D: 10 DIN Rail

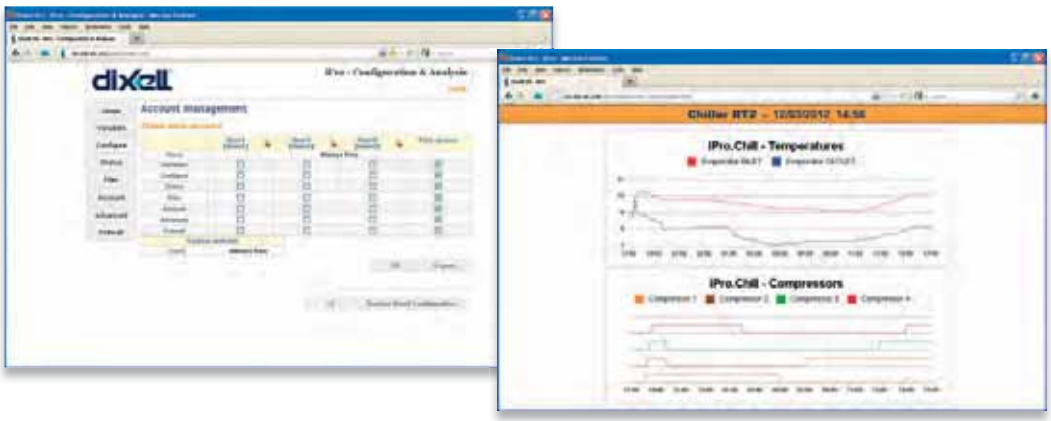
E: 4 DIN Rail

D: 4 DIN Rail

iProCHILL SERIES: up to 4 CIRCUIT and 16 COMPRESSOR UNIT CONTROLLERS

The controllers of iProCHILL family are the Dixell's answer to the requirements of the HVAC world; they are suitable for all **chillers, heat pump units up to 4 circuits and 16 compressors**. These instruments are complete and easy to use; they are the correct solution for the majority of the chiller-machines, including the most complex units, and can manage systems such as: **air/air, air/water, water/water, motor-condensing**.
Thanks to a **high degree of connectivity**, they are indispensable for remote management of a plant's "service" centers.

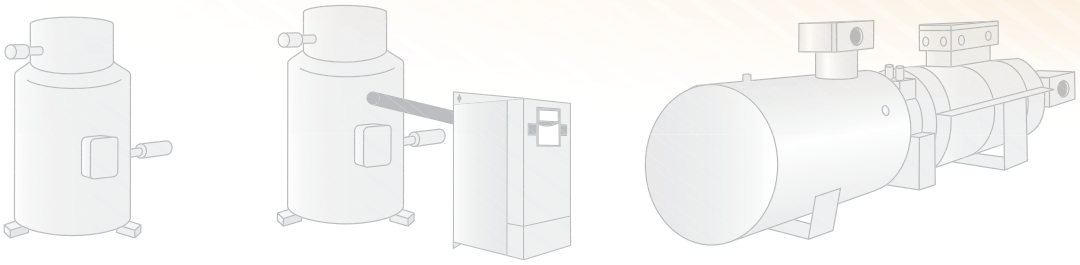
- Geothermal heat pump management with sanitary hot water production
- Instant and complete visualization of the unit values thanks to the VISOGRAPH graphic display and of the plant by means of the TGIPG touch display
- Powerful platform based on LINUX operative system on ARM9 microprocessor (200MHz/32bit)
- Ethernet for connection to an intranet-internet network
- USB output for configuration update
- Slave RS485 serial output for connection to XWEB supervising and controlling systems or to applications developed by third Party Systems
- BACnet communications allows the system to have easy and immediate integration with different manufactures ensuring complete interoperability
- Connection to the expansion modules in order to increase system capacity
- Connection to the drivers for electronic expansion valve management and control



KIND of COMPRESSORS

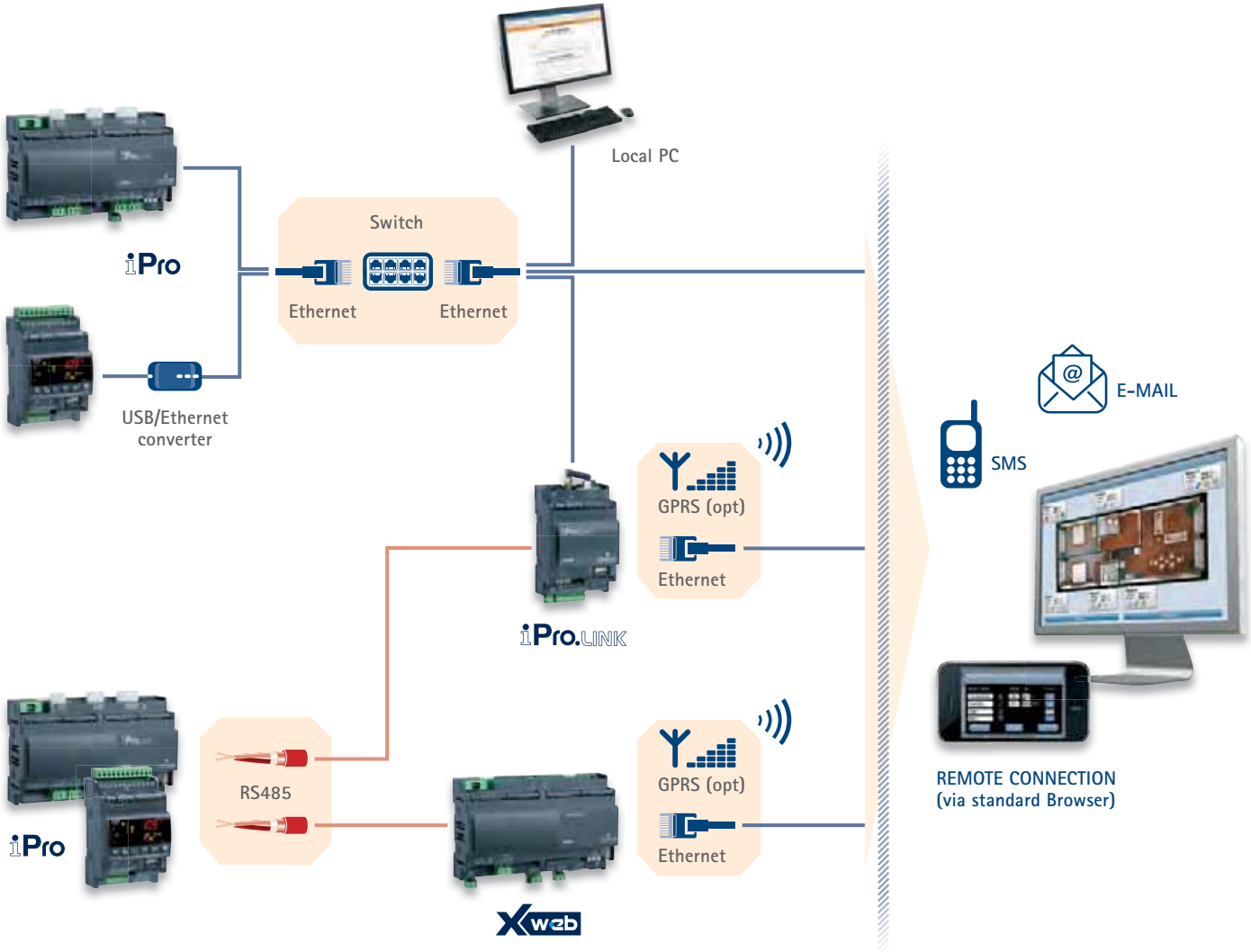
The extensive iProCHILL range allows optimal management of air conditioning units, equipped with different types of compressors of the largest manufacturers, via ModBUS, TCP/IP or through a dedicated analog signal.

- Multiscroll up to 16 compressors per circuit
- Scroll with Brushless permanent magnet motor
- Screw with regulation up to 4 capacity steps
- Stepless (only for 10 DIN format)
- Screw with inverter (also integrated)
- Reciprocating



CONNECTIVITY

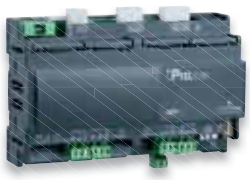
The high degree of connectivity (Ethernet or RS485) of iProCHILL Dixell controllers enables local and remote management of units/plants. Some available functions are: machine status, alarms display, and commands that send modifications such as plant comfort settings and start/stop of unit/lights.



iProCHILL

4 CIRCUIT – up to 4 CIRCUIT and 16 COMPRESSOR UNIT CONTROLLERS

D, E: 4 DIN Rail



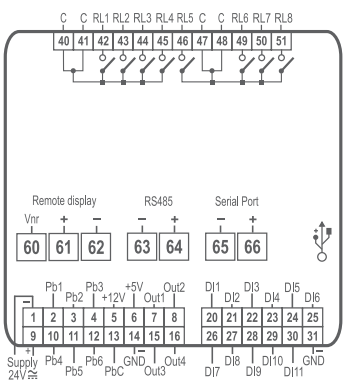
D: 10 DIN Rail

IPC108D	Controller in 4 DIN Rail format for up to 2 circuit and 6 compressor chiller and heat pumps
IPC108E	Controller in 4 DIN Rail format with LED display for up to 2 circuit and 6 compressor chiller and heat pumps
IPC115D	Controller in 10 DIN Rail format for up to 4 circuit and 16 compressors chiller and heat pumps

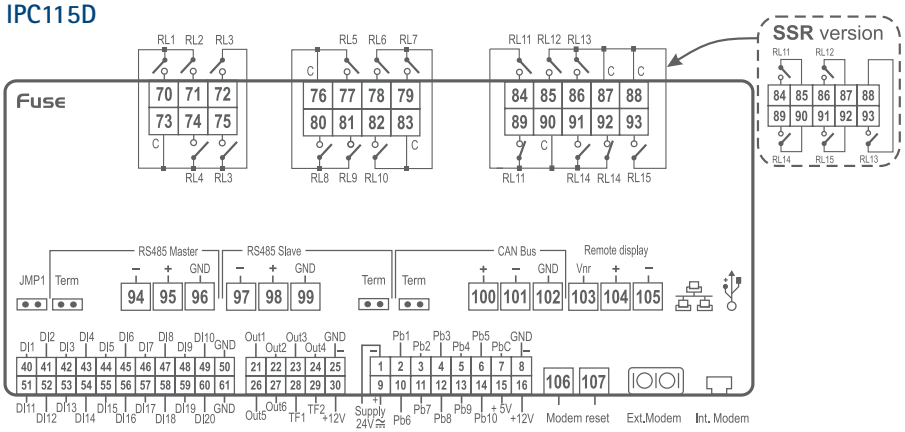
FEATURES	IPC108D	IPC108E	IPC115D
First display: n° digits		± 4 d.p.	
Second display: n° digits		± 4 d.p.	
Power supply	24Vac/dc from TF40D	24Vac/dc from TF40D	24Vac/dc from TF20D
Probe inputs			
0÷1V, 0÷5V, 0÷10V, 0÷20mA, 4÷20mA, NTC, PTC, DI	6 config	6 config	10 config
Digital inputs			
Optoinsulated	11 config	11 config	20 config
Relay outputs			
Configurable	8x5A	8x5A	12x5A + 3x8A 10x5A + 5xSSR opt
Other outputs			
PWM for fan speed module			2 config
0÷10V, 4÷20mA for fan speed module	4 config	4 config	
0÷10V for external relay			4
RS485	slave	slave	master + slave
USB	pres	pres	pres
External modem			GSM, analogue opt
LAN/RS485 master	pres	pres	
CANBus			pres
Ethernet	via USB-ETH-CONV	via USB-ETH-CONV	opt
Other			
Remote keyboard	1xVGIPC	1xVGIPC	2xVGIPC
Internal modem			analogue opt
Real time clock	pres	pres	pres
Flash memory	32MB	32MB	128MB
Connections	disconnectable + screw	disconnectable + screw	disconnectable
Connection kit	DWS30-KIT, IP-FC108	DWS30-KIT, IP-FC108	DWB30-KIT
Expansion modules	IPX106D, IPX115D, IPX125D*	IPX106D, IPX115D, IPX125D*	IPX106D, IPX115D, IPX125D*
BACnet protocol	opt	opt	opt

* References on page 40

IPC108D – IPC108E



IPC115D



TECHNICAL DATA

Housing	self extinguishing ABS
Format	4 DIN Rail: frontal 110x70mm; depth 59,5mm 10 DIN Rail: frontal 110x175mm; depth 59,5mm
Display	IPC108E: 4 digits red LED + 4 digits yellow LED + icons
Mounting	DIN Rail or wall mounting through integrated brackets
Connections	disconnectable connectors RS485 USB LAN (4 DIN Rail model) CANBus (10 DIN Rail model) Ethernet (10 DIN Rail model) Visograph
Power supply	24Vac/dc ±10% 50/60Hz
Power absorption	4 DIN Rail: 40VA max 10 DIN Rail: 20VA max
Relay outputs	4 DIN Rail: 8 SPDT 5(2)A, 250Vac 10 DIN Rail: 12 SPDT 5(2)A and 3 SPDT 8(3)A, 250Vac or 10 SPDT 5(2)A and 5 SSR, 250Vac
Analog outputs	PWM (fan module) 4÷20mA (fan module) 0÷10V (fan module or external relay)
Data storing	4 DIN Rail: on 16MB Flash memory 10 DIN Rail: on 128MB Flash memory
RAM memory	4 DIN Rail: 32MB 10 DIN Rail: 64MB
Processor	32bit
CPU	200MHz
Operating temperature	-10÷60°C (14÷140°F)
Storage temperature	-30÷85°C (-22÷185°F)
Relative humidity	20÷85% (non condensing)
Measuring and regulation range	NTC probe: -50÷110°C (-58÷230°F) PTC probe: -50÷150°C (-58÷302°F)
Resolution	0,1°C or 1°F

HOW to ORDER

IPC108D/E

I	P	C	1	0	8		-	1	0	C	D	0

C

Ethernet, protocols
0 = No
2 = BACnet

D

Serial port
1 = LAN
2 = RS485 master

IPC115D

I	P	C	1	1	5	D	-	A	B	C	0	E

A

Power supply
1 = 24Vac/dc
UL versions
2 = 24Vac

B

Modem
0 = No
1 = Internal modem (not for UL)
2 = External modem
3 = External + internal modem (not for UL)

C

Ethernet, protocols
0 = No
1 = Yes
2 = BACnet

E

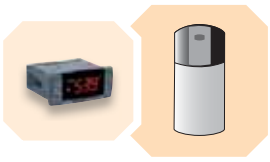
N° relè SSR
0 = None
2 = 5 SSR relays

SPECIAL APPLICATIONS: QUICK GUIDE for PRODUCT CHOICE

Dixell's parametric and programmable controllers, besides a complete management of "traditional" chiller and heat pump units, are also the ideal solution for heat pumps with boiler or residential applications. The iProGENIUS family can be easily programmed to manage special applications such as Close control, Shelter, Roof-top, Air handling units (AHU) and Central air handling units.

HEAT PUMPS with BOILER

For heat pumps with boiler, Dixell presents the **IC70CX**, a parametric, compact and flexible solution with special functions for hot water.

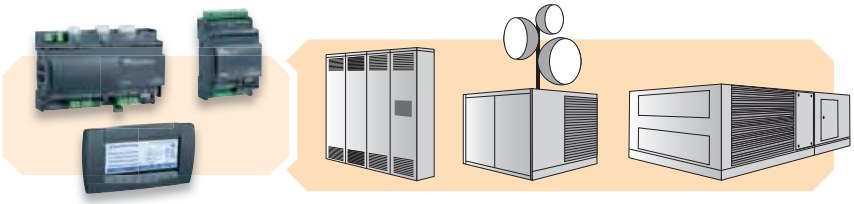


RESIDENTIAL HEAT PUMPS

Parametric controller series (**IC200** and **IC200 evo** with related **TI**, **VI** and **VGI** keyboards) and programmable controllers (**iProCHILL**) promote comprehensive heat pump management and residential plant integration dedicated to geothermal, solar functions, and sanitary management.

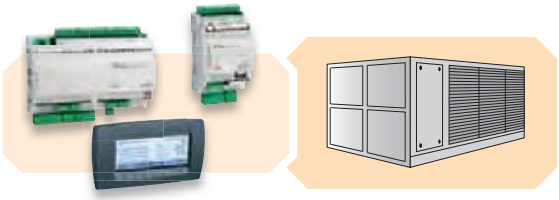
CLOSE CONTROL SHELTER – ROOF-TOP

Close control, Shelter and Roof-top units must be operated by versatile and powerful controllers. The **iProGENIUS** programmable controller line is the ideal solution for these needs because the user has a high-performance tool that allows you to easily create applications for every need.



AHU (air handling unit) – (central air handling unit)

Air Handling Units typically have several sections that have specific functions in the treatment of the air. The **iProGENIUS** controller is well suited to this modularity so because users can easily manage functions such as: mixing, air cooling and heating, dehumidification, and more.



GENERAL PURPOSE PROGRAMMABLE CONTROLLERS

SECTION INDEX

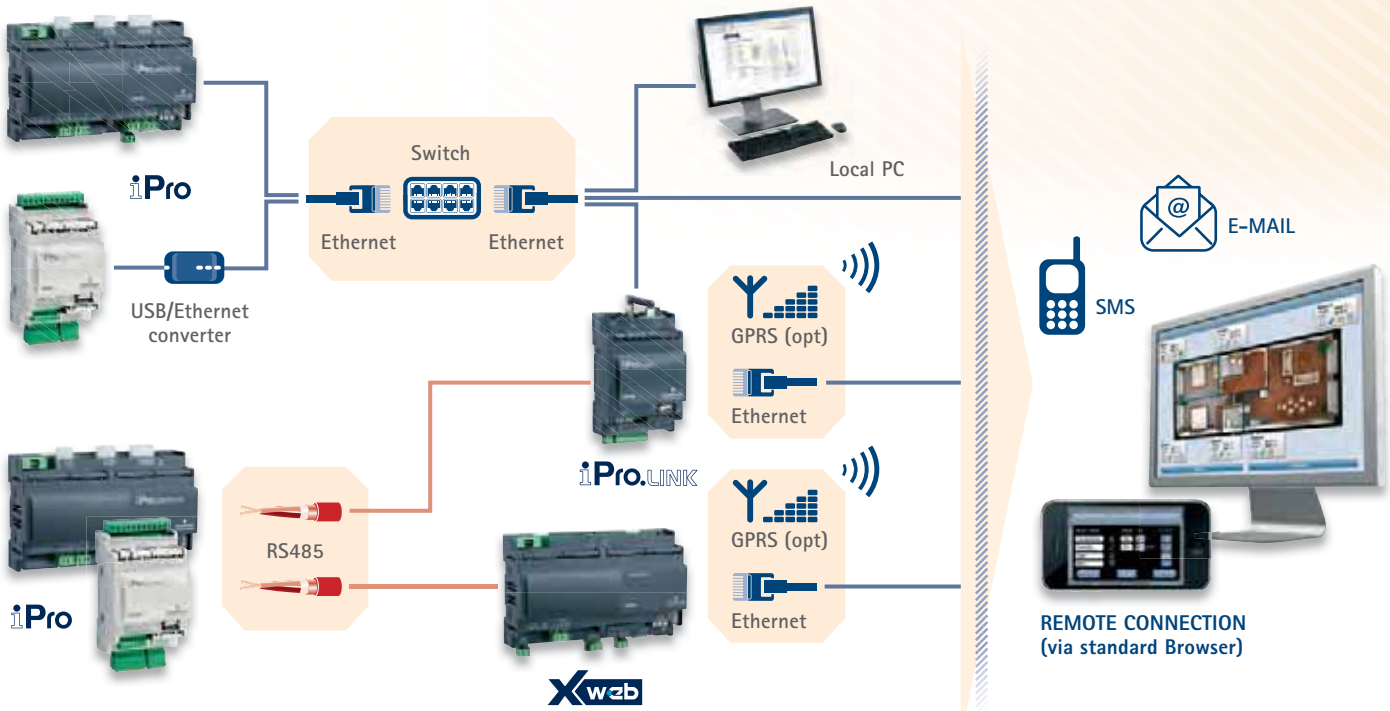
iProGENIUS SERIES: GENERAL PURPOSE PROGRAMMABLE CONTROLLERS with HIGH CONNECTIVITY

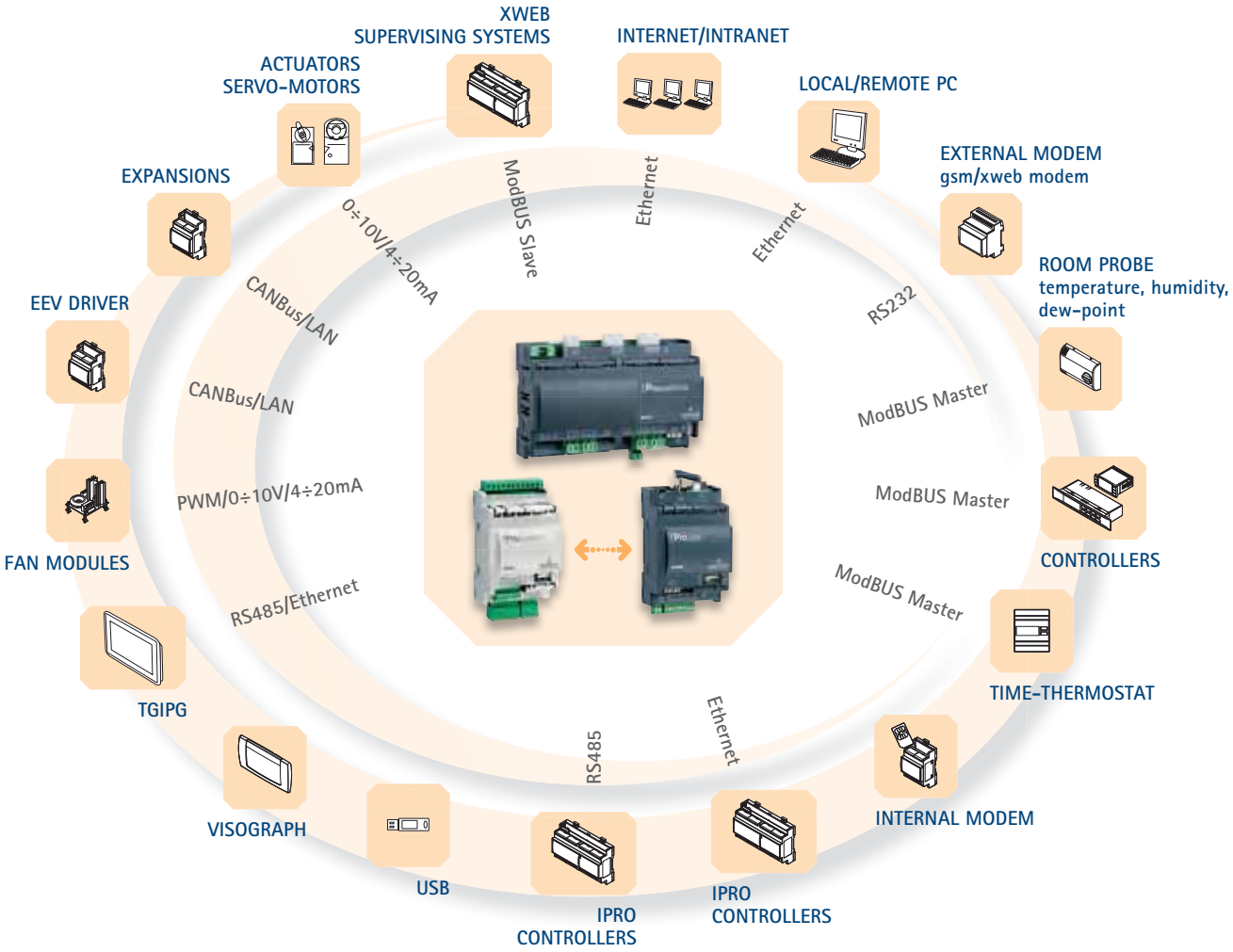
iProGenius is the Dixell family of programmable controllers that offers optimal solutions for all HVAC/R needs. They are suited for all applications in the PLC world including shopping centers, hospitals, airports, boatyards, energy management plants, and more. These controllers provide a high level of technology for ease of external connectivity and programmability providing simple answers for the user's needs, while offering local or remote monitoring control (accomplished with the powerful **iProLINK** connectivity module). An intuitive and useful HMI is also offered through the **VISOGRAPH** graphic display and the touch screen **TGIPG** display, while the expandability provided by the **IPX** modules allows use of these controllers with any machine, including the most complex.

- Powerful platform based on LINUX operative system on ARM9 (200MHz/32bit) microprocessor
- Internal Web Server with standard or customized Web Site
- Ethernet for connection to an intranet-internet network and to other controllers for a distributed application management
- USB output that allows the download of parameters, data/alarm logger and the applications and parameters upload
- Slave RS485 serial outputs for the connection to XWEB supervising and controlling systems or to applications developed by third Party Systems
- BACnet communications allows the system to have easy and immediate integration with different manufactures ensuring complete interoperability
- Connection to the expansion modules to increase system capacity
- Connection to the driver for the management and control of electronic expansion valves

CONNECTIVITY

The high degree of connectivity that marks iProGENIUS controllers, ensures a complete local and remote unit/plant management.





iProTOOL DEVELOPMENT TOOL

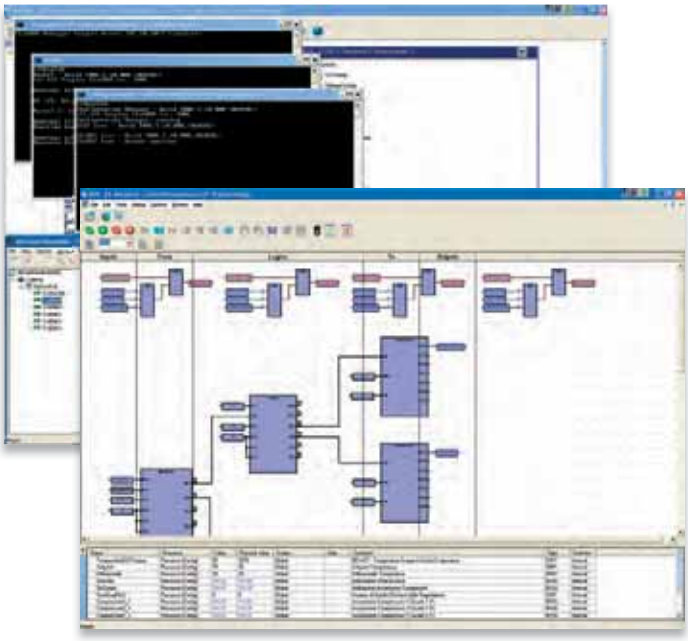
1 ISaGRAF® + WIZMATE

2 ISaGRAF® + WIZMATE + VISOPROG

iPro-TOOL is a complete and easy to use tool that allows the user to work independently to create programs for iPro controllers, taking advantage of all the programmable series potential. The package includes manuals and the **ISaGRAF®**, **WIZMATE** and **VISOPROG** (optional) software.
The user can choose among 2 options as you can see on the left.
Note: WIZMATE can be used with iProCHILL applications.

ISaGRAF®

ISaGRAF® is the standard, international and complete development environment selected by Dixell to create programs that will be uploaded into the iPro series. Also ideal for small applications, it can manage several I/O points, allows users to create control systems, and is supported all over the world. ISaGRAF® offers a combination of a highly portable, robust management engines (Virtual Machine) and an intuitive application development environment (Workbench). ISaGRAF® integrates the best system for simulation and remote debugging, supports the Flow Chart (FC: Flow Chart) and 5 different programming languages coded according to IEC61131 (SFC: Sequencial Function Chart; ST: Structured Text; FBD: Function Block Diagram; IL: Instruction List; LD: Ladder Diagram).



WIZMATE

WIZMATE is versatile software that has a fast and easy programming mode for iPro controllers (ideal for versions with the application included like the iProCHILL).

VISOPROG

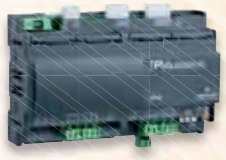
The VISOPROG is a tool that allows users to create the VISOGRAPH keyboard graphic interfaces. The program, installed on a PC, is connected to ISaGRAF® project and has a basic interface that users can easily customize depending on the requirements.

GENERAL PURPOSE PROGRAMMABLE CONTROLLERS

iProGENIUS

IPG108D	Programmable controller in 4 DIN Rail format with disconnectable connectors
IPG115D	Programmable controller in 10 DIN Rail format with disconnectable connectors
IPG208D	Programmable controller in 4 DIN Rail format with bayonet connectors, ideal for the civil field
IPG215D	Programmble controller in 10 DIN Rail format with bayonet connectors, ideal for the civil field
IPG215F	Programmble controller in 10 DIN Rail format with front LED screen and bayonet connectors, ideal for civil engineering use

D: 4 DIN Rail

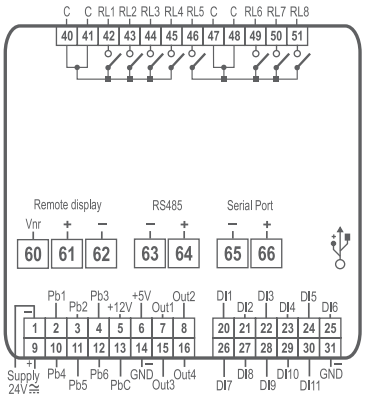


D, F: 10 DIN Rail

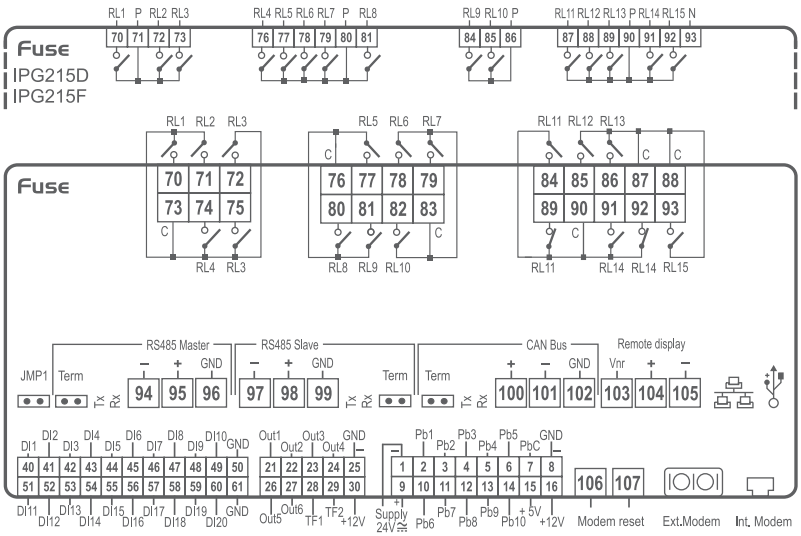
FEATURES	IPG108D	IPG115D	IPG208D	IPG215D-IPG215F
Power supply	24Vac/dc from TF40D	24Vac/dc from TF20D	24Vac/dc from TF40D	24Vac/dc from TF20D
Probe inputs				
0÷1V, 0÷5V, 0÷10V, 0÷20mA, 4÷20mA, NTC, PTC, DI	6 config	10 config	6 config	10 config
Digital inputs				
Optoinsulated	11 config	20 config	11 config	20 config
Relay outputs				
Configurable	8x5A	12x5A + 3x8A	8x5A	12x5A + 3x8A
Other outputs				
PWM outputs for fan speed module		2 config		2 config
0÷10V or 4÷20mA outputs for fan speed module	4 config		4 config	
0÷10V outputs for external relay		4		4
RS485	slave	master + slave	slave	master + slave
USB	pres	pres	pres	pres
External modem		GSM, analogue opt		GSM, analogue opt
LAN/RS485 master	pres		pres	
CANBus		pres		pres
Ethernet	via USB-ETH-CONV	opt	via USB-ETH-CONV	opt
Other				
Remote keyboard	1xVGIPG	2xVGIPG	1xVGIPG	2xVGIPG
Internal modem		analogue opt		analogue opt
Real time clock	pres	pres	pres	pres
Flash memory	32MB	128MB	32MB	128MB
Connections	disconnectable	disconnectable	bayonet	bayonet
Connection kit	DWS30-KIT, IP-FC108	DWB30-KIT	IP-FC208	IP-FC215CP
Expansion modules	IPX106D, IPX115D, IPX125D	IPX106D, IPX115D, IPX125D	IPX206D, IPX215D, IPX225D	IPX206D, IPX215D, IPX225D
BACnet protocol	opt	opt	opt	opt

IPG215F front

IPG108D - IPG208D

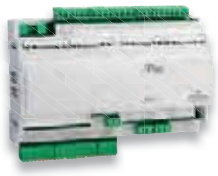


IPG115D - IPG215D - IPG215F



EXPANSION MODULES

D: 4 DIN Rail

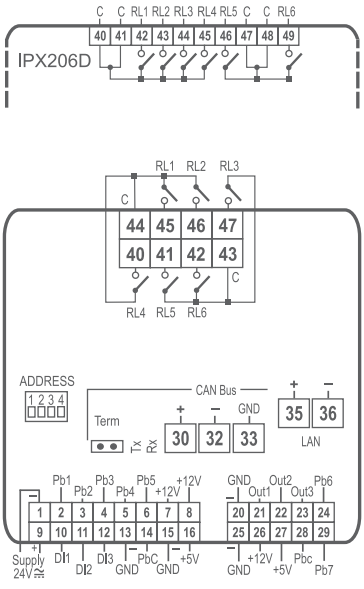


D: 10 DIN Rail

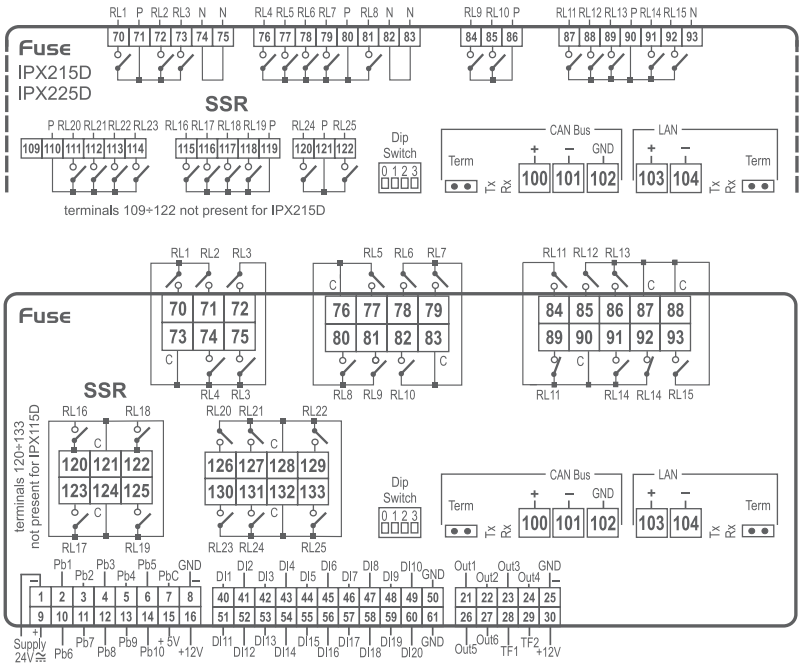
IPX106D	Expansion module in 4 DIN Rail format with disconnectable connectors and 6 relay outputs
IPX115D	Expansion module in 10 DIN Rail format with disconnectable connectors and 15 relay outputs
IPX125D	Expansion module in 10 DIN Rail format with disconnectable connectors and 25 relay outputs
IPX206D	Expansion module in 4 DIN Rail format with bayonet connectors and 6 relay outputs
IPX215D	Expansion module in 10 DIN Rail format with bayonet connectors and 25 relay outputs
IPX225D	Expansion module in 10 DIN Rail format with bayonet connectors and 25 relay outputs

FEATURES	IPX106D	IPX115D	IPX125D	IPX206D	IPX215D	IPX225D
Power supply	24Vac/dc from TF10D	24Vac/dc from TF20D	24Vac/dc from TF20D	24Vac/dc from TF10D	24Vac/dc from TF20D	24Vac/dc from TF20D
Probe inputs						
0÷1V, 0÷5V, 0÷10V, 0÷20mA, 4÷20mA, NTC, PTC, DI	7 config	10 config	10 config	7 config	10 config	10 config
Digital inputs						
Optoinsulated	3 config	20 config	20 config	3 config	20 config	20 config
Relay outputs						
Configurable	6x5A	12x5A + 3x8A	18x5A + 3x8A + 4xSSR	6x5A	15x5A	21x5A + 4xSSR
Other outputs						
0÷10V, 4÷20mA		2 config	2 config		2 config	2 config
0÷10V	3	4	4	3	4	4
LAN						
CANBus	pres	pres	pres	pres	pres	pres
Other						
Dip switch for address set	pres	pres	pres	pres	pres	pres
Connections	disconnectable	disconnectable	disconnectable	bayonet	bayonet	bayonet
Connection kit	DWEX60-30KIT	DWX115-30KIT	DWEX70-30KIT	IP-FCEX60	IP-FCEX215	IP-FCEX70

IPX106D - IPX206D



IPX115D - IPX125D - IPX215D - IPX225D

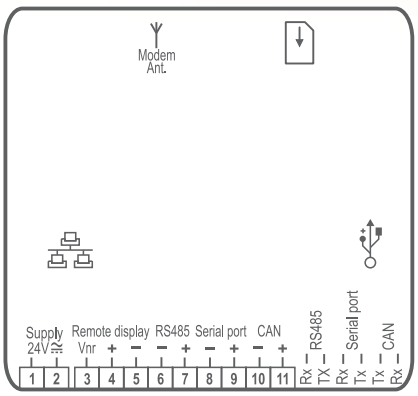


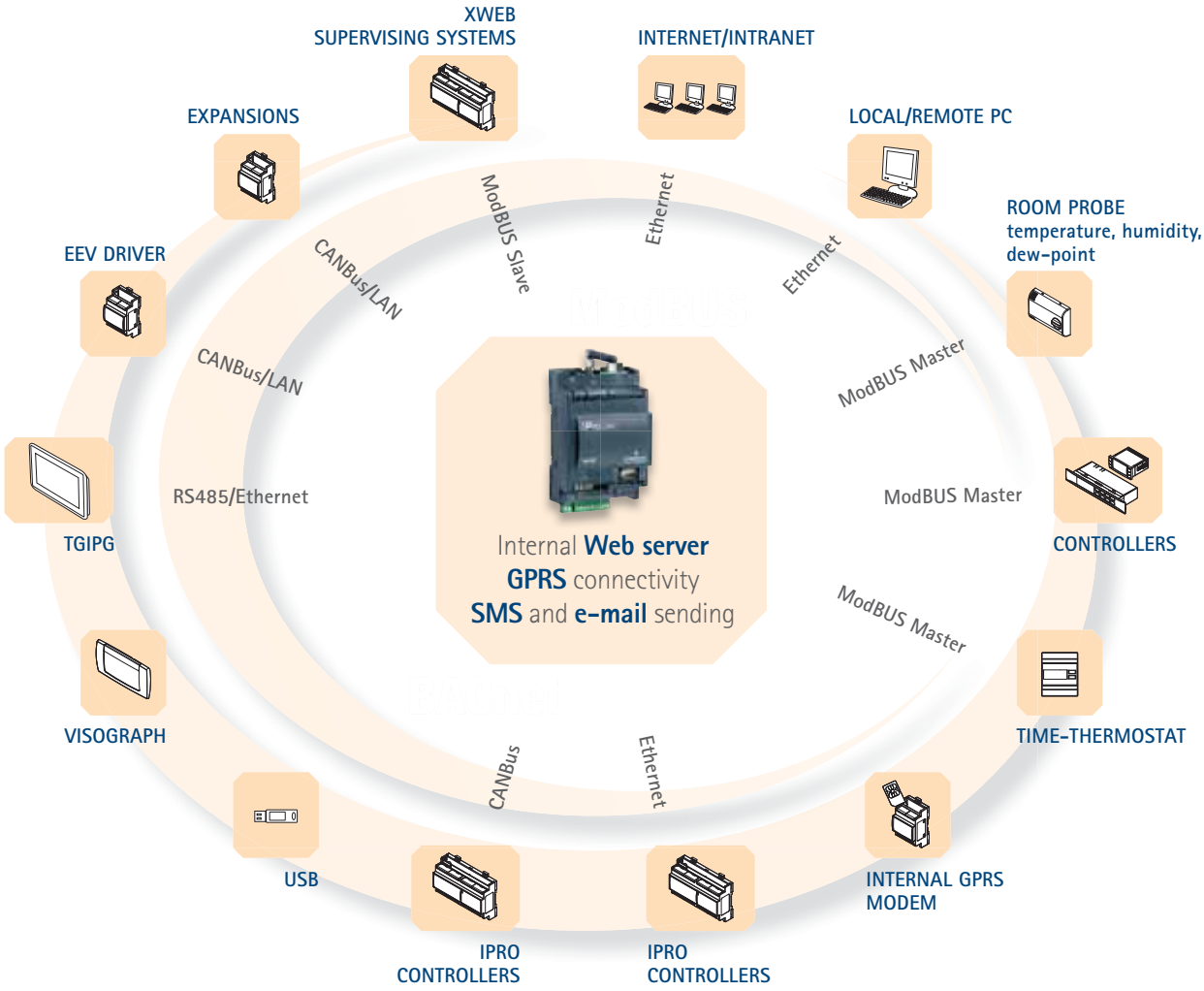
CONNECTIVITY MODULE

IPL500D | Programmable connectivity module designed to collect, store, process and manage data. It is compatible with the iPRO controllers and allows downloading of applications for data processing or management of other integrated devices

D: 4 DIN Rail

FEATURES	IPL500D
Power supply	24Vac/dc from TF20D
Outputs	
RS485	slave
USB	pres
LAN/RS485 master	pres
CANBus	pres
Ethernet	pres
Other	
Remote keyboard	VGIPG
Internal modem	GPRS opt
Real time clock	pres
Flash memory	128MB
Connections	screw
Connection kit	IP-FC500
BACnet protocol	opt





TECHNICAL DATA

Housing	self extinguishing ABS
Format	4 DIN Rail: frontal 110x70mm; depth 59,5mm 10 DIN Rail: frontal 110x175mm; depth 59,5mm
Mounting	DIN Rail or wall mounting through integrated brackets
Connections	disconnectable, bayonet and screw connectors (depending on the model) RS485, USB, LAN, CANBus, Ethernet, Visograph (depending on the model)
Power supply	24Vac/dc ±10% 50/60Hz
Power absorption	IPG (4 DIN Rail): 40VA max IPG (10 DIN Rail), IPX (10 DIN Rail), IPL500D: 20VA max IPX (4 DIN Rail): 10VA max
Relay outputs	IPG (4 DIN Rail): 8 SPDT 5(2)A, 250Vac IPG (10 DIN Rail): 12 SPDT 5(2)A and 3 SPDT 8(3)A, 250Vac IPX (4 DIN Rail): 6 SPDT 5(2)A, 250Vac IPX115D: 12 SPDT 5(2)A and 3 SPDT 8(3)A, 250Vac IPX125D: 18 SPDT 5(2)A, 3 SPDT 8(3)A and 4 SSR, 250Vac IPX215D: 15 SPDT 5(2)A, 250Vac IPX225D: 21 SPDT 5(2)A and 4 SSR, 250Vac
Analog outputs	PWM, 4÷20mA, 0÷10V (depending on the model)
Data storing	IPG (4 DIN Rail): on 32MB Flash memory IPG (10 DIN Rail), IPL500D: on 128MB Flash memory
RAM memory	IPG (4 DIN Rail) 32MB IPG (10 Din Rail) 64MB
Processor	32bit
CPU	200MHz
Operating temperature	-10÷60°C (14÷140°F)
Storage temperature	-30÷85°C (-22÷185°F)
Relative humidity	20÷85% (non condensing)
Measuring and regulation range	NTC probe: -50÷110°C (-58÷230°F) PTC probe: -50÷150°C (-58÷302°F)
Resolution	0,1°C or 1°F

HOW to ORDER

IPG108D – IPG208D	I	P	G		0	8	D	-	1	0	C	D	0
IPG115D – IPG215D/F	I	P	G		1	5		-	A	B	C	0	0
IPX106D – IPG206D	I	P	X		0	6	D	-	1	0	0	0	0
IPX115D – IPX215D	I	P	X		1	5	D	-	1	0	0	0	0
IPX125D – IPX225D	I	P	X		2	5	D	-	1	0	0	0	2

A	B	C	D
Power supply	**Modem**	**Ethernet, protocols**	**Serial port**
1 = 24Vac/dc **UL versions** **2** = 24Vac **3** = 24Vdc (for IPG215)	**0** = No **1** = Internal modem (not for UL) **2** = External modem **3** = External + internal modem (not for UL)	**0** = No **1** = Yes (for IPG115D, IPG215D and IPG215F) **2** = BACnet	**1** = LAN **2** = RS485 master

IPL500D	I	P	L	5	0	0	D	-	1	B	C	D	0

B	C	D
Modem	**Ethernet, protocols**	**Serial port**
0 = No	**1** = Yes	**1** = LAN
1 = Internal modem GPRS	**2** = BACnet	**2** = RS485 master

IPRO-TOOL	I	P	R	O	-	T	O	O	L	-	0	0	0	0	0
IPRO-TOOL + 2 Visoprog licences	I	P	R	O	-	T	O	O	L	-	0	0	0	0	1