

#### FWP — North American

#### 700 Vac/dc (UL), 5 to 1200 A

North American style bolted tags high speed fuses for the protection of DC common bus, DC drives, power converters/rectifiers, reduced rated voltage starters.

#### **Ratings**

- Volts 700 Vac/dc (UL)
- Amps 5-1200 A
- IR
  - 200 kA RMS Sym.
  - 50 kA at 700 Vdc (Type A)
  - 50 kA at 500 Vdc (Type B)

#### **Agency information**

- UL Recognized, JFHR2, E91958 FWP-\_B (5-100 A, 700-1200 A), JFHR2, E56412 FWP-\_A (125-600 A)
- CSA Class 1422-30, (53787) on 5-800 A
- CE



		l²t	(A <sup>2</sup> s)		
Rated voltage	Rated current (amps)	Pre-arcing	Clearing at 700 Vac	Watts loss (W)†	Catalog no.
	5	1.6	11	1.5	FWP-5B
	10	3.6	22	4.0	FWP-10B
	15	10.0	70	5.5	FWP-15B
	20	26.0	180	6.0	FWP-20B
	25	44.0	320	7.0	FWP-25B
	30	58.0	450	9.0	FWP-30B
	35	34.0	160	12.0	FWP-35B
	40	76.0	320	12.0	FWP-40B
	50	135.0	600	12.0	FWP-50B
	60	210.0	950	15.5	FWP-60B
	70	305.0	2000	18.0	FWP-70B
	80	360.0	2400	21.0	FWP-80B
	90	415.0	2700	25.0	FWP-90B
	100	540.0	3500	27.0	FWP-100B
	125	1800.0	7300	28.0	FWP-125A
00 Vac/dc (UL)	150	2900.0	11,700	32.0	FWP-150A
	175	4200.0	16,700	35.0	FWP-175A
	200	5500.0	22,000	43.0	FWP-200A
	225	7700.0	31,300	45.0	FWP-225A
	250	10,500.0	42,500	48.0	FWP-250A
	300	17,600.0	71,200	58.0	FWP-300A
	350	23,700.0	95,600	65.0	FWP-350A
	400	31,000.0	125,000	78.0	FWP-400A
	450	36,400.0	137,000	94.0	FWP-450A
	500	45,200.0	170,000	107.0	FWP-500A
	600	66,700.0	250,000	122.0	FWP-600A
	700	54,000.0	300,000	125.0	FWP-700A
	800	78,000.0	450,000	140.0	FWP-800A
	900	91,500.0	530,000	150.0	FWP-900A
	1000	120,000.0	600,000	170.0	FWP-1000A
	1200	195,000.0	1,100,000	190.0	FWP-1200A

<sup>†</sup> Watts loss at rated current.

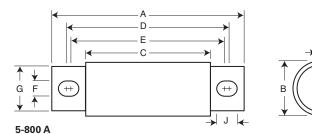
For details on electrical characteristics, contact Application Engineering and ask for data sheets: 720012, 5785316 (5-30 A), 361 (125-600 A), 5785308 (35-100 A, 700-1200 A)



#### FWP — North American

#### 700 Vac/dc (UL), 5 to 1200 A

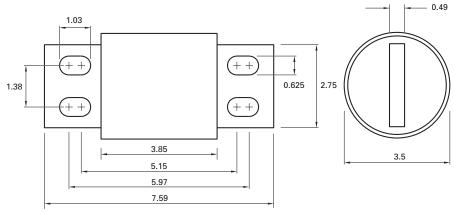
#### Dimensions — in



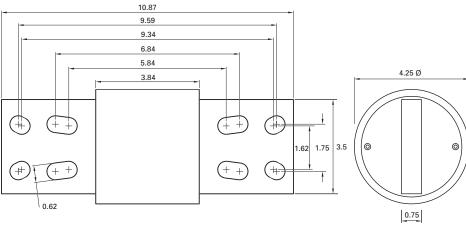
Amp range	Α	В	С	D	Е	F	G	Н	J
5-30	2.87	0.56	1.86	2.48	2.48	0.25	0.41	0.06	0.25
35-60	4.38	0.81	2.75	3.71	3.31	0.34	0.73	0.13	0.54
70-100	4.41	0.95	2.59	3.63	3.56	0.34	0.75	0.13	0.38
125-200	5.09	1.50	2.84	4.19	3.5	0.41	1.00	0.25	0.75
225-400	5.09	2.00	2.84	4.28	3.53	0.41	1.50	0.25	0.78
450-600	7.09	2.50	2.84	5.72	4.19	0.53	2.00	0.38	1.30
700-800	6.63	2.00	2.76	5.56	5.06	0.63	1.50	0.25	0.88
900-1000				Pofo	to dr	na ina			
1200	_			neiei	to dra	avvirig			

1'' = 25.4mm

1200



900-1000 A -mm



1200 A -mm

For details on electrical characteristics, contact Application Engineering and ask for data sheets: 720012, 5785316 (5-30 A), 361 (125-600 A), 5785308 (35-100 A, 700-1200 A)



## 690 Vac (IEC) 10x38mm, 4 to 32 A

Ferrule style Class gR high speed fuses for the protection of AC/DC drives and semiconductors.

#### **Ratings**

- Volts 690 Vac
- Amps 4-32 A
- IR
  - 200 kA RMS Sym.

#### Operating class gR

#### **Agency information**

- UL 248-13
- Designed and tested to IEC 60269, Part 4
- CE



				I <sup>2</sup> t (A <sup>2</sup> s)	Watts loss	(W)†		
Fuse type	Fuse size	Rated voltage	Rated current (amps)	Pre-arcing	Clearing at 690 Vac	0.81	I,	Catalog no.
			4	5.6	17	1.13	2.05	FWP-4G10F
			6	16.0	48	1.56	3.0	FWP-6G10F
			8	4.3	38	0.97	1.68	FWP-8G10F
			10	6.6	59	1.20	2.09	FWP-10G10F
Without striker	10x38 mm	690 Vac (IEC)	12	9.6	84	1.69	2.99	FWP-12G10F
			16	17.0	150	2.31	4.27	FWP-16G10F
			20	23.5	200	2.86	5.35	FWP-20G10F
			25	60.2	512	2.94	5.52	FWP-25G10F
			32**	94.0	800	3.82	7.43	FWP-32G10F

<sup>†</sup> Watts loss at rated current.

<sup>\*\*32</sup> A rated current with 25mm<sup>2</sup> conductors, derate to 27 A with 6mm<sup>2</sup> conductors.

## FAT-N B



#### **FWP Ferrule**

# 690 Vac (IEC), 700 Vac (UL), 600 - 700 Vdc (UL), 14x51mm, 1 to 50 A

Ferrule style Class aR high speed fuses for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters. Available with or without striker.

#### **Ratings**

- Volts 690 Vac (IEC), 700 Vac/600 Vdc (UL) with striker (see table for striker version)
- Amps 1-50 A
- IR
  - 200 kA RMS Sym.
  - 50 kA at 800 Vdc (5-50 A non striker version)
  - 600 Vdc for striker version

#### Operating class aR

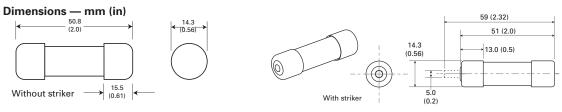
#### **Agency information**

- UL Recognized, (without striker only) JFHR2, E91958
- CSA (without striker only) Class 1422-30, 1422-90 (53787)
- Designed and tested to IEC 60269, Part 4
- CE



			Rated		I²t (A²s)		
Fuse type	Fuse size	Rated voltage	current (amps)	Pre-arcing	Clearing at 700 Vac	Watts loss (W)†	Catalog no.
			1	0.04	0.41	5.7	FWP-1A14F
		700\/ /     \	2	0.08	0.11	8.7	FWP-2A14F
		700 Vac (UL)	3	0.11	0.26	2.8	FWP-3A14F
			4	0.10	0.23	3.0	FWP-4A14F
			5	2.00	11.00	1.5	FWP-5A14F
			10	4.00	22.00	4.0	FWP-10A14F
Without striker			15	10.00	70.00	5.5	FWP-15A14F
	14x51mm (9/16"x2")	690 Vac (IEC) 700 Vac/dc (UL)	20	26.00	180.00	6.5	FWP-20A14F
			25	49.00	320.00	7.0	FWP-25A14F
			30	58.00	400.00	9.0	FWP-30A14F
			32	68.00	600.00	8.0	FWP-32A14F
			40	84.00	750.00	8.0	FWP-40A14F
			50	200.00	1800.00	9.0	FWP-50A14F
	_		10	4.00	32.00	2.0	FWP-10A14FI
			15	7.00	63.00	4.0	FWP-15A14FI
			20	26.00	234.00	4.0	FWP-20A14FI
14.0.1			25	42.00	378.00	4.0	FWP-25A14FI
With striker		700 Vac/600 Vdc (UL)	30	52.00	468.00	6.0	FWP-30A14FI
			32	68.00	600.00	8.0	FWP-32A14FI
			40	84.00	750.00	8.0	FWP-40A14FI
			50	200.00	1800.00	9.0	FWP-50A14FI

† Watts loss at rated current.



For details on electrical characteristics, contact Application Engineering and ask for data sheets: 720025, 5781724 fuses without striker; 5785566 fuses with striker



#### 690 Vac 14x51mm, 1 to 50 A

Ferrule style Class gR high speed fuses for the protection of AC/DC drives, semiconductors and high voltage auxiliary circuits in electric vehicles. Available with or without striker.

#### **Ratings**

- · Volts 690 Vac
- Amps 4-50 A
- IR 200 kA RMS Sym.

#### Operating class gR

#### **Agency information**

- UL 248-13
- Designed and tested to IEC 60269, Part 4
- CE

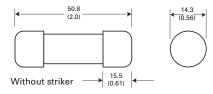


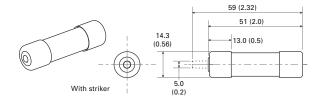


			Rated	I <sup>2</sup> t (A <sup>2</sup> s)		(W)†		
Fuse type	Fuse size	Rated voltage	current (amps)	Pre-arcing	Clearing at 690 Vac	0.81_	1,000	Catalog no.
			4	5.6	17	1.56	2.94	FWP-4G14F
		-	6	16	48	2.25	4.2	FWP-6G14F
		-	8	3.8	30	1.18	2.0	FWP-8G14F
		-	10	5.9	47	1.41	2.52	FWP-10G14F
		-	12	8.4	68	1.95	3.54	FWP-12G14F
Vithout striker		-	16	15	120	5.67	4.83	FWP-16G14F
			20	27	170	2.91	5.4	FWP-20G14F
	14x51mm (9/16"x2") -		25	53	333	3.38	6.0	FWP-25G14F
			32	108	679	3.72	6.93	FWP-32G14F
			40	211	1331	4.13	7.52	FWP-40G14F
			50	350	2200	5.36	9.8	FWP-50G14F
			8	3.8	30	1.18	2.0	FWP-8G14FI
			10	5.9	47	1.41	2.52	FWP-10G14F
			12	8.4	68	1.95	3.54	FWP-12G14F
			16	15	120	5.67	4.83	FWP-16G14F
Vith striker			20	27	170	2.91	5.4	FWP-20G14F
			25	53	333	3.38	6.0	FWP-25G14F
		-	32	108	679	3.72	6.93	FWP-32G14F
		-	40	211	1331	4.13	7.52	FWP-40G14F
		-	50	350	2200	5.36	9.8	FWP-50G14F

<sup>†</sup> Watts loss at rated current.

#### Dimensions — mm (in)





Data sheet no. 10468



#### 700 Vac/dc (UL), 22x58mm, 20 to 100 A

Ferrule style high speed fuses for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters. Available with or without striker.

#### **Ratings**

- Volts 700 Vac/dc (UL)
- Amps 20-100 A
- IR
  - 200 kA RMS Sym.
  - 50 kA at 700 Vdc, L/R 5 ms

#### Operating class aR

#### **Agency information**

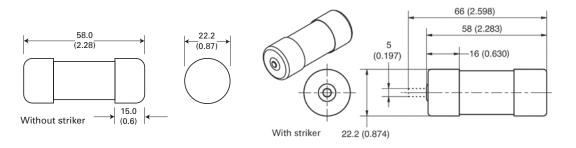
- UL Recognized, (without striker only) JFHR2, E91958
- CSA (without striker only) Class 1422-30, 1422-90 (53787)
- CE



			Rated current		I <sup>2</sup> t (A <sup>2</sup> s)		
Fuse type	Fuse size	Rated voltage	(amps)	Pre-arcing	Clearing at 700 Vac	Watts loss (W)†	Catalog no.
			20	23.0	330	5.0	FWP-20A22F
			25	37.0	530	6.0	FWP-25A22F
			32	55.0	780	8.0	FWP-32A22F
<b>NA</b> /241			40	68.0	960	12.0	FWP-40A22F
Without striker		700 Vac/dc (UL	50	155.0	2200	12.5	FWP-50A22F
			63	280.0	4000	15.0	FWP-63A22F
	- 22x58mm (7/8"x2-9/32")		80	550.0	7800	15.0	FWP-80A22F
			100	1100.0	15,600	16.5	FWP-100A22F
			20	19.0	260	5.0	FWP-20A22FI
			25	34.0	410	6.0	FWP-25A22FI
			32	53.5	605	8.0	FWP-32A22FI
NA (**)			40	68.0	750	9.0	FWP-40A22FI
With striker			50	135.0	1600	9.5	FWP-50A22FI
			63	280.0	3080	11.0	FWP-63A22FI
			80	600.0	6600	13.5	FWP-80A22FI
			100	1100.0	12,500	16.0	FWP-100A22FI

<sup>†</sup> Watts loss at rated current.

#### Dimensions — mm (in)



For details on electrical characteristics, contact Application Engineering and ask for data sheets:720026, 5781723



#### 690 Vac, 500 Vdc 22x58mm, 20 to 100 A

Ferrule style Class gR high speed fuses for the protection of AC/DC drives, semiconductors and high voltage auxiliary circuits in electric vehicles. Available with or without striker.

#### **Ratings**

- Volts
  - 690 Vac
  - 500 Vdc
- Amps 20-100 A
- IR
  - 200 kA RMS Sym.
  - 50 kA DC

#### Operating class gR

#### **Agency information**

- UL 248-13
- Designed and tested to IEC 60269, Part 4
- CE





			Rated current _		<sup>2</sup> t (A <sup>2</sup> s)	Watts Id	ss (W)†	
Fuse type	Fuse size	Rated voltage	(amps)	Pre-arcing	Clearing at 690 Vac	0.8I <sub>n</sub>	I <sub>n</sub>	Catalog no.
			20	24	154	3.23	6.00	FWP-20G22F
			25	43	274	3.66	6.65	FWP-25G22F
			32	97	616	4.86	9.21	FWP-32G22F
\			40	180	899	4.50	8.24	FWP-40G22F
Without striker			50	273	1362	6.26	11.85	FWP-50G22F
			63	516	2575	7.35	13.80	FWP-63G22F
	_22x58 mm (7/8"x2-9/32")		80	1092	5448	8.40	14.00	FWP-80G22F
			100	2065	10,300	9.40	17.70	FWP-100G22F
			20	24	154	3.23	6.00	FWP-20G22FI
			25	43	274	3.66	6.65	FWP-25G22FI
			32	97	616	4.86	9.21	FWP-32G22FI
\			40	180	899	4.50	8.24	FWP-40G22FI
With striker			50	273	1362	6.26	11.85	FWP-50G22FI
			63	516	2575	7.35	13.80	FWP-63G22FI
			80	1092	5448	8.40	14.00	FWP-80G22FI
			100	2065	10,300	9.40	17.70	FWP-100G22FI

<sup>†</sup> Watts loss at rated current.

#### Dimensions — mm (in)

