

FDR



Differential humidity controller incl. integrated sensor for inside humidity and temperature, external sensor for intake air humidity and temperature as well as the necessary switching power supply.

■ Area of application

- For controlling/regulating extract air fans depending on the absolute humidity difference between two measurement locations, e.g. inside the building and the outdoor environment using an internal sensor and external sensor for humidity and temperature.
- The internal sensor is housed directly in the electronic controller and the external sensor is housed in a casing for wall installation.

■ Features

- Non-ventilation periods can be programmed with the integrated weekly timer.
- The integrated frost protection ensures that the ventilation process is temporarily suspended and thus no cold supply air actively flows in the building.
- The extract air fan can be manually activated for a pre-set turn-off delay period using standard switches, regardless of humidity-dependent ventilation operation.
- If ventilation is not required or if useful ventilation is not possible due to the inside and outside climate conditions, the controller will switch the extract air fan to an interval mode so that the preset regular air exchange takes place.

■ Additional switch output

- Allows the enabling of an additional external heater so that the minimum room temperature does not fall below the pre-set value while the fan ventilates the room.

- Or it can be programmed to operate an additional active external dehumidifier.
- Alternatively, it can be used for building control system signalling.

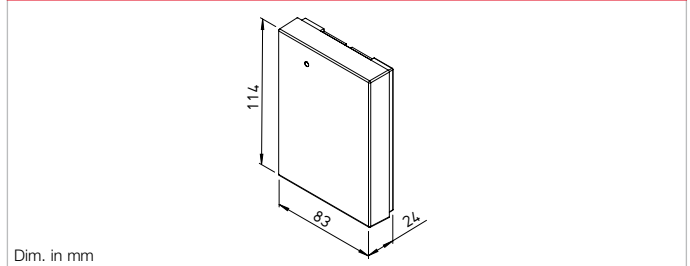
■ Control parameters FDR

- If the control parameter activation thresholds are exceeded, the room will be ventilated with the AC fan used in the room, which allows drier supply air to flow into the room.
- All single-phase Helios AC fans can be connected to the controller up to a max. current of 6 A.
- If fans with higher electrical outputs or three-phase current fans are required, a corresponding circuit breaker must be connected to the controller.
- If energy-saving EC extract air fans are used, the speed and thus the energy consumption will be reduced to a minimum depending on the absolute humidity difference.
- All Helios EC fans with a 0-10 V control input can be connected to the controller.

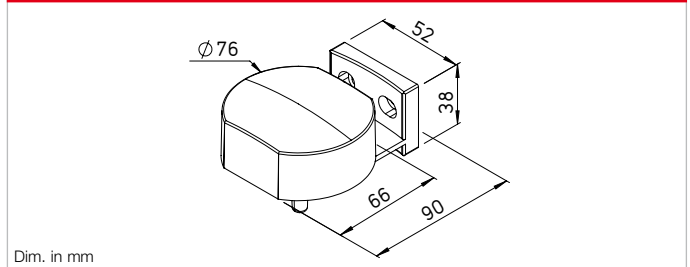
■ Control function

- Thanks to its basic factory settings, FDR is ready for operation in a very short time with only a few adjustments.
- All control parameters can be optimised in relation to the building using the free Helios FDR App.

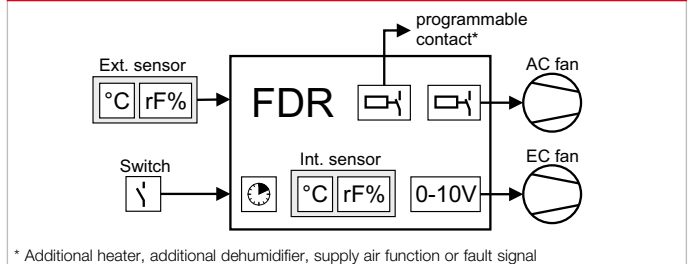
Dimensions Internal controller for FDR



Dimensions External sensor for FDR



Pictorial schematic FDR



■ Helios FDR App

- All parameters can be changed at any time via the Bluetooth interface by using the free App.
- Software updates can be loaded on the controller via the App.
- The setting parameters and function history from the past few days can be read out via the App.



Technical data:

Type	FDR
Ref. no.	08157
Voltage	230 V~, 50 Hz
Power supply unit Controller	12 V DC
Switch output ON/OFF potential-free	max. 6 A, cos phi 0.95
Controlled output voltage	0-10 V / max. 2 mA / 0-100%
Max. temperature range	outside -30 °C – 55 °C inside 0 °C – 40 °C
IP external sensor	IP54
IP controller/internal sensor	IP20
Dimensions External sensor	(W x H x D) 76 x 40 x 90 mm
Dimensions Controller/internal sensor	(W x H x D) 83 x 114 x 24 mm
Wiring diagram no.	1381