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DUO C1
Technical

SERVAT TECHNOLOGIES

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2-threshold centrifugal detector

APPLICATIONS

The 2-threshold controlled centrifugal detector, type DUO C1, with synchronized weights, can accurately detect 2 pre-determined rotational regimes.

The device is built with naturally stainless materials (nylon, stainless steel, light alloys, etc.), which allows its use in the most difficult conditions.

It is a highly reliable safety device with original operating features described below.

It is used for all cases where one wishes to enslave a rotational regime with maximum precision to:

-Create some kind of automatism from a speed threshold.

-Avoid accidental overspeeds of machines or mechanical organs.

-Intervene in case of accidental sublocities.

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The DUO C1 detector is employed in a variety of industries:

-Electric motors.

-Industrial thermal engines.

-Thermal traction engines.

-Generators.

-Marine engines.

-Air compressors.

-Pumping groups.

-Revolving electric machines of all types.

-Hydro, steam, gas turbines.

-Speed crossing orders for railway equipment.

-Material for Nuclear Engineering.

-EDF power plant equipment, micro-centrals.

-Fire equipment.

-Control of the proper operation of: ventilation, drive belts, rolling mills, winches, lifts, lifts, etc.

-Machine tools, etc...

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OPERATING PRINCIPLE

The DUO C1 type detector, with synchronized weights, uses two centrifugal s mechanism that occurses the pre-determined critical rotation regime approaches.

When this regime is reached, a sudden-acting inverter mini-switch is called upon by the mechanism and emits an electrical signal that remains as it is as long as the speed does not pass through the critical regime.

The device works indifferently in both directions and automatically rearms.

Forinformation: Various types of microswitches can be considered.

VARIOUS VERSIONS

The DUO C1 detector comes in a variety of versions, thus solving as many adaptation problems as possible.

It can be delivered in its DUO C1 AP version which is equipped with a complete elastic mating (1 sleeve machined and mounted on the detector, 1 special removable elastic element and 1 raw sleeve provided for adaptation on the control device).

Other types of trees can be considered: AL smooth tree, ATF screwdriver tree, etc.

The DUO C1 detector comes in a normal version with a 9(PE9/ PG9) press but can also be equipped with connectors of various brands (Jaeger, FRB, Socapex, PE11, marine toe press,...).

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There is a version with reinforced waterproofing: DUO C1 ETR and also an anti-flagging version: DUO C1 ADF.

DESCRIPTION

The system consists of an aluminum casing in which are the moving sets, or rotors,equipped with sledgehammers rotating at the speed of the device's training.

The rotor set consisting of sledgehammers and springs is calculated according to the speed regime to be controlled, indicated by the customer.

This set comes to order via a sliding ring system a Crouzet brand microswitch with the following characteristics:

Alternative - non-inductive circuit

10A / 110V 5A / 220V 1A / 380V

Continuous - non-inductive circuit

6A / 27V 2A / 110V 1A / 250V

The two rotors are simultaneously driven via a central gable that connects these two axes.

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MOUNTING

The detector is attached by 60mm f7 diametercentering and a 5 hole 6.5mm pierced bridle on a 114mm diameter.

It is possible to provide an adaptation flask on request and after feasibility study.

The training of the DUO C1 detector is originally planned via an elastic mating. Nevertheless, another type of mating can be considered with our agreement.

The device can operate in any position: horizontal, vertical or oblique.

USE

The device is set in the factory, at the user regime (controlled threshold) requested by the customer. The speeds that can be controlled range from 320t/m to 5000 t/m. Control thresholds below 320t/m can be studied on demand.

The usual accuracy varies from 2%for low speeds and1%for highspeeds. These numbers may be decreased depending on the type of application and the demand.

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MAINTENANCE

The DUO C1 detector is designed to operate without any greasing. This is precisely one of its main qualities.

Indeed, all its components have been chosen or designed for this purpose. It is therefore strongly discouraged to intervene to lubricate the mechanism.

NOTE: the absence of greasing does not mean lack of monitoring: in fact it is essential to check periodically the proper operation of the device. This is recommended in our important note 8201 paragraphs 1 and 2.

As an indication, monitoring and maintenance operations can be carried out between 1500 and 3000 hours of operation, depending on the hardness and intensity of the service. It is indeed difficult to establish a precise framework for these operations, which will need to be aligned with other maintenance interventions throughout the facility.

Excerpt from important note 8201

-1: Monitoring in use:

User services should monitor, at a specified frequency with us, the good condition of the device, its mating with the machine and its factory-set trigger threshold.

Some operations can be carried out on site and others in our workshops if necessary. The speed threshold will be checked on an authorized and calibrated test bed and according to the procedure of the manufacturer of these devices.

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Our company is able to carry out these checks in our workshops but also on site for better responsiveness if necessary.

-2: Aircraft maintenance:

As a general rule, if the monitoring is done properly, the maintenance will be limited to simple gestures: keeping the device clean, checking the wiring and connectors, replacing the elastic part of the training mating with an original element if needed.

NOTE: It is important to note that some parts are of our design and that it is important to use them and not to substitute them with similar elements but from another source. This can lead to malfunctions or worses of the heists for which we cannot be responsible.

For the maintenance or repair of the devices, our workshops are available; but it is also possible to travel on site (metropolitan France) on request. In any case, please consult us.

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IDENTIFICATION

The device has either a nameplate (for older versions) or an engraving that allows it to be identified:

The type of device

Its serial number

Its setting regime (or trigger speed)

In addition, the serial number and trigger speed are struck on the device's casing.

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