HTP®

HIGH TECH PRODUCTS S.R.L.

YOUR CONNECTIVITY PARTNER

IP67 SMART JUNCTION BOX WITH INTEGRATED PLC

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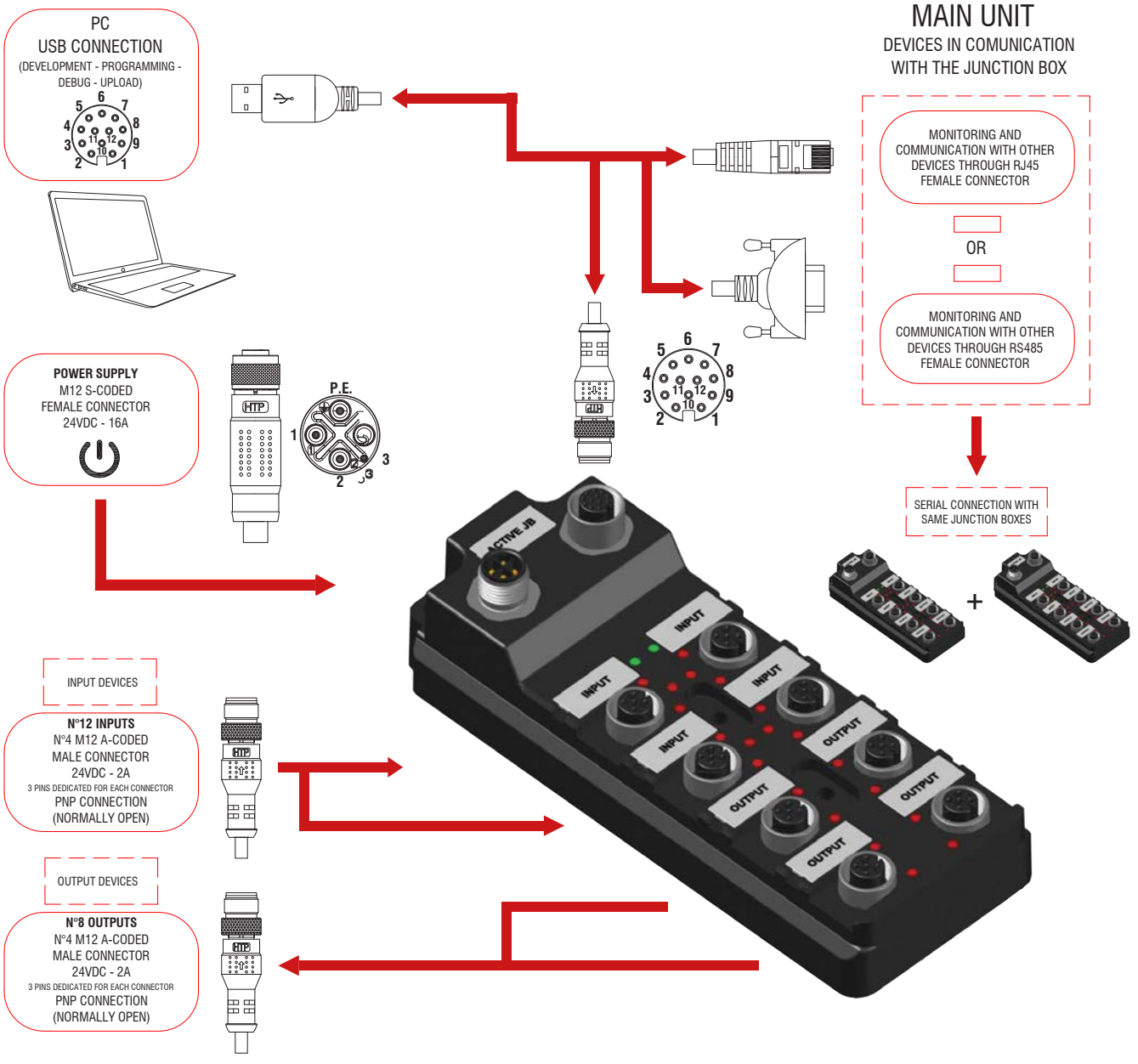
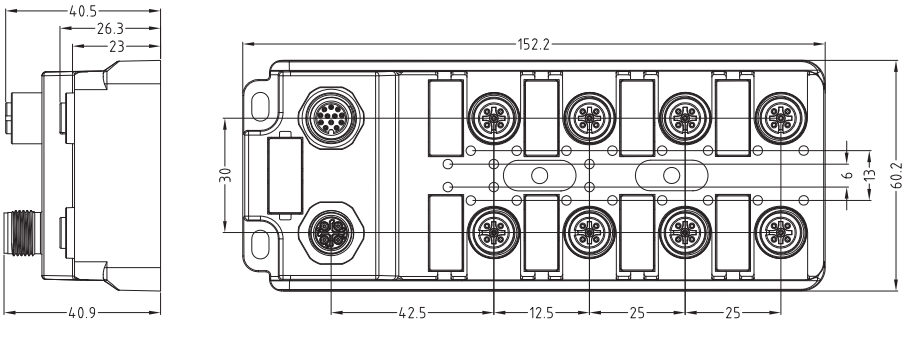


POWER CONNECTOR		PROGRAMMING CONNECTOR		INPUTS CONNECTOR		OUTPUTS CONNECTOR	
M12 S-CODED MALE 4 POLES		M12 A-CODED FEMALE 12 POLES		M12 A-CODED FEMALE 5 POLES		M12 A-CODED FEMALE 4 POLES	
FUNCTION	**PINS**	**FUNCTION**	**PINS**	**FUNCTION**	**PINS**	**FUNCTION**	**PINS**
POWER SUPPLY	1 - 3	PCB CONFIGURATION ONLY	1 - 10 11 - 12	POWER SUPPLY	1 - 3	POWER SUPPLY	1 - 3
OUTPUTS DIGITAL/ PWM SIGNALS	2 - 4	USB I/O CONFIGURATION	2 - 3 - 4 - 5	INPUTS DIGITAL SIGNALS	2 - 4 - 5	OUTPUTS DIGITAL/ PWM SIGNALS	2 - 4
		BUS OR ETHERNET COMMUNICATION	6 - 7 - 8 - 9				

IP67



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General features	Power supply	Programming	Inputs	Outputs
Connectors qty	n°1	n°1	n°4	n°4
Connector type	M12 S-coded	M12 A-coded	M12 A-coded	M12 A-coded
Contacts type	Male	Female	Female	Female
Number of contacts	n°4	n°12	n°5	n°4
Rated voltage	24V DC	5V DC	12V DC < Vn < 30V DC	24V DC
Rated current	16A	-	2A	2A
Electrical protection	Overvoltage protection	-	Optoisolated connections	Optoisolated connections
Coupling nut material	Brass+Nickel plated			
Housing material	PA66 UL94-V2			
Protection class	IP67			
Operating temperature	-40°C +90°C			
I/O features	**Signal circuit type**	**Signal contacts qty**	**Signal type**	
Inputs	PNP	n°12 (n°3 for each connector)	digital*	
Outputs	PNP	n°8 (n°2 for each connector)	n°4 digital* - n°4 PWM**	
*digital : Simply "ON/OFF" signal, without any suddivision - **PWM : Digital scalar signal, from 0%(value=0) to 100% (value=1023)				
Application features	**Development type**	**Communication protocols**	**Scans qty**	**Scan qty**
TaskScript studio	Grafic (Model-Based IDE)	ModBUS/RTU, ModBUS/TCP, HTTP/TCP/IP	10k scans/sec	<0,2ms

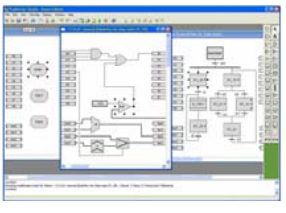
Notes:
- User friendly programming language (Sequential function chart) derived from GRAFCET and IEC-61131-3
- Fast program-debug-deploy cycle

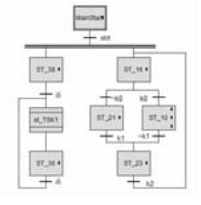
The application development environment is based on a graphical environment running upon the Windows Operating systems (from Windows XP to Windows 10), which assists the designer throughout the whole design cycle of an embedded application, from the sketch of the first modules to the deployment of the executable code to the target physical board.
The main supported phases are:

- Modeling of the solution using the graphical language;
- Validation of the design and code generation;
- Simulation of the design, possibly interacting with a model of the controlled periphery;
- Upload of the embedded application to the target physical junction box;
- Test of the design within the physical environment.
- Diagnosis of the physical environment.

Modeling of the solution using the graphical language

The graphical lenguage is based on GRAFCET and IEC-61131-3, composed by flow chart of steps; each of them contains one or more tasks; that is made of connections between I/O using mathematics and Boolean's gates.



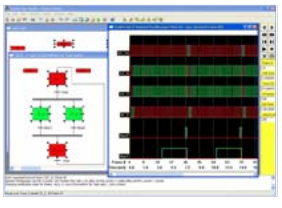


Validation of the design and codes generation

This application can validate and generate the code necessary to create the working file to upload on the Juction box.
The validation explain clearly,which are the mistakes made during the program creation, making a report file available directly on the application.
During the codes generation phase can be made all the file, also the one usable to make the simulation.

Simulation of the design, possibly interacting with a model of the controlled periphery

Using the same application, easly can be made a step by step simulation, focused specific inputs, outputs, tasksand variables present on the flow chart steps.
It is possible changing the simulating visualization focus, in real time.



Upload of the embedded application to the target physical junction box

Thanks the connection available by USB, it is easly uploading the application using the code generation, on the junction box.

Test of the design within the physical environment

Using the application is possible to verify the correct operation of the program, directly on the junction box.

Diagnosis of the physical environment

It is easy to verifiy the correct operation of the junction box during the work functions

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