Bonfiglioli

Vectron

S2U

Variable Frequency Drive

Bonfiglioli

power, control and green solutions

Power, control and green solutions

Bonfiglioli, one name for a large international group.

It was back in 1956 that Clementino Bonfiglioli established in Bologna, Italy, the company that still bears his name. Now, some fifty years later, the same enthusiasm and dedication is driving Bonfiglioli to become the world's top name in power transmission and control solutions. Through directly controlled subsidiaries and production plants around the world, Bonfiglioli designs, manufactures and distributes a complete range of gearmotors, drive systems and planetary gearboxes, and boasts the most integrated offering on the market today.

Now, to emphasise its commitment to health, safety and environmental sustainability, Bonfiglioli is adding the term "green" to the description of its offering.

This commitment can be seen too in the Group's new trademark, made up of three shapes and colours identifying Bonfiglioli's three main business areas - Power, Control & Green Solutions and symbolising a set of values that includes openness and respect for other cultures.

In a market in which excellent product quality alone is no longer sufficient, Bonfiglioli also provides experience, know-how, an extensive sales network, excellent pre-sales and after-sales service and modern communication tools and systems to create high level solutions for industry, mobile machinery and renewable energy.

Variable Frequency Drive

The ideal drive for your lean application projects

Intuitive and simple, but powerful and effective, S2U is the Bonfiglioli Vectron compact inverter for efficient speed and torque control of electric motors.
S2U range is made of 2 frame sizes and kW rating from 0.20 kW up to 2.2 kW.
The simple installation and use, together with connectivity and outstanding range of functions, make it the perfect drive for the control of those applications where productivity and short time to market are critical.
S2U can be easily integrated into any control architectures thanks to the built-in Modbus port and the wide range standard communication configuration protocols available. Easy plug in of PC VPlus software is granted via the integrated RJ45 connector in the front of the drive.
Comprehensive service for product dimensioning and selection is available in any Bonfiglioli branch office or distributor all around the world. Cabling is made easier by spring terminals and clear terminals marking.
Once you have tried S2U inverter, you'll never leave it!

Areas of application

- High environment immunity
- High braking ability without braking resistor
- High torque at low speed
- Heat sink designed for dusty environment

Packaging industry

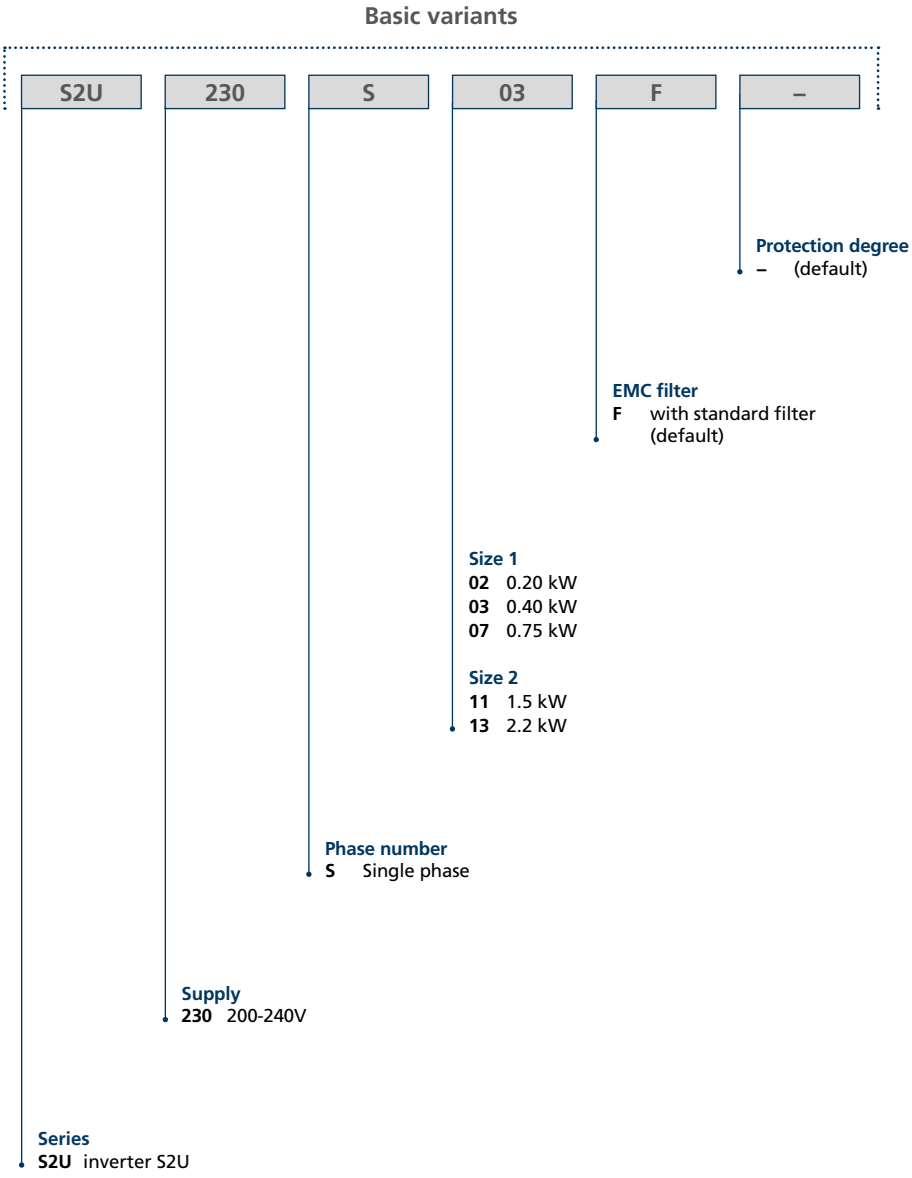
Fans, pumps and mixers

Textile machines

Material handling

Designation

S2U series



Features

- 32 bit CPU design strengthens the software's functionally, increases A/D responding speed, and enables automatic torque compensation
- Output frequency up to 650 Hz
- Modbus RS485 communication built-in for one-to-one and one-to-many control
- Links with Profibus, Devicenet, CANopen, Ethernet (TCP/IP) through gateways
- Built-in standard keypad including potentiometer for easy speed adjustment
- Links with PC VPlus software through RJ45
- EMI filter built-in for magnetic interference suppression complying with (IEC) EN61800-3 standard
- Micro size for easy installation including side-by-side and Dinrail mounting option
- PID feedback control built-in
- Suitable for conveyors, automated knitting machines, food packing machines, simple windmills and pumps
- Full protective functions
- Fanless design can effectively extend product life
- Emergency stop function built-in complying with global standard
- Panel mounting by heatsink or Dinrail option
- Earthing terminals built-in into heatsink to effectively provide grounding protection
- Flip form communication interface for easy link and dust-proof feature, with operational and protective functions

Type	Power kW
S2U230S-02	0.20
S2U230S-03	0.40
S2U230S-07	0.75
S2U230S-11	1.5
S2U230S-13	2.2

Size 1

Size 2

General technical data

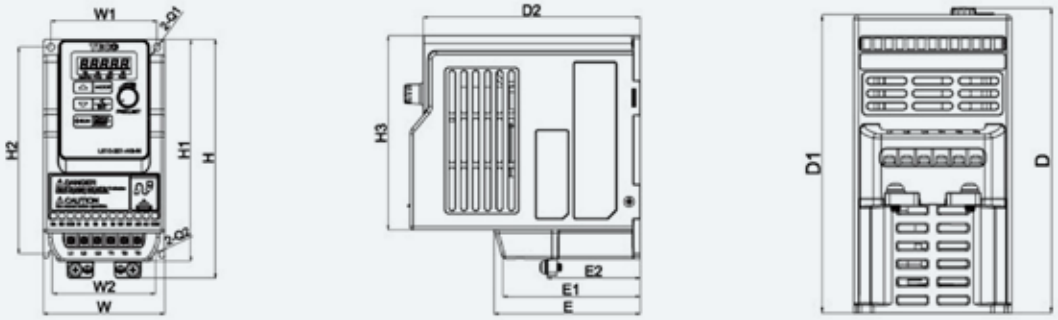
Item	S2U series
Control mode	V/F control + Auto-torque compensation function
Frequency	
Range	0.01 ... 650 hz
Setting resolution	Digital input: 0.01 Hz / Analog input: 0.06/60 Hz
Setting	Keypad: Set directly with keys or the VR on the keypad External terminal: AVI (0-10V/2-10V), ACI (0-20mA/4-20mA) input Multifunction input up/down function (group3) communication settings
Frequency limit	The lower and upper limit of frequency 3 jump frequency can be set
Run	
Operation set	Panel: run, stop button control External terminal: Multi-operation-mode2, 3 wireselection, Jog operation, Communication operation
Commonly control	
V/F curve setting	6 fixed curve, an arbitrary curve
Carrier frequency	1-16 kHz (default 5 kHz)
Acceleration and deceleration control	2 Acc/Dec time can be set 4 S curve can be set
Multifunction input	19 functions (refer to description on group3)
Multifunction output	14 functions (refer to description on group3)
Multifunction analog output	5 functions (refer to description on group3)
Other features	Overload detection, 8 preset speeds, Auto-run, Acc/Dec switch (2stages), Main/Alt run command select, Main/Alt frequency command select, PID control, torque boost, V/F start frequency, abnormity reset and ect.
Display	
LED	Display: parameter, parameter value, frequency, line speed, DC voltage, output voltage, output current, PID feedback, input and output terminal status, Heat sink temperature, Program version, Fault log and etc.
Status indicator	Instructions: run, stop, forward, reverse, and etc.
Protective functions	
Overload protection	The relays to protect the motor and the inverter
Over voltage	Over 410 V dc
Under voltage	Under 190 V dc
Momentary power loss restart	Inverter can auto-restart after power instantaneously loss
Stall prevention	Stall prevention for Acc/Dec operation
Short-circuit output terminal	Electronic circuit protection
Grounding fault	Electronic circuit protection
Other protection features	Protection for overheating of heat sink, the carrier frequency decreasing with the temperature function, fault output, reverse prohibit, for direct start after power up and error recovery parameter lock up
Environment	
Communication control	Built-in RS485 modbus, one to one or one to many control
Operating temperature	-10°C ... 50°C
Storage temperature	-20°C ... 60°C
Humidity	95% RH or less (no condensation)
Shock	20 Hz or less 1G (9.8 m/s^2) 20-50 Hz 0.6G (5.88 m/s^2)
Protection class	IP20

Technical data

S2U230S-		02	03	07	11	13
Max applicable motor output	kW	0.2	0.4	0.75	1.5	2.2
Rated output current	A	1.8	2.6	4.3	7.5	10.5
Rated capacity	kVa	0.68	1.0	1.65	2.9	4.0
Max input voltage	-	Single phase 200-240V / 50-60 Hz (+10%/-15%)				
Max output voltage	-	Three phase 0-240V				
Input current	A	4.9	7.2	11	15.5	21
Allowable momentary power loss time	-	1 second			2 seconds	
Protection level	-	IP20				

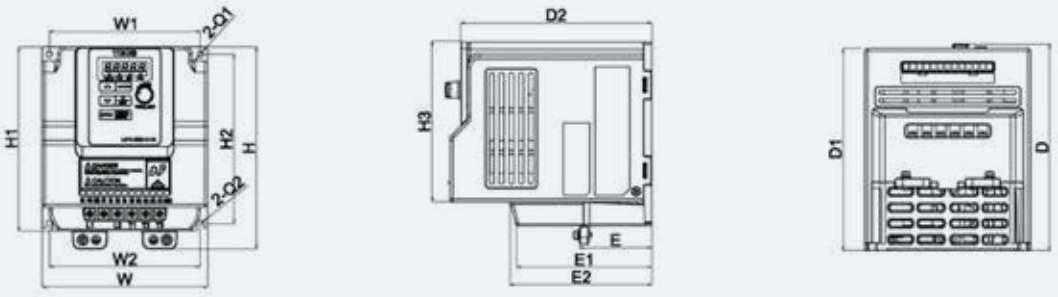
Dimensions

Size 1



Type	W	W1	W2	H	H1	H2	D	D1
				[mm]				
S2U230S-02 F	72	63	61	141	131	122	139.2	136
S2U230S-03 F	72	63	61	141	131	122	139.2	136
S2U230S-07 F	72	63	61	141	131	122	139.2	136

Size 2



Type	W	W1	W2	H	H1	H2	D	D1
				[mm]				
S2U230S-11 F	118	108	108	144	131	121	147.3	144.2
S2U230S-13 F	118	108	108	144	131	121	147.3	144.2

Added value

Sharing the value of our work with you.

The development of effective, tailored solutions for a wide range of applications is a fundamental aspect of our work.
We succeed in this because we co-operate closely with our customers, listen to their requests and work with them to improve our own performance.

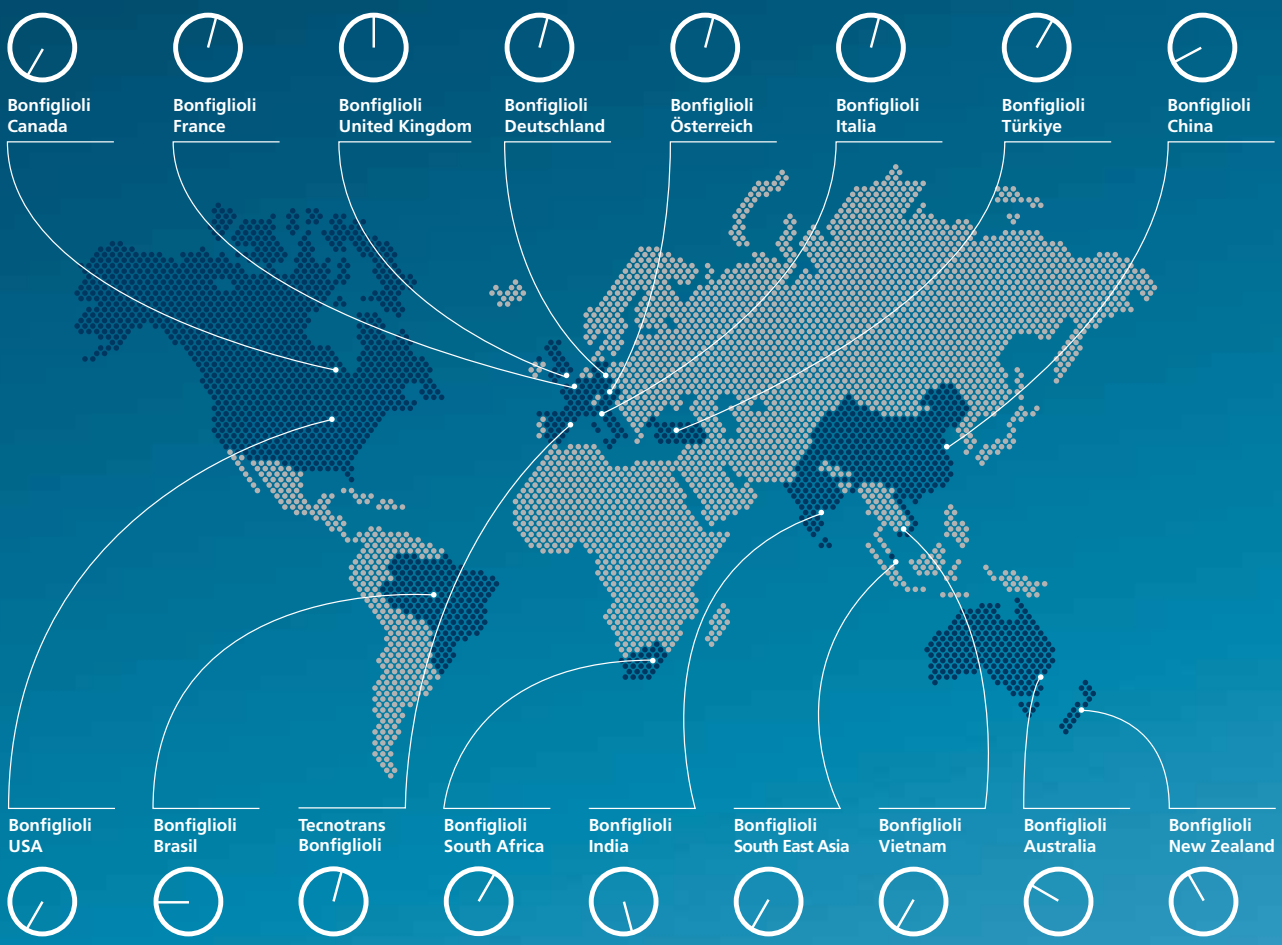
Bonfiglioli is determined to deliver the best service possible – before, during and after the sale of any of our products – by applying all our know-how, experience, technology, and advanced communication tools. Bonfiglioli works to the strictest standards of quality and safety, as certified by seven different internationally recognised institutes.

We believe in innovation, and back up this belief by dedicating 100 of our people and 5 activity centres to research and development, and by working hand in hand with some of the world's most prestigious universities.

Our work increasingly brings us into contact with other nations and cultures, for which we have the greatest respect and with whom we share a vision of sustainable development based on renewable energy.
This bond of commitment allows us to be an authoritative and reliable global partner for the present and the future.

Branches and facilities

Our branches



Our production facilities

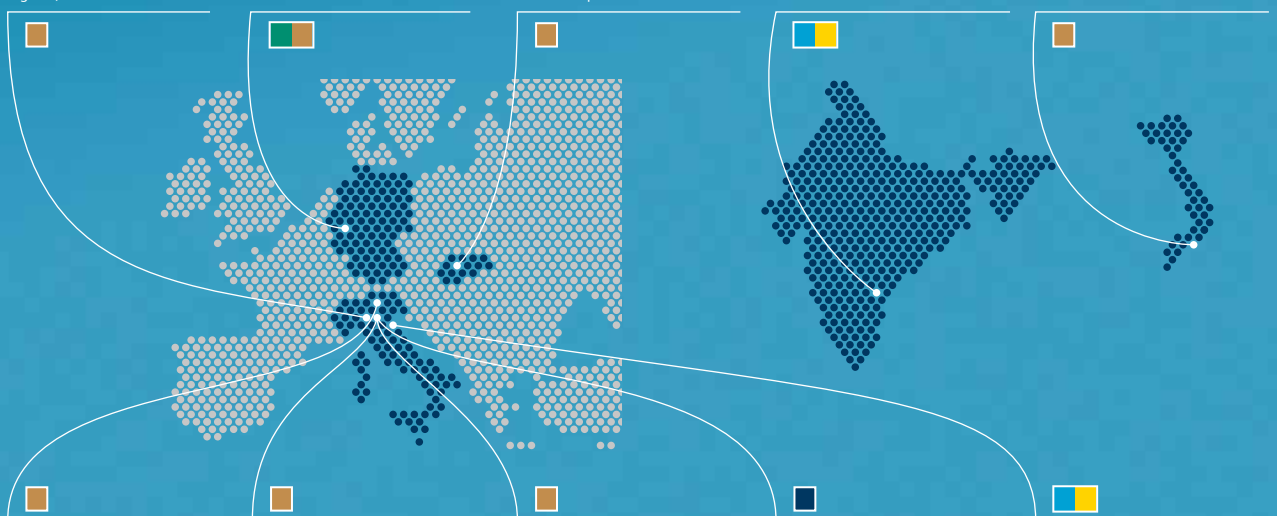
ITA1
Bonfiglioli Riduttori S.p.A.
Gearmotor assembly plant
Precison gearbox manufacturing & assembly plant
Vignola, Modena

BV
Bonfiglioli Vectron GmbH
Inverter plant
Krefeld, Germany

BSK
Bonfiglioli Slovakia Sro
Large gearboxes manufacturing plant
Povazska Bystrica
Slovakia Republic

BTPL
Bonfiglioli Transmission Pvt
Gearmotors and planetary gearbox manufacturing and assembly plant
Chennai, India

BVN
Bonfiglioli Vietnam
Electric motor plant
Ho Chi Min, Vietnam



BMR
Bonfiglioli Mechatronics Research
Brushless motor production
Rovereto, Trento

ITA2
Bonfiglioli Riduttori S.p.A.
Casting and gearcutting plant
Calderara di Reno, Bologna

B2
Bonfiglioli Riduttori S.p.A.
Assembly HDP, HDO, 300 series
Calderara di Reno, Bologna

HQ
Bonfiglioli Riduttori S.p.A.
Lippo di Calderara, Bologna

B6
Bonfiglioli Riduttori S.p.A.
Planetary gearboxes manufacturing & assembly plant
Forlì

BU Industrial
BU Regenerative & Photovoltaic
Headquarters
BU Wind & Mobile

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Bonfiglioli
power, control and green solutions

Bonfiglioli has been designing and developing innovative and reliable power transmission and control solutions for industry, mobile machinery and renewable energy applications since 1956.

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