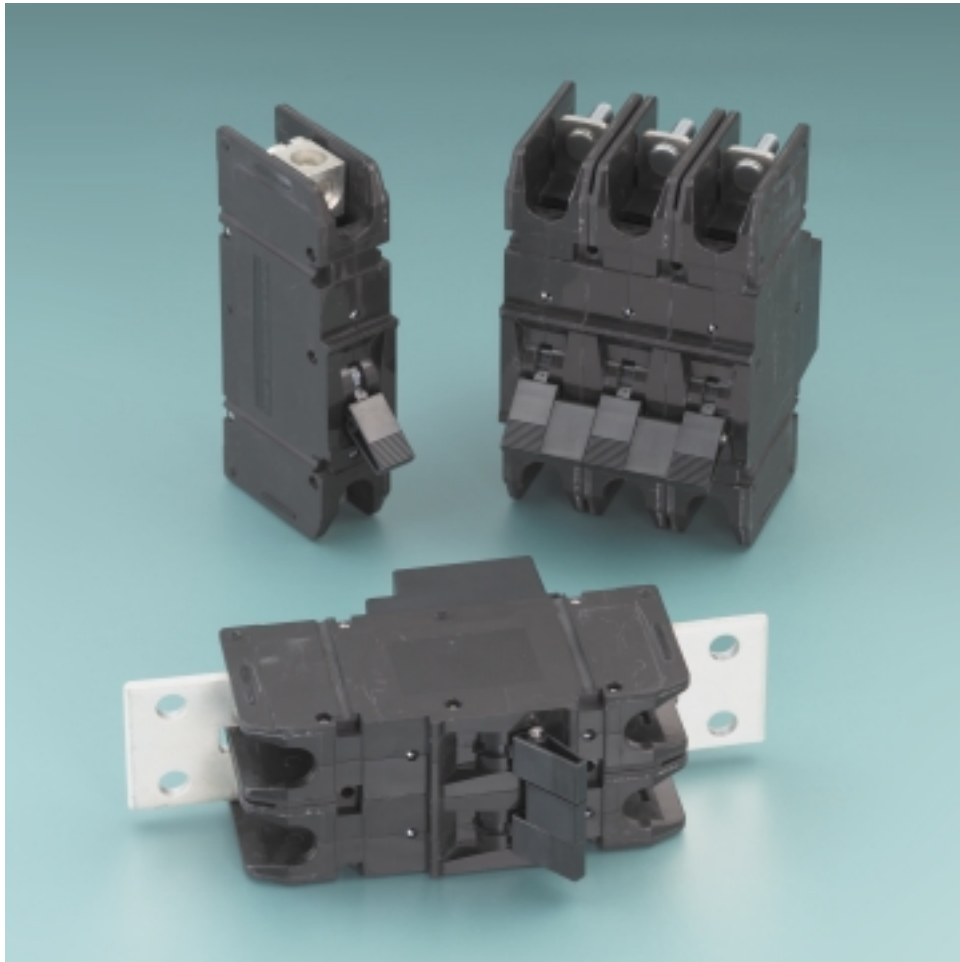


NEW

F-Series Circuit Breakers



- Solving design challenges in high and low ambient operating temperature applications -



Carling Technologies™
Innovative Designs. Powerful Solutions.

New F-Series Circuit Breakers solve design challenges in high ambient operating temperature applications

The new Carling Technologies F-Series circuit breaker is designed to handle high current applications in extremely hot and/or cold locations. Given the same situation, a heavy duty thermal circuit breaker will either nuisance trip, or fail to trip fast enough to avoid damage to equipment.

The reason for the F-Series' superior level of performance is simple: It's a current sensing device employing a time proven hydraulic/magnetic design. The load sensing mechanism is insensitive to changes in ambient or enclosure temperature. Unlike a thermal circuit breaker, it doesn't rely on a bimetal's sensitivity to the electrical heating effect of current passing through the unit and the heat or cold of the environment surrounding it.

These high amperage hydraulic/magnetic circuit breakers provide a consistent trip point over temperatures ranging from -40°C to +85°C.

In addition, The F-Series comes with a choice of overload time delays, making them ideal for critical applications having inductive loads.

The initial product release covers maximum application ratings to 700 Amps with 125 VDC. 50,000 Amp interrupting capacity @ 125VDC. Ratings above 250 Amps require a parallel pole configuration.

- CE marked (EN 60947-2)
- AC ratings approval are pending.
- Additional constructions including optional low-voltage shunt for current metering will be available soon.

For more information on our high amperage F-Series breakers, contact Carling.

www.carlingtech.com

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F-Series Catalog Ordering Scheme - Available Constructions March 2001

F	A	2	-	B	0	-	14	-	820	-	1	2	A	-	B	G
1 Prod Code	2 Actuator	3 Poles		4 Circuit	5 Auxiliary/ Alarm Switch		6 Frequency & Delay		7 Current Rating		8 Terminal	9 Handle	10 Mounting		11 Maximum Application Rating	12 Agency Approval

1 PRODUCT CODE

F

2 ACTUATOR

A Handle, one per pole

3 POLES⁶

1 One
2 Two
3 Three

4 CIRCUIT^{2,3,6}

B Series Trip (Current Coil)
P Series Trip (Current Coil) with Parallel Pole

5 AUXILIARY/ALARM SWITCH^{4,7}

0 w/o Auxiliary Switch
2 S.P.D.T., 0.110 Q.C. Terminals
3 S.P.D.T., 0.139 Solder Lug
4 S.P.D.T., 0.110 Q.C. Terminals (gold contacts)
B S.P.D.T., 0.093 Round Q.C. Terminals

6 FREQUENCY & DELAY

12 DC, Short
14 DC, Medium
16 DC, Long

7 CURRENT RATING

(amperes)

810	100.00	830	300.00
912	125.00	835	350.00
815	150.00	840	400.00
917	175.00	845	450.00
820	200.00	850	500.00
922	225.00	860	600.00
825	250.00	870	700.00

8 TERMINAL⁵

Back Connected (Front Mounted Only)

Style **Rating Max**

1 3/8 -16 Stud 250A
2 3/8 -16 Screw
Line & Load 700A
5 3/8 -16 Short Stud 250A

Front Connected (Back Mounted Only)

Style **Rating Max**

3 Box Wire Connector
with Pressure Plate -
Line & Load 700A
4 3/8 -16 Screw
Line & Load 700A

9 HANDLE

Color **Legend**

1 White Dual (Black)
2 Black Dual (White)

10 MOUNTING

Front Mounting Inserts **Back Mounting Type**

A #10-32 #10-32 Screw
Clearance Holes
B ISO M5 #10-32 Screw
Clearance Holes

11 MAXIMUM APPLICATION RATING⁶

Voltage **Current**

B 125 VDC 700 Amps

12 AGENCY APPROVAL¹

A W/O Approval
G UL489 Listed; CUL Certified
T UL489A (Telecom) Listed

NOTES

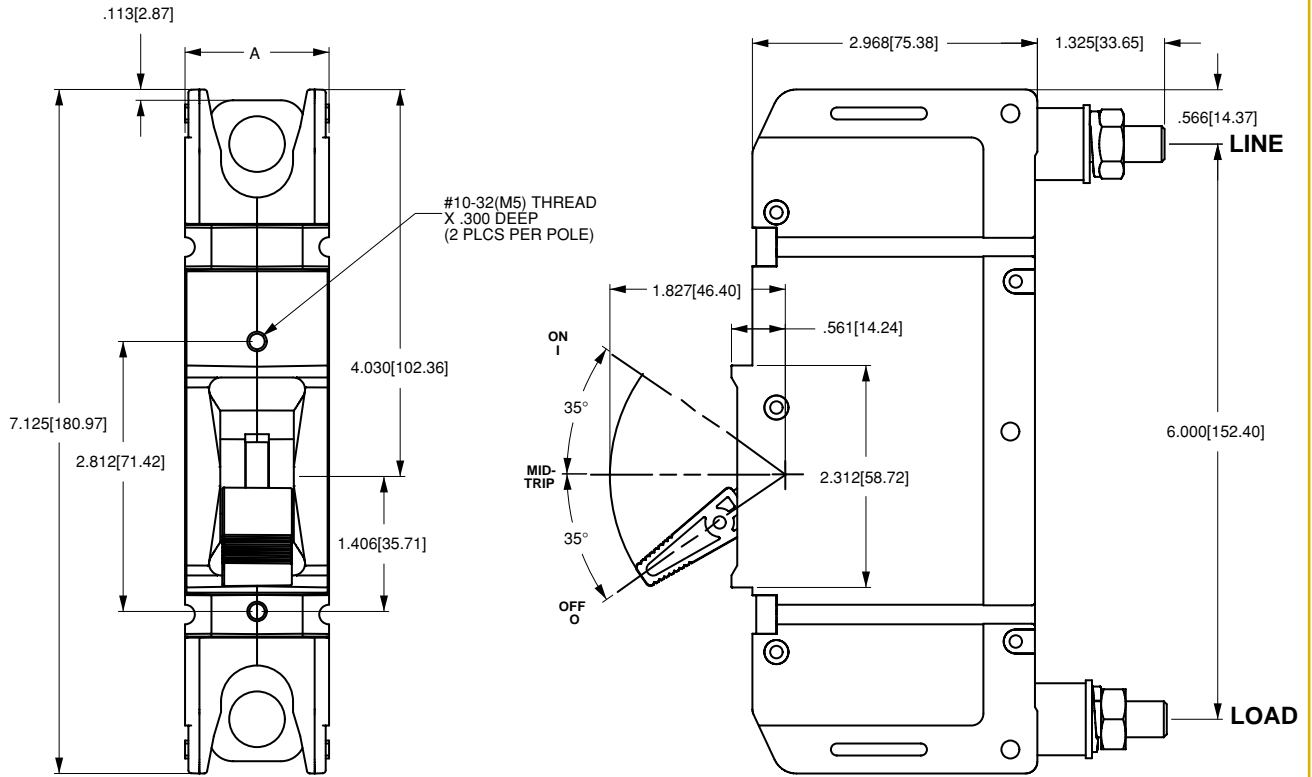
- Series Trip constructions are listed to UL489 and parallel Pole constructions are listed to UL489A (telecom use).
- Parallel Poles (Circuit code P) are supplied with factory installed bus bar on Line and Load and are available with DC only ratings (Rating Code B).
- Series Trip constructions available with either front or back connect terminals.
- On multipole unites, only one Auxiliary switch is normally supplied mounted in the extreme right pole (when viewed from back of breaker).
- Box Wire connector will accept #6 through 250 MCM copper wire.
- Ratings above 250 amps available in parallel pole configurations only (Circuit Code P). For 300-400 amps, poles/sections code 2 must be selected. For 450-700 amps, poles/sections code 3 must be selected. Ratings above 250 amps are only available with agency code T (UL489A Telecom).
- Codes 2, 3 & 4 only available with Circuit Code B. Code B only available with Circuit Code P.

F-SERIES TIME DELAY VALUES

PERCENT OF RATED CURRENT

	DELAY	100	125	150	200	400	600	800	1000
TRIP TIME	12	NO TRIP	.475 - 10.0	.275 - 2.80	.140 - .850	.030 - .190	.015 - .125	.010 - .050	.008 - .038
SECONDS	14	NO TRIP	10.0 - 110	6.00 - 40.0	2.50 - 15.0	.500 - 3.00	.180 - 1.00	.010 - .280	.008 - .080
	16	NO TRIP	110 - 1000	60.0 - 400	22.0 - 150	4.00 - 25.0	1.00 - 5.50	.010 - 1.80	.008 - .390

F-Series Form & Fit and Circuit & Terminal Diagrams



Number of Poles	Dimension "A"
1 Pole	1.500
2 Pole	3.000
3 Pole	4.500

Tolerance ± 0.015 (0.38)

TERMINAL DETAILS

