



# Message Runner KP3H

## Text Display

### Small messages on your machine

This small and compact display is extremely well-suited for indicating a variety of short messages.

### Compact DIN 36 x 72 profile

The compact DIN 36 x 72 profile allows the unit to be easily installed in control boxes where space did not allow other units to be installed.

### Green and orange character display

The text can be displayed in either green or orange to reflect equipment status at a glance. A blinking display is also available at the user's discretion for defining messages' appearance!

### Maintenance free

- Since LEDs are used for the LCD backlight, troublesome lamp replacement is not necessary.
- A backup battery is not required as the message data is stored in the Message Runner's flash memory.

### Easy-to-read message display

The 8-character display allows scrolling of up to 32 characters in length. Up to 64 messages can be saved and easily displayed.



# Message Runner KP3C and KP3R

## Text Display

In addition to the KP3H's features the KP3C and KP3R Message Runners enable message switching and data rewriting by serial communication (KP3C: RS323C, KP3R: RS485)



When creating messages, the character “\*” is defined as data. Example: The message “\*\*\*\*\*pcs” has a five-column data area. Refer to the figure below: “1 2 3 4 5” is the value in the PLCs data register.



Three data areas can be included in one message. One message may include 32 characters (“\*”) maximum for lateral display (16 characters vertical).

### Message stand-by function

Is selectable for each message, i. e. if a new signal arrives while a message is being displayed, the new message is displayed after the current message finishes.

### End message signal can be output

You can select whether or not to output a signal to an external device for each message. An internal relay for the PLC can be specified and a flag turned on. (This is called the scroll finished flag). To reset the flag, use the PLC programming software.

### Vertical display

The KP3C and KP3R Series can be mounted in lateral or vertical direction. The length of displayable messages is 32 characters for lateral display and 16 characters for vertical display.





# Message Runner KP3C and KP3R

## Text Display

### Features available for KP3C Message Runners only

**Five data formats selectable:**

- 16 bits with sign
- 16 bits without sign
- 32 bits with sign
- 32 bits without sign
- ASCII (20h to 7Eh)

### Four communication protocols selectable

- Panasonic Electric Works FP Series
- Multi-purpose serial (Message Runner dedicated protocol)
- Computer link for Mitsubishi MELSEC-FX Series
- Host link for Omron SYMAC-C Series (exclusive)



(Without face characters)

Either lit or blinking messages

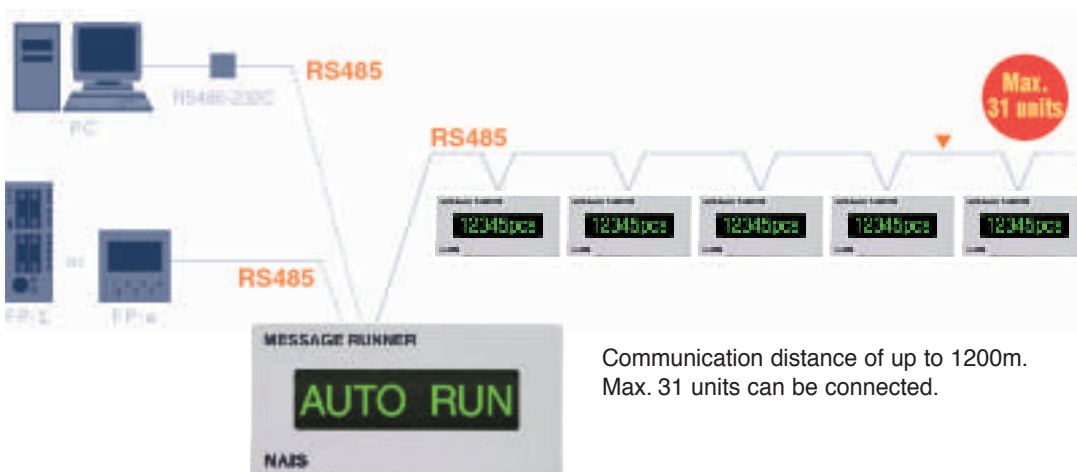
### Features available for KP3R Message Runners only

**Display data format:**

- ASCII 20 (hex) to 7E (hex), except of 3F (hex) on Multi-purpose protocol

### Two communication protocols selectable

- Multi-purpose serial (Message Runner dedicated protocol)
- MODBUS (RTU)

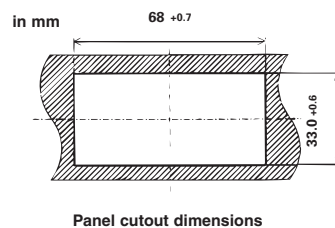
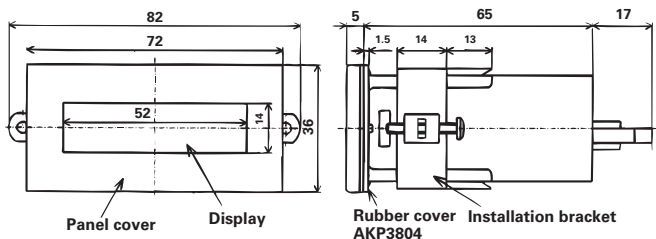


Communication distance of up to 1200m.  
Max. 31 units can be connected.

# Message Runner

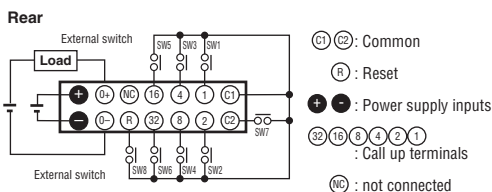
## Dimensions and Wiring

### Dimensions and part names



### Terminal wiring KP3H

\*Be sure to turn off the power of the Message Runner unit and computer before connecting or disconnecting the connector and transmission cable.



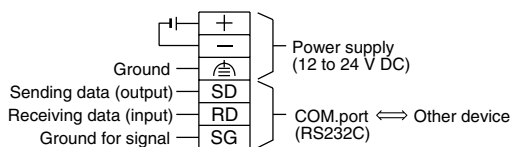
The AKP3835 (1m) and AKP3837 (3m) connector with lead wires is available (optional).

When using a non-contact (transistor) input, connect as follows: → Output, max. 0.1A, 30VDC

As a guideline, the collector voltage of the transistor should be 50V or higher, and the leakage current should be less than 1mA.

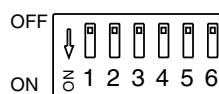
### Terminal wiring KP3C

#### Power supply and COM.port terminal block



Cross cable is used to connect another device to the COM.port.

### Functions for dip switch

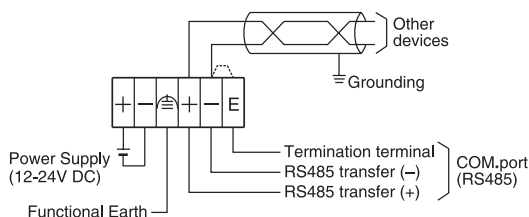


Number	Functions	OFF	ON
1	Baud rate	19,200 bps	9,600 bps
2	Data length	8 bits	7 bits
3	Parity	Yes	No
4	Parity type	Odd	Even
5	Mode selection	Data transmitting	Operation
6	Connector selection	Modular	Terminal block

Data transmission mode: Mode for sending created message and settings from the PC to the Message Runner.  
 Operation mode: Mode for transferring data with a PLC, etc., to change messages and data.  
 Connector selection: Select the connector for use with the data transmission mode.

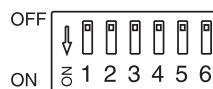
### Terminal wiring KP3R

#### Power supply and COM.port terminal block



In case of terminating station, connect E terminal to - terminal, or irregular operation occurs.

### Functions for dip switch



Number	Functions	OFF	ON
1	Baud rate	19200bps	9600bps
2	Data length	8 bits	7 bits
3	Parity	Available	Not Available
4	Parity type	Odd	Even
5	Station No. display	Not displayed	Displayed
6	Connector selection	Modular	Terminal block

Note 1) Station No. display is not concerning connector type.  
 Note 2) Select modular concerned with to transfer screens and make settings. Select terminal block for RS485 communication.



# Message Runner

## Specifications

Product types	Description	Order-No:
Body (with face characters)	Message Runner KP3H (12-24VDC)	AKP31003
Body (without face characters)	Message Runner KP3H (12-24VDC)	AKP31007
Body (with face characters)	Message Runner KP3C (12-24VDC)	AKP32113
Body (without face characters)	Message Runner KP3C (12-24VDC)	AKP32117
Body (with face characters)	Message Runner KP3R (12-24VDC)	AKP33123
Body (without face characters)	Message Runner KP3R (12-24VDC)	AKP33127
Programming unit	1m message transfer cable + message creation software	AKP38203M
Transfer cable	1m message transfer cable	AKP3811
Message creation software	CD available for KP3H, KP3C and KP3R	AKP38163M
Rubber packing	Use when water resistance is required for the panel	AKP3804
Panel cover (black, with face characters)	A panel cover (ash grey) for the body is provided as standard	AKP3801
Panel cover (black, without face characters)		AKP3805
Connector with lead wires for KP3H	Length: 1m (one line)	AKP3835
	Length: 3m (one line)	AKP3837

General	Description
Rated power supply	12-24VDC
Operating voltage range	10.8 to 26.4VDC
Power consumption	Approx. 1.1W (KP3H and KP3C) and 1.5W (KP3R)
Ambient temperature	0°C to 40°C
Ambient humidity	20 to 85% RH (non-condensing)
Storage temperature	-20°C to 60°C
Storage humidity	10 to 85% RH (non-condensing)

Display	Description
Display	Negative-type dot matrix LCD
Resolution	64 x 16 dots
Backlighting	Green / Orange LED (can be set for each message)
Character display	8 characters x 1 line
Message length	32 characters (max.)
Character types	Internal PC character set depending on the internal character type, some characters cannot be displayed (circled characters, Roman numerals and so on)
Character control	Scrolling display possible (slow, medium or fast), blinking display (0.4s ON / 0.4s OFF)

Memory	Description
Message storage	64 messages
Internal memory	F-ROM (battery backup not required)

### Communication specifications (KP3C and KP3H)

Item	KP3C Specification	KP3H Specification
Communication standard	Confirming to RS232C	Confirming to RS485
Communication method	Half duplex transmission	
Transmission distance	Max. 15m	Max. 1200m
Transmission speed	19,200 bps / 9,600 bps (selectable using DIP switch)	
Character bit	8 bits / 7 bits (selectable using DIP switch)	
Stop bit	1 bit fixed	
Parity	Odd/Even/None (selectable using DIP switch)	
Protocol	MEWTOCOL, Multi-purpose protocol (exclusive for Message Runner), Mitsubishi MELSEC-FX Series, Omron SYMAC-C Series	Multi-purpose protocol (exclusive for Message Runner), MODBUS (RTU)

Note: The shielded cables are recommended where electrical noises might occur.