HMI PANELS

APPLICATION:

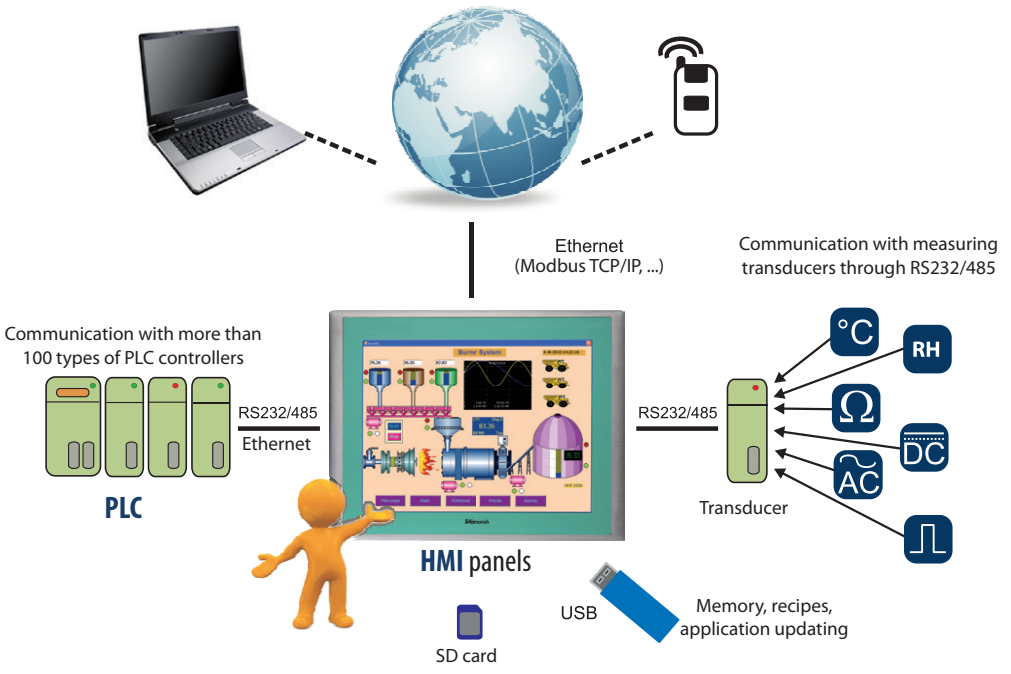
- technological process visualization
- remote control of many automation components from one place
- integration of automation devices working with different communication protocols
- data logging for technological processes

SELECTED FEATURES:

- rich library of graphic elements
- large communication possibilities (service of over 200 communication drivers, at least 2 serial ports, USB Host, optionally Ethernet)
- storage of data, alarms and events (battery operated memory)
- alarms, recipes, reports, macros (simple control)
- operation in though conditions (IP65 from front side)
- high security level
- free Panel Studio tool software

APPLICATION EXAMPLES

Communication possibilities of HMI panels



HMI PANELS TECHNICAL DATA

Type



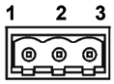


		HMI 450	HMI 730	HMI 750	HMI 1050	HMI 1550
Display	Size	4,3"TFT	7"TFT	7"TFT	10"TFT	15"TFT
	Colors	65 536				
	Resolution (W x H in pixels)	480 x 272	800 x 480	800 x 480	1024 x 768	1024 x 768
	Touch screen type	resistive analog				
	Active Display Area (W x H)	95 x 54	152 x 91	152 x 91	203 x 152	304 x 228
	Display position	both horizontal and vertical				
	MTBF backlight at 25°C	30 000 hrs	50 000 hrs			
	Backlight	LED				CCFL
	Brightness Adjustment	yes				
	Screen Saver	yes				
	Language Fonts	yes				
Main Hardware	Processor, CPU speed	ARM11, 533 MHz	ARM11, 533 MHz	ARM Cortex-A8, 667 MHz	ARM Cortex-A8, 667 MHz	ARM Cortex-A8, 667 MHz
	Flash Memory (ROM)	128 MB				
	SDRAM (RAM)	128 MB		256 MB		
	Operation System	WinCE 6.0				
	Real Time Clock	yes				
	Buzzer	yes				
	Sound output	-		option		
	SD card slot	yes	-	yes		
Interfaces	RS-232C, DB9 Male	yes				
	RS-232C/ RS422/ RS-485, DB25 Female	yes				
	USB Host	yes				
	Ethernet 10/100 Mbps, RJ45	option		yes	yes, 2 ports	

HMI

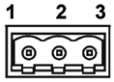
POWER SUPPLY

Fig. 1 AC power supply, 90-250 V AC, 47-63 Hz



Terminal	Description
1 ⏚	Grounding
2	N
3	L

Fig. 12 DC power supply, 11-36 V DC



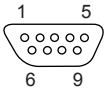
Terminal	Description
1 ⏚	Grounding
2	DC-
3	DC+

Fig. 3 DC power supply, 11-36 V DC (only for HMI 450)

Terminal	Description
1	DC +
2	DC -

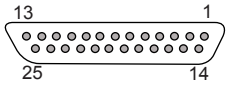
INTERFACES

Fig. 4 COM1 port, DB9 male (RS232C)



Pin	Signal	Input/Output
1	DCD	Output
2	RD	Input
3	TD	Output
4	DTR	Output
5	SG	
6	DSR	Input
7	RTS	Output
8	CTS	Input
9	RI	Input

Fig.5 COM2 port, DB25 female (RS232C/RS422/RS485)



Pin	Signal	Input/ Output	Type	Pin	Signal	Input/ Output	Type
1	FG	-	-	14	RTSA	Output	RS422
2	TD	Output	RS232C	15	RTSB	Output	RS422
3	RD	Input	RS232C	16	-	-	-
4	RTS	Output	RS232C	17	-	-	-
5	CTS	Input	RS232C	18	CTSA	Input	RS422
6	DSR	Input	RS232C	19	CTSB	Input	RS422
7	SG	-	5V-/RS232C	20	DTR	Output	RS232C
8	DCD	Output	RS232C	21	5 V +	Output	
9	-	-	-	22	RI	Input	RS232C
10	-	-	-	23	-	-	-
11	-	-	-	24	RXDA	Input	RS422
12	TXDA	Output	RS422/RS485	25	RXDB	Input	RS422
13	TXDB	Wyjście	RS422/RS485				

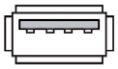
ETHERNET

Fig. 6 RJ45 connection, Ethernet 10/100 Mbps

Pin	Description
1	Transmission (TX+)
2	Transmission (TX-)
3	Reception (RX+)
4	Not connected
5	Not connected
6	Reception (RX-)
7	Not connected
8	Not connected

USB

Fig. 7 USB



Pin	Description
1	+ 5V DC (max 100mA)
2	USB-DN
3	USB-DP
4	GND

AUDIO INPUT /OUTPUT

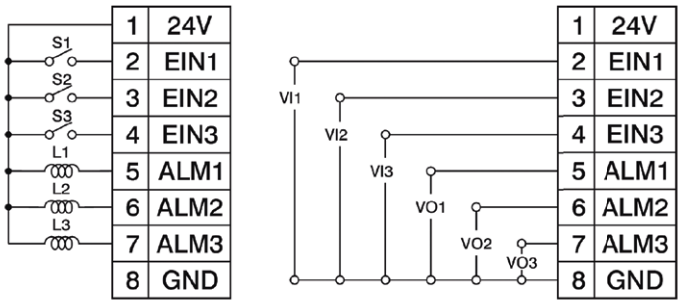
Rys.8 Input / output socket

Audio input for connecting a microphone (for future use)
Audio output. Used for playing sound files related to an Event / Alarm

For connection use a headphone jack: ø3.5 mm and length 14 mm.

DIGITAL INPUTS / OUTPUTS

Fig. 9 inputs / outputs



Pin	Signal	Description	Label in Panel Studio
1	24V +	+ 24V DC power supply	
2	EIN1	Digital input 1	SystemDI_1
3	EIN2	Digital input 2	SystemDI_2
4	EIN3	Digital input 3	SystemDI_3
5	ALM1	Digital output 1	SystemDO_1
6	ALM2	Digital output 2	SystemDO_2
7	ALM3	Digital output 3	SystemDO_3
8	GND	Neutral (ground) 0V DC	

HMI PANELS ORDERING CODE

Table 79. HMI ordering code:

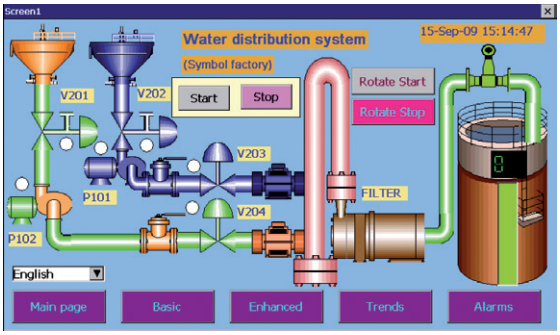
HMI	XXXX	X	X	X	X	XX	X	X
Type:								
4.5" HMI 450	0450	1	0	1				
7" HMI 730	0730		0	0				
7' HMI 750	0750			1	1			
10" HMI 1050	1050			1	1			
15" HMI 1550	1550			1	1			
Supply voltage:								
11...36 V d.c.		1						
90...250 V a.c.		2						
Input/output Audio 3 DI, 3 DO:								
lack			0					
yes			1					
SD card:								
lack				0				
yes				1				
Ethernet:								
lack					0			
yes					1			
Version:								
standard						00		
cutom-made*						XX		
Language:								
Polish							P	
English							E	
other*							X	
Acceptance tests:								
without extra requirements								0
with an extra quality inspection certificate								1
acc. to customer's request*								X

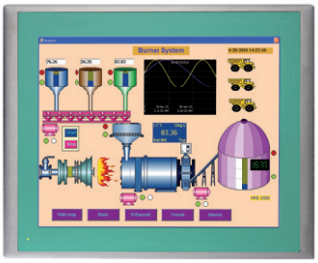
* after agreeing with the manufacturer

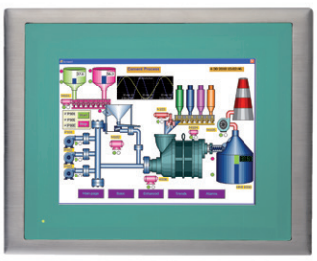
Panel Studio Software

- Graphical visualization of processes
- (available rich library of graphical elements), possible import of own graphics in gif, bmp, jpg formats.
- Communication with devices of over 100 manufacturers (among others: Modbus ASCII/RTU Master and Slave,
- Siemens: S5, S7-200, S7-300, Profibus DP, GE: 90 Series CCM, 90 Series SNP,
- Allen Bradley: Micrologix 1000/1500, DH-485, SLC 5/03, 5/04, Saia, Omron and others).
- Data storage in internal memory.
- Alarm storage.
- Event log.
- Review of archived data on trends and tables.
- Recipes.
- Macros (set of instructions for algorithm realization).
- Simulation in off-line (without panel and controllers) and on-line mode (with controllers connected to PC computer ports.)

process control







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