

### 3 PRODUCT CODE

590 Series Three phase converters.

All members of the three phase converter range can be fully specified using a digit numerical order code.

<u>Block No.</u>	<u>No. of Digits</u>	<u>Function</u>
1	3	Basic product
2	4 or 5	Output current
3	1	Supply voltage (Power)
4	1	Field converter configuration
5	1	Supply voltage (Auxiliary)
6	1	User language
7	1	Speed feedback source
8	1	Serial link
9	4	Speed feedback calibration
10	3	Field voltage
11	3	Field current
12	3	Armature voltage
13	1	Armature current profile
14	2	Speed break 1
15	2	Armature current break 2
16	2	Speed break 2

The last two blocks in the product code allow for special control features and special build options .

17	2	Special hardware
18	3	Special software

The 18 blocks are defined as follows:-

BLOCK 1 3 Digits identifying the basic product.

590	3 phase 4 quadrant (regenerative) converter up to 150 amps.
591	3 phase 2 quadrant (non-regenerative) converter up to 150 amps.
592	3 phase 4 quadrant (regenerative) converter up to 270 amps.
593	3 phase 2 quadrant (non-regenerative) converter up to 270 amps.
594	3 phase 4 quadrant (regenerative) converter up to 450 amps.
595	3 phase 2 quadrant (non-regenerative) converter up to 450 amps.
596	3 phase 4 quadrant (regenerative) converter up to 720 amps.
597	3 phase 2 quadrant (non-regenerative) converter up to 720 amps.
598	3 phase 4 quadrant (regenerative) external stacks up to 1388 amp.
599	3 phase 2 quadrant (non-regenerative) external stacks up to 1388 amp.

**BLOCK 2**

590 to 597  
Inclusive

4 digits identifying the DC output current rating.

The digits in this block represent a number between 000.0 and 999.9. To form the code from the numbers, the decimal point is suppressed and leading zeros are added where necessary.

Examples:           234.5 Amps   -   Code 2345  
 Conversely:       Code 1234       -   123.4 Amps

598 and 599

5 digits identifying the DC output current rating.

The digits in this block represent a number between 0000.0 and 2000.0. To form a code from the numbers, the decimal point is suppressed and leading zeros are added where necessary.

Examples:           1250 Amps   -   Code 12500  
                   Code 11250   -   1125 Amps

**BLOCK 3**

1 Digit identifying the 3 Phase AC power, supply voltage.

0	110v	
1	115v	
2	208v	
3	220v	
4	240v	
5	380v	
6	415v	
7	440v	
8	460v	
9	480v	
A	500v	
B	550v	] — 598 / 599 External Stacks only
C	600v	
D	660v	

**BLOCK 4**

1 Digit identifying field supply configuration.

- 0 Externally supplied field.
- 1 Internally supplied field regulator.  
 (Note: This digit requires a second part product code (Blocks 10 to 16).)
- 2 Internally supplied full wave rectifier. \*
- 3 Internally supplied half wave rectifier. \*
- 4 Externally supplied field regulator.  
 (Note: This digit requires a second part product code (Blocks 10 to 16).)
- 5 Externally supplied full wave rectifier. \*
- 6 Externally supplied half wave rectifier. \*
- 7
- 8 Internally supplied 3 phase rectifier. \*
- 9

Note: Options marked with an asterisk will only be supplied on special request.

**BLOCK 5**

1 Digit identifying the auxiliary AC control supply voltage.

0	110v
1	115v
2	
3	220v
4	240v

**BLOCK 6** 1 Digit code to define user interface language.  
0 English

**BLOCK 7** 1 Digit code identifying the speed feedback source.  
0 Armature Voltage.  
1 DC Tacho.  
2 5701 Microtach.  
3 Wire ended encoder.

**BLOCK 8** 1 Digit code identifying the main serial link port (P2).  
0 No Serial Link.  
1 Serial Link Fitted RS422/485

**BLOCK 9** 4 Digits code identifying full speed.

Note: Block 9 is dependent upon Block 7

**IF** Block 7 is 0 i.e. Armature Voltage Feedback.

The four digits form a number which represents the ACTUAL armature voltage at full speed, rounded to the nearest whole number and with leading zeros added where necessary.

For example: 490 volts - Code 0490  
Code 0500 - 500 volts

**IF** Block 7 is 1 i.e. DC Tachogenerator Feedback.

The four digits form a number which represents the ACTUAL tacho feedback voltage at full speed, rounded to the nearest whole number and with leading zeros added where necessary.

For example: 123 volts - Code 0123  
Code 0090 - 90 volts

**IF** Block 7 is 2 i.e. 5701 MICROTACH Feedback and 3 i.e. an Encoder.

The four digits form a number which represents the ACTUAL motor revolutions per minute at full speed, rounded to the nearest whole number and with leading zeros added where necessary.

For example: 1500RPM - Code 1500  
Code 1000 - 1000RPM

**BLOCK 10** 3 Digits identifying the DC field voltage

The digits in this block represent the DC field voltage of the motor rounded to the nearest whole number with leading zeros added where necessary.

For example: 100 volts - Code 100  
Code 180 - 180 Volts

**BLOCK 11** 3 Digits identifying the DC field current

The digits in this block represent the DC field current of the motor, the current being in the range 00.0 to 30.0. To form the code from the numbers, the decimal point is suppressed and leading zeros are added where necessary.

For example: 12.5 Amps - Code 125  
Code 085 - 8.5 Amps

**BLOCK 12** 3 Digits identifying the armature voltage at base speed.

The digits in this block represent the armature voltage of the motor at base speed. Where base speed is the motor speed at full field, full armature volts. To form the code from the voltage, round to the nearest whole number with leading zeros added where necessary.

For example: 400 volts - Code 400  
Code 500 - 500 Volts

**BLOCK 13** 1 Digit identifying the requirement for armature current profile.  
0 No armature current profile.  
Note: Blocks 14, 15 and 16 are not required but should be entered as zeros on the product code.  
1 Armature current profile required.  
Note: Blocks 14, 15 and 16 are required to complete the current profile specification.

**BLOCK 14** 2 Digits identifying the motor speed at armature profile break 1.  
For example: 50% - Code 50      The digits in this block represent the percentage of motor top speed at the first (break 1) armature current profile point. Add leading zeros as necessary.  
Code 65 - 65%  
Note: Block 14 is not required if Block 13 = 0 but should be entered as zeros on the product code.

**BLOCK 15** 2 Digits identifying the motor armature current at armature profile break 2.  
The digits in this block represent the percentage of full load armature current at the second (break 2) armature current profile point. To form the code from the numbers, round to the nearest whole number with leading zeros added where necessary.  
For example: 49% - Code 49  
Code 59 - 59%  
Note: Block 15 is not required if Block 13 = 0 but should be entered as zeros on the product code.

**BLOCK 16** 2 Digits identifying the motor speed at armature profile break 2.  
The digits in this block represent the percentage of motor top speed at the second (break 2) armature current profile point. To form the code from the numbers, round to the nearest whole number with leading zeros added where necessary.  
For example: 60% - Code 60  
Code 90 - 90%  
Note: Block 16 is not required if Block 13 = 0 but should be entered as zeros on the product code.

**BLOCK 17** 2 Digits identifying special options (hardware)  
00 No special options  
01 to 99 Documented special options

**BLOCK 18** 3 Digits identifying special options (software).  
000 The Basic Block Diagram  
001  
002  
003  
004  
005  
006  
007  
008  
009  
010 to 999 Documented Special options