OMRON

The Simple and Compact Inverter



J1 Inverter -Efficient, Reliable, and Smart

In today's market, businesses are looking for cost-effective solutions without sacrificing quality. Many applications don't require high-end features – so why pay for more than you need?

That's why OMRON developed the J1 Inverter: a compact, affordable solution designed specifically for low-end applications, where the balance between performance, functionality, and price truly matters.

Ideal solution for a wide range of application

Designed for stability, it features stall prevention functions to ensure smooth operation during load or power supply fluctuations.

Quick reaction response against external disturbances thank to Dynamic Torque Vector Control.

Avoid overvoltage trip thanks to automatic deceleration control.

Overload prevention control automatically decreasing the frequency until the inverter cools down.

Slow flow-rate stopping function for stopping fan or pump at speed lower than a low limit is added for keeping lowest speed, to realize further energy-saving in conjunction with PID control.





Beverage, Fruit, Agriculture, Bakery etc.. Material Handling Applications: Conveyors System s • Mixer

Water Treatment Variable Torque Applications: • HVAC • Pumps • Fans

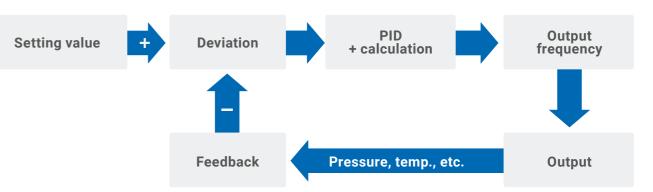
Equipped with PID control function

PID control is used to eliminate disparities in actual measurement values and target values for such applications as those involving instrument control employed for fans and pumps, facilitating the control of temperature, flow rate, and pressure with proportional action (P), integral action (I), and derivative action (D).

Proportional, Integral and Derivative adjustable parameters adaptable for each system (temperature, pressure, etc.).

Set Value (SV) selectable between keypad, analog input, UP/DOWN function, communications or multistep.

Equipped with PID control function





 Noodle-making machine Woodworking machinery

Installation

Side-by-side mounting is possible



For inverters installed side-by-side, maximum ambient temperature is +40 °C

Connectivity

Equipped with RS-485 as standard

Designed for seamless integration, J1 enables reliable multi-drop connections at the inverter's terminals. It supports Modbus communication, ensuring efficient and flexible data exchange across your network.





Example:

Units: mm

5 drives: 1-phase 200V 0.75 kW

Certifications

Corresponding to the main international standards



- UL Standards (USA)
- cUL Approval (Canada)
- CE Marking (Europe)
- Restriction of Hazardous Substances (Europe)
- EAC (Eurasian and Russia)

CUL US LISTED UL/CUL (EC Directive (CE Mark) RoHS₂

Programming

Sysmac Studio Support

One software for programming, configuration and monitoring. User friendly and helpful GUI for drive configuration by Sysmac Studio Drive Edition.



Simple and Intuitive Programming Software

J1 Editor is a lightweight 100KB tool ideal for new users. It offers basic functionality like parameter editing and upload/ download.Trace is not included, and the software is completely free to use.



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Product Scope

Low-End Inverter J1



0.4 to 2.2kW 1ph 200V 0.4 to 3.7kW 3ph 400V IP20

J1 AC Drive, 0.4 kW, 1.8 A, 400 VAC, 3~ input, max. output freq. 400 Hz
J1 AC Drive, 0.75 kW, 2.5 A, 400 VAC, 3~ input, max. output freq. 400 Hz
J1 AC Drive, 1.5 kW, 4.3 A, 400 VAC, 3~ input, max. output freq. 400 Hz
J1 AC Drive, 2.2 kW, 6.3 A, 400 VAC, 3~ input, max. output freq. 400 Hz
J1 AC Drive, 3.7 kW, 10.5 A, 400 VAC, 3~ input, max. output freq. 400 Hz
J1 AC Drive, 0.4 kW, 3.5 A, 200 VAC, 1~ input, max. output freq. 400 Hz
J1 AC Drive, 0.75 kW, 4.2 A, 200 VAC, 1~ input, max. output freq. 400 Hz
J1 AC Drive, 1.5 kW, 9.2 A, 200 VAC, 1~ input, max. output freq. 400 Hz
J1 AC Drive, 2.2 kW, 10 A, 200 VAC, 1~ input, max. output freq. 400 Hz

Notes



OMRON

Would you like to know more?

OMRON EUROPE → +31 (0) 23 568 13 00
industrial.omron.eu

Sales & Support Offices

Austria

Tel: +43 (0) 2236 377 800 industrial.omron.at

Belgium Tel: +32 (0) 2 466 24 80 industrial.omron.be

Czech Republic Tel: +420 234 602 602 industrial.omron.cz

Denmark Tel: +45 43 44 00 11 industrial.omron.dk

Finland Tel: +358 (0) 207 464 200 industrial.omron.fi

France Tel: +33 (0) 1 56 63 70 00 industrial.omron.fr **Germany** Tel: +49 (0) 2173 680 00 industrial.omron.de

Hungary Tel: +36 1 399 30 50 industrial.omron.hu

Italy Tel: +39 02 326 81 industrial.omron.it

Netherlands Tel: +31 (0) 23 568 11 00 industrial.omron.nl

Norway Tel: +47 22 65 75 00 industrial.omron.no

Poland Tel: +48 22 458 66 66 industrial.omron.pl Portugal

Tel: +351 21 942 94 00 industrial.omron.pt

Russia Tel: +7 495 648 94 50 industrial.omron.ru

South Africa Tel: +27 (0)11 579 2600 industrial.omron.co.za

Spain Tel: +34 902 100 221 industrial.omron.es

Sweden Tel: +46 (0) 8 632 35 00 industrial.omron.se

Switzerland Tel: +41 (0) 41 748 13 13 industrial.omron.ch Turkey

Tel: +90 (216) 556 51 30 industrial.omron.com.tr

United Kingdom Tel: +44 (0) 1908 258 258 industrial.omron.co.uk

More OMRON representatives industrial.omron.eu

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