indicators..... 139
15 Automotive Market for Circuit
Breakers & Fuses 142
16 Electrical Equipment &
Appliance Shipments..... 144
17 Electrical Equipment Market for
Circuit Breakers & Fuses..... 145
18 Other Markets for Circuit
Breakers & Fuses 146

INDUSTRY STRUCTURE

1 Revenue Data: Selected
Circuit Breaker & Fuse
Manufacturers, 2008..... 150
Cht US Circuit Breaker & Fuse
Market Share by
Company, 2008..... 151
2 Capital Spending Patterns:
Selected Circuit Breaker
& Fuse Manufacturers 163
3 Composite Financial Ratios:
Selected Circuit Breaker
& Fuse Manufacturers 165

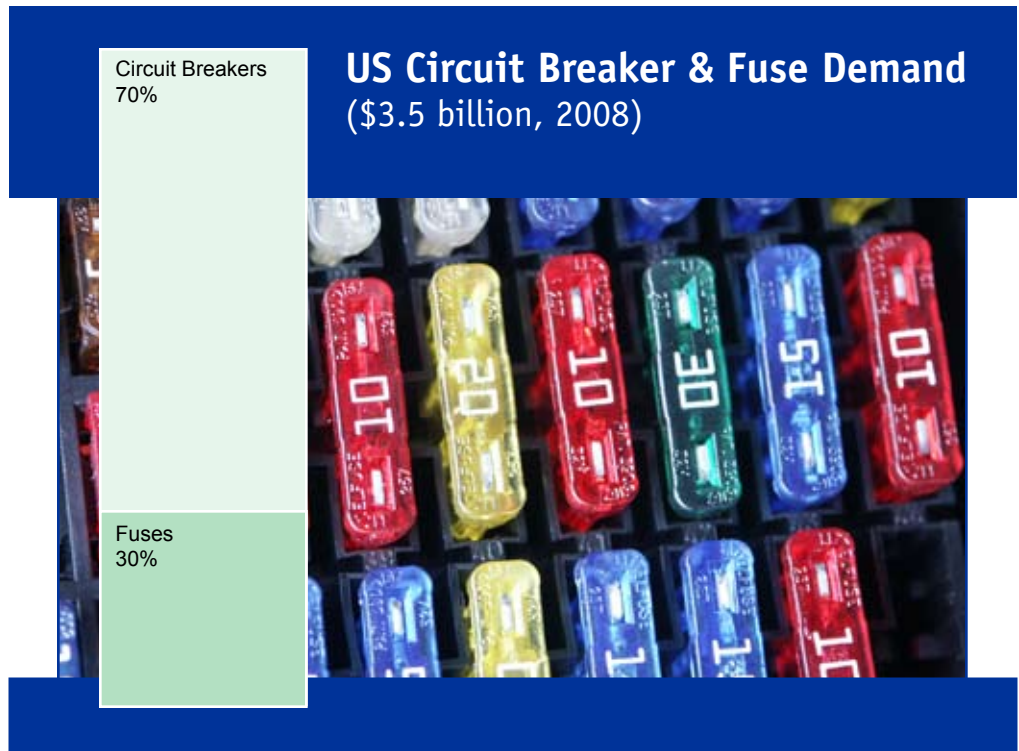
Advances will be supported in part by a strong recovery in residential building construction expenditures following the slump in new home construction experienced in 2007 and 2008.

US demand to reach \$3.8 billion in 2013

The US market for circuit breakers and fuses is forecast to reach \$3.8 billion in 2013, expanding at a 2.0 percent yearly rate. Advances will be supported by a strong recovery in residential building construction expenditures following the slump in new home construction experienced in 2007 and 2008. Continued, though moderating, growth in utilities construction expenditures will also bolster demand. After adjusting for inflation, shipments of durable goods will also increase, supporting gains in circuit protection device consumption. In particular, the expected recovery in motor vehicle production and the continued, albeit decelerating, growth in aerospace equipment shipments will benefit suppliers of circuit breakers. However, advances will not be as strong as those recorded during the 2003-2008 period when price increases served to bolster market growth in current dollar terms.

Residential construction to be fastest growing market

The residential construction market will post the strongest gains of any major market through 2013, averaging 6.7 percent per year to \$380 million. This will be a considerable reversal from the declines posted during the 2003-2008 period, which were due to residential building construction expenditures dropping sharply in 2007 and 2008.



Electric power will remain the largest market for circuit breakers and fuses, advancing 2.2 percent annually to \$1.3 billion in 2013. Gains in this market will not be as strong as those posted during the 2003-2008 period, when electric utilities construction expenditures averaged double-digit yearly growth as a result of efforts to upgrade the US electrical grid and adopt alternative technologies such as wind and solar power.

High-power fuses offer best growth opportunities

The fastest growing product segment through 2013 will be high-power fuses, reaching \$580 million on annual gains of

3.0 percent. Advances will be supported by their intense use in electric utilities construction, as well as in wind farm step-up transformers. However, demand for these products will be restrained to some degree by expected real declines in nonresidential building construction expenditures. Molded case circuit breakers will post the strongest increases in the circuit breaker market, reaching \$1.7 billion in 2013 on 2.4 percent yearly growth. Sales increases will be supported by a recovery in residential building construction expenditures, continued (though moderating) growth in military and aerospace applications, and the increasing use of these products in place of fuses in a number of applications.

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Sample Text, Table & Chart

MARKETS

Power Fuses & Fuse Links -- Sales of power fuses and links are forecast to increase 10 million in 2013, slowing from the performance of 2012. The period of 2013 is expected to see continued increases in electrical construction expenditures, a degree experienced during the period of power fuses and links will be in the wind power segment, as high voltage fuses are often used to step-up transformers in wind farms.

SAMPLE TEXT

High-power fuses are designed to deal with greater voltage than other fuses, so they tend to be longer and employ spring mechanisms and tube liners to deal with the greater threat of electrical arcs. Power fuses are available in a number of designs, with expulsion and current-limiting types among the more common. In expulsion fuses, the fuse element (fuse link) is mounted in a tube lined with an arc extinguishing medium. A fault condition causes vaporization of the element and the fuse tube liner, resulting in the expulsion of vapors from the tube, deionizing the arc path created by the fault condition. Current-limiting fuses typically offer higher interrupting ratings than expulsion types, and thus are often employed for back-up purposes. Although power fuses face stiff competition from power circuit breakers in a variety of applications, power fuses offer lower maintenance costs.

In December 2007, Carbone Lorraine's Ferraz Shawmut subsidiary acquired the Power Fuse division of the Consumer and Industrial segment of General Electric. By significantly expanding its power fuse offerings, Ferraz Shawmut hopes to take advantage of the growing electric power generation and distribution market, both in the US and abroad. Medium and high voltage fuse products now manufactured by the company are suited to a broad range of applications, including electric power

TABLE V-2

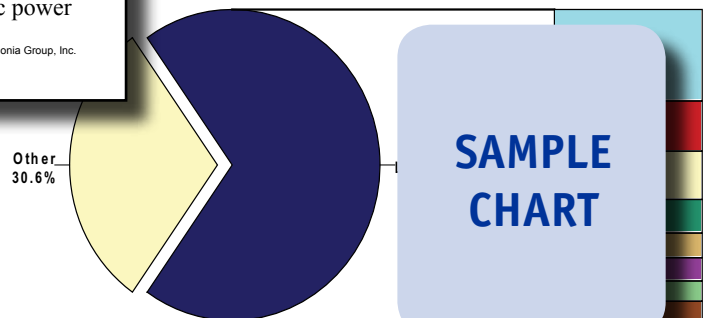
MOLDED CASE CIRCUIT BREAKER SUPPLY & DEMAND (million dollars)

Item	1998	2003	2008	2013	2018
Private Fixed Investment (bil \$)					
\$ MCCB/000\$ investment					
Molded Case Circuit Breaker Demand 1					
Industrial					
Light-Duty					
Specialty					
- imports					
+ exports					
Molded Case Circuit Breaker Shipments					

SAMPLE TABLE

CHART VIII-1

BREAKER & FUSE MARKET SHARE BY COMPANY (\$3.5 billion, 2008)

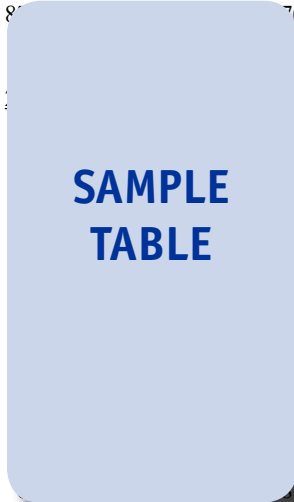


SAMPLE CHART

Sample Profile, Table & Forecast

TABLE VII-1
CIRCUIT BREAKER & FUSE DEMAND
BY MARKET & APPLICATION
(million dollars)

Item	1998	2003	2008	2013	2018
Gross Domestic Product (bil \$)	8,000	10,000	12,000	14,000	16,000
\$ CB&F/000\$ GDP	0.01	0.01	0.01	0.01	0.01
Circuit Breaker & Fuse Demand	100	100	100	100	100
By Market:					
Electric Power	20	20	20	20	20
Nonresidential Construction	40	40	40	40	40
Machinery	35	35	35	35	35
Residential Construction	45	45	45	45	45
Electronic Equipment	35	35	35	35	35
Nonautomotive Transport Equip	70	70	70	70	70
Automotive	35	35	35	35	35
Electrical Equipment	09	09	09	09	09
Other	51	51	51	51	51
By Application:					
New Construction	55	55	55	55	55
Original Equipment	25	25	25	25	25
MRO	10	10	10	10	10



COMPANY PROFILES

Powell Industries Incorporated
 8550 Mosley Drive
 Houston, TX 77075
 713-944-6900
 http://www.powellind.com

Revenues: \$1.3 billion
 US Revenues: \$1.3 billion
 Employment: 2,370

Key Products: Circuit breakers, fuses, switchgear, control systems

Powell Industries designs and production of systems for the distribution, control and management of electric power. The Company operates through two segments: Electrical Power Products and Process Control Systems.

The Company competes in the US circuit breaker and fuse industry through the Electrical Power Products segment, which had revenues of \$611 million and employed 2,370 in FY 2008. The segment manufactures such products as POWLVAC metal-clad and replacement circuit breakers. These items are part of the POWER/VAC product line, which also comprises self-contained switchgear with water-resistant housings, reliable arc interruption, high-resolution oscillation and high-impedance fault detection properties. Powell's POWLVAC metal-clad circuit breakers are designed for 5- to 38-kilovolt (kV) applications. The Company's POWLVAC replacement circuit breakers are intended for 5- to 15-kV end uses. These units are engineered to replace vertical lift air circuit breakers, and feature new frames, bushings, interlock mechanisms and secondary disconnects. POWLVAC replacement circuit breakers are marketed primarily as alternatives to refurbishing, retrofitting and converting existing circuit breakers.

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“Demand for circuit breakers and fuses in the electric power sector is expected to increase 2.2 percent per year through 2013 to \$1.3 billion, remaining the largest sector but slowing from the growth registered during the 2003-2008 period. New construction applications will be the dominant source of growth through 2013, although increases will not be as strong as those experienced between 2003 and 2008. This growth will especially benefit demand for ...”
 --Section VII, pg. 106

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OTHER STUDIES

Lamps

US demand for lamps is forecast to rise 3.8% annually through 2013. Gains will be driven by federal regulations aimed at replacing conventional incandescent lamps with higher cost fluorescent lamps. Halogen lamps are also forecast to grow especially fast, benefiting from the ban on general service incandescent lamps. This study analyzes the \$5.7 billion US lamp industry, with forecasts for 2013 and 2018 by lamp type and market. It also evaluates company market share and profiles industry players.

#2549 09/2009..... \$4800

Advanced Lighting

US demand for advanced lighting is forecast to grow 10.9% yearly through 2013, spurred by a ban on incandescent lamps starting in 2012. Compact fluorescent lamps (CFLs) and light emitting diodes (LEDs) will grow the fastest, followed by advanced high-intensity discharge (HID) and halogen lighting. This study analyzes the \$4 billion US advanced lighting industry, with forecasts for 2013 and 2018 by product, market and region. It also evaluates company market share and profiles industry players.

#2486 04/2009..... \$4700

World Electric Lighting

Global electric lighting demand will grow 7.4% annually through 2012. The BRIC economies will be the fastest growing markets, driven by rising incomes and rapidly growing nonresidential construction. LED lighting devices and fluorescent lamps will outpace incandescent lamps. This study analyzes the \$28 billion world electric lighting industry, with forecasts for 2012 and 2017 by product, market, world region and for 23 countries. It also evaluates market share and profiles industry players.

#2442 12/2008..... \$5600

World Lighting Fixtures

Global demand for lighting fixtures will rise 5.2% annually through 2012. While demand in the large markets of Japan and the US will improve, the developing economies of Asia and Eastern Europe will grow the fastest. China is forecast to become the largest national lighting fixture market in 2012, surpassing the US. This study analyzes the world lighting fixture industry, with forecasts for 2012 and 2017 by product, market, world region and for 23 countries. It also evaluates market share and profiles industry players.

#2391 08/2008..... \$5700

Sensors

US sensor demand will grow 4.3% annually through 2012, supported by increasing output of major sensor-containing products such as motor vehicles. Sensors based on new technologies (e.g., MEMS-based, imaging) will see the fastest gains. The automotive industry will remain the biggest market while growth in military and aerospace uses will also be strong. This study analyzes the \$10.3 billion US sensor industry, with forecasts for 2012 and 2017 by product and market. It also evaluates market share and profiles major players.

#2377 07/2008..... \$4600

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