

Alarm

# EFST-6



HVAC CONTROLS AND POWER

## Frost Alarm

EFST-6 is a series of frost alarms designed to protect against frost damage in, for example, the water-based heating surfaces of ventilation plants.

EFST-6 is a safe and reliable alarm system, developed for use in both large and small installations where there is a need for early warning of low pipe temperature in order to prevent water damage.

EFST-6 has been used successfully in many HVAC installations, either where a redundant alarm is required in relation to the BMS system or where no BMS system for monitoring pipe temperature is installed.

EFST-6 was designed to provide our customers with an advantageous combination of high quality, reliability and low life cycle costs.

### EFST-6 FUNCTIONS

#### Early Warning

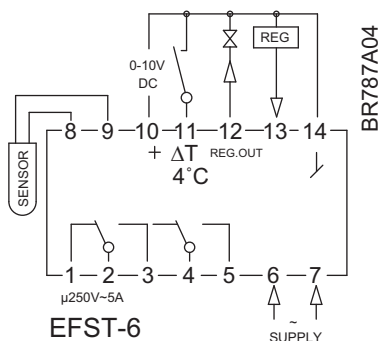
The adjustable alarm limits allow suitably early warning in relation to the environment in which the pipes are installed and in relation to whether the addition of anti-freeze allows lower temperatures than pure water.

#### Dual Alarm Function

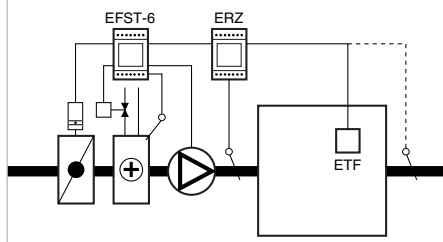
EFST-6 is equipped with a voltage-free changeover relay, making it ideal for connection to a BMS system as it is not necessary to connect an interfacing component. It also contains a separate make contact which can be used to power a local visual or acoustic alarm.

#### Local Temperature Display

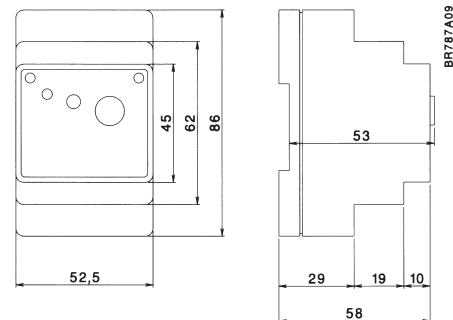
The built-in DC outlet allows a display to be connected for showing actual temperature.



Wiring



Application example



Dimensions

## EFST FUNCTIONS

### Sensor Fault Monitoring

If the sensor short-circuits or is disconnected, the alarm relays are activated in order to ensure that no alarms are missed because of system faults.

## TECHNICAL DATA

SUPPLY VOLTAGE	SENSOR INPUT	SETTING
1 x 230 V AC $\pm 10\%$ 50/60 Hz	NTC	5-40 °C
ANALOGUE VALVE OUTPUT	ANALOGUE INSTRUMENT OUTPUT	DIMENSIONS (W/D/H)
0-10/10-0 V DC and 6-16/ 16-6 V DC, max. 10 mA	0-10 V DC, max. 10 mA	52.5 x 58 x 86 mm
ALARM TEMPERATURE RANGE	RELAY OUTPUT	POWER CONSUMPTION
0-20 °C	1 x SPNO and 1 x SPST 250 V AC, 6 A	3 VA
AMBIENT TEMPERATURE	NIGHT SETBACK $\Delta T$	WEIGHT
20/+50 °C	4 °C (fixed on terminal closure between 11 and 14)	530 g
ENCLOSURE RATING	ACCURACY	
IP20	$\pm 5\%$ for the scale range	

## CE MARKING

EFST meets the requirements contained in the following standards:

EMC DIRECTIVE	LOW VOLTAGE DIRECTIVE
EN 50081-1 EN 50082-1	EN 60730-2-9

## INSTALLATION

### Controller Installation

The EFST series was designed to be mounted on a DIN rail inside an enclosure with a suitable enclosure rating.

### Cable Connection

The control signal cable from an external controller may be up to 50 m in length. The control signal cable must be kept separate from mains-carrying cables as voltages may be produced that can damage the controller.

The control signal cable need not be screened, but the use of screened cable increases the immunity of the EFST to electrical interferences, which is particularly important in industrial installations. The screen must be connected with a bracket to a grounded metal backplate or directly to the installation ground wire.

## PRODUCT PROGRAM

TYPE	PRODUCT
EFST-6-1221	Frost alarm, scale 0-20 °C, 230 V AC.
EFST-6-3221	Frost alarm, scale 0-20 °C, 24 V AC.

## ACCESSORIES

TYPE	PRODUCT
ETF-aa22	Temperature sensor, NTC, -40 - +120 °C (see separate datasheet).