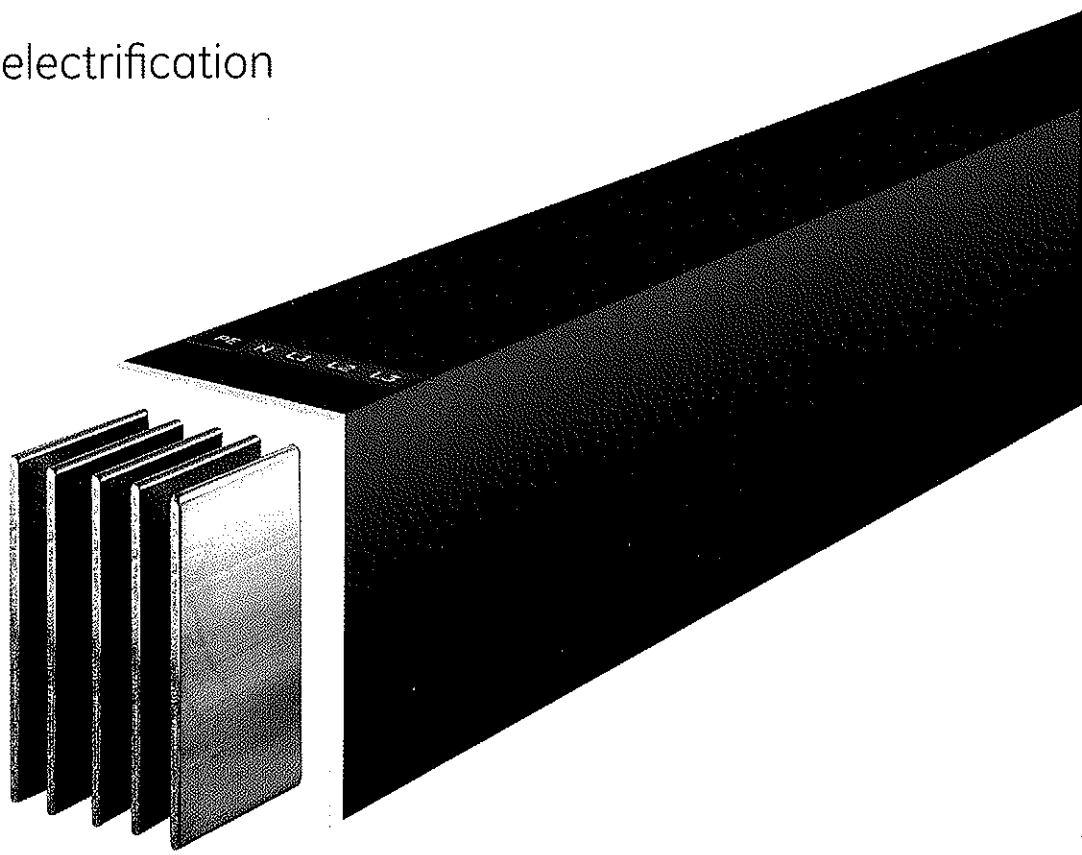
GE
Industrial Solutions

WORLDWIDE PARTNER

WavePro-F Busway

A New Generation of Fire Rated Busway

Leading the future of electrification



GE imagination at work

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GE (NYSE: GE) works on things that matter. The best people and the best technologies taking on the toughest challenges. Finding solutions in energy, health and home, transportation and finance. Building, powering, moving and curing the world. Not just imagining. Doing. GE works. For more information, visit the company's website at www.ge.com.

Industrial Solutions

Industrial Solutions, a GE heritage business, is leading the future of electrification with advanced technologies that protect and control the distribution of electricity throughout a facility's infrastructure. We provide customers, across various industries, with end-to-end product and service solutions that ensure the reliability and protection of the electrical infrastructure; from the substation, to a facility's critical equipment, and all the power technologies in between.

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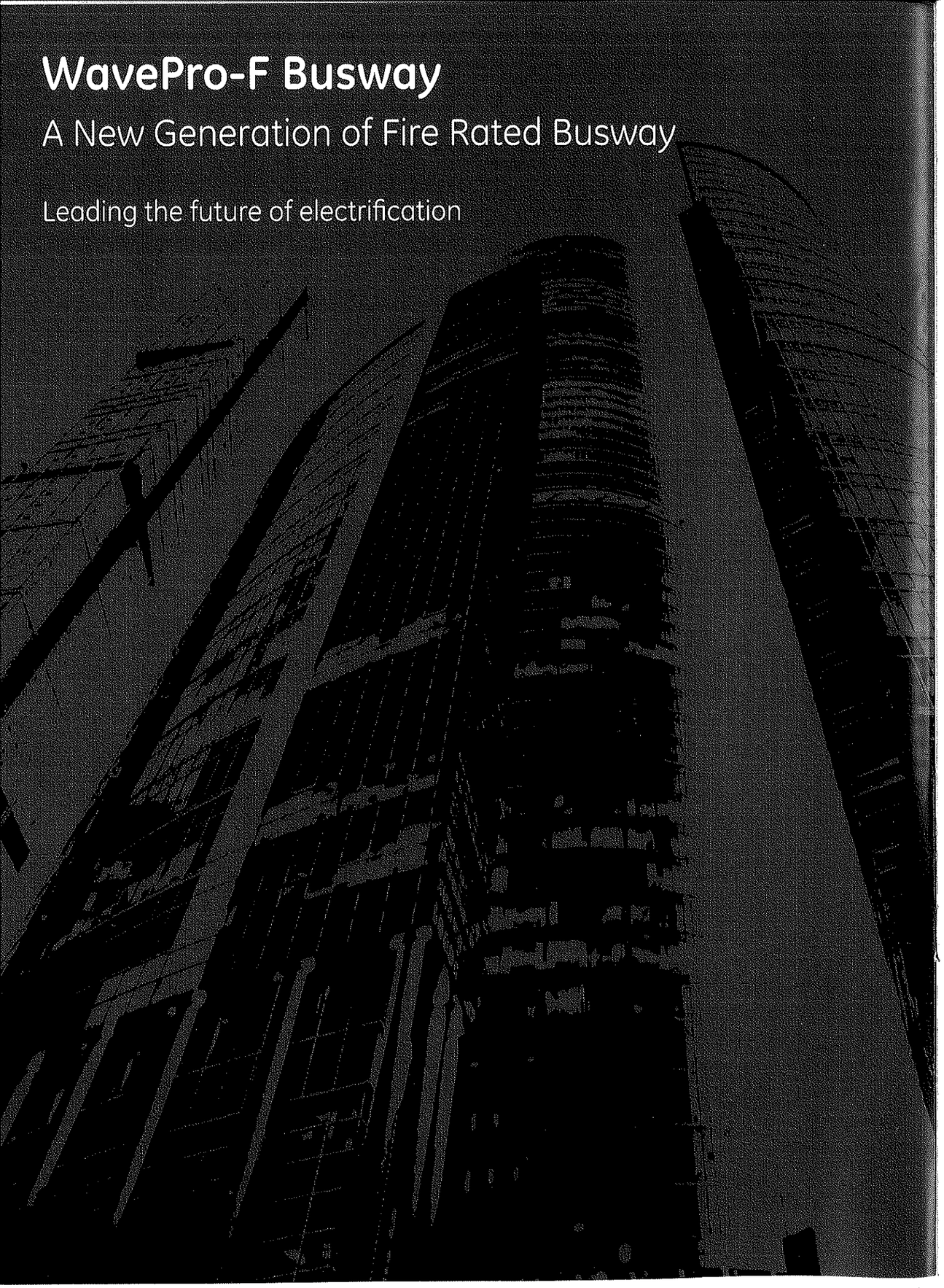

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GE

GE Industrial Solutions

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GE Busway

Along with the rapid growth of the American automotive industry, the world's earliest busway was produced in the 1940's. The first generation busway product developed by GE was the LVD busway with steel housing. In 1989, GE designed the milestone product, Spectra™ Series busway, which used aluminum housing and epoxy insulation in the design of busway for the first time, creating a new industry standard. GE low-voltage busway family covers a wide range of products, including power busway and lighting busway, which comply with UL, NEMA, IEC and GB standards.

There are four R&D centers around the world participating in the development of busway products. This ensures simultaneous advancement of global technology and processes that continue to position GE as the industry leader.

Spectra™ Series Busway

Spectra™ Series busway uses GE's unique blue coat epoxy insulation, which means the life of the product can be up to 50 years, longer than others in the industry. Spectra™ series busway has earned the trust of industry leaders due to its ease of installation, reliability, and technical features that make it a global market leader.

CANADIAN STANDARDS ASSOCIATION

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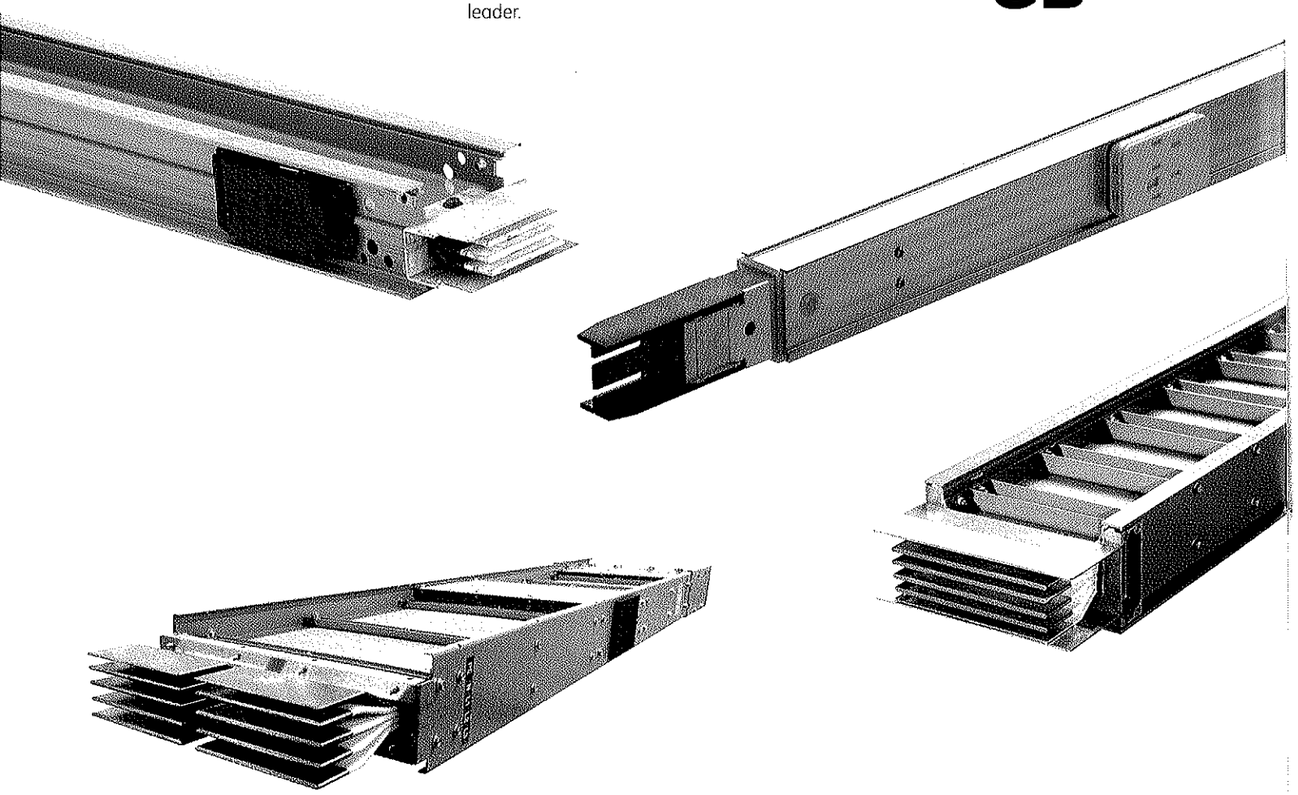


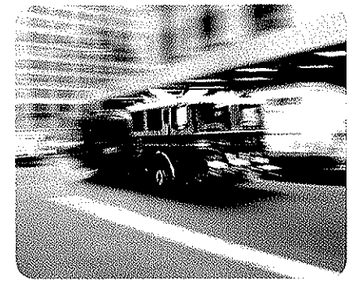
WavePro-F Busway

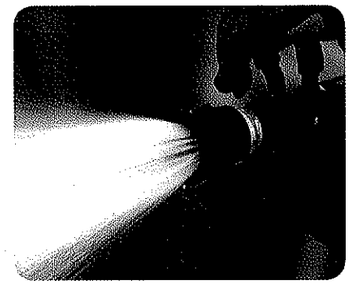
Designed to meet or exceed international IEC standards, WavePro-F busway is a cast resin, new generation fire resistant busway that addresses the requirements of the global market.

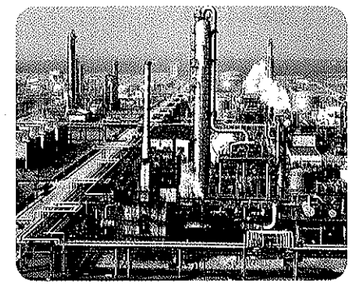
WavePro-F busway uses an Automatic Pressure Gelatin (APG) process, resulting in a compact cast resin with low internal stress. The cast resin forms an external surface which provides a water tight barrier around the current carrying conductors. The connection of the busway to other electrical equipment is designed with outstanding levels of electrical insulation performance and waterproofing.

The leakage current of the busway system is near zero. This ensures safety of the system and extends the distance of the power transmission and distribution. With the new resin materials and fillers, no toxic gases will be released if the product is burnt.

WavePro-F busway features excellent fire resistant performance and up to IP68 protection level. It is especially suitable for emergency generator circuits of high-rise commercial buildings, shipyards, the chemical industry, and other demanding applications with high requirements on fireproofing, waterproofing and corrosion resistance.



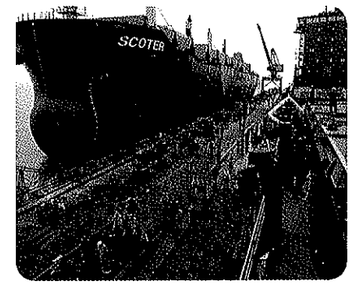












Product Overview

Reference standards & certificates

Design standards:

IEC 61439-1 2011

IEC 61439-6 2012

IEC 60331-21 1999

BS 6387:1994

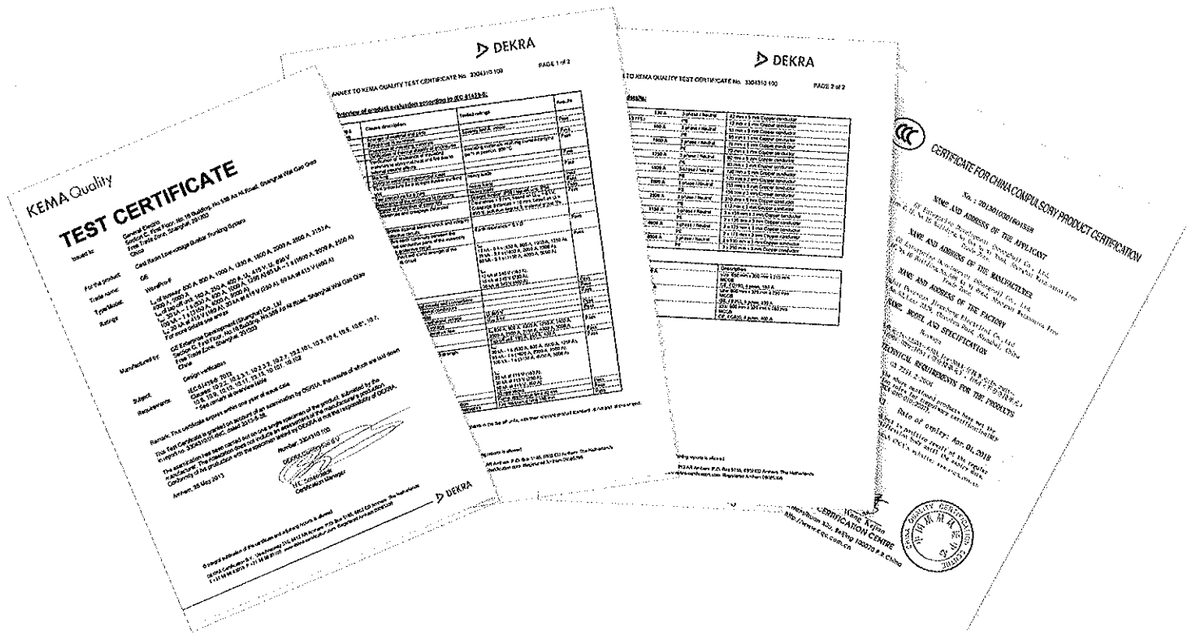
Product certificates and reports:

KEMA KEUR

IEC60331: 750°C(1382°F)/180min

BS6387: 950°C(1742°F)/180min

CCC Certificate



Product Features

Advanced cast process

WavePro-F is the first busway which uses an APG process and a unique formulation of epoxy resin that has been specially developed for WavePro-F busway. The resin is mixed in a sealed vacuum to ensure a consistent quality with even distribution of the mixture with no air voids. The epoxy resin mixture is injected into the APG mold using a pressurized pump and the temperature is raised to 140°C(284°F). Under controlled temperature and pressure conditions, the materials in the mold will set gradually. After curing, the result is an insulated busway that is compact, void-free, has low internal stress and a smooth outer surface.

With regard to mechanical strength, withstand voltage and insulation resistance, the APG busway is superior to common busway cast in the standard cold cast process.

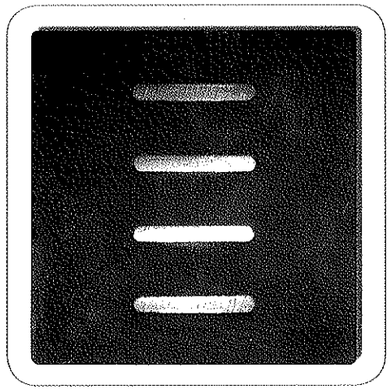


Figure 05-1. WavePro-F - APG formed

Performance		Busway APG cast	Busway Normal temp and pressure cast
Impact strength	kJ/m²	14~16	7~9
	kJ/ft²	1.3~1.5	0.7~0.8
Power frequency withstand voltage	kV/mm	20	12~14
	kV/in	508	304.8~355.6
Insulation resistance	Ω·cm	10^{14}~10^{15}	10^{12}~10^{14}
	Ω·ft	10^{12}~10^{14}	10^{10}~10^{12}

Table 05-1

Busway cast under normal temperature and pressure

The process of normal temperature cast busway is very basic, it adopts a labor intensive manual casting process without using specialized molding equipment. Compared with the APG busway, the normal temperature cast busway has many problems:

- Busway cured under normal temperature tends to develop air voids which can decrease the insulation performance and heat dissipation capability. This results in partial discharge, high temperature rise, inefficient energy consumption, and low current carrying capacity
- The normal temperature cast busway mixture contains lots of coarse particles, and there is no mechanical vacuum agitation and pressure injection during the cast process, so the internal texture is loose, thus significantly reducing the structural strength of the busway
- The normal temperature cast busway is cured in a uncontrolled and variable temperature mold, due to the different contraction ratio at different points in the cast, the appearance of the busway is crude and not smooth

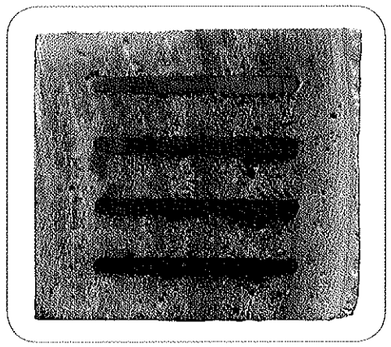


Figure 05-2. Normal temperature cast busway

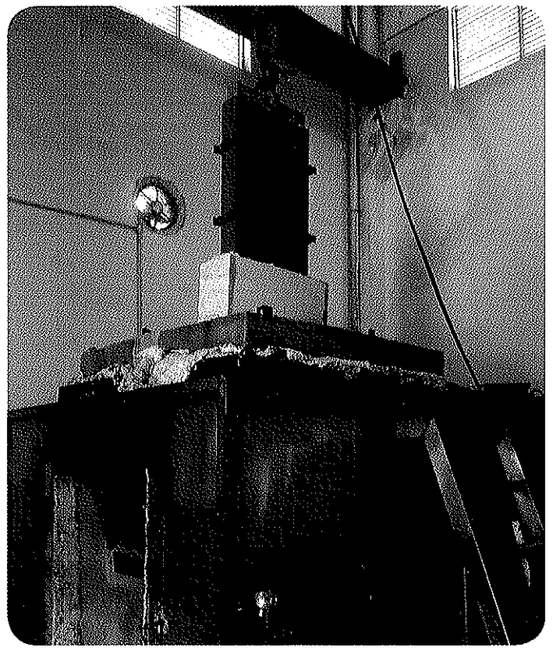
Product Features

Excellent fireproof performance

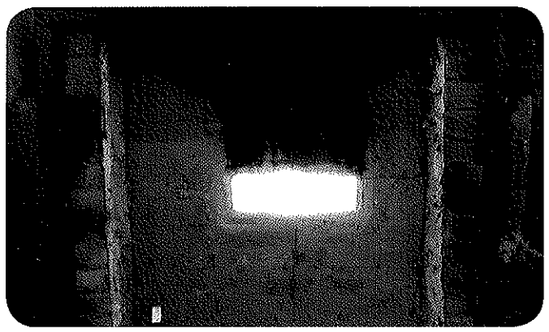
- WavePro-F busway uses fireproof resin designed for the aerospace industry which incorporates flame retardant filler and a specially formulated composition of materials. The optimal component mix was determined based on extensive laboratory research and testing, and meets UL94 V-0 requirements
- WavePro-F busway has passed two fireproof tests, a 750°C(1382°F)/180min test as specified by IEC60331-21 standard and 950°C(1742°F)/180min test as specified by BS6387 standard
- Certified for resistance to flame propagation (IEC 61439-6, Clause 10.101) and fire resistance in wall penetrations [IEC 61439-6, Article 10.102, with fire resistance of 180 minutes and flame temperature up to 1056°C(1933°F)]



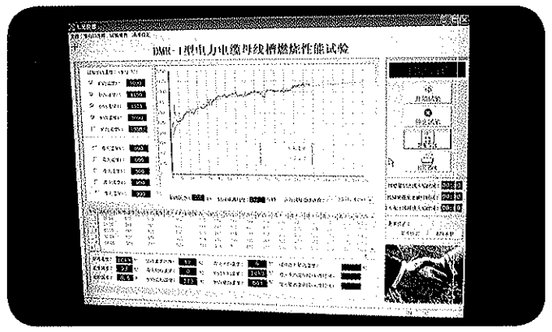
- Flame propagation test



- Wall penetration test



- Busway burn test

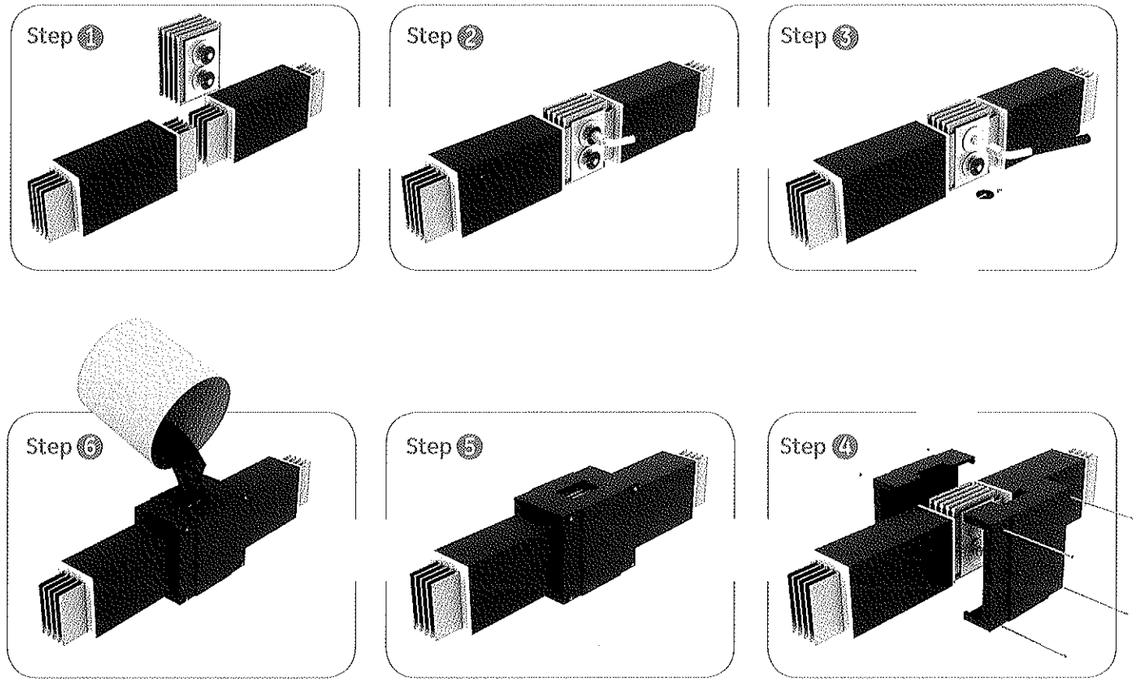


- Flame temperature curve

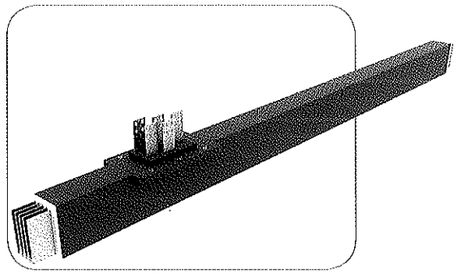
Quick and reliable joint connection

Traditionally, to connect joints of fire resistant busway, it is necessary to install a special casting mold at the connection points one by one during the time of installation. After curing, these molds need be disassembled and cleaned before they can be used for casting the next joint connection. Many molds are needed, and labor costs for repeated disassembly can be high. Casting quality on site is difficult to ensure and the joint appearance is poor.
WavePro-F busway uses an integrated connection process. While making connection points during field installation, the joint connection cover acts as the casting mold. After casting, the connection cover and joint become a single piece and there is no need to remove the cover. The connection cover is a prefabricated component, its material and production process are the same as the fire resistant busway and provides double protection for the connection points. The joint connections can be cast one by one, or several joints can be cast at the same time. The construction period is shortened and what is normally an installation bottleneck is eliminated.

Joint connection process

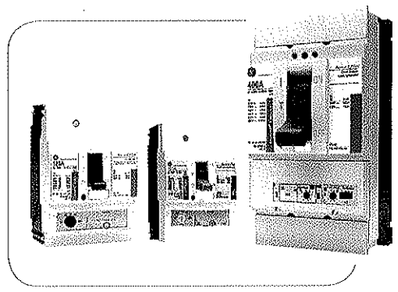


Product Features



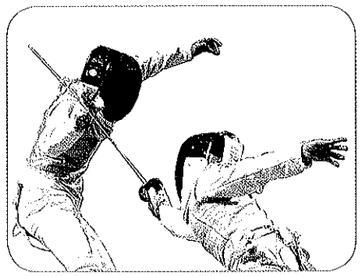
Power take-off connection

The power take-off is an integral part of a cast straight length section. The tapered design ensures water will run off from the joint. The power take-off connection can be customized according to the site requirements.



GE circuit breakers

The standard configuration of WavePro-F power take-off boxes use GE's Record Plus™ circuit breakers to provide reliable protection for the circuit.
Record Plus™ circuit breakers have unique current limiting characteristics and an integrated protection device known as a trip unit. They meet the protection and isolation requirements of low-voltage power distribution products.



Protection level

The protection degree is up to IP68 for feeder busway, and IP54 for busway with power take-off boxes which comply with the requirements of IEC 60529 degrees of protection provided by enclosures. The IP68 designed product can work under water over a long period of time or be laid in cable conduit or directly buried.

Electrical Characteristics

WavePro-F cast resin busway is a Class II insulation device with two standard configurations:

- 4P (L1, L2, L3, 100%PEN)
- 5P (L1, L2, L3, 100%N, 60%PE)

Grounding resistance

3L+N+PE grounding resistance (60% independent ground wire @20°C(68°F))

No.	Rated Current (A)	Resistance (10^{-6}Ω/m)	Resistance (10^{-3}Ω/100ft)
1	630	145.8	4.4
2	800	110.7	3.4
3	1000	86.5	2.6
4	1250	67.2	2.0
5	1600	50.2	1.5
6	2000	38.8	1.2
7	2500	28.5	0.9
8	3150	22.3	0.7
9	4000	17.2	0.5
10	5000	13.0	0.4

Table 09-1

Resistance/Reactance/Impedance and voltage drop

Rated Current (1)	Rated short-time withstand current (Icw)	Rated peak withstand current (Ipk)	20°C(68°F)		Full load/stable state (50Hz)					
			Resistance		Resistance		Reactance		Impedance	
A	kA	kA	(10^{-6}Ω/m)	(10^{-3}Ω/100ft)	(10^{-6}Ω/m)	(10^{-3}Ω/100ft)	(10^{-6}Ω/m)	(10^{-3}Ω/100ft)	(10^{-6}Ω/m)	(10^{-3}Ω/100ft)
630	30	63	87.5	2.7	107.7	3.3	92	2.8	141.6	4.3
800	30	63	66.4	2.0	81.7	2.5	70.4	2.1	107.9	3.3
1000	30	63	51.9	1.6	63.9	1.9	55.5	1.7	84.7	2.6
1250	30	63	40.3	1.2	49.6	1.5	43.4	1.3	65.8	2.0
1600	65	143	30.1	0.9	37.1	1.1	32.7	1.0	49.4	1.5
2000	65	143	23.3	0.7	28.6	0.9	25.5	0.8	38.4	1.2
2500	65	143	17.1	0.5	21.1	0.6	19.1	0.6	28.4	0.9
3150	100	220	13.4	0.4	16.5	0.5	14.6	0.4	22	0.7
4000	100	220	10.3	0.3	12.7	0.4	11.4	0.3	17	0.5
5000	100	220	7.8	0.2	9.6	0.3	8.7	0.3	13	0.4

Table 09-2

Full load/stable state (50Hz) Line to line voltage drop - Concentrated load									
cosϕ=0.6		cosϕ=0.7		cosϕ=0.8		cosϕ=0.9		cosϕ=1.0	
(V/m)	(V/100ft)	(V/m)	(V/100ft)	(V/m)	(V/100ft)	(V/m)	(V/100ft)	(V/m)	(V/100ft)
0.151	4.604	0.154	4.695	0.154	4.695	0.15	4.573	0.118	3.598
0.146	4.451	0.149	4.543	0.149	4.543	0.145	4.421	0.113	3.445
0.143	4.360	0.146	4.451	0.146	4.451	0.142	4.329	0.111	3.384
0.14	4.268	0.142	4.329	0.142	4.329	0.138	4.207	0.107	3.262
0.134	4.085	0.137	4.177	0.137	4.177	0.132	4.024	0.103	3.140
0.13	3.963	0.133	4.055	0.132	4.024	0.128	3.902	0.099	3.018
0.121	3.689	0.123	3.750	0.123	3.750	0.119	3.628	0.091	2.774
0.118	3.598	0.12	3.659	0.12	3.659	0.116	3.537	0.09	2.744
0.116	3.537	0.118	3.598	0.117	3.567	0.114	3.476	0.088	2.683
0.111	3.384	0.112	3.415	0.112	3.415	0.108	3.293	0.083	2.530

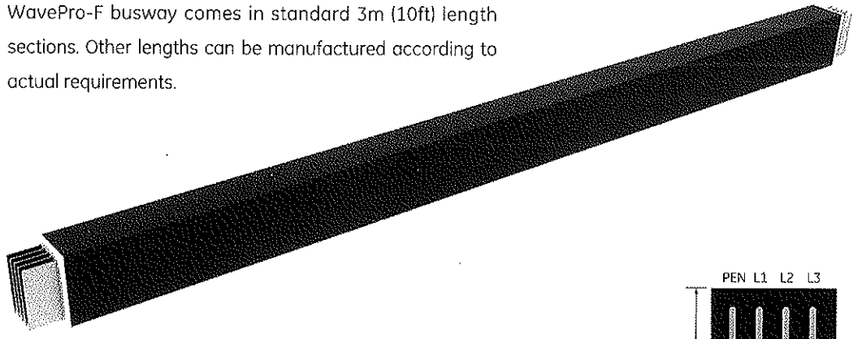
Table 09-3

Note:
(1). For 60Hz application the 1000A, 1600A, 2000A, 2500A, 3150A and 4000A busway current rating shall be reduced to 95% of the rated current.

Product Data

Feeder straight length

WavePro-F busway comes in standard 3m (10ft) length sections. Other lengths can be manufactured according to actual requirements.



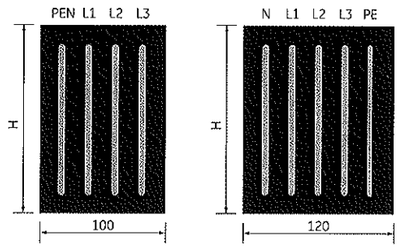
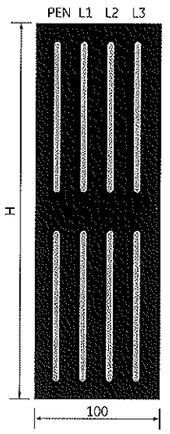


Figure 10-1



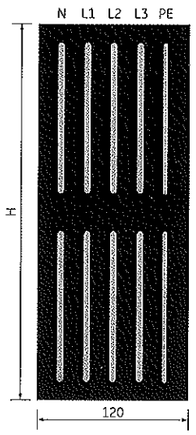


Figure 10-2

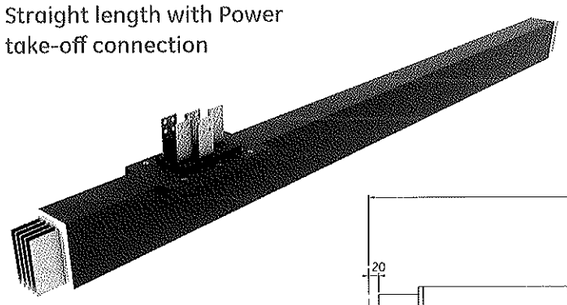
Busway Weight

Rated Current	H		Straight length 3L+PEN		Joint 3L+PEN		Straight length 3L+N+PE		Joint 3L+N+PE		Figures
A	mm	in	kg/m	lb/ft	kg/EA	lb/EA	kg/m	lb/ft	kg/EA	lb/EA	
630	75	3.0	27.3	18.3	18.2	40.0	32.6	21.9	18.5	40.7	
800	85	3.3	31.9	21.4	20.1	44.2	37.9	25.4	20.4	44.9	
1000	100	3.9	38.1	25.6	23.7	52.1	45.3	30.4	24.2	53.2	
1250	120	4.7	46.5	31.2	27.3	60.1	55.3	37.1	27.9	61.4	Figure 10-1
1600	150	5.9	59	39.6	33.7	74.1	70.1	47.0	34.5	75.9	
2000	185	7.3	73.7	49.4	39.8	87.6	87.5	58.7	40.8	89.8	
2500	240	9.5	96.7	64.9	48.1	105.8	114.8	77.0	49.5	108.9	
3150	330	13.0	130.6	87.6	57.9	127.4	155.2	104.1	59.8	131.6	
4000	410	16.2	164	110.0	76.9	169.2	194.8	130.7	79.5	174.9	Figure 10-2
5000	520	20.5	210	140.9	93.1	204.8	249.3	167.2	96.3	211.9	

Table 10-1

Note: the length of busway is the distance between the centers of two adjacent joints.

Straight length with Power take-off connection



Power take-off typical dimensions

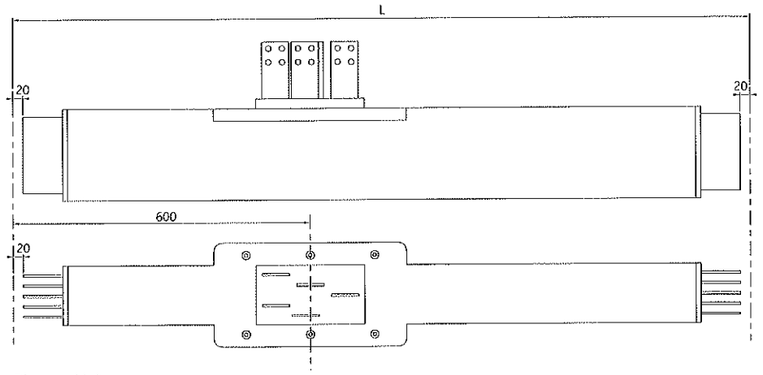
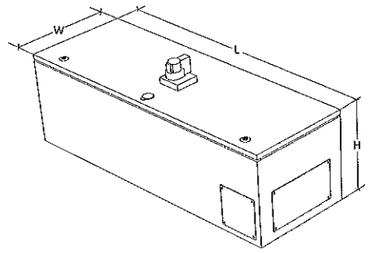
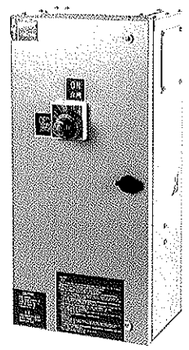
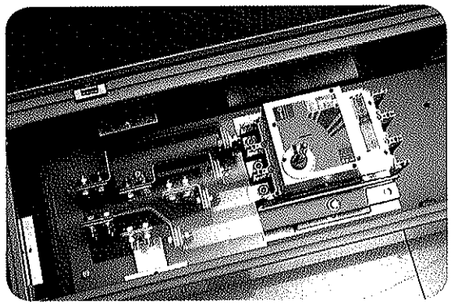


Diagram 11-1

Power take-offs





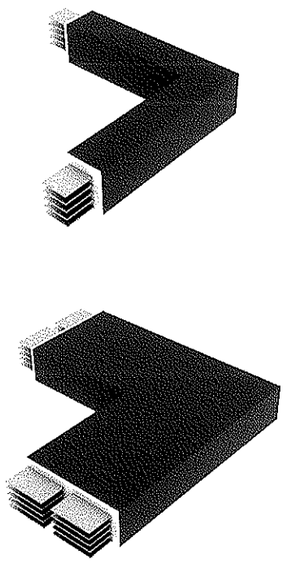


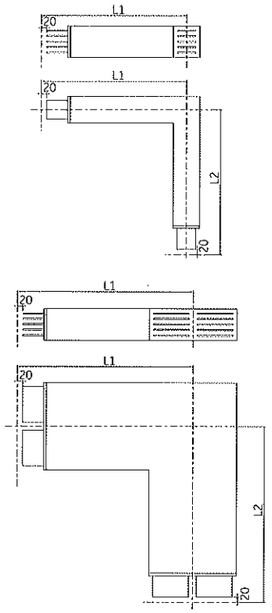
Specification of distribution box	Outline dimensions of distribution box						Weight	
	L		W		H			
	mm	in	mm	in	mm	in	kg/EA	lb/EA
FD160	650	25.6	304	12.0	210	8.3	18.1	39.8
FE160/FE250	800	31.5	324	12.8	230	9.1	24.8	54.6
FG400	900	35.5	324	12.8	280	11.0	38.1	83.8

Table 11-1

Note: due to the construction of the WavePro-F cast resin busway, the power take-off box and the corresponding busway section are assembled as a set in the factory and delivered together.

Product Data

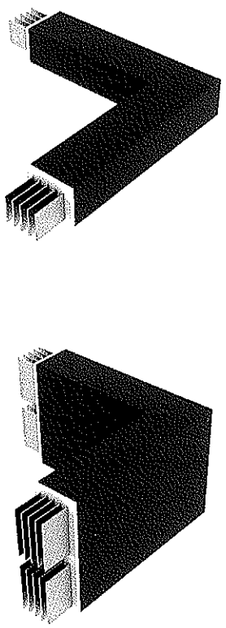


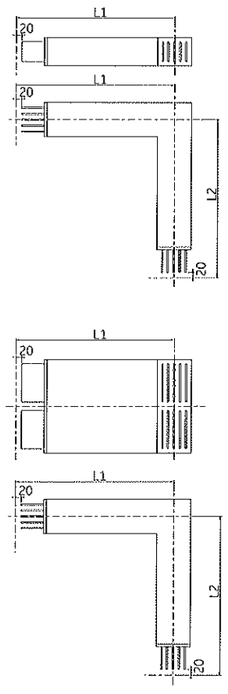


L-shaped horizontal elbow

No.	Rated Current	Standard size			
		L1		L2	
	A	mm	in	mm	in
1	630	500	19.7	500	19.7
2	800	500	19.7	500	19.7
3	1000	500	19.7	500	19.7
4	1250	500	19.7	500	19.7
5	1600	500	19.7	500	19.7
6	2000	500	19.7	500	19.7
7	2500	500	19.7	500	19.7
8	3150	650	25.6	650	25.6
9	4000	650	25.6	650	25.6
10	5000	650	25.6	650	25.6

Table 12-1

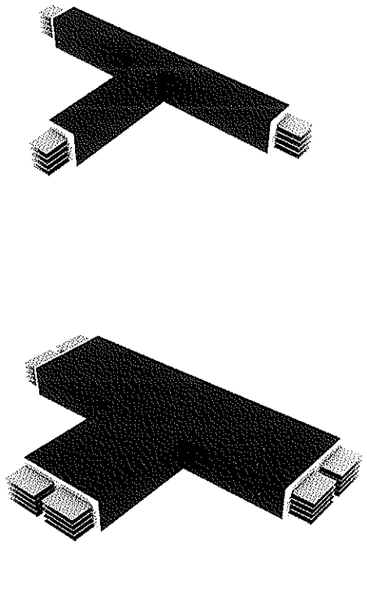




L-shaped vertical elbow

No.	Rated Current	Standard size			
		L1		L2	
	A	mm	in	mm	in
1	630	350	13.8	350	13.8
2	800	350	13.8	350	13.8
3	1000	350	13.8	350	13.8
4	1250	350	13.8	350	13.8
5	1600	350	13.8	350	13.8
6	2000	350	13.8	350	13.8
7	2500	350	13.8	350	13.8
8	3150	350	13.8	350	13.8
9	4000	350	13.8	350	13.8
10	5000	350	13.8	350	13.8

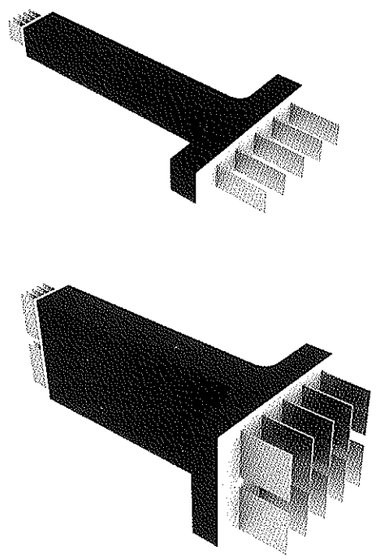
Table 12-2

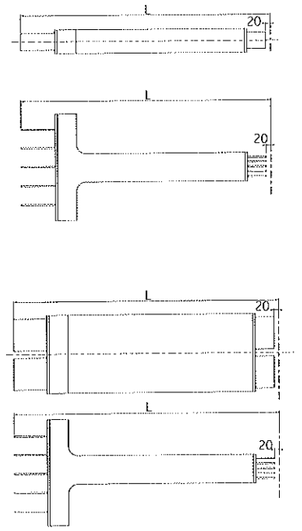


T-shaped horizontal elbow

No.	Rated Current	Standard size					
		L1		L2		L3	
	A	mm	in	mm	in	mm	in
1	630	500	19.7	500	19.7	500	19.7
2	800	500	19.7	500	19.7	500	19.7
3	1000	500	19.7	500	19.7	500	19.7
4	1250	500	19.7	500	19.7	500	19.7
5	1600	500	19.7	500	19.7	500	19.7
6	2000	500	19.7	500	19.7	500	19.7
7	2500	500	19.7	500	19.7	500	19.7
8	3150	650	25.6	650	25.6	650	25.6
9	4000	650	25.6	650	25.6	650	25.6
10	5000	650	25.6	650	25.6	650	25.6

Table 13-1





Flanged end

No.	Rated Current	Standard size	
		L	
	A	mm	in
1	630	1000	39.4
2	800	1000	39.4
3	1000	1000	39.4
4	1250	1000	39.4
5	1600	1000	39.4
6	2000	1000	39.4
7	2500	1000	39.4
8	3150	1000	39.4
9	4000	1000	39.4
10	5000	1000	39.4

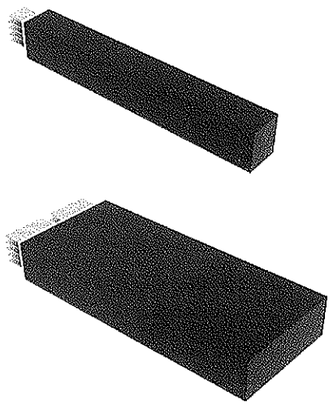
Table 13-2

Product Data

Product Data

Busway terminal

The dimensions of busway terminals can be customized according to the installation requirements.



Busway terminals typical dimensions

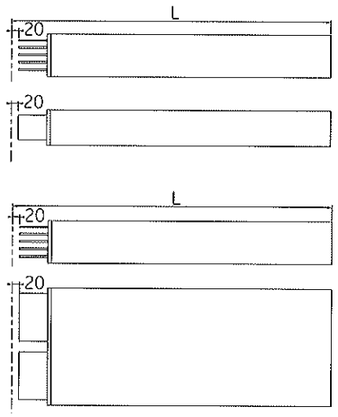
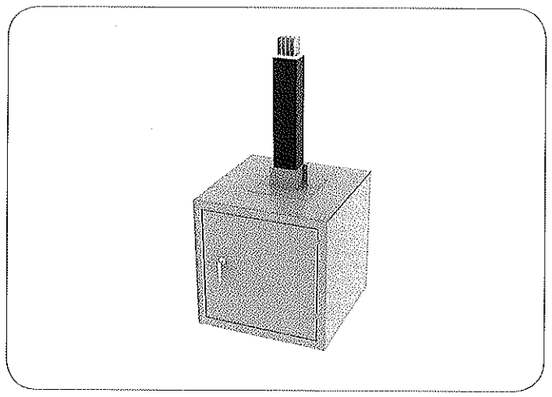
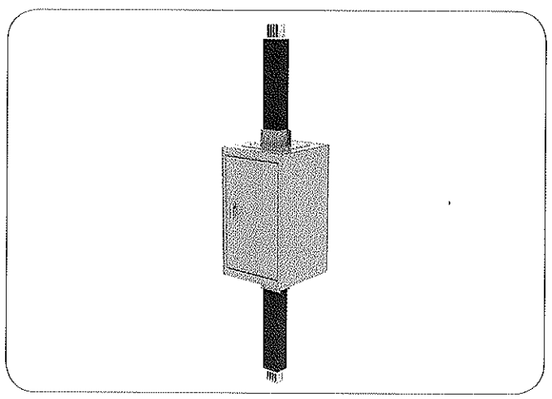


Diagram 14-1

End cable tap box



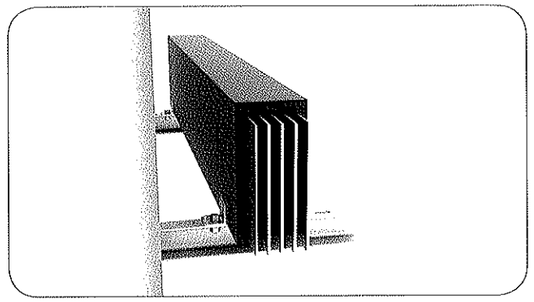
Center cable tap box



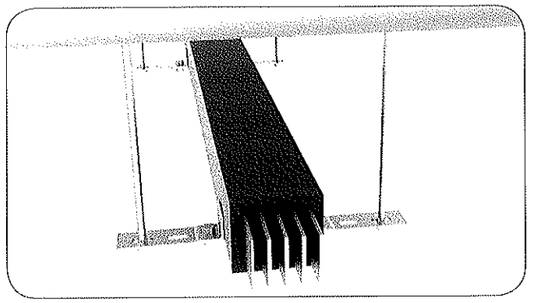
Note: the box dimensions can be customized according to site conditions.

Busway installation

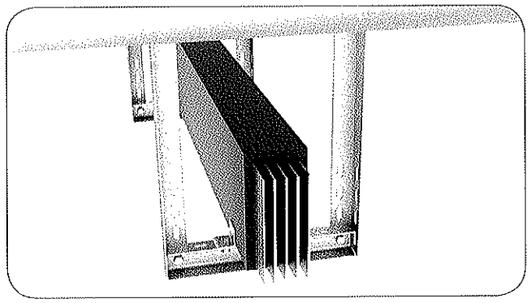
WavePro-F can support a number of different installation arrangements.
Generally, the space between horizontal installation hanging brackets of busway is recommended to be 1m, the space between the vertical installation hanging brackets is 2.5m.



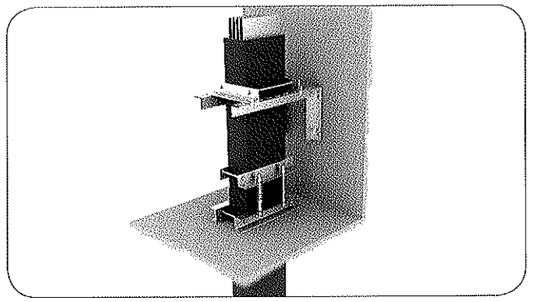
● Horizontal back-to-wall installation



● Horizontal hanging bracket installation - for 630A-1250A



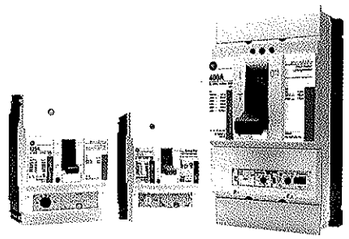
● Horizontal hanging bracket installation - for 1600A-5000A



● Vertical installation

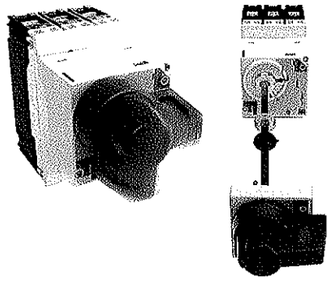
Note: There are special angle requirements for WavePro-F busway installation, please refer to Busway installation manual.

Product Data



Protection components in Power take-offs

The power take-off is an integral part of a cast straight length section. The tapered design ensures water will run off from the joint. The power take-off connection can be customized according to the site requirements.
The standard configuration of WavePro-F power take-off boxes use GE's Record Plus™ circuit breakers to provide reliable protection for the circuit.
Record Plus™ circuit breakers have unique current limiting characteristics and an integrated protection device known as a trip unit. They meet the protection and isolation requirements of low-voltage power distribution products.



Easy-to- mount rotary handle

A rotary handle can be fitted onto the front of the record plus breakers, allowing the vertical handle movement to be changed into a rotary operation, with the ON position at 3 o'clock and the OFF position at 6 o'clock. An accurate position indication of the three breaker positions, ON-OFF and TRIPPED, is provided by a totally new internal design that also allows the user to install one or two early closing and late opening auxiliary contact blocks.

FD160

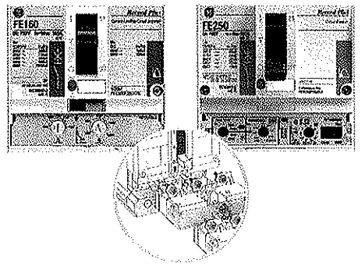
Rated at 160A, the FD160 frame size is designed for use in both a DIN-rail environment with modular equipment and in industrial applications. It is supplied with IPXXB terminals suitable for direct connection of one or two conductors totalling up to 95mm² and is available as a thermal magnetic breaker, a molded case switch, and as a magnetic-only motor circuit protector.
The FD160 bridges the gap between residential miniature circuit breakers and industrial molded case circuit breakers.

FE160 and FE250

Rated at 160 and 250A, FE sizes are equipped with an easily accessible busbar connection and can also be supplied with cable lugs for use with copper or aluminum conductors. The design allows the use of interchangeable thermal-magnetic, magnetic-only, and electronic trip units.

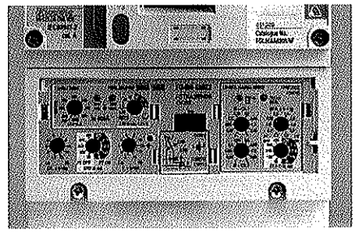
FG400 and FG630

Rated at 400 and 630A, the FG frame size includes all of the advanced features of the FD and FE frame sizes.
The FG connection area features easy-to-access busbar connections. Cable lugs for use with single or multiple copper or aluminum conductors are optionally available. The breaker is designed for use with interchangeable electronic trip units that can be easily adapted to multiple levels of protection.



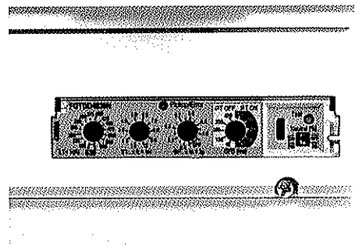
Thermal-magnetic trip

The current range of available devices is 16 to 250A, used as three-pole or four-pole devices. Electromechanical trip units include thermal-magnetic, magnetic protection and motor protection types. High performance thermal-magnetic trip units come in selective and non-selective types, are equipped with fault indicators, distinguish overload and short-circuit times. This patented safety characteristic allows the user to directly reset the circuit breaker to reduce shutdown time after an overload occurrence.



Electronic trip SMR2

SMR2 provides more comprehensive and flexible solutions. This device has two kinds of modules with different available settings, each of which allows the user to adjust protection easily to meet the requirements of all circuits. Available options include adjustable overload value, overload trip delay characteristic, short delay adjustment value, short delay time adjustment, inverse time-delay I2t delay adjustment and energy value. Ground fault protection and unload are also options offered for this trip unit.



PremEon™ S

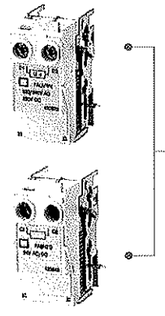
PremEon is a new line of electronic trip units designed to offer uncompromising reliability in all network environments. Each standard unit has between two and four overcurrent protection devices:
An overload protection **(LT)** with a range of 0.3 to 1 times the chosen trip unit rating[1]. Each of the possible 15 positions has a rating in Amps.
A delayed short-circuit protection **(ST)** with a wide setting band of 2 to 13[2] times the **LT** device setting or Ir value. A fixed time setting per breaker size is applied.
A selective instantaneous device **(I)** set at a fixed value of 14[2] times the chosen trip unit rating, using waveform recognition to assure selectivity.
An optional ground fault protection device **(GF)** (residual principle) can be set from 0.4 to 1 times the chosen trip unit rating and be used with multiple delay and/or I²T settings.

(1) A version without LT protection is available.
(2) FG630 630A type is 2-10 x Ir and 11 x In.



Auxiliary and bell alarm contacts

The internal accessories are common to Record Plus™ FD, FE and FG circuit breakers. They offer a unique, patented, auxiliary contact block with normally open and normally closed contacts which are suitable for use in high current and high fidelity applications. Selective fault indication is possible by using one or a combination of the two bell alarm contact types.



Trip coil Releases

The shunt and undervoltage releases are a totally new design combining the best in electromechanical and electronic engineering. Most releases are common for AC and DC voltages and are available in a wide voltage range. They combine low power consumption, a kiss-free, lock-out design and the ease of use common to all Record Plus™ internal accessories.

Product Data

Power take-offs with GE Record Plus circuit breaker

Power take-offs with FD160, 3-pole 3-protection

Rated Current (A)	Icc/415V	Circuit breaker	Distribution box model (standard)	Distribution box model (with shunt trip)
16	20kA	FDS160 16A, 36KA 3P	WFPR3P0154FDS	WFPR3P0154FDSS
25	20kA	FDS160 25A, 36KA 3P	WFPR3P0254FDS	WFPR3P0254FDSS
32	20kA	FDS160 32A, 36KA 3P	WFPR3P0354FDS	WFPR3P0354FDSS
40	20kA	FDS160 40A, 36KA 3P	WFPR3P0454FDS	WFPR3P0454FDSS
50	20kA	FDS160 50A, 36KA 3P	WFPR3P0554FDS	WFPR3P0554FDSS
63	20kA	FDS160 63A, 36KA 3P	WFPR3P0654FDS	WFPR3P0654FDSS
80	20kA	FDS160 80A, 36KA 3P	WFPR3P0854FDS	WFPR3P0854FDSS
100	20kA	FDS160 100A, 36KA 3P	WFPR3P1054FDS	WFPR3P1054FDSS
125	20kA	FDS160 125A, 36KA 3P	WFPR3P1354FDS	WFPR3P1354FDSS
160	20kA	FDS160 160A, 36KA 3P	WFPR3P1654FDS	WFPR3P1654FDSS

Table 17-1

Power take-offs with FD160, rotary handle, 4-pole 4-protection

Rated Current (A)	Icc/415V	Circuit breaker	Distribution box model (standard)	Distribution box model (with shunt trip)
16	20kA	FDS160 16A, 36KA 4P	WFPR4P0164FDS	WFPR4P0164FDSS
25	20kA	FDS160 25A, 36KA 4P	WFPR4P0254FDS	WFPR4P0254FDSS
32	20kA	FDS160 32A, 36KA 4P	WFPR4P0354FDS	WFPR4P0354FDSS
40	20kA	FDS160 40A, 36KA 4P	WFPR4P0454FDS	WFPR4P0454FDSS
50	20kA	FDS160 36A, 36KA 4P	WFPR4P0554FDS	WFPR4P0554FDSS
63	20kA	FDS160 63A, 36KA 4P	WFPR4P0654FDS	WFPR4P0654FDSS
80	20kA	FDS160 80A, 36KA 4P	WFPR4P0854FDS	WFPR4P0854FDSS
100	20kA	FDS160 100A, 36KA 4P	WFPR4P1054FDS	WFPR4P1054FDSS
125	20kA	FDS160 125A, 36KA 4P	WFPR4P1354FDS	WFPR4P1354FDSS
160	20kA	FDS160 160A, 36KA 4P	WFPR4P1654FDS	WFPR4P1654FDSS

Table 17-2

Power take-offs with FE/FG, 3-pole 3-protection

Rated Current (A)	Icc/415V	Circuit breaker	Distribution box model (standard)	Distribution box model (with shunt trip)
25	30kA	FEN160 25A, 50KA 3P	WFPR3P0254FEN	WFPR3P0254FENS
32	30kA	FEN160 32A, 50KA 3P	WFPR3P0354FEN	WFPR3P0354FENS
40	30kA	FEN160 40A, 50KA 3P	WFPR3P0454FEN	WFPR3P0454FENS
50	30kA	FEN160 50A, 50KA 3P	WFPR3P0554FEN	WFPR3P0554FENS
63	30kA	FEN160 63A, 50KA 3P	WFPR3P0654FEN	WFPR3P0654FENS
80	30kA	FEN160 80A, 50KA 3P	WFPR3P0854FEN	WFPR3P0854FENS
100	30kA	FEN160 100A, 50KA 3P	WFPR3P1054FEN	WFPR3P1054FENS
125	30kA	FEN160 125A, 50KA 3P	WFPR3P1354FEN	WFPR3P1354FENS
160	30kA	FEN160 160A, 50KA 3P	WFPR3P1654FEN	WFPR3P1654FENS
200	30kA	FEN250 200A, 50KA 3P	WFPR3P2054FEN	WFPR3P2054FENS
250	30kA	FEN250 250A, 50KA 3P	WFPR3P2554FEN	WFPR3P2554FENS
400	50kA	FGN630 400A, 50KA 3P	WFPR3P5454FGN	WFPR3P5454FGNS

Table 17-3

Power take-offs with FE/FG, 4-pole 4-protection

Rated Current (A)	Icc/415V	Circuit breaker	Distribution box model (standard)	Distribution box model (with shunt trip)
25	30kA	FEN160 25A, 50KA 4P	WFPR4P0254FEN	WFPR4P0254FENS
32	30kA	FEN160 32A, 50KA 4P	WFPR4P0354FEN	WFPR4P0354FENS
40	30kA	FEN160 40A, 50KA 4P	WFPR4P0454FEN	WFPR4P0454FENS
50	30kA	FEN160 50A, 50KA 4P	WFPR4P0554FEN	WFPR4P0554FENS
63	30kA	FEN160 63A, 50KA 4P	WFPR4P0654FEN	WFPR4P0654FENS
80	30kA	FEN160 80A, 50KA 4P	WFPR4P0854FEN	WFPR4P0854FENS
100	30kA	FEN160 100A, 50KA 4P	WFPR4P1054FEN	WFPR4P1054FENS
125	30kA	FEN160 125A, 50KA 4P	WFPR4P1354FEN	WFPR4P1354FENS
160	30kA	FEN160 160A, 50KA 4P	WFPR4P1654FEN	WFPR4P1654FENS
200	30kA	FEN250 200A, 50KA 4P	WFPR4P2054FEN	WFPR4P2054FENS
250	30kA	FEN250 250A, 50KA 4P	WFPR4P2554FEN	WFPR4P2554FENS
400	50kA	FGN630 400A, 50KA 4P	WFPR4P5454FGN	WFPR4P5454FGNS

Table 17-4

Note: above-listed are common models, for special requirements, please contact your local GE account manager.

Product Selection Guide

Straight length and components

WF	B	F	EL	4	20	C	68
WavePro-F	B: Busway	F: Feeder R: Riser	SL: Straight Length EL: Elbow FE: Flanged End BX: Flanged End Box EC: Terminal Busway TE: Tee PO: Power take-off connection JT: Joint ETB: End Cable Box CTB: Center Cable Box	Service: 4: 3L+PEN 5: 3L+N+Internal PE	Rated Current 06: 630A 08: 800A 10: 1000A 12: 1250A 16: 1600A 20: 2000A 25: 2500A 31: 3150A 40: 4000A 50: 5000A	Conductor C: Copper	68: IP68

Selection example:

1. 2000A feeder, 3L + 100%PEN, copper busway: WFBFSL420C68
2. 4000A elbow, 3L + 100%N + PE, copper busway: WFBFEL540C68
3. 2000A, 3L + 100%PEN busway power take-off connection: WFBFPO420C

Power take-offs

WF	P	R	3P	10	54	FEN	S
WavePro-F	P: Power take-offs	M: Manual operation R: Rotary handle	3P: 3-pole 4P: 4-pole 4-protection	01: 16A 02: 25A 03: 32A 04: 40A 05: 50A 06: 63A 08: 80A 10: 100A 13: 125A 16: 160A 20: 200A 25: 250A 32: 315A 40: 400A	54: IP54	FDS FDN FEN FGN FEH FGH	-: without shunt trip S: with shunt trip

Accessories

WF	A	SPHR	10
WavePro-F	A: Accessories	SPHR: Spring Hanger FX: Vertical Fixed Hanger HB: Horizontal Bracket HF: Horizontal Hanger CNB: Connection copper bar	Rated Current 06:630A 08:800A 10:1000A 12:1250A 16:1600A 20:2000A 25:2500A 31:3150A 40:4000A 50:5000A

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