



## Top product features!

- Wide input range, single phase 100...240 V AC  $\pm 10\%$
- Robust metal housing or compact plastic housings occupy minimal control cabinet space
- Extra power due to "power boost" design
- Energy-saving efficiencies up to 94% generate less heat and eliminate the need for external cooling
- Short-circuit and overload protection

## Low power loss ensures uptime

**NEW!** ifm's power supplies are designed to provide the voltage supply for sensors, actuators, controllers, and other electronic loads. These new power supplies are compact and lightweight, generating less heat and occupying minimal space in control cabinets. Models operate from a wide input voltage range with short circuit and overload protection, including "no-hiccup" short circuit operation.

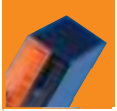
ifm's switched-mode power supplies have a typical regulated output voltage of 24 VDC. Between no-load and full-load, they ensure stable supply voltage and operational reliability in case of supply voltage fluctuations. Line voltage fluctuations up to  $\pm 15\%$  as well as line interference can be compensated for and not passed on to the load. They have a high peak current capacity for inductive load switching and do not shut down or fold-back due to the high inrush currents required.

Each power supply undergoes a comprehensive test procedure including high frequency and high current load switching. To further insure reliability, all power supplies are fully burned in at elevated temperatures.



With its "power boost" design, ifm's power supplies provide up to 50% extra power above the rated load for up to 5 seconds. This additional power allows for difficult loads to start, such as motors.

Company	IO-Link		Position Sensors					Motion Control	Vision Sensors
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Encoders / Speed monitors	2D / 3D inspection
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143



# Product + accessory selector

Dimensions (mm)	Current (A)	Output Voltage (V)	Input Voltage Range (V)	Efficiency (%)	Part No.	List Price (1-pc.)
<b>Power supply • 1-phase (24 V DC)</b>						
45 x 90 x 100	1.25	24...28 DC	100...240 AC	84.0	<b>DN1030</b>	<b>\$141.00</b>
45 x 90 x 100	2.5	24...28 DC	100...240 AC	88.0	<b>DN1031</b>	<b>\$152.00</b>
40 x 130 x 127	3.3	24...28 DC	100...240 AC	89.8	<b>DN4011</b>	<b>\$157.00</b>
40 x 130 x 127	5.0	24...28 DC	100...240 AC	90.2	<b>DN4012</b>	<b>\$208.00</b>
62 x 130 x 127	10.0	24...28 DC	100...240 AC	91.6	<b>DN4013</b>	<b>\$271.00</b>
65 x 130 x 137	20.0	24...28 DC	100...240 AC	94	<b>DN4014</b>	<b>\$315.00</b>
<b>NEW!</b> 125 x 130 x 133	40.0	24...28 DC	100...240 AC	93.6	<b>E84016</b>	<b>\$568.00</b>
<b>Power supply • 3-phase (24 V DC)</b>						
62 x 130 x 127	10.0	24...28 DC	3 x 380...480 AC	92.8	<b>DN4033</b>	<b>\$313.00</b>
65 x 130 x 137	20.0	24...28 DC	3 x 380...480 AC	94	<b>DN4034</b>	<b>\$418.00</b>
<b>NEW!</b> 110 x 130 x 131	40.0	24...28 DC	3 x 380...480 AC	95.2	<b>E84036</b>	<b>\$504.00</b>

## Technology Comparison

Features	Low cost Brand A	Good performance Brand B	ifm's DN4012	Why is this important?
<b>Power Supply Efficiency</b>	86%	90%	90%	<b>Efficiency reduces cabinet space:</b> A more efficient power supply generates less heat in a cabinet. This allows a smaller enclosure to be designed, which reduces machine size and saves in build costs. ifm's new power supplies are designed to generate less heat and can be mounted in smaller cabinets.
<b>Inrush Current</b>	24 A	15 A	3 A	<b>Limiting inrush current reduces cost:</b> ifm's microprocessor-controlled inrush current limiter ensures minimum inrush current. This allows the option to use smaller circuit breakers and thinner gauge wires, which reduces the overall cost of the system.
<b>Housing Size</b>	63.5 x 142 x 116 mm	40 x 130 x 125 mm	40 x 124 x 127 mm	<b>Compact housing size reduces cabinet space:</b> Cabinet space is a valuable commodity. ifm's new slim-line power supplies occupy less space. Therefore, smaller enclosures may be designed resulting in considerable cost savings.
<b>Mean Time Before Failure</b>	450,000 hrs.	635,000 hrs.	869,000 hrs.	<b>High MTBF increases reliability:</b> Mean Time Between Failure (MTBF) values indicate the quality and reliability of the unit. ifm power supply's high quality components ensure long life in application.
<b>AC Buffer Times</b>	None	None	80 ms	<b>AC buffering increases reliability:</b> AC lines can be affected by EMC and other factors leading to an unstable AC input voltage and can cause a disruption on the 24 VDC side. Longer buffer times allow for brief disturbances on the AC input line without affecting the 24 VDC output power. ifm's power supplies are designed with AC buffering capability.
<b>Power Reserve</b>	None	20%	20%	<b>Additional power reserve increases reliability:</b> The ability to provide a continuous current beyond standard specifications allows difficult loads, such as motors, to start. ifm's power supplies provide 20% extra current to ensure uninterrupted operation.

<b>Safety Technology</b>	<b>Process Sensors</b>	<b>Industrial Networks</b>	<b>ID Systems</b>	<b>Machine Condition</b>	<b>Power Supplies</b>	<b>Wiring Technology</b>				
Safety products	Pressure	Flow	Level	Temperature	AS-i network	Safety systems	RF identification systems	Diagnostic systems	Power supplies	Cordset solutions
144 - 155	156 - 175	176 - 191	192 - 207	208 - 225	226 - 239	240 - 251	252 - 253	254 - 259	260 - 263	264 - 277



## Top product features!

- Provides regulated 24 VDC power for 2 or 3-wire position sensors
- Suitable for PNP or NPN switching sensors
- Extra-slim housing with wide input operating voltage range
- Single and dual channel versions
- High sensor supply current: 24 VDC / 300 mA

## AC to DC Converters

Switching amplifiers are used for powering DC sensors in AC voltage environments and for switching higher current loads or AC voltage.

The new switching amplifiers by ifm have a compact housing and mount on standard 35 mm DIN rail. Both one and two-channel models are available. Their wide input voltage range allows them to be powered with both 120 V AC and 220 V AC power sources. Additional features include plug-in terminals for simple installation and selectable PNP or NPN sensor inputs.

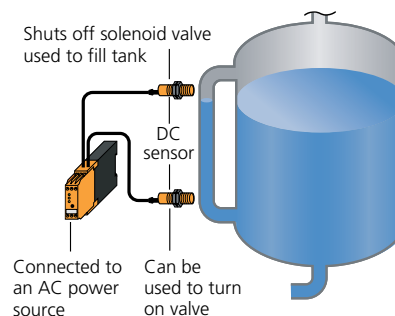
One-channel switching amplifiers are suitable for a sensor with one output, the dual channel types are suitable for a sensor with two outputs or two sensors with one output each. Current consumption must be taken into account.

### Single channel - Part No. DN0210

Provides regulated 24 VDC power for 2- or 3-wire proximity sensors and converts the sensor signal to a relay output capable of switching up to 1250 VA. The unit can be used with either a positive-switching or negative-switching proximity switch and an LED indicates the status of the output relay.

### Dual channel - Part No. DN0220

Two integrated 3A relays enable higher current loads such as solenoids to be switched by the sensors. This dual channel AC to DC converter provides regulated 24 VDC power to 2- or 3-wire position sensors. Suitable for PNP or NPN switching sensors, the DN0220 operates on a wide input voltage range and has a high sensor supply current. The compact, corrosion-resistant housing occupies minimal control cabinet space.



Dual channel converter can be used with two sensors with one output each.

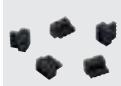
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## Product + accessory selector

Dimensions (mm)	Type	Output Voltage (V)	Nominal Input Voltage (V)	Frequency (Hz)	Part No.	List Price (1-pc.)
109 x 25 x 113	Single channel	24 DC / 300 mA	110...240 AC	50...60	<b>DN0210</b>	<b>\$182.00</b>
109 x 25 x 113	Dual channel	24 DC / 2 x 150 mA	110...240 AC	50...60	<b>DN0220</b>	<b>\$249.00</b>

### Accessories

Type	Description	Part No.	Unit Price (1-pc.)
	Connector, 4 pins with screw terminals, pack of 5 (supplied)	<b>E40173</b>	<b>\$23.00</b>

 Can't find the right sensor for your application, call 800-441-8246 or visit [www.ifm.com/us](http://www.ifm.com/us)

### Technical Specs

Contact rating: 4 A (240 V AC, 24 V DC); resistive load  
 Auxiliary energy for sensors: 24 DC SELV, ± 10 %  
 300 mA  
 short circuit and overload protected  
 Protection housing / terminals: IP20  
 Ambient temperature: -4...140 °F (-20...60° C)  
 Display DN0210: Power supply 1 x green LED  
 Output 1 x yellow LED (lights if output relay is energized)  
 Fault 1 x red LED  
 Display DN0220: Power supply 1 x green LED  
 Output 2 x yellow LED (lights if output relay is energized)  
 Fault 1 x red LED  
 Potentiometer: Selection PNP / NPN  
 Housing material: Plastic PC GF20  
 Mounting: Rail TH35 (according to EN 60715)  
 Connection: Unit: 4-pin terminal blocks with 5.0 mm pitch  
 Connector: 4-pin with screw connection

### Simple and comprehensive website



Data sheets, application examples, software downloads, virtual product demos... just one click away.

-  **Place orders, tech support**  
800-441-8246
-  **Visit our product catalog**  
[www.ifm.com/us](http://www.ifm.com/us)
-  **Shop for products online**  
Easy ordering via eShop

#### Safety Technology

#### Process Sensors

#### Industrial Networks

#### ID Systems

#### Machine Condition

#### Power Supplies

#### Wiring Technology

Safety products

Pressure

Flow

Level

Temperature

AS-i network

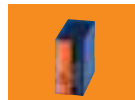
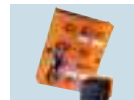
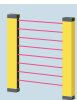
Safety systems

RF identification systems

Diagnostic systems

Power supplies

Cordset solutions



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