



DDU-XX

Digital Display Unit

DDU-TDC (Time/Date)
DDU-TM (Time)
DDU-DT (Date, 6 Digit)
DDU-DT8 (Date, 8 Digit)
DDU-TD (Time & Date)
DDU-DY (Day)
DDU-HZ (Frequency)
DDU-CL (Calendar)



Masibus Digital Display Unit DDU-XX is a versatile, multi-featured code driven digital display. It displays parameters like time, date, day, calendar and frequency. The time, date and day display decodes and displays all time protocols like NTP (Ethernet) and serial RS232/485 (NGTS, NMEA and T-Formats). frequency display decodes frequency from raw input signal or from ethernet input.

The DDU has built-in battery backed RTC which maintains time in case of loss of power and communication break. Redundant input option is available for critical installations.

The 100 mm (4") large display can be viewed from a typical distance of around 60 m.

The rugged case makes DDU-XX ideal for demanding industrial environments. Flush LED display of DDU-XX offers a wide angle viewing. time, date, day, calendar & frequency displays are available in different mounting options.

Features

- 4" (100mm) large display
- Multiple time frame inputs
 - Serial NMEA-0183[RMC] / NGTS/ T-Format
 - NTP protocol Over RJ45
- Retains time during loss of power/time code
- Wall/ rack/ table-top mounting for IP20 enclosure
- Wall/ hanging-type mounting for IP65 enclosure
- Universal power supply
- Manual time setting
- Configurable international time zone
- Remote time monitoring
- 4 level brightness control

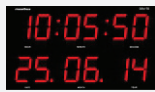
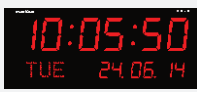
Applications

Synchronization with GPS System in electrical utilities:

- Generation
- Transmission
- Energy and demand monitoring
- Distribution interface with SCADA/RTU
- EMS system

TECHNICAL SPECIFICATIONS

Technical Specification Sheet

	Time/Date Configurable Display	Time or Date Display	Time & Date Display	Day Display	Frequency Display	Calendar Display (Date, Time, Day)
Display						
No. of Digit	Six	Six / Eight ¹ (Date only)	Time: Six Date: Six	Three	Five	Time: Six Date: Six Day: Three
Digit Height	4" (100 mm)					Time: 4"(100 mm) Date: 2.3"(57 mm) Day: 2"(50 mm)
Type of Display	7 Segment	7 Segment	7 Segment	5x7 Dot matrix type	7 Segment	Time: 7 segment Date: 7 segment Day: 5x7 dot matrix type
Display Colors ²	Red	Red	Red	Red	Red	Time: Red Date: Red/Green Day: Red/Amber
Display Format	Time: HH:MM:SS Date: DD:MM:YY	Time: HH:MM:SS Date: DD:MM:YY MM.DD.YY/YY.MM.DD	Time: HH:MM:SS Date: DD:MM:YY MM.DD.YY/YY.MM.DD	DDD	XX.XXX	Time: HH:MM:SS Date: DD.MM.YY MM.DD.YY/YY.MM.DD Day: DDD
Lock/Unlock Indicator	✓	✓	✓	✓	NA	✓
12/24 Hour Mode	✓	✓	✓	NA	NA	✓
AM/PM Indication	✓	✓	✓	NA	NA	✓
International Time Zones	✓	✓	✓	✓	NA	✓
User Interface						
Serial Configuration [Hyper Terminal]	✓	✓	✓	✓	NA	✓
Telnet CLIENT [with LAN Interface Only]	✓	✓	✓	✓	NA	✓
Password Protected	✓	✓	✓	✓	NA	✓
DIP Switch	NA	NA	NA	NA	✓	NA
Signal Input						
RS-232/RS-485	✓	✓	✓	✓	✓	✓
NTP (LAN Interface)/ Ethernet in Case of Frequency Input	✓	✓	✓	✓	✓	✓
Line Frequency Input	NA	NA	NA	NA	✓	NA
Mechanical						
IP20 Protection						
Size [HXWXD] (in mm) [Without Mounting Bracket]	175 X 665 X 60	177 x 646 x 68	355 x 646 x 68	177 x 326 x 68	177 x 646 x 68	266 x 646 x 68
Weight (Approx.)	3.8 Kg	4.5 Kg	7.32 Kg	2.5 Kg	4.5 Kg	5.5 Kg
Material	M.S with Powder coating inside and out					
Front Acrylic Mounting	Smoke grey/ acrylic Rack mount / Wall mount / Table top / Hanging type					
IP65 Protection	NA					NA
Size [HXWXD] (in mm)	NA	200 x 800 x 120	400 x 800 x 120	200 x 400 x 120	200 x 800 x 120	NA
Weight (Approx.)	NA	9 Kg	16 Kg	3.3 Kg	9 Kg	NA
Material	NA	1.2 mm mild steel with powder coat paint				NA
Front Acrylic Mounting	NA	Smoke grey acrylic				NA
	NA	Hanging type / Wall mount				NA
Technical Specification Sheet						
Power Supply						
Power	AC: 90-264 V, 47-63 Hz,1Ph & DC: 90-300 V					
Power Consumption	<10 W					
Terminals	3 pin plug-in type connector [Cable size: 2.5 sq.mm]					
Environmental						
Operating Temperature	0 °C to +55 °C					
Storage Temperature	-20 °C to +80 °C					
Humidity	20 to 90 % RH (Non-condensing)					

TECHNICAL SPECIFICATIONS

Standard Signal Input

Input	Time Display Signal Input	Frequency Display Signal Input	Physical Interface
Serial RS-485			2 Pin plug-in type connector [Cable size: 2.5 sq mm] 2 Pin Plug-in type Connector [Cable Size: 0.22sq.mm] for DDU-TDC
Serial RS-232	Protocols: NMEA-0183[RMC] / NGTS/ T – Format Baud rate: 4800/9600/19200/38400/57600/ 115200 bps	Based on serial frame [Broadcasted by server] Baud rate: 2400/4800/ 9600/19200 bps	9-Pin d type female for IP20 Enclosure, 3 Pin plug-in type connector [Cable size: 2.5 sq mm] for IP65 enclosure 3-Pin Plug in type Connector[Cable Size: 0.22 sq.mm] for DDU-TDC
NTP (LAN Interface)	Time sync protocol: NTP V3, UDP, telnet Internet protocol: IPv4; Mode: Client Protocol time format: UTC	Based on UDP [Broadcasted by server]	RJ45, 10/100 Mbps
AC Voltage Input	N/A	63V, 110V & 240 V AC input Voltage range is -30% to +25% of selected input 45-65 Hz, input frequency	2 Pin plug-in type connector [Cable size: 2.5 sq mm]

Isolation (Withstanding voltage)

Between primary terminals* and secondary terminals**: At least 1500 V AC for 1 minute

Between primary terminals* and grounding terminal: At least 1500 V AC for 1 minute

Between grounding terminal and secondary terminals**: At least 1500 V AC for 1 minute

Between secondary terminals**: At least 1500 V AC for 1 minute

* Primary terminals indicate power terminals.

** Secondary terminals indicate RS-232/485 and RJ45.

Insulation resistance: 20MΩ or more @ 500 V DC between power terminals and grounding terminal



[DDU-TDC] - IP20



[DDU-DT] - IP20



[DDU-DT8] - IP20



[DDU-TM] - IP20



[DDU-TD] - IP20



[DDU-TM] - IP65



[DDU-DY] - IP20



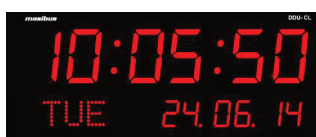
[DDU-HZ] - IP20



[DDU-DY] - IP65



DDU-CL



[DDU-CL] - IP20



[DDU-DT] - IP65

TECHNICAL SPECIFICATIONS

Ordering Code for Time / Date Configurable Display Unit (DDU-TDC)

Model	Display Type	Mounting
DDU	XXX	X
	TDC Time/date configurable	T Table top (IP20)
		R Rack / panel (IP20)
		W0 Wall (IP20)

Standard input consists of serial (RS232/ RS485) & Ethernet RJ 45 (NTP/SNTP)

Accessories for DDU-TDC (Optional)

Extra Mounting Clamp for IP20 Enclosure

Rack/panel	Table top
m-MK-FPL-50-3 [177mm height unit]	m-MK-TT-50-2



Ordering Code for Time/ Date/ Day Display Unit

Model	Display Type	Mounting
DDU	XX	X
	TM Time	T Table top (IP20)
	DT Date (6 Digit)	R Rack/panel (IP20)
	DT8* Date (8 Digit)	W0 Wall (IP20)
	DY Day	W1 Wall (IP65)
	TD# Time & Date	H1 Hanging type (IP65)
	CL# Calendar	
	SP Special	

Note: -

Standard input consists of serial (RS232/ RS485) & Ethernet RJ 45 (NTP/SNTP)

X - Specify From Table

- Available in IP20 & Table, Panel/Rack type mount only

* - For Special display type contact factory

Ordering Code for Frequency Display Unit

Model	Display Type	Mounting	Input Type
DDU	XX	X	X
	HZ Frequency	T Table Top (IP20)	1 RS-232
		R Rack/Panel (IP20)	2 RS-485
		W0 Wall (IP20)	3 Ethernet
		W1 Wall (IP65)	4 Line Freq - 63 V AC
		H1 Hanging Type (IP65)	5 Line Freq - 110 V AC
			6 Line Freq - 240 V AC

Note: -

For Frequency display unit in case of Ethernet or Line Frequency input type, RS-232 serial port will be given for firmware upgradation

For Display Color other than RED, please specify at the time of Order.

Accessories for Time/ Date/ Day/ Frequency Display Unit (Optional)

Extra Mounting Clamp for IP20 Enclosure

Wall	Rack/Panel			Table Top
m-MK-FW-50-1 [177mm Height Unit]	m-MK-FW-50-2 [266 & 355mm Height Unit]	m-MK-FPL-50-1 [177mm Height Unit]	m-MK-FPL-50-2 [266mm Height Unit]	m-MK-FPL-50-3 [355mm Height Unit]
				m-MK-TT-50-1



Operational Manual: https://www.masibus.com/wp-content/uploads/2019/05/m06om301_08.pdf