

HMI OPERATOR'S PANEL- MT SERIES

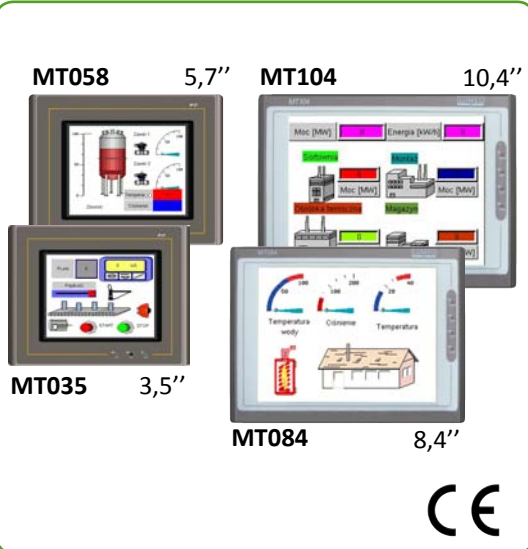
FEATURES:

TFT Touch

- 3,5" 320 x 240
- 5,7" 320 x 240
- 8,4" 800 x 600
- 10,4" 640 x 480
- 256 colours 65535 colours
- RTC IP65
- MEM Password protection

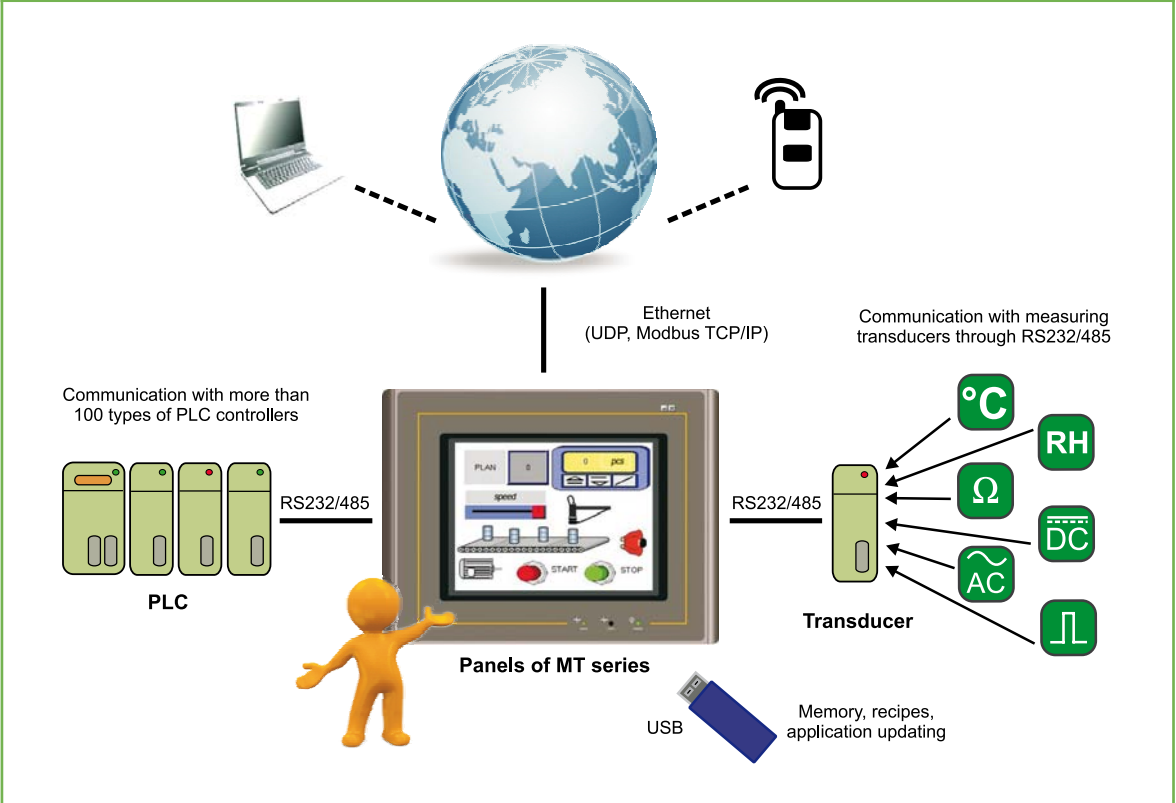
INPUTS:

- RS 232 RS 485
- RS 422
- USB



- Rich library of graphic elements.
- Large communication possibilities (service of over 200 communication drivers, at least 2 serial ports, USB connectors and Ethernet in option).
- Transparent communication (access to PLC from SCADA application through HMI).
- Multi-language applications (up to 10 languages).
- Storage of data, alarms and events (battery-operated memory).
- Alarms, recipes, reports, macros (simple control).
- Operation in tough conditions (IP65 from frontal side).
- High security level (8 access levels for applications).
- Free Panel Master tool software.

EXAMPLE OF APPLICATION



EXTERNAL FEATURES

Model	MT035	MT058	MT084	MT104
Matrix	3.5" TFT	5.7" TFT	8.4" TFT	10.4" TFT
Colours	256	256	65535	65535
Resolution	320 x 240	320 x 240	800 x 600	640 x 480
Net weight	0.3 kg	0.85 kg	0.9 kg	1.4 kg
Overall dim.: l x h x d (mm)	130 x 106.2 x 36	186.5 x 145.4 x 42	232.5 x 175.8 x 49	315 x 241 x 60
Panel cut-out: l x h (mm)	118.5 x 92.5	174.5 x 132.5	221.5 x 164	303 x 226

COMMUNICATION INTERFACES

Model	MT035	MT058	MT084	MT104
COM1	RS232/422/485	RS232/422/485	RS232/422/485	RS232/422/485
COM2	RS422/485	RS232/422/485	RS232/422/485	RS232/422/485
COM3	lack	lack	RS232/422/485	RS232/422/485
Ethernet	lack	yes	yes	yes
USB Host 2.0	lack	lack	2x	3x

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MEMORY RESSOURCES

Model	MT035	MT058	MT084	MT104
Flash memory	4MB	4MB	16MB	16MB
System memory	1MB	2MB	64MB	64MB
Battery-operated memory	128kB - 1MB			
CPU	RISC ARM 32-bit			

RATED OPERATING CONDITIONS

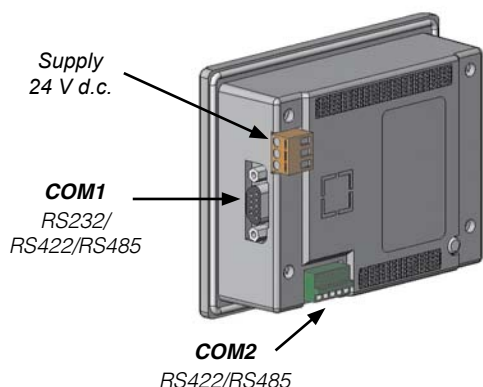
Model	MT035	MT058	MT084	MT104
Supply voltage	20 .. 24 .. 28 V d.c.			
Input power	6W	10W	10W	20W
Operating temperature	0 .. 50°C			
Relative humidity	20 .. 90 % (inadmissible condensation)			
Storage temperature	-20 .. 60°C			
Frontal protection grade	IP65			
Operating position	vertical or horizontal			

SAFETY AND COMPATIBILITY REQUIREMENTS

Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2
	noise emissions	acc. to EN 61000-6-4

CONNECTION DIAGRAMS

Connectors of the MT035 panel



COM1 serial port in the panel - DB9-9P female connector.

Pin definition:

Pin	Function	Pin	Function
1	RS422 TX+ i RS485 +(A)	6	RS422 TX- i RS485 -(B)
2	RS232 RXD	7	RS232 RTS
3	RS232 TXD	8	RS232 CTS
4	RS422 RX+	9	RS422 RX-
5	GND		

COM2 serial port in the panel – connector 4 (5) pins (RS422 and RS485)

422	TX+	RX+	RX-	TX-	SG*
485	+(A)			-(B)	

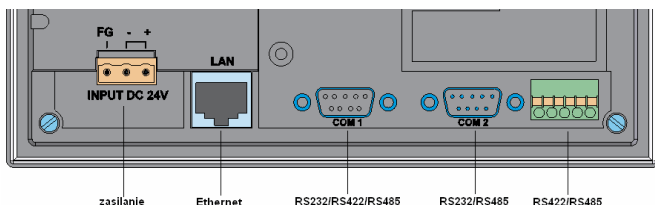
* MT035, MT058 and MT084.

COM2 serial port in the panel – DB9-9P male connector.

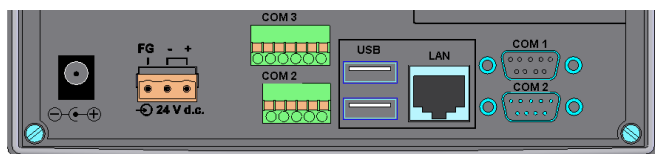
(MT058, MT084 and MT104)

Pin definition:

Pin	Function	Pin	Function
1	RS485 +(A)	6	RS485 -(B)
2	RS232 RXD	7	RS232 RTS
3	RS232 TXD	8	RS232 CTS
4		9	
5	GND		



Connectors of the MT058 panel



Connectors of the MT084 and MT104panel

COMMUNICATION WITH PLC CONTROLLERS:

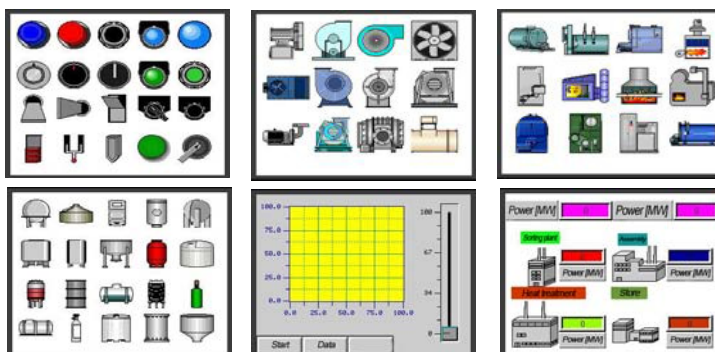
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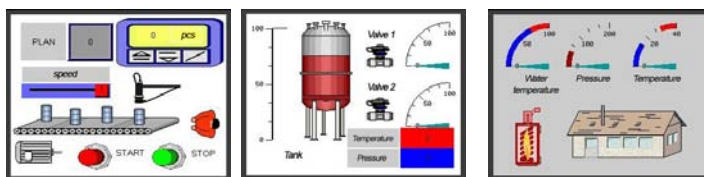
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PANEL MASTER

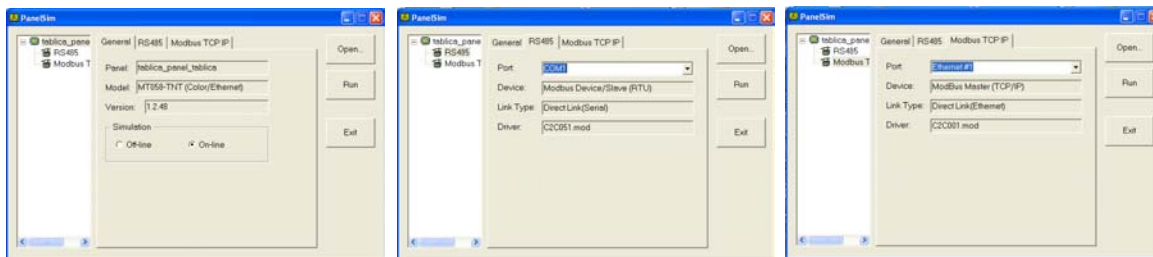
Several thousands of ready icons and graphic components



Possible import of own bmp, jpg graphics and gif animations



Off-line and on-line application simulator (communication test from PLC)



Data conversion by means of macros

```

Macro - makro czasowe 1
1 SUI02=MOV (sm2, 2) // ALARM
2 IF SUI02>SUI00 (F)
3 sm4_wy1=1
4 ELSE
5 sm4_wy1=0
6 ENDIF
7 IF SUD.1 //Wyjście sm4 wy2
8 sm4_wy2=1
9 ELSE
10 sm4_wy2=0
11 ENDIF
12 IF SUD.2 //Wyjście sm4 wy3
13 sm4_wy3=1
14 ELSE
15 sm4_wy3=0
16 ENDIF

Macro - PrDob_read
1 O\PrDob\SPTR0=MOV(1\SPTR0, 18) (U)
2 SIO=1028//address of O\PrDob\SPR0
3 SI1=7088//address of 1\SPR0
4 FOR 18
5 SU{SIO}=DW {SI1} (F)
6 SIO=SIO+2 (U)
7 SI1=SI1+2 (U)
8 NEXT
9 SIO=1010 (U)//address of O\PrDob\SPTR0
10 SI1=1064 (U)//address of O\PrDob\SPTR0H
11 SI2=1082 (U)//address of O\PrDob\SPTR0M
12 FOR 18
13 SU{SI1}=SU {SIO}/100 (U)
14 SU{SI2}=SU {SIO}*100 (U)
15 SIO=SIO+1 (U)
16 SI1=SI1+1 (U)
17 SI2=SI2+1 (U)
18 NEXT
    
```

ORDERING

Operator's panel MT -	XXX-XXX	XX	X
Type:			
3.5"	035-TST		
5.7"	058-TST		
5.7" Ethernet	058-TNT		
8.4" Ethernet	084-TNT		
10.4" Ethernet	104-TNT		
Version:			
standard		00	
Acceptance tests:			
without additional quality requirements			0
with an extra quality inspection certificate			1
acc. to customer's request*			X

Order example:

The code MT-084-TNT-00-0 means:

MT-084-TNT - operator's panel with diagonal 8.4" with Ethernet interface,

00 - standard version,

0 - without additional quality requirements.

SEE ALSO:



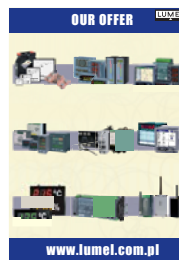
SMC controller.



Modules I/O of SM series.



SM9 feeder.



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