S2U Series

Variable Frequency Drive

PRODUCTS &
SOLUTIONS

Variable frequency Drive: the ideal drive for your lean application projects

Intuitive and simple, but powerful and effective, S2U is Bonfiglioli 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.

Mechatronics - The Challenge to build your Success

Faster, better and cheaper - this is the new challenge for machine designers!

Increasing demands on the productivity of complex system machines, more flexible machines which run at highest efficiency level are requiring now new intelligent technical solutions that enhance growth tomorrow.

Bonfiglioli has implemented a precise and detailed strategy to precisely achieve this objective!

Mechatronic Drives & Solutions division is born with the mission to improve profitability by acting as a riskless partner and a provider of energy-efficient solutions over the total lifecycle in the field of industrial automation.

SYSTEM INTEGRATION   **EXPERTISE**   **ENERGY SAVING**

Type of applications

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

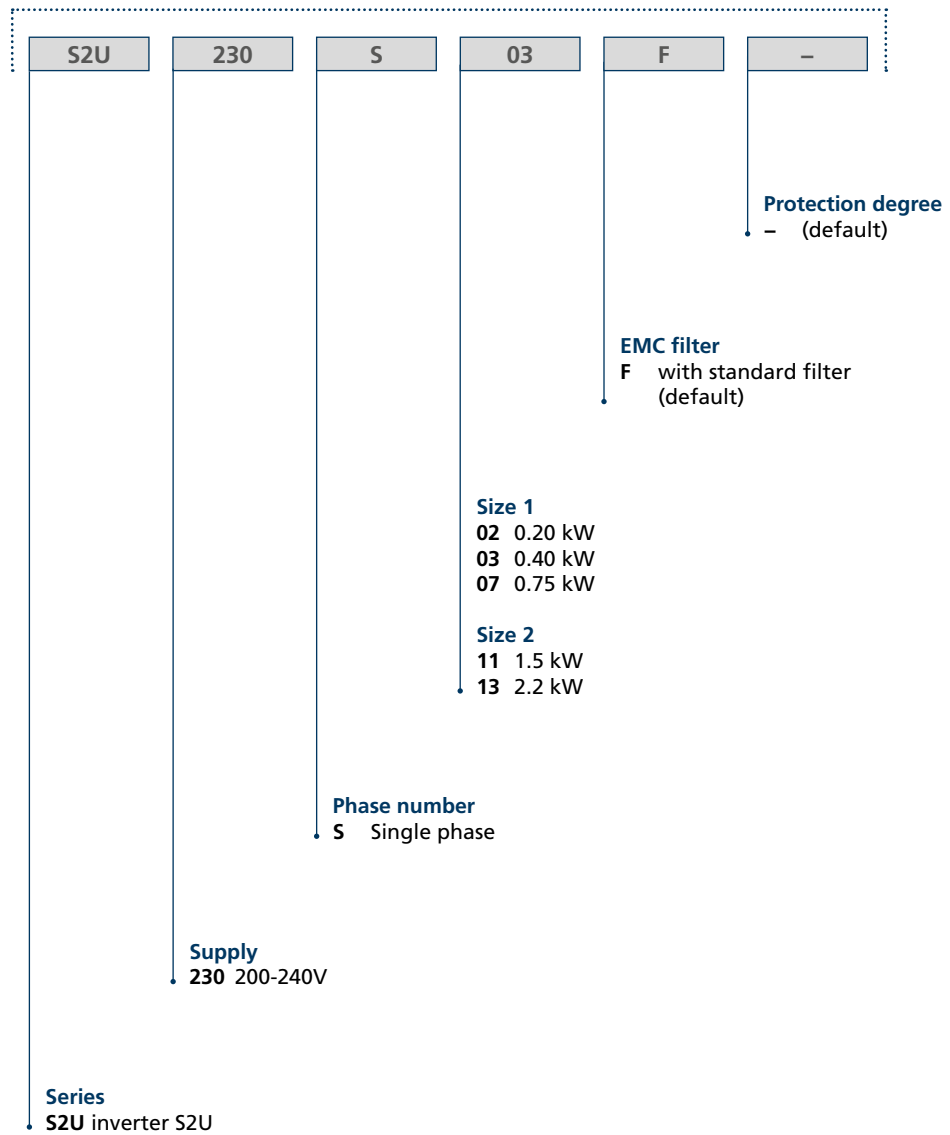**PACKAGING INDUSTRY**   **FANS, PUMPS AND MIXERS**   **TEXTILE MACHINES**   **MATERIAL HANDLING**

Designation

S2U series

Basic variants

S2U	230	S	03	F	–

Protection degree
– (default)

EMC filter
F with standard filter (default)

Size 1
02 0.20 kW
03 0.40 kW
07 0.75 kW

Size 2
11 1.5 kW
13 2.2 kW

Phase number
S Single phase

Supply
230 200-240V

Series
S2U inverter S2U

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

Bonfiglioli

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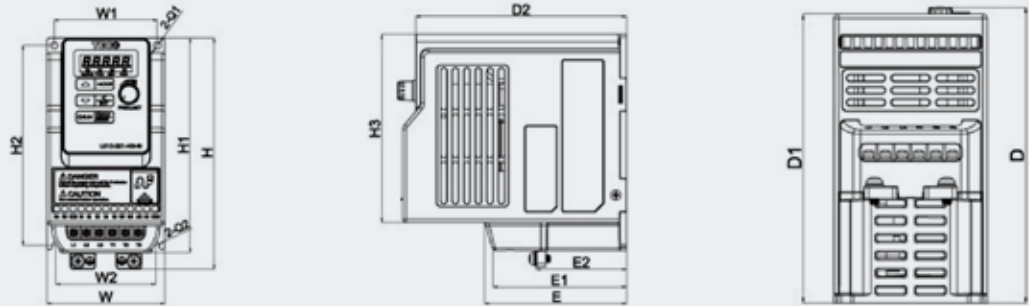
Type	W	W1	W2	H	H1	H2	D	D1
				[mm]				
S2U230S-02 F	72	63	61	141	131	122	139.2	136
S2U230S-03 F	72	63	61	141	131	122	139.2	136
S2U230S-07 F	72	63	61	141	131	122	139.2	136

Size 2
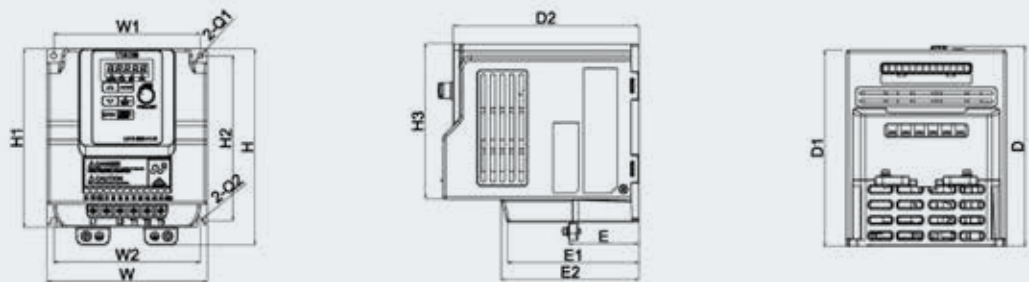
Type	W	W1	W2	H	H1	H2	D	D1
				[mm]				
S2U230S-11 F	118	108	108	144	131	121	147.3	144.2
S2U230S-13 F	118	108	108	144	131	121	147.3	144.2

Global **Presence**

Bonfiglioli is a market force with a presence spanning 22 countries on 5 continents. Our organization makes the most of geographic proximity to offer complete solutions combining efficiency and competence.

| 4000 EMPLOYEES | 20 BRANCHES | 15 PLANTS | 550 DISTRIBUTORS | 80 COUNTRIES |

We Are a Global Company

Thanks to an international network of sales branches and closely interconnecting production plants, we can guarantee the same high standards of Bonfiglioli quality anywhere at any given time. Aware that our direct presence in local markets is the key to long-lasting success, our family includes 20 sales branches, 15 production plants and more than 500 distributors around the world.

Our organization is always close by, offering complete and efficient solutions and supporting our customers with dedicated services, such as co-engineering or after-sales assistance.

Bonfiglioli Worldwide Locations

Australia
Bonfiglioli Transmission (Aust.) Pty Ltd
2, Cox Place Glendenning NSW 2761
Locked Bag 1000 Plumpton NSW 2761
Tel. +61 2 8811 8000

Brazil
Bonfiglioli Redutores do Brasil Ltda
Travessa Cláudio Armando 171 - Bloco 3
CEP 09861-730 - Bairro Assunção
São Bernardo do Campo - São Paulo
Tel. +55 11 4344 2322

China
Bonfiglioli Drives (Shanghai) Co. Ltd.
#68, Hui-Lian Road, QingPu District,
201707 Shanghai
Tel. +86 21 6700 2000

France
Bonfiglioli Transmission s.a.
14 Rue Eugène Pottier
Zone Industrielle de Moimont II
95670 Marly la Ville
Tel. +33 1 34474510

Germany
Bonfiglioli Deutschland GmbH
Sperberweg 12 - 41468 Neuss
Tel. +49 0 2131 2988 0

Bonfiglioli Vectron GmbH
Europark Fichtenhain B6 - 47807 Krefeld
Tel. +49 0 2151 8396 0

O&K Antriebstechnik GmbH
Ruhrallee 8-12 - 45525 Hattingen
Tel. +49 0 2324 2050 1

India
Bonfiglioli Transmission Pvt. Ltd.
Mobility & Wind Industries
AC 7 - AC 11 Sidco Industrial Estate
Thirumudivakkam Chennai - 600 044
Tel. +91 844 844 8649

Discrete Manufacturing &
Process Industries - Motion & Robotics
Survey No. 528/1
Perambakkam High Road Mannur Village,
Sriperumbudur Taluk Chennai - 602 105
Tel. +91 844 844 8649

Discrete Manufacturing &
Process Industries
Plot No.A-9/5, Phase IV MIDC Chakan,
Village Nighoje Pune - 410 501
Tel. +91 844 844 8649

Italy
Bonfiglioli Riduttori S.p.A.
Discrete Manufacturing &
Process Industries
Via Cav. Clementino Bonfiglioli, 1
40012 Calderara di Reno
Tel. +39 051 6473111

Mobility & Wind Industries
Via Enrico Mattei, 12 Z.I. Villa Selva
47122 Forlì
Tel. +39 0543 789111

Discrete Manufacturing &
Process Industries
Via Sandro Pertini lotto 7b
20080 Carpiano
Tel. +39 02985081

Motion & Robotics
Via Unione 49 - 38068 Rovereto
Tel. +39 0464 443435/36

New Zealand
Bonfiglioli Transmission (Aust.) Pty Ltd
88 Hastie Avenue, Mangere Bridge,
2022 Auckland
PO Box 11795, Ellerslie
Tel. +64 09 634 6441

Singapore
Bonfiglioli South East Asia Pte Ltd
8 Boon Lay Way, #04-09,
8@ Tadehub 21, Singapore 609964
Tel. +65 6268 9869

Slovakia
Bonfiglioli Slovakia s.r.o.
Robotnícka 2129
Považská Bystrica, 01701 Slovakia
Tel. +421 42 430 75 64

South Africa
Bonfiglioli South Africa Pty Ltd.
55 Galaxy Avenue, Linbro Business Park,
Sandton, Johannesburg
2090 South Africa
Tel. +27 11 608 2030

Spain
Tecnotrans Bonfiglioli S.A
Pol. Ind. Zona Franca, Sector C,
Calle F, n° 6 - 08040 Barcelona
Tel. +34 93 447 84 00

Turkey
Bonfiglioli Turkey Jsc
Atatürk Organize Sanayi Bölgesi,
10007 Sk. No. 30
Atatürk Organize Sanayi Bölgesi,
35620 Çiğli - Izmir
Tel. +90 0 232 328 22 77

United Kingdom
Bonfiglioli UK Ltd.
Unit 1 Calver Quay, Calver Road, Winwick
Warrington, Cheshire - WA2 8UD
Tel. +44 1925 852667

USA
Bonfiglioli USA Inc.
3541 Hargrave Drive
Hebron, Kentucky 41048
Tel. +1 859 334 3333

Vietnam
Bonfiglioli Vietnam Ltd.
Lot C-9D-CN My Phuoc Industrial Park 3
Ben Cat - Binh Duong Province
Tel. +84 650 3577411

PRODUCTION
ASSEMBLY
SALES
SERVICE

Bonfiglioli

We have a relentless commitment to excellence, innovation & sustainability. Our team creates, distributes and services world-class power transmission & drive solutions to keep the world in motion.