



DDMP COM : Digital Diagnostic Motor Protection device with MODBUS Communication

The DDMP COM is a compact design device that ensures safe motor protection and instantly provides the failure's reasons on the display, with the possibility of share information and commands via MODBUS RTU.



CHARACTERISTICS

- LCD display and buttons

- FAIL SAFE RELAY (Prevents the motor control in case of missing feeding)

- Rated voltage 1000V AC 50/60Hz.

-Overload protection for single-phase and three-phase motor --> cold motor: 5,10,20,30 sec ; hot motor: reduces the cold times to 1/3
according to EN/IEC 60947-4-1 (4 tripping class) --> LED "AL" ON info on the display

-phase loss protection (>3 sec) --> LED "AL" ON info on the display

- Asymmetrical current (>40% for $IM(I1+I2+I3)/3$) (30 sec). --> LED "AL" ON e info on the display

-PTC: Terminals (T1-T2)

Solution 1:

- Thermistor over-temperature protection $>3500\Omega \pm 300\Omega$
(re start at $1500\Omega \pm 300\Omega$). --> "AL" BLINKING LED and info on the display

- Thermistor motor protection $<50\Omega$ --> "AL" BLINKING LED and info on the display

Solution 2:

- Reading input of a dry contact state (EC2)

Reset : Terminals (17-18)

Solution 1 : Tele reset/ remote reset/ auto reset.

Solution 2 : Reading external contact (EC1)

-MODBUS RTU Communication

-Monitoring of phase currents, average current and thermal load

- 6 models available

- DDMP 5 COM (1...5A)

- DDMP 34 COM (3...34,5A)

- DDMP 65 COM (33...65A)

- DDMP 320 COM (64... 320A)

- DDMP 450 COM (90...450A)

- DDMP 900 COM (180...900A)

- **passing through CT**
- **Possibility of screw or DIN fixing** (up to model DDMP 65)
- **Possibility of using external CT** (DDMP5 COM model only)
- **Integrated measuring system for current from 0.1 to 900A**
- **Operating hours meter and number of starts with disconnection warning**
- **Under current warning**
- **Possibility of motor remote control via MODBUS with NO contact** ⁽¹⁾

IEWS

- Input status : EC1 EC2 (by MODBUS)
- Motor current
- Phases Current
- Thermal load
- PTC Status
- Reset time (via MODBUS)
- Fault
- Warning
- Number of starts
- Number of working hours

FAULT

- Phase loss ⁽²⁾
- Phase asymmetry ⁽²⁾
- PTC > 3500 Ω \pm 300 Ω
- PTC < 50 Ω
- Overload
- Underload / No load

FAULT STORAGE

- If the device is disconnected in alarm condition, when it is switched back on, it will return to alarm status with the LED on and an with the reasons of failure in the dedicated menu pages.

WARNING

- Maximum operating hours
- Maximum number of starts

⁽¹⁾ Under development

⁽²⁾ Not suitable for use for values below 20% of the set current

TEST

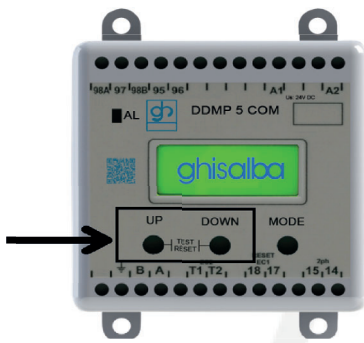
By Pressing UP+DOWN buttons at the same time while you are screen 8 on activate the TEST phase, all alarm signals are activated and the device goes into trip mode.

The TEST is active only in case of $I = 0$.

Following a TEST, if automatic reset is not set, a RESET must be performed according to the procedure described below and the system will be reset immediately.

RESET

As standard, the DDMP can be reset by three different methods; manual, automatic and remote reset. RESET is possible only if a fault is present or a TEST has been performed.



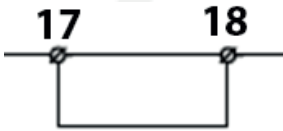
Manual reset

To reset the device, press the **UP and DOWN** buttons simultaneously in presence of one of the first 7 screens.

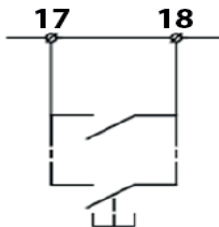
Automatic reset from the terminal block

Note: Make sure the feature is enabled in the setup screen (Page. 10 and 14).

The automatic reset function is achieved by short-circuiting the reset terminals (17-18)



- PTC fault, phase loss, or asymmetry: the system resets immediately.
- Overload alarm (oL): Reset is possible only after a cooling-off period equal to 6 times the selected trip class, while holding down the buttons for 3 seconds.



Remote reset

The device is set up for remote reset by a clean contact connected to pin 17-18

The reset occurs immediately when the contact closes (except for the oL alarm, which follows the cooling logic described above).

APPROVALS & HOMOLOGATIONS



INSTALLATION WARNING



All installations, commissioning, maintenance and verification of the causes of intervention must be carried out by authorized and qualified personnel, according to local regulations.

SINGLE-PHASE OPERATION

To use the device in single-phase mode, you must create a **jumper (max. 2–2.5 cm)** between terminals **14** and **15**.

It is important that the single phase passes through both current transformers in the same direction (either both from the top or both from the bottom).

ELECTRICAL CONNECTIONS

Screw connection to be carried out according the diagrams Figure (2)

- cable lengths <30m
- Diameter 0.5...2.5 mm²

POWER SUPPLY

Terminals : A1/A2

- Version: 24VAC / DC (±15%)
- Version: 110-240VAC (±15%)

DIGITAL INPUTS

Terminals (17-18):

Solution 1 : Tele reset / remote reset / auto reset

Solution 2 : EC1 External Contact Reading

Terminals (T1- T2) :

Solution 1:

- Thermistor over-temperature protection $>3500\Omega \pm 300\Omega$
(electrical reset to $1500\Omega \pm 300\Omega$).

- Thermistor motor Protection $<50\Omega$

Solution 2:

- EC2 Reading a Dry Contact Status Input

RELAY OUTPUTS 5A 230VAC resistive load

- 98A-97 / NO --> changeover
- 98B-97 / NC --> contacts
- 95-96 / NC

MODBUS

RS 485

Terminals : $\frac{+}{-}$ - B - A

CONNECTIONS AND SIGNALS



Figure (1)

A1		A2	Power supply terminals	
95		96	NC	
98A	97	98B	NC (97-98B), NO (98A-97)	
18		17	Tele reset	
T1		T2	PTC	
15		14	Single phase use (electrical jumper)	
	⊥	B	A	MODBUS link
		AL	- Stable light for current-related alarms - The rapid flashing indicates that faults are coming from the PTC. - A slow flash indicates a warning	

(MAIN) CONNECTIONS

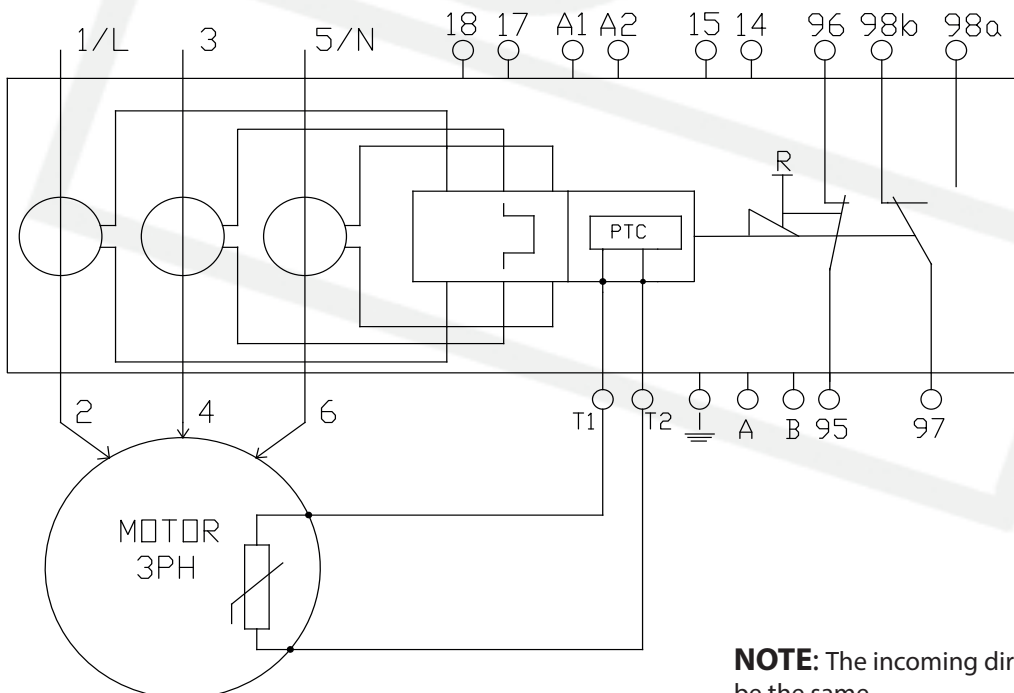


Figure (2)

NOTE: The incoming direction of of the currents must be the same

DISPLAY CODES

DDMP	Digital Diagnostic Motor Protection
AL	Fault
PHU	Indicates the condition of any current asymmetry beyond the maximum permitted value
CL	Operating class
LoT	Short-circuited probe alarm
CTp	Screen for setting the primary value in case of the use of external TA
CTs	Screen for setting the secondary value of any external TA used
H	Operation hours
HiT	Overtemperature alarm
H-ON	Reset operating hours
Im	Average current
In	Rated current
I0	Minimum current
PHL	Condition of phase loss.
NC	Normally closed
NO	Normally open
N-St	Reset start number
oL	Overload
uL	Under load
PT	PTC Setup
PTC	Thermocouple ACTIVE
PWD	Password
St	Start
TA	Current transformer
WU	Motor warm up
ID	Firmware version
EC2	The input is used for testing a remote connection
EC1	Programmable clean contact input
Tx	Speed and transmission
RC	Modbus Configuration
■	Indicates that the value set in terms of hours and minutes of operation has been exceeded Start
<	Blinking if the measured current is lower than the one set as I0

VISUALIZATIONS SCREEN DDMP 5 -320 - 450 - 900

To change the screen, press the MODE button

<p>Without external TA</p> <table border="1"> <tr><td>I</td><td>=</td><td>x</td><td>x</td><td>.</td><td>x</td><td>x</td><td>A</td></tr> <tr><td>L</td><td>O</td><td>A</td><td>D</td><td></td><td>O</td><td>K</td><td>*</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>o</td><td>L</td><td><</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>u</td><td>L</td><td><</td></tr> </table> <p>With external TA and In <= 100A</p> <table border="1"> <tr><td>I</td><td>=</td><td>x</td><td>x</td><td>x</td><td>.</td><td>x</td><td>A</td></tr> <tr><td>L</td><td>O</td><td>A</td><td>D</td><td></td><td>O</td><td>K</td><td>*</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>o</td><td>L</td><td><</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>u</td><td>L</td><td><</td></tr> </table> <p>With external TA and In >= 100A</p> <table border="1"> <tr><td>I</td><td>=</td><td>x</td><td>x</td><td>x</td><td>x</td><td>x</td><td>A</td></tr> <tr><td>L</td><td>O</td><td>A</td><td>D</td><td></td><td>O</td><td>K</td><td>*</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>o</td><td>L</td><td><</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>u</td><td>L</td><td><</td></tr> </table>	I	=	x	x	.	x	x	A	L	O	A	D		O	K	*						o	L	<						u	L	<	I	=	x	x	x	.	x	A	L	O	A	D		O	K	*						o	L	<						u	L	<	I	=	x	x	x	x	x	A	L	O	A	D		O	K	*						o	L	<						u	L	<	<p>1-HOME SCREEN: If the device is working properly , the average current is displayed. If the I value exceeds 1.2IN it will flash . The second line shows the current status: OK : I < 1.2IN oL : I > 1.2IN - overheating. uL : I < IO ((After 30 seconds, there is a fault) During the overcurrent time the oL message is flashing. When the relay trips the red alarm LED will be permanent on lit. During the reset time (30s, 1m, 2m, 3m depending on the CLASS set) the " symbol appears at the bottom right. MINIMUM CURRENT If a value different from OFF is set on IO parameter and the average current measured I is lower, the symbol "<" will flash at the bottom right of the screen and, if requested, the value "255" will be shown for the "Belt Warning" parameter.</p>
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VISUALIZATIONS SCREEN DDMP 5 -320 - 450 - 900

To change the screen, press the **MODE** button

<p>Without external TA</p> <table border="1" data-bbox="121 349 568 443"> <tr><td>I</td><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>A</td></tr> <tr><td></td><td></td><td>x</td><td>x</td><td>.</td><td>x</td><td>x</td><td></td><td></td><td></td></tr> </table> <p>With external TA and In <= 100A</p> <table border="1" data-bbox="121 477 568 571"> <tr><td>I</td><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>A</td></tr> <tr><td></td><td></td><td>x</td><td>x</td><td>x</td><td>.</td><td>x</td><td></td><td></td><td></td></tr> </table> <p>With external TA and In >= 100A</p> <table border="1" data-bbox="121 600 568 694"> <tr><td>I</td><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>A</td></tr> <tr><td></td><td></td><td>x</td><td>x</td><td>x</td><td>x</td><td>x</td><td></td><td></td><td></td></tr> </table>	I	2								A			x	x	.	x	x				I	2								A			x	x	x	.	x				I	2								A			x	x	x	x	x				<p>5-SCREEN I2 : I2 value.</p>
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<table border="1" data-bbox="121 1704 568 1798"> <tr><td>N</td><td>-</td><td>S</td><td>t</td><td></td><td></td><td></td><td></td><td>-/■</td><td></td></tr> <tr><td>x</td><td>x</td><td>x</td><td>x</td><td>x</td><td></td><td></td><td></td><td></td><td></td></tr> </table>	N	-	S	t					-/■		x	x	x	x	x						<p>10-START-UP SCREEN : The number of starts is displayed (condition I > I0). If the START value set is exceeded, the symbol " ■ " will appear at the top Right of the screen</p>																																								
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VISUALIZATIONS SCREEN DDMP 5 -320 - 450 - 900

To change the screen, press the **MODE** button

<table border="1"> <tr><td>S</td><td>E</td><td>T</td><td>U</td><td>P</td><td></td><td></td><td></td></tr> <tr><td>p</td><td>w</td><td>d</td><td>=</td><td>x</td><td>x</td><td>x</td><td></td></tr> </table>	S	E	T	U	P				p	w	d	=	x	x	x		<p>PASSWORD SCREEN: Enter password to access the SETUP menu (pwd 1-999). This screen is available only if I=0;</p>																
S	E	T	U	P																													
p	w	d	=	x	x	x																											
<table border="1"> <tr><td>S</td><td>E</td><td>T</td><td></td><td></td><td>P</td><td>0</td><td>1</td></tr> <tr><td>E</td><td>X</td><td>T</td><td>-</td><td>C</td><td>T</td><td>=</td><td>Y/N</td></tr> </table>	S	E	T			P	0	1	E	X	T	-	C	T	=	Y/N	<p>SET P01-TA SCREEN If an external TA is used, set Y If an external TA is not used, set N (default) When N is set the next screen will be P04 Note = Settings already configured for the DDMP 320-450-900 models</p>																
S	E	T			P	0	1																										
E	X	T	-	C	T	=	Y/N																										
<table border="1"> <tr><td>S</td><td>E</td><td>T</td><td></td><td></td><td>P</td><td>0</td><td>2</td></tr> <tr><td>C</td><td>T</td><td>p</td><td>=</td><td>x</td><td>x</td><td>x</td><td>x</td></tr> </table>	S	E	T			P	0	2	C	T	p	=	x	x	x	x	<p>SET P02-TA PRIMARY SCREEN Screen for setting the CTp value of the primary of any external TA used. 80 < CTp < 1500 For example in case of external TA 100/5 CTp= 100 Screen available only it is selected an external TA is set in P01</p>																
S	E	T			P	0	2																										
C	T	p	=	x	x	x	x																										
<table border="1"> <tr><td>S</td><td>E</td><td>T</td><td></td><td></td><td>P</td><td>0</td><td>3</td></tr> <tr><td>C</td><td>T</td><td>s</td><td>=</td><td></td><td>x</td><td></td><td></td></tr> </table>	S	E	T			P	0	3	C	T	s	=		x			<p>SET P03- TA SECONDARY SCREEN: Screen for setting the secondary value of any external TA used. 1 < CTs < 5 (For example in case of external TA 100/5 CTs=5 Screen available only if the use of an external TA is set in P01)</p>																
S	E	T			P	0	3																										
C	T	s	=		x																												
<p>Without external TA</p> <table border="1"> <tr><td>S</td><td>E</td><td>T</td><td></td><td></td><td>P</td><td>0</td><td>4</td></tr> <tr><td>I</td><td>N</td><td>=</td><td>x</td><td>.</td><td>x</td><td>x</td><td>A</td></tr> </table> <p>With external TA</p> <table border="1"> <tr><td>S</td><td>E</td><td>T</td><td></td><td></td><td>P</td><td>0</td><td>4</td></tr> <tr><td>I</td><td>N</td><td>=</td><td>x</td><td>x</td><td>x</td><td>x</td><td>A</td></tr> </table>	S	E	T			P	0	4	I	N	=	x	.	x	x	A	S	E	T			P	0	4	I	N	=	x	x	x	x	A	<p>SET P04 - NOMINAL CURRENT SCREEN In: Selection IN value 1 < IN < 5 A without external TA 60 < IN < 1500A (CTp) with external TA</p>
S	E	T			P	0	4																										
I	N	=	x	.	x	x	A																										
S	E	T			P	0	4																										
I	N	=	x	x	x	x	A																										
<table border="1"> <tr><td>S</td><td>E</td><td>T</td><td></td><td></td><td>P</td><td>0</td><td>5</td></tr> <tr><td>C</td><td>L</td><td>=</td><td></td><td></td><td>5/10/20/30</td><td></td><td>sec</td></tr> </table>	S	E	T			P	0	5	C	L	=			5/10/20/30		sec	<p>SET P05- OPERATION CLASS SCREEN: Selection operating class</p>																
S	E	T			P	0	5																										
C	L	=			5/10/20/30		sec																										
<table border="1"> <tr><td>S</td><td>E</td><td>T</td><td></td><td></td><td>P</td><td>0</td><td>6</td></tr> <tr><td>I</td><td>D</td><td>=</td><td>x</td><td>x</td><td>x</td><td></td><td></td></tr> </table>	S	E	T			P	0	6	I	D	=	x	x	x			<p>SET P06 - MODBUS ID SCREEN: MODBUSS ID selection Station number (1-128)</p>																
S	E	T			P	0	6																										
I	D	=	x	x	x																												
<table border="1"> <tr><td>S</td><td>E</td><td>T</td><td></td><td></td><td>P</td><td>0</td><td>7</td></tr> <tr><td>T</td><td>x</td><td>=</td><td>x</td><td>x</td><td>.</td><td>x</td><td></td></tr> </table>	S	E	T			P	0	7	T	x	=	x	x	.	x		<p>SET P07 - SPEED AND TRANSMISSION SCREEN: 9.6K or 19.2K transmission speed input</p>																
S	E	T			P	0	7																										
T	x	=	x	x	.	x																											

VISUALIZATIONS SCREEN DDMP 5 -320 - 450 - 900

To change the screen, press the MODE button

<table border="1"> <tr><td>S</td><td>E</td><td>T</td><td></td><td>P</td><td>0</td><td>8</td></tr> <tr><td>P</td><td>T</td><td>=</td><td>-</td><td>-</td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td>P</td><td>T</td><td>C</td><td></td></tr> <tr><td></td><td></td><td></td><td>E</td><td>C</td><td>2</td><td></td></tr> </table>	S	E	T		P	0	8	P	T	=	-	-						P	T	C					E	C	2		<p>SET P08 - PTC SCREEN: PTC thermal protection PT = -- protection off PT = PTC protection PTC active PT= EC2 uses the PTC input to read the state of a remote contact</p>
S	E	T		P	0	8																							
P	T	=	-	-																									
			P	T	C																								
			E	C	2																								
<table border="1"> <tr><td>S</td><td>E</td><td>T</td><td></td><td>P</td><td>0</td><td>9</td></tr> <tr><td>R</td><td>C</td><td>=</td><td>N</td><td>O</td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td>Y</td><td>E</td><td>S</td><td></td></tr> </table>	S	E	T		P	0	9	R	C	=	N	O						Y	E	S		<p>SET P09 - MODBUS ENABLING SCREEN , In E CLASS: Setting the possibility to remotely configure the following parameters. - IN - CL By default RC=NO</p>							
S	E	T		P	0	9																							
R	C	=	N	O																									
			Y	E	S																								
<table border="1"> <tr><td>S</td><td>E</td><td>T</td><td></td><td>P</td><td>1</td><td>0</td></tr> <tr><td>E</td><td>C</td><td>1</td><td>=</td><td>N</td><td>O</td><td></td></tr> <tr><td></td><td></td><td></td><td>Y</td><td>E</td><td>S</td><td></td></tr> </table>	S	E	T		P	1	0	E	C	1	=	N	O					Y	E	S		<p>SET P10 - EC1 SCREEN setting the possibility to read the status of the external contact on pins 17-18 (EC1=YES) or to have the tele-reset of the active device on those same pins (EC1=NO) By default EC1=NO</p>							
S	E	T		P	1	0																							
E	C	1	=	N	O																								
			Y	E	S																								
<table border="1"> <tr><td>S</td><td>E</td><td>T</td><td></td><td>P</td><td>1</td><td>1</td></tr> <tr><td>I</td><td>0</td><td>=</td><td colspan="4">OFF / 20-60%</td></tr> </table>	S	E	T		P	1	1	I	0	=	OFF / 20-60%				<p>SET P11 - % IO SCREEN: setting the percentage value of the IO of the motor. If a value different from OFF is set in the parameter for currents different from O but less than IO, the device will flash the "<" symbol on the main screen and will transmit the warning byte 255 via MODBUS. The value 255 indicates the possibility that the drive belt is broken as consequence of the low current consumption of the motor. If the measured I is more than IO, the warning byte will have a value of zero and no flashing symbol will appear on the main screen.</p>														
S	E	T		P	1	1																							
I	0	=	OFF / 20-60%																										
<table border="1"> <tr><td>S</td><td>E</td><td>T</td><td></td><td>P</td><td>1</td><td>2</td></tr> <tr><td>H</td><td>=</td><td></td><td>X</td><td>X</td><td>X</td><td>X</td></tr> </table>	S	E	T		P	1	2	H	=		X	X	X	X	<p>SET P12 - OPERATING HOURS SCREEN: Screen for setting the maximum number of operating hours (I > IO) after which a warning message will appear on screen 9 of the main menu. Default : H=65535</p>														
S	E	T		P	1	2																							
H	=		X	X	X	X																							
<table border="1"> <tr><td>S</td><td>E</td><td>T</td><td></td><td>P</td><td>1</td><td>3</td></tr> <tr><td>S</td><td>t</td><td>=</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> </table>	S	E	T		P	1	3	S	t	=	X	X	X	X	<p>SET P13 - NUMBER OF STARTS SCREEN: Screen for setting the maximum number of motor starts (Start) over that a warning message will appear on screen 10 of the main menu Default : St=65535</p>														
S	E	T		P	1	3																							
S	t	=	X	X	X	X																							

VISUALIZATIONS SCREEN DDMP 5 -320 - 450 - 900

To change the screen, press the MODE button

<table border="1"> <tr> <td>R</td><td>E</td><td>S</td><td></td><td>P</td><td>1</td><td>4</td> </tr> <tr> <td>H</td><td>-</td><td>O</td><td>N</td><td>=</td><td>Y/N</td><td></td> </tr> </table>	R	E	S		P	1	4	H	-	O	N	=	Y/N		<p>SET P14 - H-ON OPERATION RESET SCREEN: Screen where is possible reset the H-ON operating hours value indicated on the display screen 9</p>	
R	E	S		P	1	4										
H	-	O	N	=	Y/N											
<table border="1"> <tr> <td>R</td><td>E</td><td>S</td><td></td><td>P</td><td>1</td><td>5</td> </tr> <tr> <td>N</td><td>-</td><td>S</td><td>t</td><td>=</td><td>Y/N</td><td></td> </tr> </table>	R	E	S		P	1	5	N	-	S	t	=	Y/N		<p>SET P15 - STARTS NUMBER RESET SCREEN: Screen where is possible to reset the value of the number of starts N-St indicated in the display screen 10</p>	
R	E	S		P	1	5										
N	-	S	t	=	Y/N											
<table border="1"> <tr> <td>S</td><td>E</td><td>T</td><td></td><td>P</td><td>1</td><td>6</td> </tr> <tr> <td>p</td><td>w</td><td>d</td><td>=</td><td>x</td><td>x</td><td>x</td> </tr> </table>	S	E	T		P	1	6	p	w	d	=	x	x	x	<p>SET P16 - NEW PASSWORD SCREEN : Enter new PWD Default is 001</p>	
S	E	T		P	1	6										
p	w	d	=	x	x	x										
<table border="1"> <tr> <td>S</td><td>E</td><td>T</td><td></td><td>P</td><td>1</td><td>7</td> </tr> <tr> <td>r</td><td>e</td><td>v</td><td>x</td><td>x</td><td>.</td><td>x</td><td>x</td> </tr> </table>	S	E	T		P	1	7	r	e	v	x	x	.	x	x	<p>VERSION AND MODEL</p>
S	E	T		P	1	7										
r	e	v	x	x	.	x	x									

VISUALIZATIONS SCREEN DDMP 34 / 65

To change the screen, press the MODE button

<table border="1" data-bbox="121 517 616 703"> <tr> <td>I</td><td>=</td><td>x</td><td>x</td><td>x</td><td>.</td><td>x</td><td>A</td> </tr> <tr> <td>L</td><td>O</td><td>A</td><td>D</td><td></td><td>O</td><td>K</td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td>o</td><td>L</td><td>*</td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td>u</td><td>L</td><td><</td> </tr> </table>	I	=	x	x	x	.	x	A	L	O	A	D		O	K							o	L	*						u	L	<	<p>1-HOME SCREEN: If the device is working properly , the average current is displayed. If the I value exceeds 1.2IN it will flash . The second line shows the current status: OK : I < 1.2IN oL : I > 1.2IN - overheating. uL: I < IO ((After 30 seconds, there is a malfunction) During the overcurrent time the oL message is flashing. When the relay trips the red alarm LED will be permanent on lit. During the reset time (30s, 1m, 2m, 3m depending on the CLASS set) the " symbol appears at the bottom right. MINIMUM CURRENT If a value different from OFF is set on IO parameter and the average current measured I is lower, the symbol "<" will flash at the bottom right of the screen and, if requested, the value "255" will be shown for the "Belt Warning" parameter.</p>																
I	=	x	x	x	.	x	A																																										
L	O	A	D		O	K																																											
					o	L	*																																										
					u	L	<																																										
<table border="1" data-bbox="121 1032 624 1301"> <tr> <td></td><td></td><td></td><td></td><td>-</td><td>-</td><td></td><td></td> </tr> <tr> <td>P</td><td>T</td><td>C</td><td>=</td><td>O</td><td>K</td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td>H</td><td>i</td><td>T</td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td>L</td><td>o</td><td>T</td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td>E</td><td>C</td><td>2</td><td></td> </tr> <tr> <td>W</td><td>-</td><td>U</td><td>=</td><td>X</td><td>X</td><td>X</td><td>%</td> </tr> </table>					-	-			P	T	C	=	O	K							H	i	T						L	o	T						E	C	2		W	-	U	=	X	X	X	%	<p>2- PTC SCREEN: This screen shows the status of the thermal protection. -- : not installed OK: not in alarm HiT: overtemperature alarm LoT: Short circuit probe alarm EC2: when the input is used to read a remote contact. In case of alarm the red LED will flash. The second line shows the W-U heating status of the system (0-100%) based on the measured average current.</p>
				-	-																																												
P	T	C	=	O	K																																												
				H	i	T																																											
				L	o	T																																											
				E	C	2																																											
W	-	U	=	X	X	X	%																																										
<table border="1" data-bbox="121 1435 616 1615"> <tr> <td>P</td><td>H</td><td>L</td><td>=</td><td>O</td><td>K</td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td>A</td><td>L</td><td></td><td></td> </tr> <tr> <td>P</td><td>H</td><td>U</td><td>=</td><td>O</td><td>K</td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td>A</td><td>L</td><td></td><td></td> </tr> </table>	P	H	L	=	O	K							A	L			P	H	U	=	O	K							A	L			<p>3- PHASE LOSS AND PHASE ASYMMETRY SCREEN: PHL indicates the condition of possible phase failure. When the relay trips, the red alarm LED will be permanently on. PHU indicates the condition of possible current asymmetry beyond the maximum permitted value. When the relay trips, the red alarm LED will be permanently on.</p>																
P	H	L	=	O	K																																												
				A	L																																												
P	H	U	=	O	K																																												
				A	L																																												
<table border="1" data-bbox="121 1839 568 1928"> <tr> <td>I</td><td>l</td><td></td><td></td><td></td><td></td><td></td><td>A</td> </tr> <tr> <td></td><td></td><td>x</td><td>x</td><td>x</td><td>.</td><td>x</td><td></td> </tr> </table>	I	l						A			x	x	x	.	x		<p>4-SCREEN I1 : I1 value.</p>																																
I	l						A																																										
		x	x	x	.	x																																											

VISUALIZATIONS SCREEN DDMP 34 / 65

To change the screen, press the MODE button

<table border="1" data-bbox="127 443 571 528"> <tr> <td>I</td><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td>A</td> </tr> <tr> <td></td><td></td><td>x</td><td>x</td><td>x</td><td>.</td><td>x</td><td></td><td></td> </tr> </table>	I	2							A			x	x	x	.	x			<p>5-SCREEN I2 : I2 value.</p>
I	2							A											
		x	x	x	.	x													
<table border="1" data-bbox="127 864 571 949"> <tr> <td>I</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td>A</td> </tr> <tr> <td></td><td></td><td>x</td><td>x</td><td>x</td><td>.</td><td>x</td><td></td><td></td> </tr> </table>	I	3							A			x	x	x	.	x			<p>6-SCREEN I3 : I3 value.</p>
I	3							A											
		x	x	x	.	x													
<table border="1" data-bbox="127 1122 571 1207"> <tr> <td>I</td><td>N</td><td>=</td><td>x</td><td>x</td><td>.</td><td>x</td><td>A</td> </tr> <tr> <td>C</td><td>L</td><td>=</td><td colspan="5">5/10/20/30 sec</td> </tr> </table>	I	N	=	x	x	.	x	A	C	L	=	5/10/20/30 sec					<p>7-IN AND CLASS SCREEN: The IN and class are shown</p>		
I	N	=	x	x	.	x	A												
C	L	=	5/10/20/30 sec																
<table border="1" data-bbox="127 1294 571 1379"> <tr> <td>T</td><td>E</td><td>S</td><td>T</td><td></td><td></td><td></td><td></td> </tr> <tr> <td>U</td><td>P</td><td>+</td><td>D</td><td>O</td><td>W</td><td>N</td><td></td> </tr> </table>	T	E	S	T					U	P	+	D	O	W	N		<p>8-TEST SCREEN : Pressing UP and DOWN at the same time the relay TEST is performed. This screen is available only if I=0</p>		
T	E	S	T																
U	P	+	D	O	W	N													
<table border="1" data-bbox="127 1485 571 1570"> <tr> <td>H</td><td>-</td><td>O</td><td>N</td><td></td><td></td><td></td><td>-/■</td> </tr> <tr> <td>H</td><td>H</td><td>H</td><td>H</td><td>H</td><td>:</td><td>M</td><td>M</td> </tr> </table>	H	-	O	N				-/■	H	H	H	H	H	:	M	M	<p>9-TIME AND OPERATION SCREEN : The hours and minutes of operation (condition of I > I0) of the device are shown. If the set H-ON max value is exceeded, the symbol " ■ " will appear at the top Right of the screen</p>		
H	-	O	N				-/■												
H	H	H	H	H	:	M	M												
<table border="1" data-bbox="127 1675 571 1760"> <tr> <td>N</td><td>-</td><td>S</td><td>t</td><td></td><td></td><td></td><td>-/■</td> </tr> <tr> <td></td><td>x</td><td>x</td><td>x</td><td>x</td><td>x</td><td></td><td></td> </tr> </table>	N	-	S	t				-/■		x	x	x	x	x			<p>10-START-UP SCREEN : The number of starts is displayed (condition I > I0). If the START value set is exceeded, the symbol " ■ " will appear at the top Right of the screen</p>		
N	-	S	t				-/■												
	x	x	x	x	x														

VISUALIZATIONS SCREEN DDMP 34 / 65

To change the screen, press the MODE button

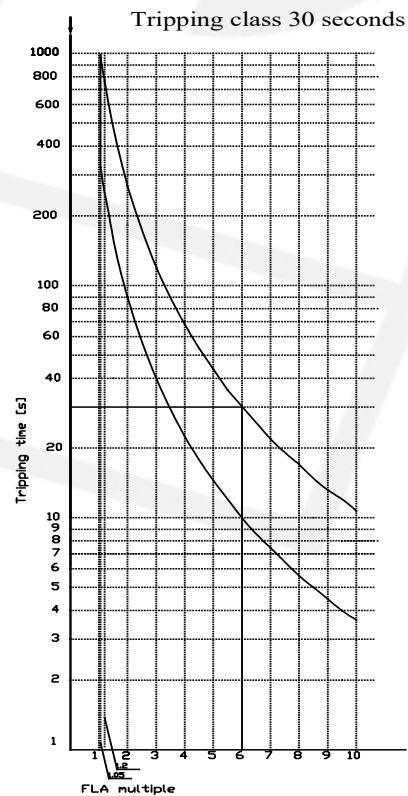
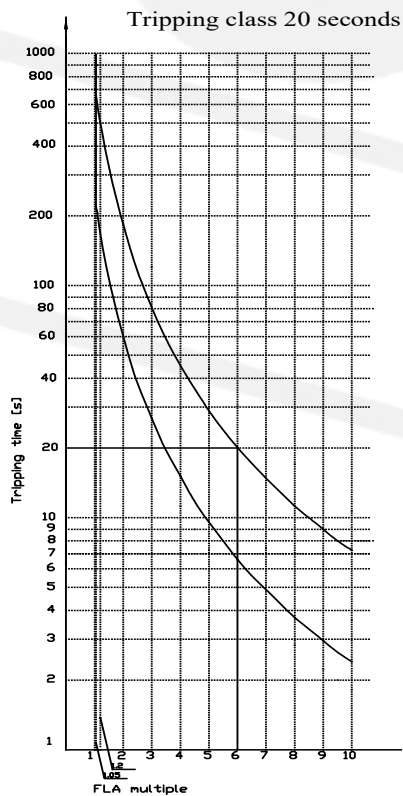
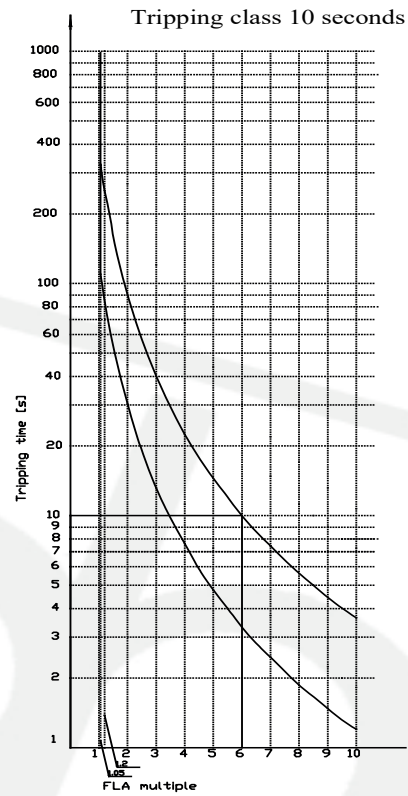
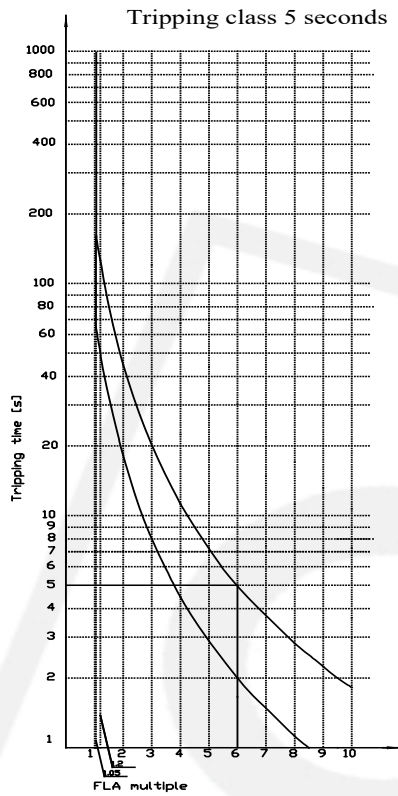
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S	E	T	U	P																																					
p	w	d	=	x	x	x																																			
<table border="1" data-bbox="129 591 609 685"> <tr> <td>S</td><td>E</td><td>T</td><td></td><td></td><td>P</td><td>0</td><td>1</td><td></td><td></td> </tr> <tr> <td>I</td><td>N</td><td>=</td><td>x</td><td>x</td><td>.</td><td>x</td><td>A</td><td></td><td></td> </tr> </table>	S	E	T			P	0	1			I	N	=	x	x	.	x	A			<p>SET P01 - NOMINAL CURRENT SCREEN In: Selection IN value 3 < IN < 34,5 A 33 < IN < 65A (CTp)</p>																				
S	E	T			P	0	1																																		
I	N	=	x	x	.	x	A																																		
<table border="1" data-bbox="129 786 592 880"> <tr> <td>S</td><td>E</td><td>T</td><td></td><td></td><td>P</td><td>0</td><td>2</td><td></td><td></td> </tr> <tr> <td>C</td><td>L</td><td>=</td><td></td><td></td><td>5/10/20/30</td><td>se</td><td></td><td></td><td></td> </tr> </table>	S	E	T			P	0	2			C	L	=			5/10/20/30	se				<p>SET P02- OPERATION CLASS SCREEN: Selection operating class</p>																				
S	E	T			P	0	2																																		
C	L	=			5/10/20/30	se																																			
<table border="1" data-bbox="129 943 592 1037"> <tr> <td>S</td><td>E</td><td>T</td><td></td><td></td><td>P</td><td>0</td><td>3</td><td></td><td></td> </tr> <tr> <td>I</td><td>D</td><td>=</td><td>x</td><td>x</td><td>x</td><td></td><td></td><td></td><td></td> </tr> </table>	S	E	T			P	0	3			I	D	=	x	x	x					<p>SET P03 - MODBUS ID SCREEN: MODBUSS ID selection Station number (1-128)</p>																				
S	E	T			P	0	3																																		
I	D	=	x	x	x																																				
<table border="1" data-bbox="129 1122 592 1216"> <tr> <td>S</td><td>E</td><td>T</td><td></td><td></td><td>P</td><td>0</td><td>4</td><td></td><td></td> </tr> <tr> <td>T</td><td>x</td><td>=</td><td>x</td><td>x</td><td>.</td><td>x</td><td>K</td><td></td><td></td> </tr> </table>	S	E	T			P	0	4			T	x	=	x	x	.	x	K			<p>SET P04 - SCHERMATA VELOCITÀ E TRASMISSIONE: inserimento velocità di trasmissione 9.6K o 19.2K</p>																				
S	E	T			P	0	4																																		
T	x	=	x	x	.	x	K																																		
<table border="1" data-bbox="129 1279 587 1458"> <tr> <td>S</td><td>E</td><td>T</td><td></td><td></td><td>P</td><td>0</td><td>5</td><td></td><td></td> </tr> <tr> <td>P</td><td>T</td><td>=</td><td></td><td></td><td>-</td><td>-</td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td>P</td><td>T</td><td>C</td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td>E</td><td>C</td><td>2</td><td></td><td></td> </tr> </table>	S	E	T			P	0	5			P	T	=			-	-									P	T	C								E	C	2			<p>SET P05 - PTC SCREEN: PTC thermal protection PT = -- protection off PT = PTC protection PTC active PT= EC2 uses the PTC input to read the state of a remote contact</p>
S	E	T			P	0	5																																		
P	T	=			-	-																																			
					P	T	C																																		
					E	C	2																																		
<table border="1" data-bbox="129 1547 587 1686"> <tr> <td>S</td><td>E</td><td>T</td><td></td><td></td><td>P</td><td>0</td><td>6</td><td></td><td></td> </tr> <tr> <td>R</td><td>C</td><td>=</td><td></td><td></td><td>N</td><td>O</td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td>Y</td><td>E</td><td>S</td><td></td><td></td> </tr> </table>	S	E	T			P	0	6			R	C	=			N	O									Y	E	S			<p>SET P06 - MODBUS ENABLING SCREEN , In E CLASS: Setting the possibility to remotely configure the following parameters. - IN - CL By default RC=NO</p>										
S	E	T			P	0	6																																		
R	C	=			N	O																																			
					Y	E	S																																		
<table border="1" data-bbox="129 1771 587 1910"> <tr> <td>S</td><td>E</td><td>T</td><td></td><td></td><td>P</td><td>0</td><td>7</td><td></td><td></td> </tr> <tr> <td>E</td><td>C</td><td>1</td><td>=</td><td></td><td>N</td><td>O</td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td>Y</td><td>E</td><td>S</td><td></td><td></td> </tr> </table>	S	E	T			P	0	7			E	C	1	=		N	O									Y	E	S			<p>SET P07 - EC1 SCREEN setting the possibility to read the status of the external contact on pins 17-18 (EC1=YES) or to have the tele-reset of the active device on those same pins (EC1=NO) By default EC1=NO</p>										
S	E	T			P	0	7																																		
E	C	1	=		N	O																																			
					Y	E	S																																		

VISUALIZATIONS SCREEN DDMP 34 / 65

To change the screen, press the MODE button

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">S</td><td style="text-align: center;">E</td><td style="text-align: center;">T</td><td style="text-align: center;">P</td><td style="text-align: center;">0</td><td style="text-align: center;">8</td> </tr> <tr> <td style="text-align: center;">I</td><td style="text-align: center;">0</td><td style="text-align: center;">=</td><td colspan="3" style="text-align: center;">OFF / 20-60%</td> </tr> </table>	S	E	T	P	0	8	I	0	=	OFF / 20-60%			<p>SET P08 - % IO SCREEN: setting the percentage value of the IO of the motor. If a value different from OFF is set in the parameter for currents different from 0 but less than IO, the device will flash the "<" symbol on the main screen and will transmit the warning byte 255 via MODBUS. The value 255 indicates the possibility that the drive belt is broken as consequence of the low current consumption of the motor. If the measured I is more than IO, the warning byte will have a value of zero and no flashing symbol will appear on the main screen.</p>						
S	E	T	P	0	8														
I	0	=	OFF / 20-60%																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">S</td><td style="text-align: center;">E</td><td style="text-align: center;">T</td><td style="text-align: center;">P</td><td style="text-align: center;">0</td><td style="text-align: center;">9</td> </tr> <tr> <td style="text-align: center;">H</td><td style="text-align: center;">=</td><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td style="text-align: center;">X</td> </tr> </table>	S	E	T	P	0	9	H	=	X	X	X	X	<p>SET P09- OPERATING HOURS SCREEN: Screen for setting the maximum number of operating hours (I > IO) after which a warning message will appear on screen 9 of the main menu. Default : H=65535</p>						
S	E	T	P	0	9														
H	=	X	X	X	X														
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">S</td><td style="text-align: center;">E</td><td style="text-align: center;">T</td><td style="text-align: center;">P</td><td style="text-align: center;">1</td><td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">S</td><td style="text-align: center;">t</td><td style="text-align: center;">=</td><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td style="text-align: center;">X</td> </tr> </table>	S	E	T	P	1	0	S	t	=	X	X	X	<p>SET P10 - NUMBER OF STARTS SCREEN: Screen for setting the maximum number of motor starts (Start) over that a warning message will appear on screen 10 of the main menu Default : St=65535</p>						
S	E	T	P	1	0														
S	t	=	X	X	X														
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">R</td><td style="text-align: center;">E</td><td style="text-align: center;">S</td><td style="text-align: center;">P</td><td style="text-align: center;">1</td><td style="text-align: center;">1</td> </tr> <tr> <td style="text-align: center;">H</td><td style="text-align: center;">-</td><td style="text-align: center;">O</td><td style="text-align: center;">N</td><td style="text-align: center;">=</td><td style="text-align: center;">Y/N</td> </tr> </table>	R	E	S	P	1	1	H	-	O	N	=	Y/N	<p>SET P11 - H-ON OPERATION RESET SCREEN: Screen where is possible reset the H-ON operating hours value indicated on the display screen 9</p>						
R	E	S	P	1	1														
H	-	O	N	=	Y/N														
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">R</td><td style="text-align: center;">E</td><td style="text-align: center;">S</td><td style="text-align: center;">P</td><td style="text-align: center;">1</td><td style="text-align: center;">2</td> </tr> <tr> <td style="text-align: center;">N</td><td style="text-align: center;">-</td><td style="text-align: center;">S</td><td style="text-align: center;">t</td><td style="text-align: center;">=</td><td style="text-align: center;">Y/N</td> </tr> </table>	R	E	S	P	1	2	N	-	S	t	=	Y/N	<p>SET P12 - STARTS NUMBER RESET SCREEN: Screen where is possible to reset the value of the number of starts N-St indicated in the display screen 10</p>						
R	E	S	P	1	2														
N	-	S	t	=	Y/N														
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">S</td><td style="text-align: center;">E</td><td style="text-align: center;">T</td><td style="text-align: center;">P</td><td style="text-align: center;">1</td><td style="text-align: center;">3</td> </tr> <tr> <td style="text-align: center;">p</td><td style="text-align: center;">w</td><td style="text-align: center;">d</td><td style="text-align: center;">=</td><td style="text-align: center;">x</td><td style="text-align: center;">x</td> </tr> </table>	S	E	T	P	1	3	p	w	d	=	x	x	<p>SET P13 - NEW PASSWORD SCREEN : Enter new PWD Default is 001</p>						
S	E	T	P	1	3														
p	w	d	=	x	x														
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">S</td><td style="text-align: center;">E</td><td style="text-align: center;">T</td><td style="text-align: center;">P</td><td style="text-align: center;">1</td><td style="text-align: center;">4</td> </tr> <tr> <td style="text-align: center;">r</td><td style="text-align: center;">e</td><td style="text-align: center;">v</td><td style="text-align: center;">x</td><td style="text-align: center;">x</td><td style="text-align: center;">.</td> </tr> <tr> <td style="text-align: center;">x</td><td style="text-align: center;">x</td><td style="text-align: center;">x</td><td style="text-align: center;">x</td><td style="text-align: center;">x</td><td style="text-align: center;">x</td> </tr> </table>	S	E	T	P	1	4	r	e	v	x	x	.	x	x	x	x	x	x	<p>VERSION AND MODEL</p>
S	E	T	P	1	4														
r	e	v	x	x	.														
x	x	x	x	x	x														

TRIPPING CURVES



Note: Minimum time for manual reset is six times the selected tripping class

TECHNICAL FEATURES

	MECHANICAL DATA	
Protection degree	-	IP20
Fixing	-	Screws fixing or rail mounting (DIN 35mm)
Weight	Kg	0.35
Resistance to shock	g	15g 11ms for screw mounting
	POWER CIRCUIT	
Rated voltage	V AC	1000
Rated insulation voltage	V AC	1000
Rated impulse withstand voltage	kV	8
DDMP 5 COM minimum current value settable (Ie)	A	1
DDMP 5 COM maximum current value settable	A	5
DDMP 34 COM minimum current value settable (Ie)	A	3
DDMP 34 COM maximum current value settable	A	34.5
DDMP 65 COM minimum current value settable (Ie)	A	33
DDMP 65 COM maximum current value settable	A	65
DDMP 320 COM minimum current value settable (Ie)	A	64
DDMP 320 COM maximum current value settable	A	320
DDMP 450-COM minimum current value settable (Ie)	A	90
DDMP 450 COM maximum current value settable	A	450
DDMP 900 COM maximum current value settable	A	180
DDMP 900 COM maximum current value settable	A	900
Connections	mm ²	fino a 16
Tripp class		5-10-20-30
Consumption	VA	2
Frequency limits	Hz	da 50 a 60
Storage temperature	°C	-20...+80
Operating temperature	°C	-10...+55
	CONTROL CIRCUIT	
Reset type	Manual / automatic /remote	
Test function	Yes	
Supply voltage	24V AC/DC, 110-240V AC	
Trip and alarm contacts 95-96 (N/C), 97-98B (N/C), 97-98 (N/O)		
Rated voltage	V AC	250
Max thermal current	A	7
Resistive	A	8A 250VAC/30VDC (AC13)
Inductive	A	4A 250VAC Cosφ=0,4 (AC15)
Protection fuse	A	10
Connections cross section	mm ²	0.5...1.5

TECHNICAL FEATURES

Phase loss and imbalance of current		
Imbalance of current	Limit	>40% x 30 sec
Phase loss	Limit	Phase 1 <20% x 3 sec
PTC protection		
Max number of PTC sensor in series	#	6
Max. resistance of PTC in series	Ω	1500
Upper tripping limit (overtemperature)	Ω	3500
Release after overtemperature	Ω	1800
Lower intervention limit (short circuit)	Ω	50
Release after short circuit	Ω	1800
Standard compliance		
IEC 60947-4-1		RINA (pending)

MODBUS RTU (19200 bit/s - 8 date bit- 1 stop bit- no parity 8,1,NONE)

The device can be connected (as a SLAVE) in an RS 485 network and can communicate with an RTU using the standard MODBUS (rtu) protocol.

The MODBUS instructions implemented are:

- **READ OUTPUT REGISTER (03)** This instruction allows you to request the value of some controlled parameters
- **PRESET SINGLE REGISTER (06)** With the instruction is possible to set the parameter value.

In the detail:

READ OUTPUT REGISTER (03)

ID A3-12	3	ADD H	ADD L	NH	NL	CRC H	CRC L
----------	---	-------	-------	----	----	-------	-------

This instruction allows you to request the value of some parameters controlled by the A3-12 which has as ID the value entered in the **A3-12 ID** field

The following table details which parameters can be transmitted and to which addresses they should be requested.

ADD H	ADD L	PARAMETER TRANSMITTED (2 byte)	CHARACTERISTICS OF THE TRANSMITTED PARAMETER	UNIT OF MEASUREMENT
00	01	Im	If RR= 1 The value received should be divided by 10 If RR=0 e IN <= 100A The value received should be divided by 10 If RR=0 e IN >100A The value received must be divided by 100	A
00	02	In	If RR= 1 The value received must be divided by 100 If RR=0 The received value corresponds to the set IN	A
00	03	I1	If RR= 1 The value received should be divided by 10 If RR=0 e IN <= 100A The value received should be divided by 10 If RR=0 e IN >100A The value received must be divided by 100	A
00	04	I2	If RR=I The value received should be divided by 10 If RR=0 e IN <= 100A The value received should be divided by 10 If RR=0 e IN >100A The value received should be divided by 100	A
00	05	I3	If RR=I The value received should be divided by 10 If RR=0 e IN <= 100A The value received should be divided by 10 If RR=0 e IN >100A The value received should be divided by 100	A

ADD H	ADD L	PARAMETER TRANSMITTED (2 byte)	CHARACTERISTICS OF THE TRANSMITTED PARAMETER	UNIT OF MEASUREMENT
00	06	WU	Index of motor warning	%
00	07	ALARM CODE	0 : no alarm 1 : oL alarm 2 : phase loss alarm (PHL) 3 : Current asymmetry alarm (PHU) 4 : PTC HiT alarm 5 : PTC LoT alar 6: I < IO alarm	--
00	08	OPERATING CLASS	--	--
00	09	RR	If RR=1 no external TA If RR =0 an external TA is used	--
00	0A	Remote contact status EC1	255: Closed contact O: Open contact	--
00	0B	Remote contact status EC2	255: Closed contact O: Open contact	--
00	0C	Countdown reset time	30-60-120-180	sec
00	0D	Belt Warning	O: Im>IO o Im=0 255: Im<IO	--
00	0E	H-ON Reset operating hours	0-65535 ore	h
00	0F	MIN minutes of operation	0-59 min	min
00	10	start number	0-65 535	--
00	11	Status of operating hours	0 : H-ON < HMax 255 : H-ON> HMax	--
00	12	Start number status	0 : N-St < SMax 255 : N-St > SMax	--
00	13	Device version	Model	--

NH-NL indicate the number parameters to be transmitted; in fact, it is possible to request the transmission of more than one parameter at the same time (up to 11).

Example

Instruction:

1	3	0	0	0	4	44	09
---	---	---	---	---	---	----	----

requires to A3-12 with ID= 1 to transmit the parameters Im, In, I1 and I2

Example:

Instruction :

1	3	0	0	0	9	85	CC
---	---	---	---	---	---	----	----

Requires A3-12 with ID= 1 to transmit the parameters Im, In, I1, I2, I3, WU ,alarm code, class and RR

PRESET SINGLE REGISTER (06)- SOLO SE RC=YES (schermata P07)

With the instruction

ID A3-12	6	ADD H	ADD L	NH	NL	CRC H	CRC L
----------	---	-------	-------	----	----	-------	-------

You can set the value of a configuration parameter of the A3-12.

For example, with the instruction:

2	6	0	0	0	1	48	39
---	---	---	---	---	---	----	----

You set the CLASS=10 sec in the device with ID=2

- NL=0 -> CLASS 5sec
- NL=1 -> CLASS 10sec
- NL=2 -> CLASS 20sec
- NL=3 -> CLASS 30sec

For example, with the instruction:

2	6	0	1	0	32	59	EC
---	---	---	---	---	----	----	----

You set In=5.0A (50>0x32 in hexadecimal) in the device with ID=2

For example, with the instruction:

2	6	0	1	1	59	19	93
---	---	---	---	---	----	----	----

You set In=34.5A (345> 0x159 in hexadecimal) in the device with ID=2

For example, with the instruction:

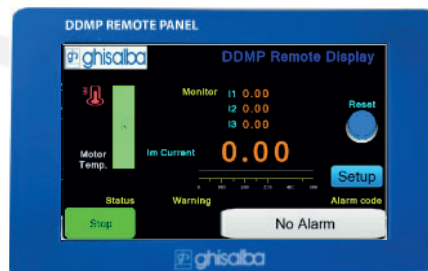
2	6	0	4	0	0	C8	38
---	---	---	---	---	---	----	----

You reset the device with ID=2

ACCESSORIES

DDMP REMOTE PANEL

- Remote display device for DDMP with RS485 serial connection
- Basic 4.3-inch TFT video (expandable to 7 or 10 inches)
- Single or multi device connection up to 10 DDMP
- Configurable ethernet port for signal relay



INTEGRATED FUNCTIONS

- DDMP reading display (Currents, %motor temperature, Motor status and active alarms)
- Parameter Programming (Current Rating, Class)
- Event and Alarm History (with no-load reporting)
- Date and Time
- Current chart
- Password for access to programming
- Statistics (operation hours and number of starts)
- Ethernet Parameters
- Language selection: Italian, English
- Maximum current limit alert (configurable)
- Minimum current limit warning (configurable)
- No load

ELECTRICAL PARAMETERS

- Power supply 24VDC
- Power: <5W
- Serial connection: terminal block

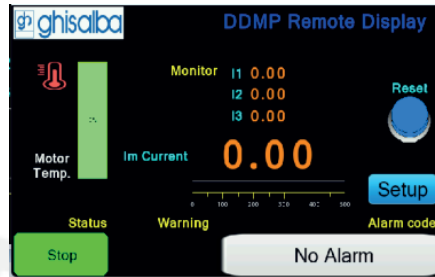
IP54 VERSION

DDMP Remote Display supplied in an electrical panel complete with contactor, automatic manual selector, illuminated start and stop button, door lock disconnecter, manual and test certificate.



DDMP Remote Panel Software (version 1.00)

HOME PAGE



MONITOR



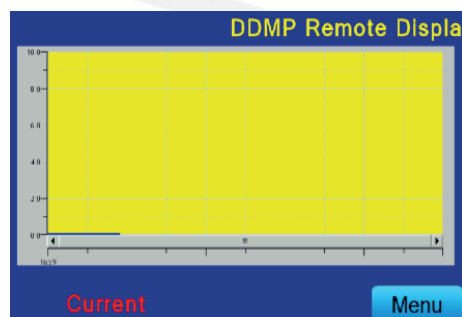
PARAMETERS



ALARMS AND HISTORICAL EVENTS



CURRENT GRAPH



HMI WITH RESISTIVE TOUCH

DDMP REMOTE PANEL 4,3 / DDMP REMOTE PANEL 7 / DDMP REMOTE PANEL 10

- High resolution LCD display
- Software DDMP Remote Panel
- USB host port for data storage
- Tropicalized motherboard coating
- Ethernet
- Connection Cable



ORDERING CODES

DESCRIPTION	DISPLAY	SIZE	RESOLUTION	ETHERNET
DDMP REMOTE PANEL 4,3	4,3"	16:9	800x480	1x10/100 Mbit
DDMP REMOTE PANEL 7	7"	16:9	1024x600	
DDMP REMOTE PANEL 10	10,1"	16:9	1024x600	

TECHNICAL SPECIFICATIONS

	DDMP REMOTE PANEL 4,3	DDMP REMOTE PANEL 7	DDMP REMOTE PANEL 10
Technical information			
Display	4,3"	7"	10,1"
Size	16:9	16:9	16:9
Resolution	800x480	1024x600	1024x600
Depth of Color [BIT]	16	24	24
luminosity [cd/m2]	250	350	400
Backlighting	LED		
LCD Duration	50.000 hours		
Touch	RESISTIVE - glass + protective glass		
CPU	A7 1GHz	A7 1GHz	A7 1GHz
Flash Memory / RAM [Mb]	128/128	256/4000	
RTC - Clock	Internal battery 3V CR2032		
LCD visibility angle (high/low/left/right)	85° / 85° / 85° / 85°		

	DDMP REMOTE PANEL 4,3	DDMP REMOTE PANEL 7	DDMP REMOTE PANEL 10
Connections			
Ethernet	1x RJ45		
USB Slave	USB Type C		
USB Host Ports	Usb Type A		
COM 1	RS232 - RS 485 - RS422		
COM 2	RS485		
COM 3	RS232 - RS 485 - RS422		

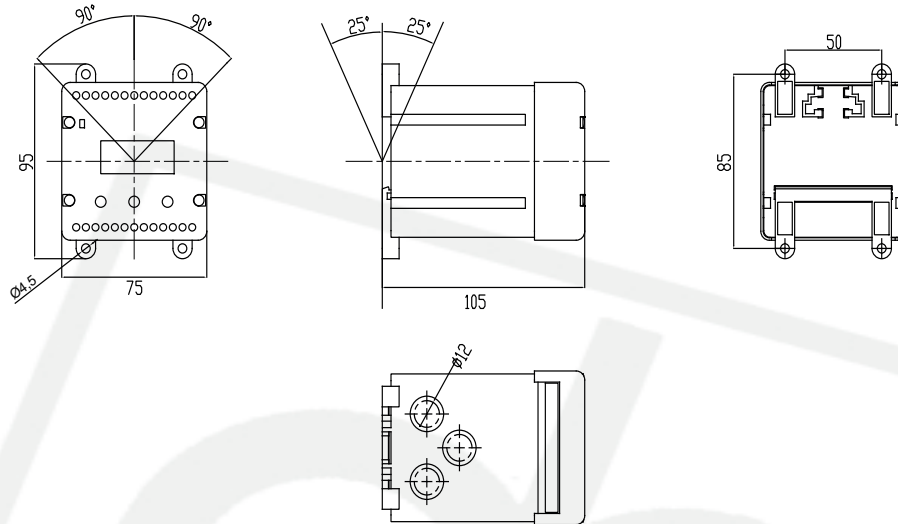
Electrical Specifications			
Consumption	<5W	<10W	
Supply voltage	24 VDC (18-28 VDC)		
Protections	Overvoltage , electrical discharges		
Power supply failure	<5 ms		
Conformity	EN61000-6-2:2005,EN61000-6-4:2007, RoHS, Surge Immunity:±1KV, EFT:±2KV, ESD:4KV, Air:8KV		

Environment	
Working temperature	0~50°C
Storage temperature	-20~60°C
Anti - UV	Not suitable for use in strong ultraviolet light (sunlight)
Humidity	10~ 90% RH (no condensation)
Vibration resistance	10~25 Hz (X,Y,Z,2G / 30minutes)
Cooling	Natural air

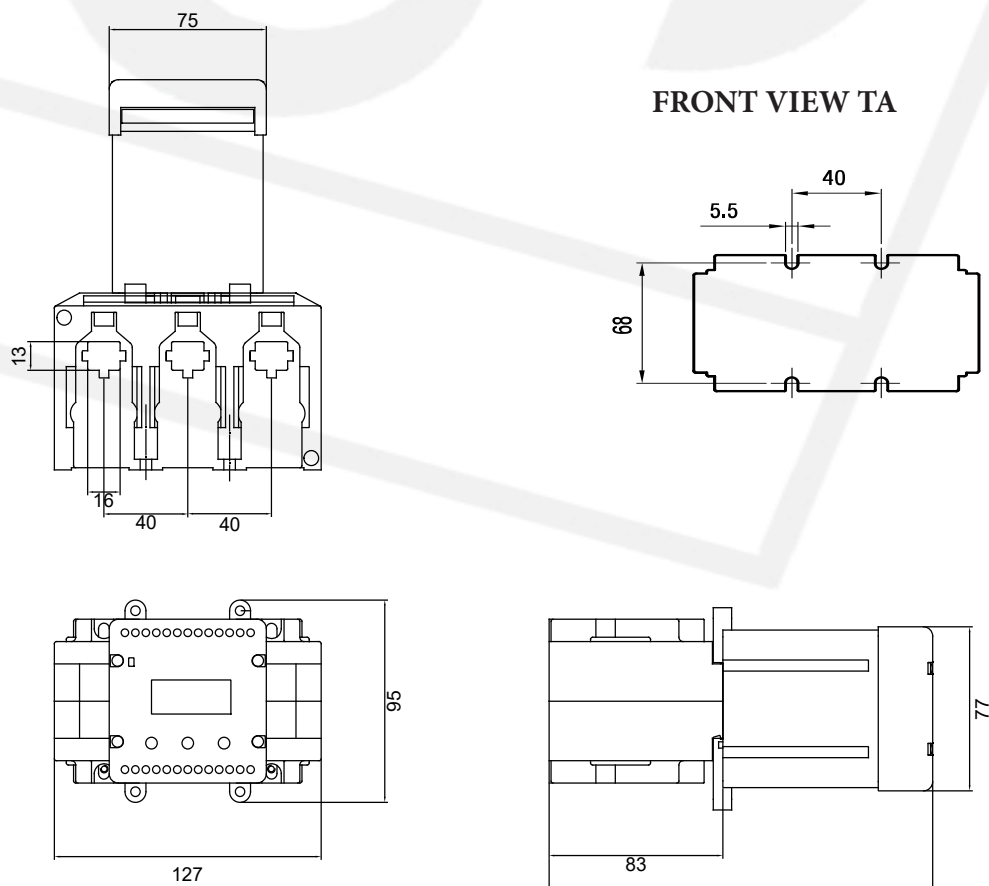
Mechanical structure				
Level of protection	0~50°			
Structure	ABS	ABS	ABS	
Drilling template [mm]	132x80 mm	190x136mm	260x202	
Dimensions [mm]	138 mm 86 mm 32 mm	204 mm 145 mm 36,6 mm	273 mm 213 mm 36 mm	
VESA Mounting				
Weight	300 g	476 g	920 g	

DIMENSIONS

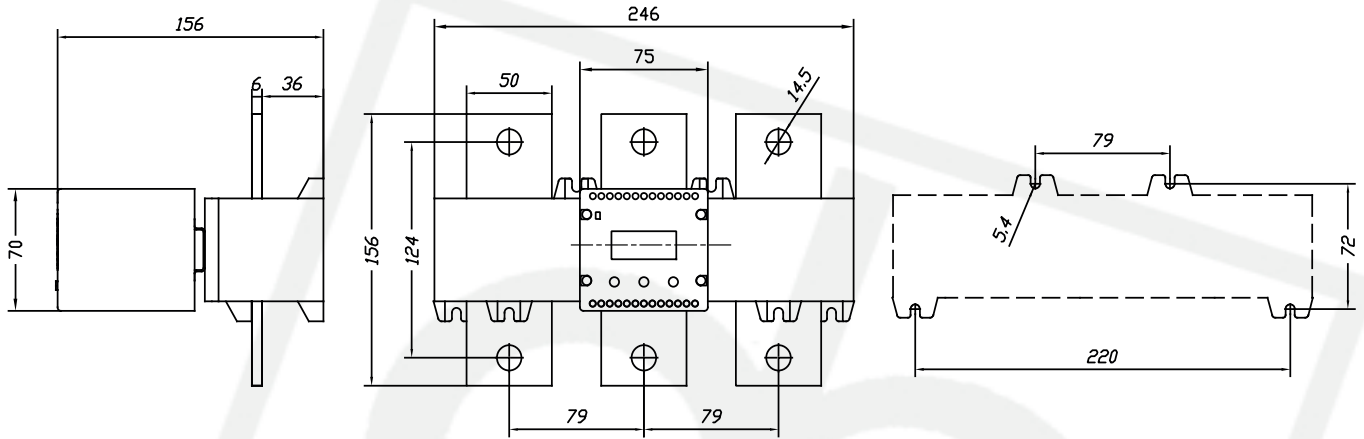
DDMP 5 COM / DDMP 34 COM / DDMP 65 COM



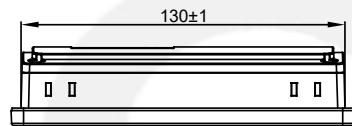
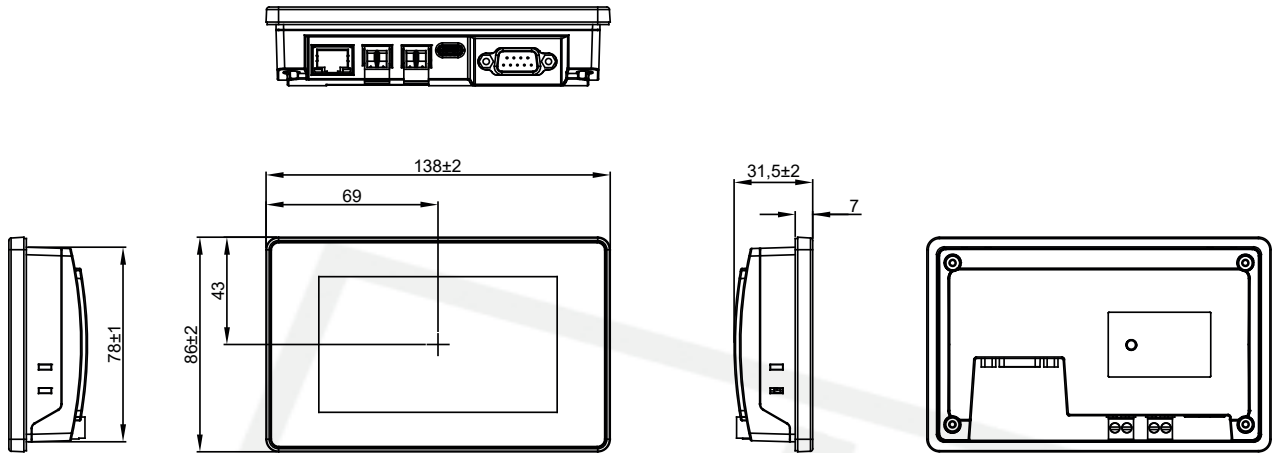
DDMP 320 COM / DDMP 450 COM



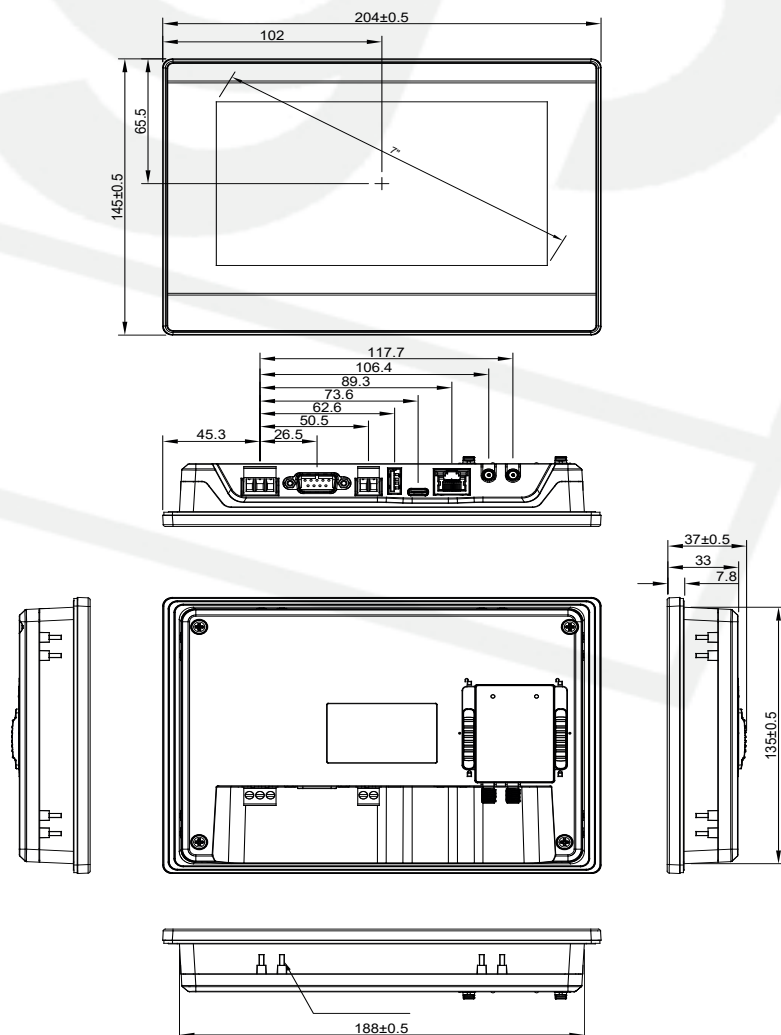
DDMP 900 COM



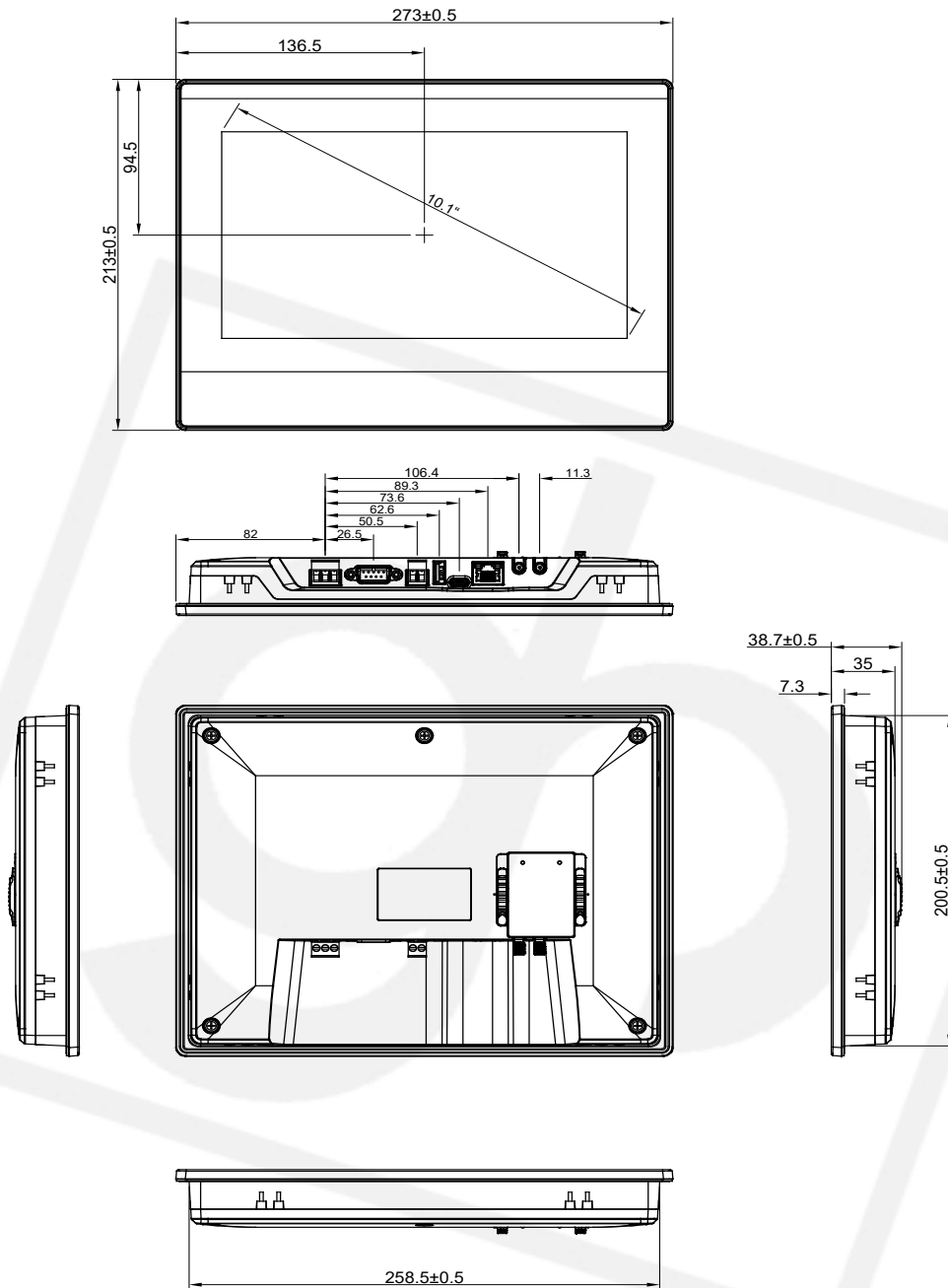
DDMP REMOTE PANEL 4,3



DDMP REMOTE PANEL 7



DDMP REMOTE PANEL 10



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