

# Signal Converters & Isolators

## Frequency To Analogue Converter PXF-20



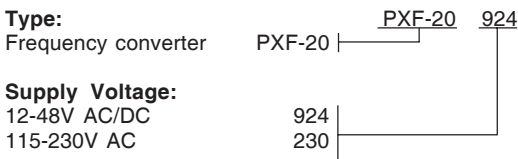
### DESCRIPTION

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.

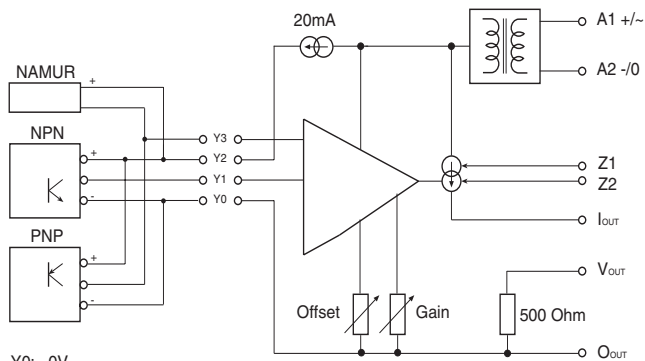
#### Features

- 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

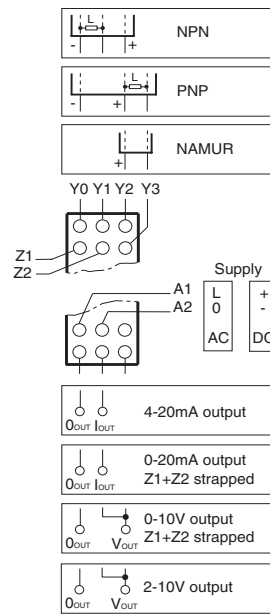


### BLOCK DIAGRAM



Y0: 0V  
Y1: Input NPN  
Y2: 12,6-14V @ 0-20mA  
Y3: Input PNP/NAMUR

### WIRING DIAGRAM

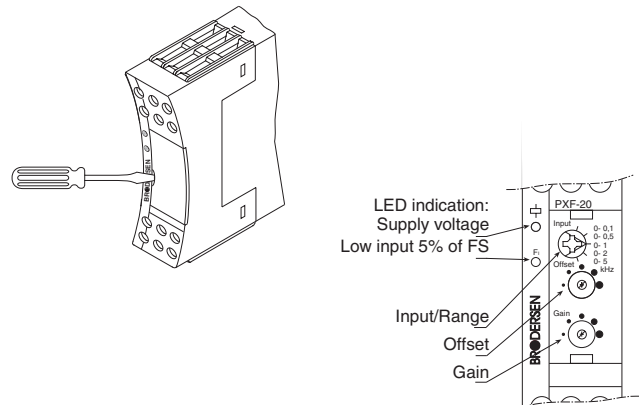


### ADJUSTMENT

PXF-20 is delivered adjusted to offset = 0% and gain = 100%. To compensate for any loss in cables, etc. it is 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
0-10V DC	via internal 500 Ohm shunt.
2-10V DC	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:**

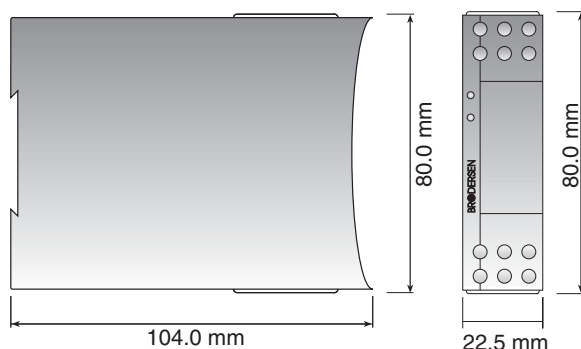
Ambient temperature:-20 to 55°C.  
 Storage temperature:-40 to 80°C.  
 Mounting: 35mm DIN-rail (EN50022).  
 Terminals: Screw terminals with dual compartment.  
 Terminal screws are combined crosshead/slotted. Up to 2 x 2,5mm<sup>2</sup> wire (2 x 1,5mm<sup>2</sup> inc. ferrule).  
 Recommended torque, 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**



# SCATTERGOOD & JOHNSON LTD

ELECTRICAL ENGINEERING & FLUID CONTROL DISTRIBUTORS

Est.1899

At Scattergood & Johnson Ltd, we pride ourselves on being a technical distributor to specialist industries.

Working with a range of quality product suppliers across a number of specialist markets, we are not your average 'box shifter' - we are your technical and supply chain partner.

We fully support every product we sell - for free! Our internal team and external sales engineers can answer any product or application question, no matter the complexity.

Backing up this technical ability is a range of 50,000+ products available from stock for nationwide next day delivery (same day if required!), or you can collect what you need from any of our trade counters around the UK.

Select your specialist interest below to learn more about how we can help.



Online, In Branch and On the Road - Scattergood & Johnson Ltd, there when you need us.

# [www.scatts.co.uk](http://www.scatts.co.uk)