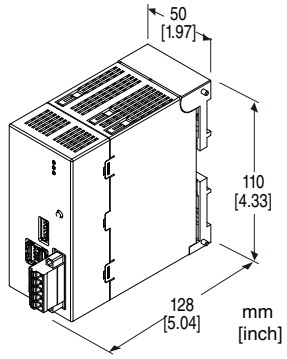
RGP30 Series

REMOTE GRAPHIC PANEL

(with HDMI™ output)

Functions & Features

• Fulfills the function of display units using Web technology without dedicated displays.
• Supports Modbus/TCP and SLMP for connecting with various PLCs.
• Equipped with Web server which allows access via network and displays Web screen on browser of the user's terminal.
• Equipped with HDMI output for connecting with an HDMI monitor.
• Facilitates creation of Graphic Panels with Designing Software (model: RGP-Designer).



MODEL: RGP30-N-R[1]

ORDERING INFORMATION

• Code number: RGP30-N-R[1]
Specify a code from below for [1].
(e.g. RGP30-N-R/E)

TYPE

N: Standard

POWER INPUT

DC power
R: 24 V DC
(Operational voltage range: ±10 %; ripple 10 %p-p max.)

[1] OPTIONS

OS Language
Blank: Japanese
/E: English

RELATED PRODUCTS

• Graphic Panel Designing Software for RGP30 Series (model: RGP-Designer)
• Local certification authority creator (model: LCA-RGP)
Softwares are downloadable at M-System's web site.

GENERAL SPECIFICATIONS

Connection

• **Power supply**: Spring clamp terminal block
Applicable wire size: 0.2 - 2.5 mm^2
Stripped length: 10 mm
Recommended solderless terminal
AI0,25-10YE 0.25 mm^2 (Phoenix Contact)
AI0,34-10TQ 0.34 mm^2 (Phoenix Contact)
AI0,5-10WH 0.5 mm^2 (Phoenix Contact)
AI0,75-10GY 0.75 mm^2 (Phoenix Contact)
AI1-10RD 1.0 mm^2 (Phoenix Contact)
AI1,5-10BK 1.5 mm^2 (Phoenix Contact)
AI2,5-10BU 2.5 mm^2 (Phoenix Contact)
• **Ethernet**: RJ-45 connector
• **USB**: USB type A connector
• **HDMI**: HDMI connector
Housing material: Flame-resistant resin (gray)
Isolation: Ethernet to USB or HDMI or internal power or power supply to FE
Indicator LEDs: POWER, RUN, ERROR
(Refer to the insruction manual for details)

CONTROL CIRCUIT

CPU: Intel Atom E3827 (Dual Core 1.75 GHz)
Memory: 2 GB DDR3K-1333
Internal storage: 30 GB
OS: Microsoft Windows 10 IoT Enterprise 2016 LTSB

ETHERNET COMMUNICATION

Communication Standard: IEEE 802.3u
Transmission: 10BASE-T / 100BASE-TX
Baud rate: 10 / 100 Mbps (Auto Negotiation function)
Protocol: TCP/IP, Modbus/TCP, SLMP, HTTP
Transmission media: 10BASE-T (STP, Category 5)
100BASE-TX (STP, Category 5e)
Max. length of fieldbus segment: 100 meters
Ethernet Status LED: ACT, LNK
IP address: 192.168.0.1 (Ex-factory setting)

USB

Specification: USB 2.0
No.of ports: 2

Transmission distance: 5 meters max.
Power supply capability: 5V DC±10%, 500mA DC max.

MDMI

Max. resolution: 1920 x 1080
Frame rate: 60 Hz
Transmission distance: 5 meters max.
Applicable cable: Standard HDMI cable

INSTALLATION

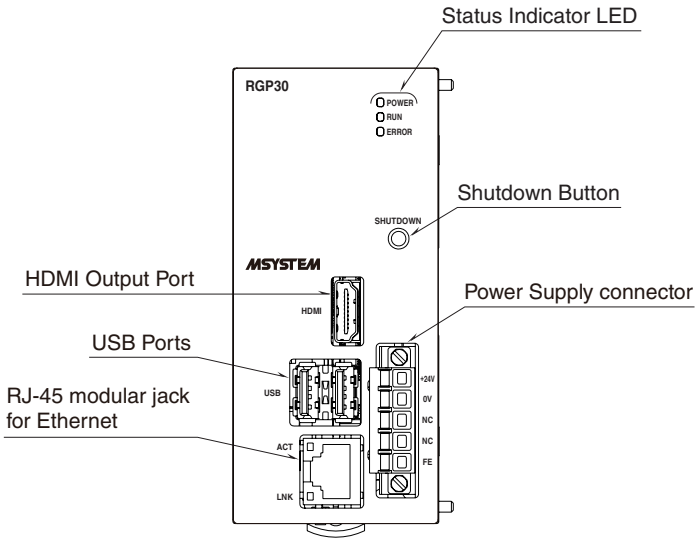
Power consumption : Approx. 18 W
Operating temperature: -10 to +50°C (14 to 122 °F)
Operating humidity: 30 to 90 %RH (non-condensing)
Atmosphere: No corrosive gas or heavy dust
Mounting: DIN rail
Weight: 400 g (0.88 lb)

PERFORMANCE

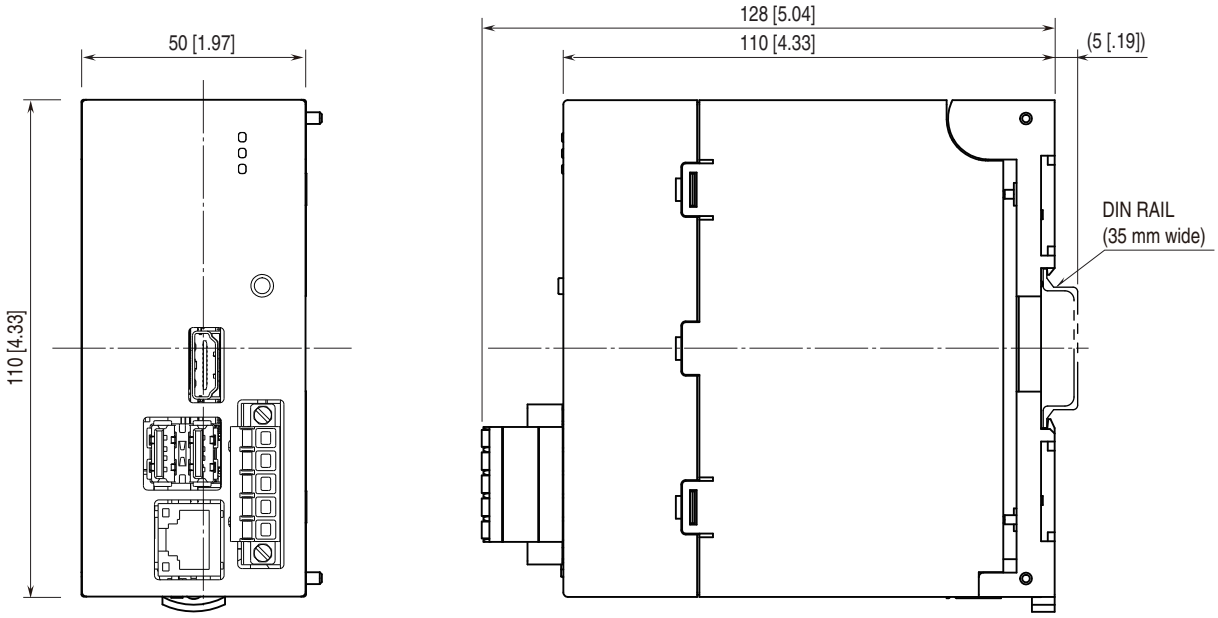
Calendar clock (with battery backup):
Accuracy: Monthly deviation of ≤ 3 minutes at 25°C or 77 °F
Back up period: Approx. 10 years at 25°C or 77 °F
Battery: Primary lithium battery (non-removable)
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 1500 V AC @ 1 minute (Ethernet to USB or HDMI or internal power or power supply to FE)

EXTERNAL VIEW

■ **FRONT VIEW**

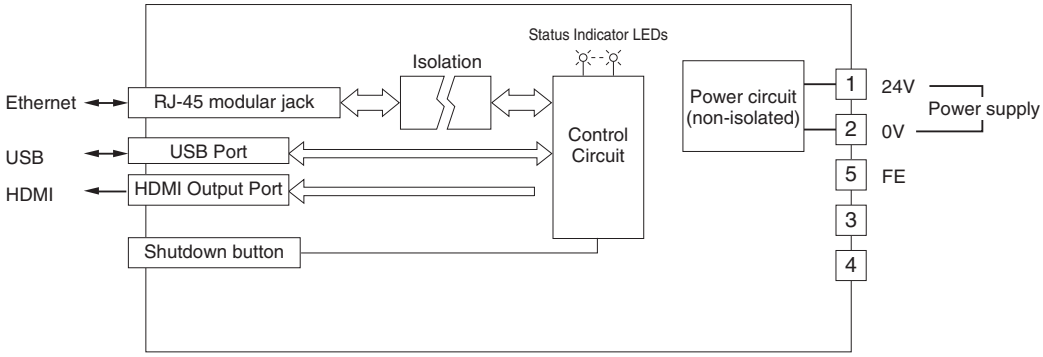


EXTERNAL DIMENSIONS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

Caution: FE terminal is NOT a protective conductor terminal.



DISPLAY FUNCTION

● No.of GP (Gprahic Panels) for simultaneous display: Max.8
● Screen size: VGA (640*480), SVGA (800*600), XGA (1024*768), SXGA (1280*1024), HD (1280*720), FHD (1920*1080), Custom
● No. of Screens: Max. 1024 for 8 GPs in total
● No. of parts: Max.1024 on a single Screen
● Parts for Screens:
• Shape (Rectangle, Circle, Line, Picture)
• Character string (Variable, fixed)
• Lamp/switch (Bit/Word)
• Data display
• Gauge
• Screen display frame
• [Change screen] switch

LOWER COMMUNICATION

■ Modbus/TCP master
RGP30 can connect with R3 or R7 series remote I/Os for I/O expansion and collectively handle data acquired from multiple remote measuring points.
● Modbus/TCP devices
• R3-NE1
• R5-NE1
• R6-NE2
• R7E series
• 72EM2-M4
• DL8
• TR30
• DL30
• R30NE1

• Yokogawa FA-M3 (F3SP71-4S)

■ SLMP client

RGP30 can connect with SLMP-compatible MELSEC CPU units for I/O expansion and collectively handle data acquired from multiple remote measuring points.

● SLMP-compatible devices

• MELSEC iQ-R Series CPU units
• MELSEC iQ-F Series CPU units
• MELSEC Q Series CPU units

● No.of slaves: 32 nodes (selectable from Modbus/TCP and SLMP devices)

WEB SERVER

RGP30 works as a Web server and fulfils the function of display units.

● Compatible terminals and browsers

• iPad (iOS 14.4)
• iPhone (iOS 11): Safari
• Android tablet (Android 10):
  Chrome 90
• Windows PCWindows 7, 8.1, 10
  Internet Explorer 11
  Microsoft Edge 44
  Microsoft Edge 90.0
  Firefox 88.0
  Chrome 90.0

● No. of connectable terminals: 8

● Protocol

• HTTP
• HTTPS

Certificate can be created by using Local certification authority creator (model: LCA-RGP).

GRAPHIC PANEL DESIGN

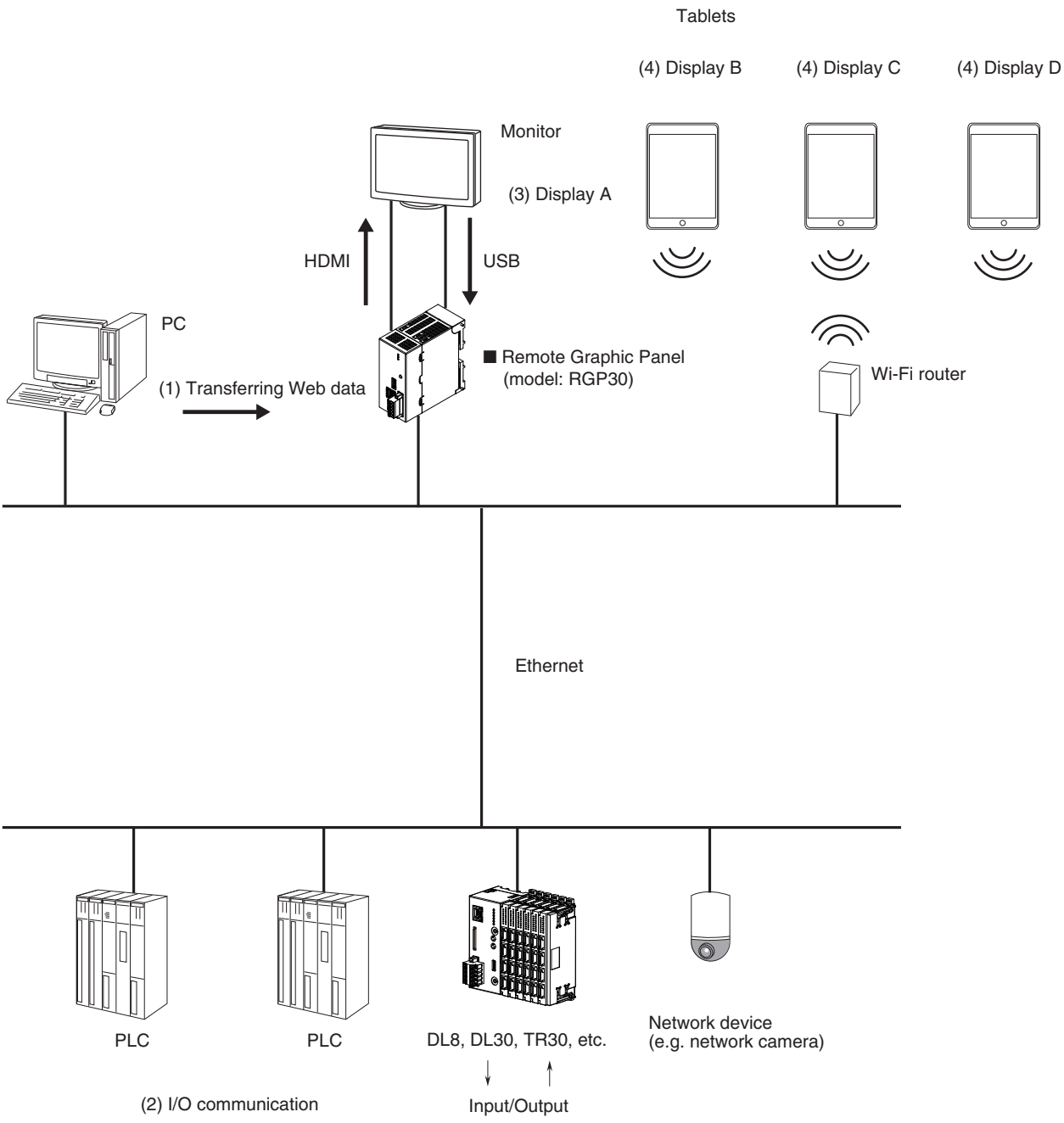
Create Graphic Panels using Graphic Panel Designing Software for RGP30 Series (model: RGP-Designer).

SYSTEM CONFIGURATION EXAMPLES

■ Designing Software
(model: RGP-Designer)

■ Field monitoring
(Web screen)

■ Field monitoring
(Web screen)



(1) Transfer data of Graphic Panels created on RGP-Designer to the RGP unit.
(2) Perform I/O communication with PLC over Modbus/TCP or SLMP.
(3) Connect to the RGP Web server from browser of the RGP unit by loopback to display on an HDMI monitor. (Display unit A).
(4) Connect to the RGP Web server from outside via the network to display on a terminal (Display units B, C, D).

⚠ Specifications are subject to change without notice.