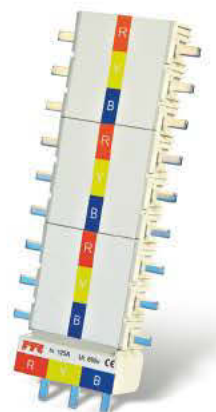


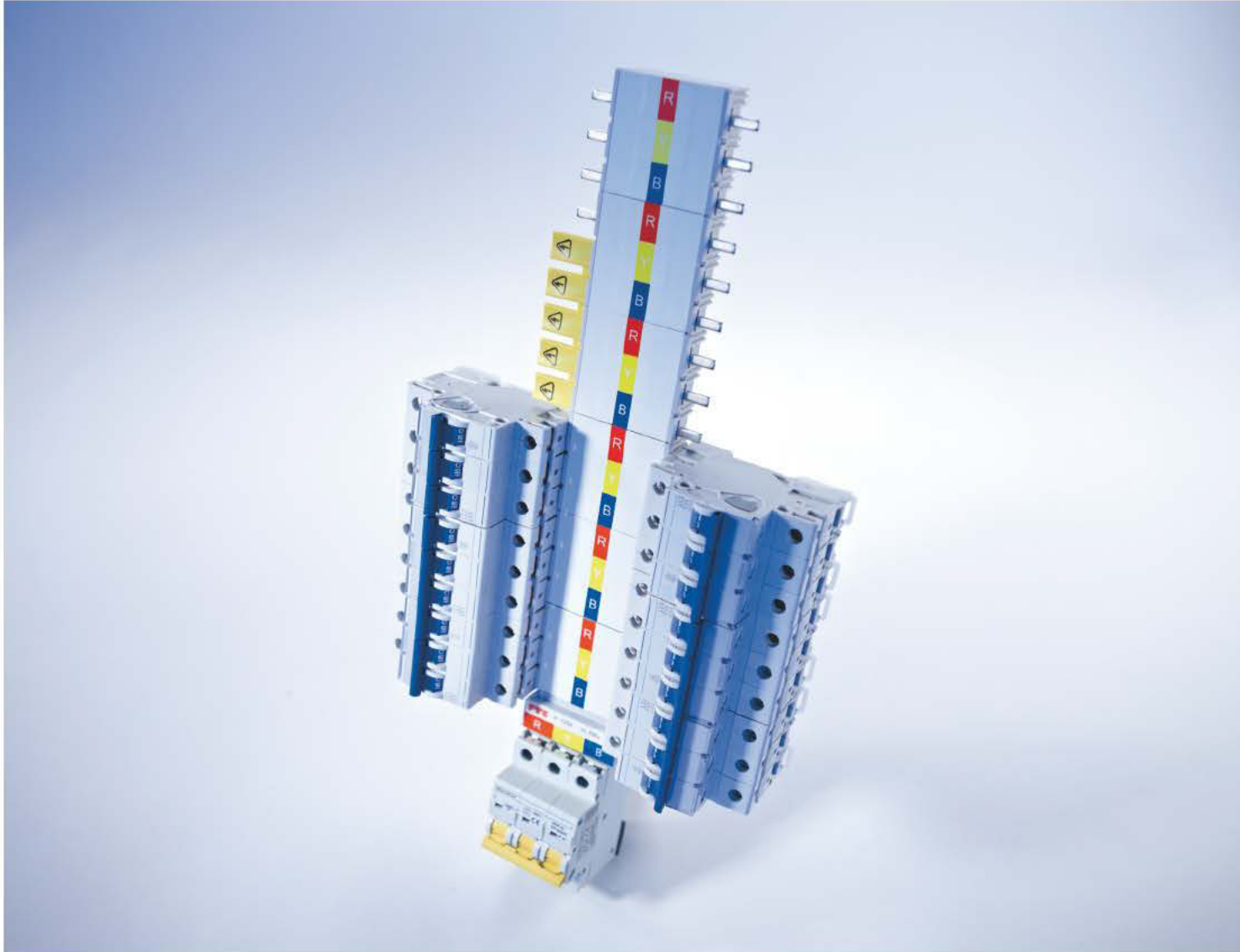


# Vertical Busbars

Solutions for pan assembly systems



# Vertical Busbars by FTG



**Air insulated busbars.** The FTG VBA-system impresses by its economic efficiency. An attractive price is accompanied by a time saving feature of about 30% for mounting the busbars compared with extensive wiring! The VBA-systems from FTG are designed as modular systems - 4 to 24 ways are available as a standard. Due to the compact construction space will be saved besides time, connection errors will be minimized. A wide selection of various designs covers any mounting requirement. Besides the standard range FTG develops and manufactures custom made solutions based on your very special demands.

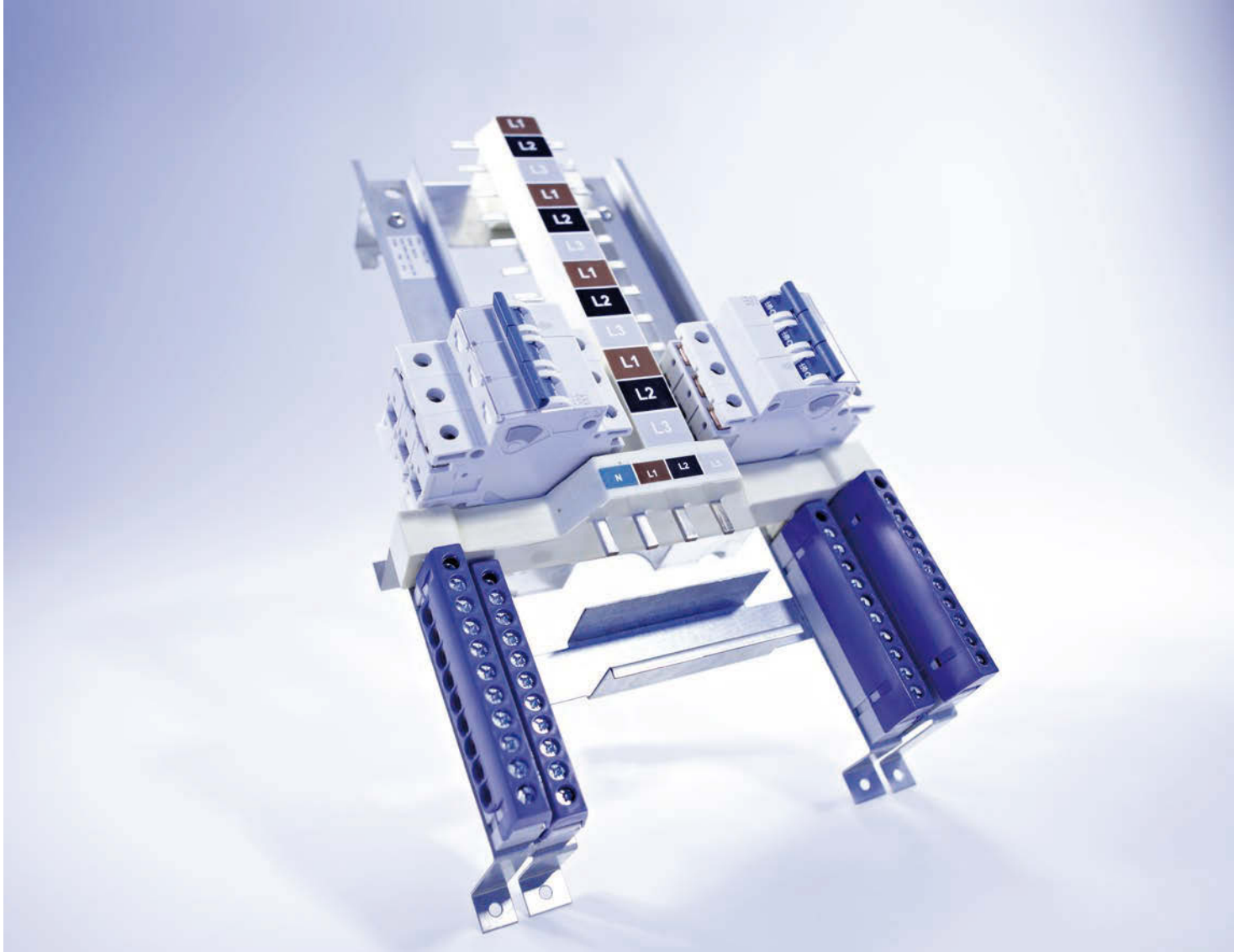
<b>VBA - Air insulated busbars from FTG</b>	
no. of phases	3
triple pole ways	4 - 24
type	pin
ampere rate	125A/250A
short circuit withstand	25kA conditional (Icc)
incomer	pin or bolt connection 18mm pitch
outgoings	pin 18mm, direct
conductors	copper, tin plated
max. operating voltage	690V
protection	IP 20
regulations	IEC 61439-1 (-2), ASTA



VBR - Resin moulded busbars from FTG	
no. of phases	3 / 3+N / 4
triple pole ways	4 - 24
type	pin and fork
ampere rate	125A - 800A
short circuit withstand	up to 105 kA (Ipk)
incomer	pin, fork or bolt 18 / 35 / 52.5 or 70 mm
outgoings	pin or fork 18 / 25.4 or 35 mm
conductors	copper, tin plated
max. operating voltage	690V
protection	IP 20
regulations	IEC 61439-1 (-2), ASTA

**Resin moulded busbars.** The fully sealed-in vertical bars from FTG are a safe choice. As well as the air insulated version, this high quality design saves space in the mounting situation. The range covers bars with up to 24 ways and a maximum current load of 800 Ampere! The resin moulded busbars are thus the appropriate alternative when the specification asks for especially durable products. More than 50 different types are available as standard versions. This allows covering all common requirements.

# Individuality as a standard



**Individuality as a standard.** As one of the leading manufacturers of products for power distribution systems FTG produces more than 8,000 products for distributing power, among those several dozens of vertical busbars. Moreover, FTG designs continuously custom specific solutions, from development to prototype manufacturing and final series production. Existing products in the assortment are further developed continuously and adapted to new specifications. Customers from all over the world value this service and rely on the quality of the FTG products.

**Delivered ready to use.** Applications such as complete DB-boards will be pre-assembled and supplied according to customer's specifications. An economic alternative which saves mounting time.



# Quality that is ensured



**Quality made in Germany.** FTG demands a very high quality standard of their products. This can be demonstrated by numerous certifications and conformities. FTG is certified according to ISO 9001 since 1996. Vertical busbars from FTG comply with various international standards:

- IEC 61439-1 (-2)
- BS-EN 61439-1 (-2)
- ASTA certified

All FTG products provide conformity with:

- CE
- RoHS
- REACH

Safety with the range of products. FTG supplies a wide range of accessories for their products ensuring safety during operation. For not used connections there are for example protective caps preventing unintentional contacts.

# Product overview Vertical Busbars



## VBA-System 125A (air insulated)

no. of phases	3
type	pin
max. ampere rate	125
incomer	pin or bolt connection, 18 mm
outgoings	pin, 18 mm, direct
4 ways	# A104..3P18P00-0..
6 ways	# A106..3P18P00-0..
8 ways	# A108..3P18P00-0..
10 ways	# A110..3P18P00-0..
12 ways	# A112..3P18P00-0..
14 ways	# A114..3P18P00-0..
16 ways	# A116..3P18P00-0..
18 ways	# A118..3P18P00-0..
20 ways	# A120..3P18P00-0..
22 ways	# A122..3P18P00-0..
24 ways	# A124..3P18P00-0..

## VBA-System 250A (air insulated)

no. of phases	3
type	pin
max. ampere rate	250
incomer	pin or bolt connection, 18 mm
outgoings	pin, 18 mm, direct
4 ways	# A204..3P18P00-0..
6 ways	# A206..3P18P00-0..
8 ways	# A208..3P18P00-0..
10 ways	# A210..3P18P00-0..
12 ways	# A212..3P18P00-0..
14 ways	# A214..3P18P00-0..
16 ways	# A216..3P18P00-0..
18 ways	# A218..3P18P00-0..
20 ways	# A220..3P18P00-0..
22 ways	# A222..3P18P00-0..
24 ways	# A224..3P18P00-0..

## VBR-System 125A (resin moulded)

no. of phases	3
type	pin
max. ampere rate	125
incomer	pin, 18 mm
outgoings	pin, 18 mm
4 ways	# B104..3P18P00-0..
6 ways	# B106..3P18P00-0..
8 ways	# B108..3P18P00-0..
10 ways	# B110..3P18P00-0..
12 ways	# B112..3P18P00-0..
14 ways	# B114..3P18P00-0..
16 ways	# B116..3P18P00-0..
18 ways	# B118..3P18P00-0..
20 ways	# B120..3P18P00-0..
24 ways	# B124..3P18P00-0..

## VBR-System 250A with clear protection cover (resin moulded)

no. of phases	3
type	pin
max. ampere rate	250
incomer	M 10, 35 mm
outgoings	pin, 18 mm
4 ways	# B204..3L35P00-0..
6 ways	# B206..3L35P00-0..
8 ways	# B208..3L35P00-0..
10 ways	# B210..3L35P00-0..
12 ways	# B212..3L35P00-0..
14 ways	# B214..3L35P00-0..
16 ways	# B216..3L35P00-0..
18 ways	# B218..3L35P00-0..
24 ways	# B222..3L35P00-0..

## VBR-System 250A (resin moulded)

no. of phases	3
type	pin
max. ampere rate	250
incomer	bolt M 10, 52.5 mm
outgoings	pin, 25.4 mm
4 ways	# B204..3L50P10-0..
6 ways	# B206..3L50P10-0..
8 ways	# B208..3L50P10-0..
12 ways	# B212..3L50P10-0..

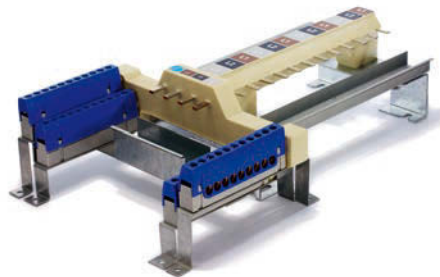
## VBR-System 400A (resin moulded)

no. of phases	3
type	pin
max. ampere rate	400
incomer	bolt M 10, 52.5 mm
outgoings	pin, 25.4 mm
4 ways	# B404..3L50P10-0..
6 ways	# B406..3L50P10-0..
8 ways	# B408..3L50P10-0..
12 ways	# B412..3L50P10-0..

## VBR-System 630A (resin moulded)

no. of phases	3
type	pin
max. ampere rate	630
incomer	bolt M 10, 52.5 mm
outgoings	pin, 25.4 mm
4 ways	# B604..3L50P10-0..
6 ways	# B606..3L50P10-0..
8 ways	# B608..3L50P10-0..
12 ways	# B612..3L50P10-0..
14 ways	# B614..3L50P10-0..*
16 ways	# B616..3L50P10-0..*

\* in prep.



### VBR-System 800A (resin moulded)

no. of phases	3
type	fork
max. ampere rate	800
incomer	bolt M 10, 70 mm
outgoings	fork, 35 mm
6 ways	# B806..3L70F20-0..
12 ways	# B812..3L70F20-0..

### VBR-System 800A (resin moulded)

no. of phases	4
type	fork
max. ampere rate	800
incomer	bolt M 10, 70 mm
outgoings	pin, 35 mm
6 ways	# B806..4L70P20-00
12 ways	# B812..4L70P20-00

### Pan Assembly System 125A

no. of phases	3
type	pin
max. ampere rate	125
incomer	pin, 18 mm
outgoings	pin, 18 mm
4 ways	# P104..3P18P00-0..
6 ways	# P106..3P18P00-0..
8 ways	# P108..3P18P00-0..
12 ways	# P112..3P18P00-0..
16 ways	# P116..3P18P00-0..
18 ways	# P118..3P18P00-0..
24 ways	# P124..3P18P00-0..

### Pan Assembly System 250A +N

no. of phases	3+N
type	pin
max. ampere rate	250
incomer	fork, 35 mm
outgoings	pin, 18 mm
4 ways	# P104..4F35P00-0..
6 ways	# P106..4F35P00-0..
8 ways	# P108..4F35P00-0..
12 ways	# P112..4F35P00-0..
16 ways	# P116..4F35P00-0..
18 ways	# P118..4F35P00-0..
24 ways	# P124..4F35P00-0..

### Pan Assembly System 125A +N

no. of phases	3+N
type	pin
max. ampere rate	125
incomer	pin, 18 mm
exit	pin, 18 mm
4 ways	# P104..4P18P00-0..
6 ways	# P106..4P18P00-0..
8 ways	# P108..4P18P00-0..
12 ways	# P112..4P18P00-0..
16 ways	# P116..4P18P00-0..
18 ways	# P118..4P18P00-0..
24 ways	# P124..4P18P00-0..

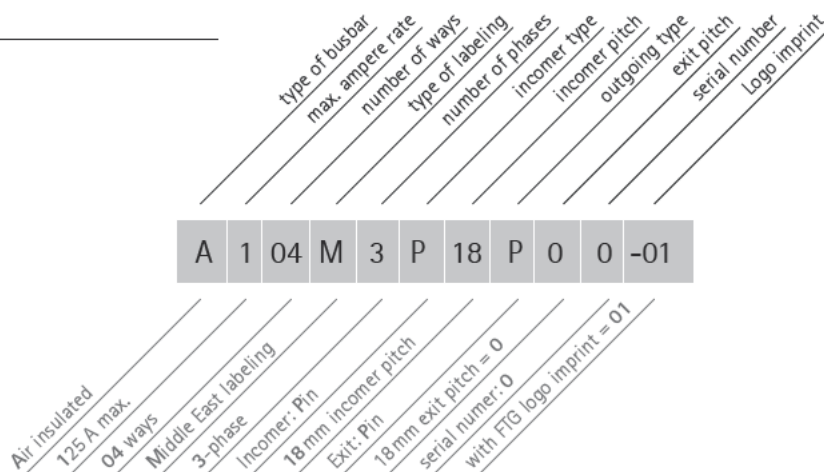
### Accessories

Protection cover for unused ports	# BRL5
Insulated terminal, 50 mm <sup>2</sup> , pin	# 802/215S
Connection terminal, 50 mm <sup>2</sup> , fork/pin	# 802/ESB50
Distribution block, 1/1, 95 mm <sup>2</sup> , grey	# KVIAC11095G
Distribution block 2/2, 95 mm <sup>2</sup> , grey	# KVIAC12095G
Neutral terminal, IP20, 9x25 mm <sup>2</sup>	# 38079B
Neutral terminal, 15x10 mm <sup>2</sup> , blue	# 870N/15
Earth terminal, 15x10 mm <sup>2</sup> , green	# 870S/15
Neutral terminal, IP20, 15x10 mm <sup>2</sup> , blue	# 870N/15FS
Earth terminal, IP 20, 15x10mm <sup>2</sup> , green	# 870S/15FS
Distribution bar, blank, 166x10mm <sup>2</sup>	# 870M
Cable set, 3pol, 16 mm <sup>2</sup> , 6mod, 17.8 mm	# PV3225/16



## Nomenclature

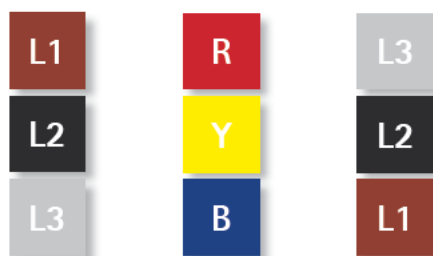
Example: VBA-System (Vertical Busbar Air insulated), max. current rate: 125A, 4 ways, Middle East labeling, 3 phases, Incomer type: pin, incomer pitch: 18mm, exit type: pin, exit pitch: 18mm, with imprinted FTG logo



type of busbar	A max.	no. of ways	label	no. of phases	incomer type	incomer pitch	outgoing type	outgoing pitch	serial no.	imprint
A air insulated	1 125A	04 4 ways	M Middle East	3 3 phases	P pin	1 8 18 mm	P pin	0 18 mm	0 -	00 without
B resin moulded	2 250A	06 6 ways	K Untd. Kingdom	4 4 phases	F fork	2 5 25 mm	F fork	1 25 mm	1 -	01 FTG logo
P Pan assembly	4 400A	08 8 ways	U USA		L bolt	3 5 35 mm		2 35 mm	2	
W without head	6 600A	10 10 ways				4 0 40 mm			3	
	8 800A	12 12 ways				5 0 50 mm				
		14 14 ways				7 0 70 mm				
		16 16 ways								
		18 18 ways								
		20 20 ways								
		22 22 ways								
		24 24 ways								

please note: some combinations only on request.

## available types of labels



K	M	U
Untd. Kingdom	Middle East	USA
L1: brown	R: red	L3: grey
L2: black	Y: yellow	L2: black
L3: grey	B: blue	L1: brown