IGI Systems FPV Interface Combined USB-RS485 Communication and Power Supply for Brooks Instrument Digital Mass Flow Devices, Analogue Pressure Transducers and Solenoid Valves

As simple to use as the dIGIbox and fully compatible with the IGI multi-drop cable, the FPV Interface is designed to provide additional functionality by adding combined analogue signal acquisition and 24V DC power to drive up to 8 pressure transducers, and a 24V DC power relay to actuate up to 8 solenoid valves.

Power to and signal from analogue pressure transducers is achieved via 4 D9 connectors, each D9 connector driving 2 pressure transducers. The 16 bit analogue to digital converter can be used for generic analogue signal acquisition from devices other than pressure transducers.

The 24V DC relay power is supplied to up to 8 solenoid valves via a 16 port terminal strip and the maximum current is 2A per relay channel. The 8 channel 24V DC relay outputs are not limited to solenoid valves and they can be used to actuate other devices and Solid State Relays to apply power to external devices.

Windows PC based control/logging and programmable timed setpoint changes/valve states is achieved via the IGI “LAB interface” application, or via the “IGIDLL (with LABview example code) so that the FPV Interface can be integrated into your own LABview applications.

Simply install the USB driver, connect the multi-drop cable to FPV Interface and to the Brooks Instrument digital flow devices, hook up the pressure transducer cables and wire in the solenoid valves and that’s it… run the “LAB interface” software and you have working flow devices, pressure transducers and valves.


Pressure Transducers
Valve Relay Power
1-2
3-4
5-6
7-8
Digital Flow


IGIsystems
FPV Flow + Pressure + Valve

Specifications:

CE Mark: YES

Physical:

Dimensions (HxWxD): 60 x 170 x 250 mm

Weight: 950g

Electrical (External 24V DC Power Supply):

AC Input: 90–264 V; 47–63 Hz

Full Load Current: 2.3A @ 100V

24V DC Output: max 7.5A

Dimensions (HxWxD): 44 x 85 x 171 mm

Weight: 300g

Environmental:

Operating Temperature: 0-40 ºC

Relative Humidity: 90% max, non-condensing

LED Indicators:

Red:	USB 5V DC Power Present
Yellow:	RS485 Rx
Green:	RS485 Tx

FPV Interface Connections:

To MFC Cable:	LEMO 2B	(max 8 Brooks Instrument flow devices)
To Pressure Transducers:	4 x D9	(50mV max per pressure transducer)
To Solenoid Valves:	16 way screw terminal	(2A max per relay channel)
To PC:	USB Type B	
To Power Supply:	4 Socket DIN	

Multi-Drop Cable: DeviceNet Thin High-Flexibility (violet polyurethane outer sheath)

EC Declaration of Conformity

We **IGI Systems Ltd**
of **23, Grange Road, West Cowick, East Riding of Yorkshire, DN14 9EL, UK**

in accordance with the following Directives:

2006/95/EC	The Low Voltage Directive
2004/108/EC	The Electromagnetic Compatibility Directive

hereby declare that:

Equipment **FPV Interface**

is in conformity with the applicable requirements of the following documents:

EN 60905-1: 2006 2nd Edition	Safety of Information Technology Equipment
EN 55022: 1998, A1(2000), A2(2003)	Emission Standard, Information Technology Equipment
EN 55024: 1998, A1(2000), A2(2003)	Immunity Standard, Domestic, Commercial and Light Industrial Equipment
EN 61000-3-2: 2006	EMC Limits for Harmonic Current Emissions
EN 61000-3-3: 1995, A1(2001), A2(2005)	Limitation of Voltage Fluctuations & Flicker
EN 55011: 1998, A1(1999), A2(2001), Group 1, Class B	Conducted Emissions
EN 61000-4-3: 2006	Radiated Immunity
EN 61000-4-6: 1996, A1(2001)	Conducted RF Immunity

I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications. The unit complies with all applicable Essential Requirements of the Directives.

Signed:

Name: Dr. Trevor Ingham
Position: Director
West Cowick 1st January 2011

Document Reference: FPV Interface/CE/Declaration/Rev1