FLUID TEMPERATURE MEASURING DEVICE OF LAUNDRY PROCESSING APPARATUS AND LAUNDRY PROCESSING APPARATUS

TECHNICAL FIELD

[0001] The present disclosure relates to the technical field of laundry processing apparatuses, in particular to a fluid temperature measuring device of a laundry processing apparatus and a laundry processing apparatus.

BACKGROUND

[0002] Basically all laundry processing apparatuses available on the market contain a temperature sensor which may be arranged inside or outside a container to be detected. In the case of being installed inside the container to be detected, the temperature sensor will deteriorate in measuring accuracy if attached with impurities such as thread debris on its surface. For example, in a machine equipped with a drying module, it is particular easy for thread debris to accumulate on the surface of the temperature sensor. In the case of being installed outside the container to be detected, the temperature sensor is susceptible to external temperatures, which may lead to inaccuracy in the detected temperature values. In the prior art, the sensor is arranged inside a mounting housing which prevents the sensor from coming into direct contact with laundry water, and the container to be detected is provided with an opening in which the mounting housing is located. This approach, though preventing laundry water from coming into direct contact with the sensor, it deteriorates the impermeability of the container to be detected due to the opening thereon.

SUMMARY

[0002a] In an aspect, the present disclosure refers to a fluid temperature measuring device of a laundry processing apparatus, comprising: a temperature sensor; a housing that defines a passageway for fluid circulation; a sensor mount that has a mount body fixed on an outer wall of the housing and a cover in combination with the mount body to define a cavity for accommodating the temperature sensor on an outer side of the housing; and thermal insulation cotton that is located between the temperature sensor and the cover, wherein the temperature sensor is arranged in the cavity and is configured to operate by sensing a temperature of the housing, the cover is configured to press the temperature sensor by means of the thermal insulation cotton.

[0002b] In another aspect, the present disclosure refers to a fluid temperature measuring device, comprising: a temperature sensor; a housing that defines a passageway for fluid circulation; and a sensor mount that has a mount body fixed on an outer wall of the housing and a cover in combination with the mount body to define a cavity for accommodating the temperature sensor on an outer side of the housing, wherein the temperature sensor is arranged in the cavity and is configured to operate by sensing a temperature of the housing, the cover is formed with a pressing rib protruding towards the temperature sensor, and the pressing rib is able to elastically deform.

[0002c] In another aspect, the present disclosure refers to a laundry processing apparatus, comprising the fluid temperature measuring device according to any one of the above aspects.

[0003] In an example, the present disclosure provides a fluid temperature measuring device of a laundry processing apparatus which is stable and reliable in measuring, and a laundry processing apparatus.

[0004] In an example, the present disclosure provides a fluid temperature measuring device of a laundry processing apparatus, comprising:

[0005] a temperature sensor;

[0006] a housing that defines a passageway for fluid circulation; and

[0007] a sensor mount that defines a cavity for accommodating the temperature sensor on an outer side of the housing,

[0008] wherein the temperature sensor is arranged in the cavity and operates by sensing a

temperature of the housing.

[0009] Further, the sensor mount comprises a cover, and a mount body fixed on an outer wall of the housing, wherein the cover in combination with the mount body defines the cavity.

[0010] Further, the cover presses directly or indirectly the temperature sensor.

[0011] Further, the cover is a thermal insulation member made of a thermal insulation material, or the sensor mount further comprises a thermal insulation member, and the cover presses the temperature sensor by means of the thermal insulation member.

[0012] Further, the cover and the mount body are fixedly connected by means of a screw and/or a hook.

[0013] Further, the mount body and the housing are integrally formed.

[0014] Further, a pressing rib is provided on one side of the cover pressed toward the temperature sensor.

[0015] Further, the sensor mount is provided with a wiring hole that allows a lead wire of the temperature sensor to pass through the sensor mount.

[0016] Further, the temperature sensor touches the outer wall of the housing, or a heat conducting medium is provided between the temperature sensor and the outer wall of the housing.

[0017] In an example, the present disclosure further provides a laundry processing apparatus, which comprises the fluid temperature measuring device in any one of the technical solutions described above.

[0018] As the result of the technical solutions described above, the present disclosure is advantageous in the following aspects.

[0019] The temperature sensor arranged outside the housing reduces the effect of thread debris that otherwise block the temperature sensor, so that the temperature sensor detects more stable and reliable. Besides, since the temperature sensor is arranged in the cavity, the temperature sensor is not be affected by external temperatures and thus the accuracy of the temperature sensor is improved. Also, the temperature sensor accommodated in the sensor mount arranged on an outer side of the housing enables the temperature sensor to operate by sensing the temperature of the housing. This ensures not only the impermeability of the housing with preventing it from leaking gas due to the absence of the opening on the housing, but also the accuracy of the temperature values detected by the temperature sensor.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] The present disclosure will be further explained below with reference to the drawings.

FIG. 1 is a structural schematic diagram of a fluid temperature measuring device according