

In-mold measurement
Mold marshaling system

MVS08 resin temperature preamplifier

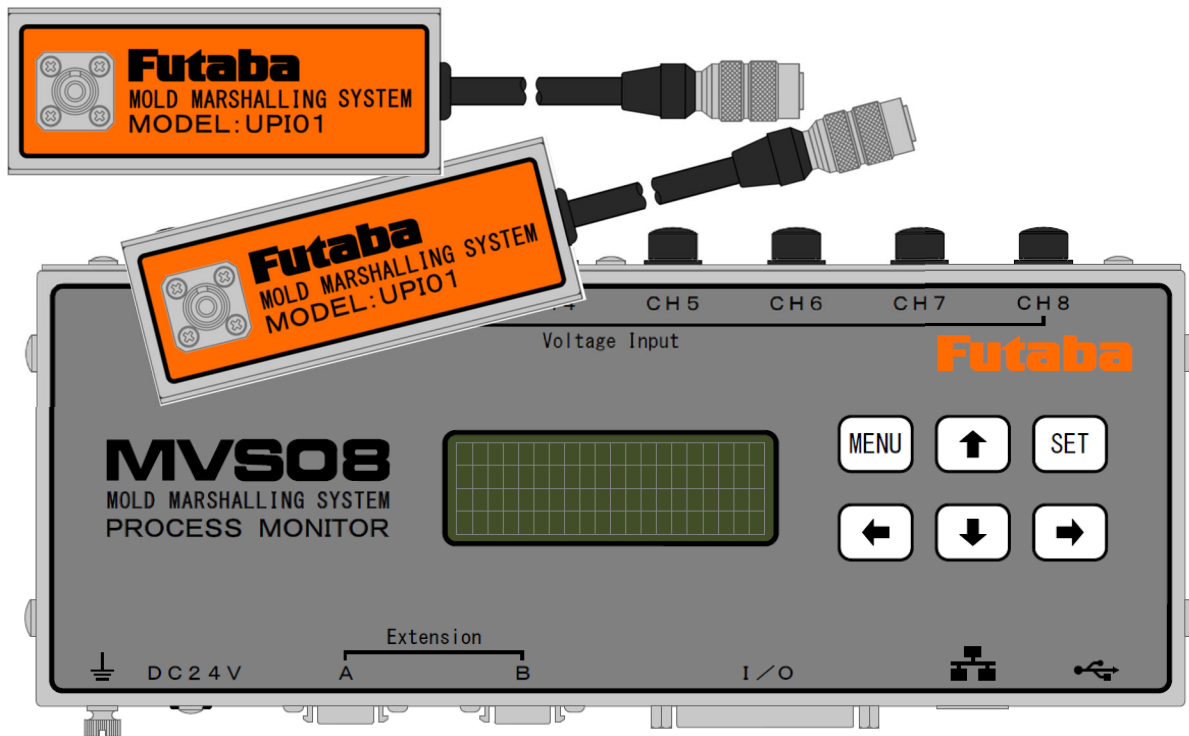
UPI01

Instruction Manual

Thank you very much for purchasing the products of Futaba Corporation.

Please read this instruction manual thoroughly and use it for a long time.

Do not use the product in any way other than that described in the instruction manual.



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SAFETY PRECAUTIONS (Be sure to read these precautions before using our products.)

■BEFORE USE

Read this "Safety Precautions" and the instruction manual carefully before use.

After reading this manual, keep it in a safe place for future reference.

Be sure to observe the following safety precautions when using the product.

Futaba Corporation assumes no responsibility or warranty for injuries caused by the use of the product contrary to these precautions.

■To ensure safe use of this product, the following warning messages are used in this manual.



Warning In the column of this indication "the possibility of death or serious injury, etc. is assumed."



Caution In the column of this indication, "only possible injury or property damage is assumed".

■General notes

- Before and during operations, be sure to check that this product functions properly.
- Provide adequate safety measures to prevent damage in the unlikely event that our products should fail.
- Use outside indicated specifications or purposes and modification of our products will void any warranty of the functions and performance as specified of our products.
- Use this product in combination with other devices only after careful consideration, as the product may fail to satisfy its functionality and performance capabilities as a result of the conditions and environment in which it is used.

■Precautions



Warning Be sure to unplug the power cable from the outlet when installing or connecting the cable. Failure to do so may cause an electric shock or malfunction.



Warning Do not use a cable that is broken or has a damaged cable coating.
Failure to do so may cause a fire, electric shock, damage to the equipment or malfunction.



Caution Do not splash water on the sensors, amplifiers, relay amplifiers, or connection cables. Failure to do so may result in electric shock or damage to the equipment.

Preface

The Mold Marshalling System UPI01 is a dedicated accessory that connects to the Injection Molding Monitoring System MVS08 to measure resin temperatures. One preamplifier is required per resin temperature sensor for measurement.

Refer to MVS08 Operator's Manual for more information on the injection molding monitoring system.

Please read this instruction manual thoroughly to ensure correct use.

If you have any questions, please contact our sales department.

Standard accessories

■ This instrument has the following standard accessories.

After unpacking, check that all accessories are included.

- Resin-temperature preamplifier main unit "UPI01".....1 unit
- Instruction manual (this booklet).....1 pc.

Handling Precautions

- Turn on the injection molding monitoring system (hereafter abbreviated as MVS08) after connecting the systems. Be sure to power MVS08 from an AC outlet. Never plug in or unplug the AC adapter jack to operate the power supply. Doing so may damage the unit and the AC adapter.
- Wait at least 5 seconds before turning the power on again after turning it off. If the power is turned on within 5 seconds or ON/OFF is repeated, it may fail due to the rush current (inrush current) that occurs when the power is turned on.
- Warm up the unit before use. Provide a warm-up time of about 30 minutes after the power is turned on.
- Avoid using the product in environments where temperatures are extremely high or low. The operating temperature range is 10 to 40°C. If it is unavoidable to expose the product to direct sunlight or use it in cold climates, shade the product or keep it warm.
- Use within the relative humidity range of 35 to 85%RH or less. If the product is used outside the operating humidity range or in an environment exposed to water droplets, performance may drop or malfunction may result.
- Do not use the product in dusty places. If dust gets inside, performance will deteriorate. Do not allow dust to enter not only during use but also during storage. Use the product in an environment where the PC can be used.
- Do not use the product immediately if the environment changes suddenly. Leave the product in the operating environment and use it after blend with its surroundings. Condensation may occur if the ambient temperature and humidity change suddenly due to movement, etc., and this may cause a drop in performance or malfunction.
- Do not use the product in an environment subject to vibration or impact. Continuous vibration or large impact may cause a drop in performance or malfunction.
- Do not use the product in a strong electromagnetic field. Use the product in an environment where the PC can be used. Use in the vicinity of wireless devices, microwave ovens, electric furnaces, and other devices that generate strong electromagnetic fields may cause performance degradation, malfunction, or failure.
- Do not use the product in locations with poor power supply conditions. Use a power supply with AC100 ~240V, 50/60Hz, and no instantaneous power failure or noise.
- Do not pull on the connecting cable. Connect the connection cable with sufficient margin so that excessive force is not applied to the connection part. Pulling or applying excessive force may cause failure, interruption of measurement, or abnormal measurement value.

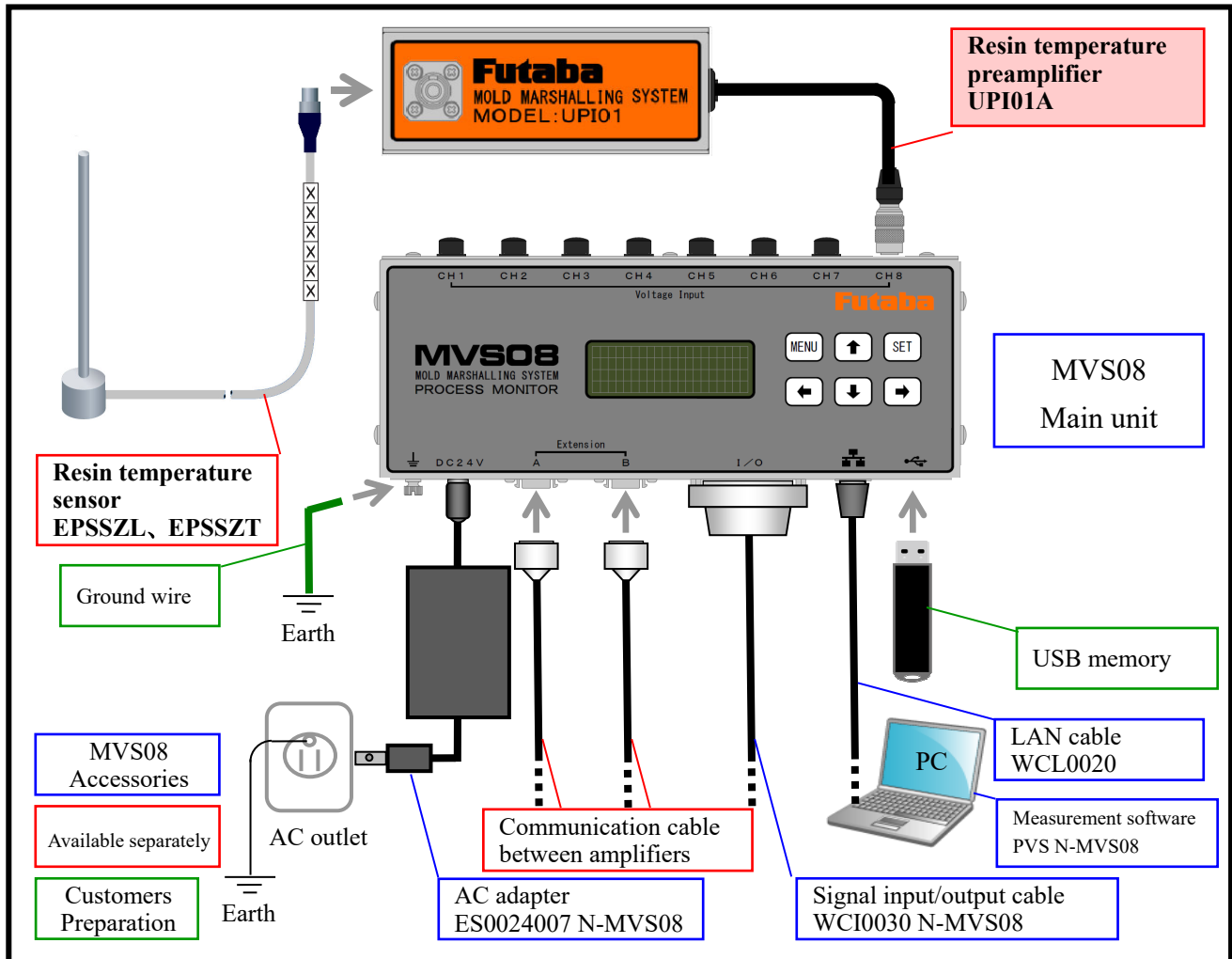
1. System configuration

■ System Configuration with Injection Molding Monitoring System "MVS08 Set"

This section shows the basic configuration for measuring resin temperature using a resin temperature preamplifier (UPI01).

One UPI01 is required per resin-temperature sensor.

Resin-temperature preamplifier EPD-JB001 and EPT-JB001 other than UPI01 cannot be connected to MVS08. Dedicated cables are available to connect EPT-JB001 to MVS08 via EPT-001 amplifier.

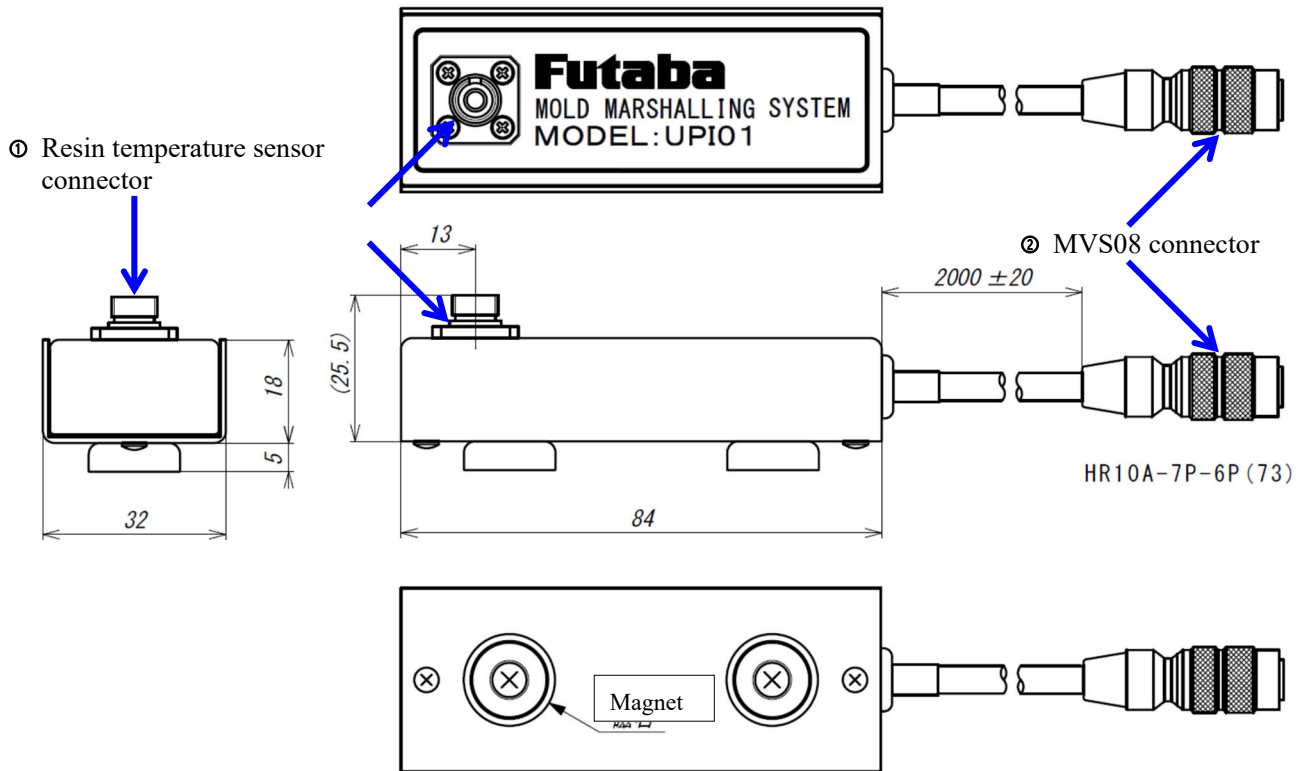


2. Specifications

■ Specifications <Resin-temperature preamplifier UPI04>

Product code	UPI01A	
Number of measurement points	1	
Measuring range	EPSSZL series: 60 to 430°C, EPSSZT series: 60 to 390°C	
Accuracy	±2%F.S.(±8.6°C)	
Compatible sensor	Plastic temp.: EPSSZL series, EPSSZT series	
Cable length	2m	
Mounting method	Installed with two magnets at the bottom	
Environmental resistance	Operating temperature	+10~+40°C
	Operating humidity	35 to 85%RH (non-condensing)
Weight	Approx. 200g	

3. Part Names (Unit: mm)



4. Preparation

4-1 Installation of the system

A magnet is attached to the back of the preamplifier UPI01. Install on a flat surface near the mold.

When installing the sensor on the movable side, determine the position of UPI01 so that excessive force is not applied to the sensor cable in the mold open/close operation.

The operating temp. range of the preamplifier UPI01 is 10 to 40°C. For stable measurement, do not install it on the mold body.

4-2 Connecting MVS08 Unit and preamplifier UPI01

Connect the preamplifier UPI01 to MVS08 main unit.

Insert the plug of UPI01 into the connector of MVS08. There is a rotation-stop.

Therefore, twist the plug left and right to find the fitting position, and then insert it all the way in.



4-3 Connecting the preamplifier UPI01 and the Resin-Temp Sensor

Connect the resin-temperature sensor to the preamplifier UPI01.

With the notch on UPI01 connector side aligned with the convex portion on the sensor side connector, insert it all the way in and screw in the outer ring on the sensor side to secure it.

Do not twist the sensor cable forcibly when aligning the notch with the convex part.

Otherwise, the optical fiber inside the cable may be damaged.

With a relay amplifier UPI01, be careful not to twist the sensor cable when fixing the magnet.



FUTABA CORPORATION

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The specifications are subject to change without prior notice for product improvement.

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