

Signal Converters & Isolators

Frequency To Analogue Converter PXF-20



DESCRIPTION

Frequency converter for converting frequency to an analogue process signal. The frequency converter has NPN/PNP/NAMUR input in 5 ranges from 0-5kHz.

The frequency range for input are selected by a rotary switch and type of analogue output are selected via choice of terminal - see connection diagram.

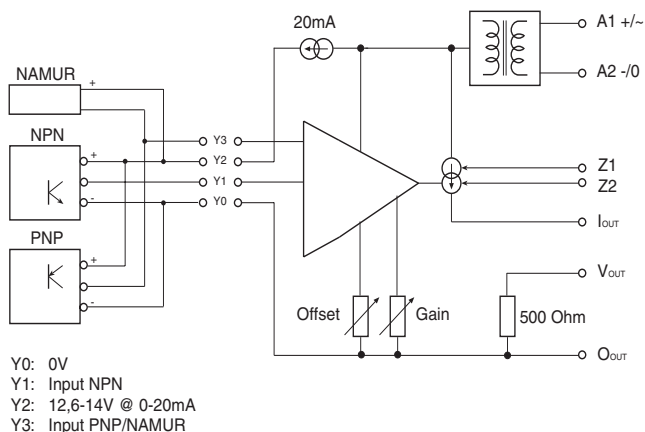
Features

- NPN/PNP/namur input in 5 ranges.
- Output 0-10VDC/2-10VDC/0-20/4-20mA - selected via terminals.
- Output offset and gain adjustable $\pm 5\%$.
- Yellow LED indication of input less than 5%.
- Galvanically isolated supply/output.
- Internal sensor supply 12.6V to 14V @ 0-20mA.
- Operating voltage 24-48V AC/DC, 115-230V AC.

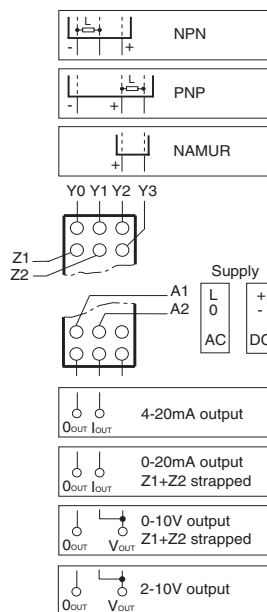
VERSIONS/ORDERING CODES

Type:	Frequency converter	PXF-20	PXF-20	924
Supply Voltage:	12-48V AC/DC	924		
	115-230V AC	230		

BLOCK DIAGRAM



WIRING DIAGRAM

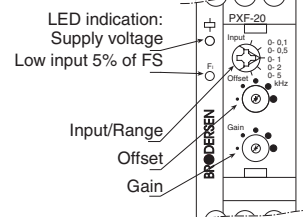
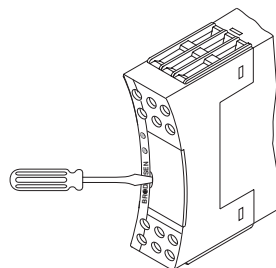


ADJUSTMENT

PXF-20 is delivered adjusted to offset = 0% and gain = 100%. To compensate for any loss in cables, etc. is it possible to adjust the output signal.

Remove the front cover. The offset (zero) and gain (span) on the output signal can be adjusted $\pm 5\%$ of max. signal. Put the cover back on to avoid any accidental adjustment of the relay. See fig. 1.

Fig. 1



TECHNICAL DATA

Input signal:

NPN/PNP/NAMUR frequency input
Frequency ranges/selected by rotary switch.
0-100Hz
0-500Hz
0-1000Hz
0-2000Hz
0-5000Hz
Internal supply for sensor max. 20mA. Sensors with higher current consumption require external supply.

Input voltage levels:

PNP/NAMUR:	High > 5V	Low < 2,5V
NPN	High > 7,5V	Low < 5V
Max. voltage level:	35V DC.	

Min. pulse/pause time: 10µs

Output:

Output signal	R_{MAX}
4-20mA DC	500 Ohm
0-20mA DC	500 Ohm
0-10VDC	via internal 500 Ohm shunt.
2-10VDC	via internal 500 Ohm shunt.
Selected via terminals.	

Offset (zero) and gain (span) are adjustable $\pm 5\%$. see. fig. 1.

Accuracy:	<1%, without adjustment.
Linearity:	<0,05% of full scale.
Temp. coefficient	0,02%/°C.
Ripple (RMS):	<0,1% at range >1kHz.
	<1% at range <1kHz.

Supply voltage:

Supply voltage	Consumption
12-48V AC/DC (10,5-60)V AC/DC	2W
115-230V AC (90-264)V AC	2W

All galvanically isolated 3,75kV AC 1 min. to input and output.

General data:

Ambient temperature:-20 to 55°C.
Storage temperature:-40 to 80°C.
Mounting: 35mm DIN-rail (EN50022).
Terminals: Screw terminals with dual compartment.
Terminal screws are combined crosshead/slotted. Up to 2 x 2,5mm² wire (2 x 1,5mm² inc. ferrule).
Recommended torque, 0,5Nm., Max. 0,7 Nm. (VDE0609-2)
Housing: Noryl (GE), UL94V1.
Terminal block: Noryl (GE), UL94V0.
Weight: 170 g.
Indicators: Green LED = operating voltage.
Yellow LED = input less than 5-10% of FS.
Protection: IP20.
Electric isolation: 3,75kVAC (1 min.) between supply, INPUT and supply (EN60950).
Note: No galvanic isolation between input and analogue output.

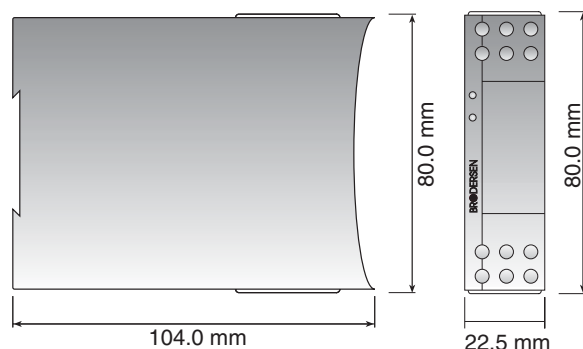
SPECIFICATIONS:

PXF-20 is designed and developed with regard to relevant specifications:

- EN60204-1 / VDE0113 electrical material on machines.
- VDE0110 / IEC664 Isolation specifications/creepage and clearance distances.
- Electrical safety in accordance with EN61010.
- IEC414 Safety regulations for control and monitoring equipment.
- EMC: Emission EN50081-1
Immunity EN50082-2
- Humidity in accordance with IEC68-2-3; RH=95%, 40°C.
- Vibration in accordance with IEC68-2-6.
- Shock when mounted, in accordance with IEC68-2-27.

PXF-20 is CE-marked in accordance with EMC and the Low Voltage Directive.

MECHANICAL DIMENSIONS





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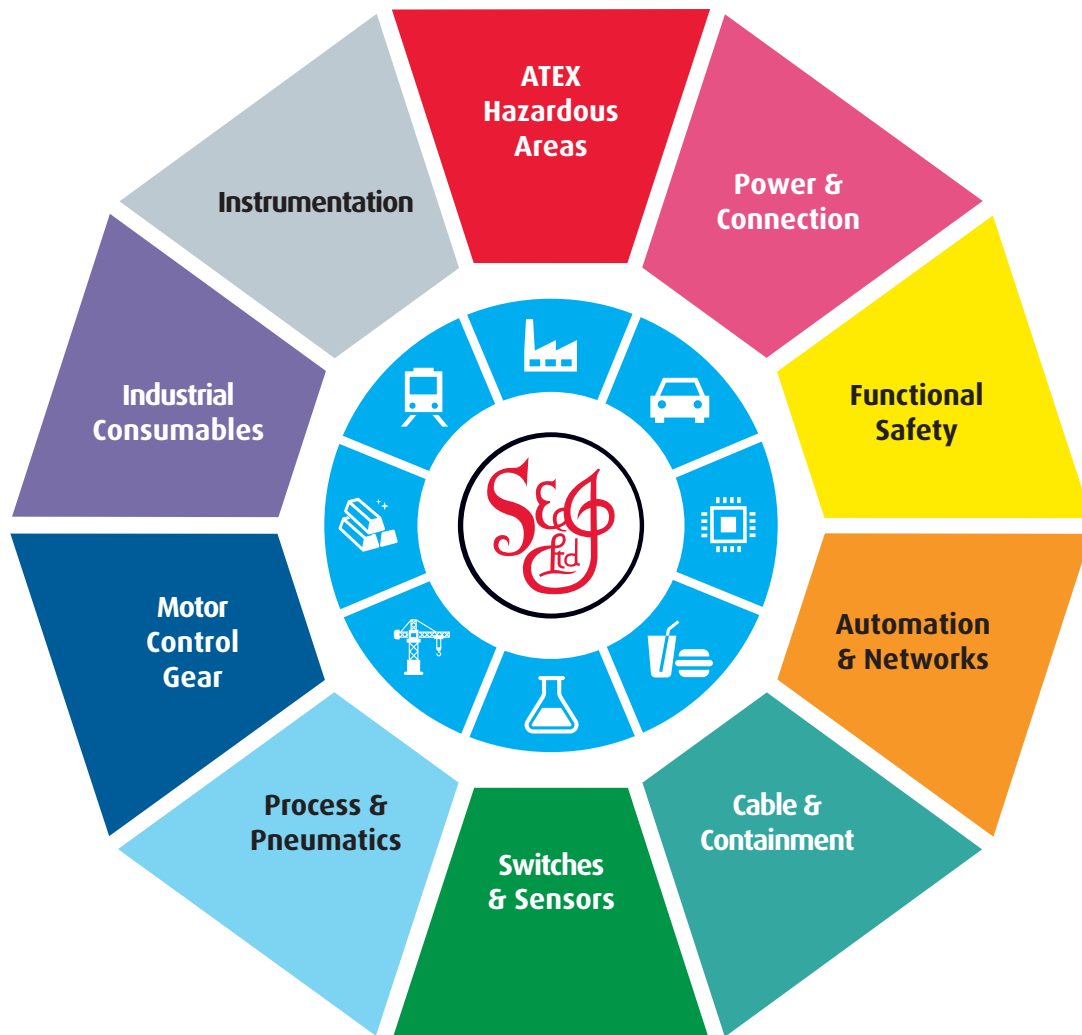
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