

Data sheet

# Thermometer EKA 153



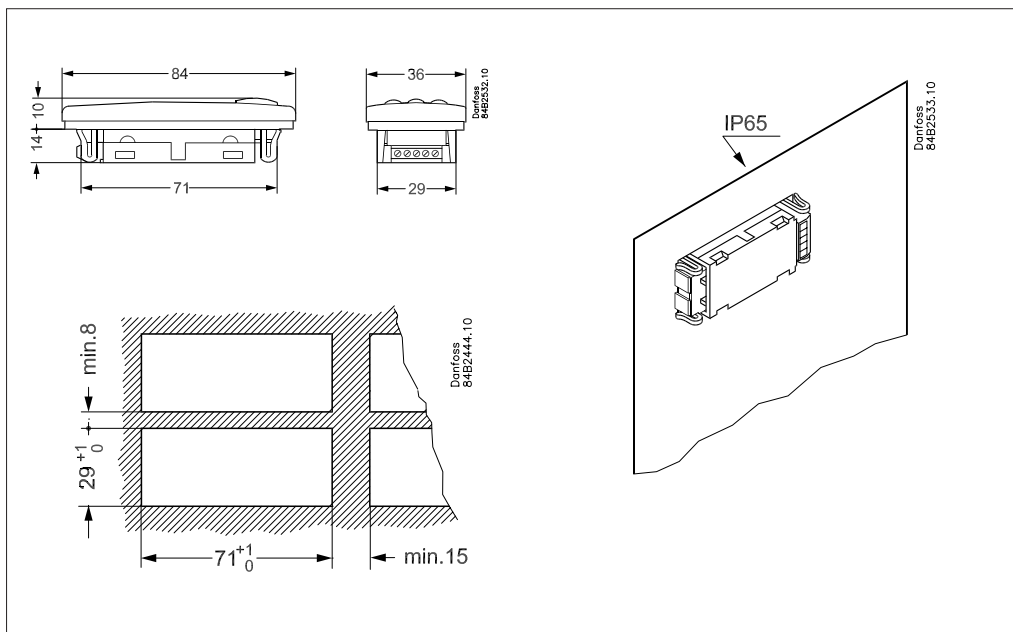
## Introduction and application

The EKA 153 is a thermometer used for registering up to three temperatures in connection with Refrigeration Appliance Controls. The temperatures can be read from the display and sent to a central system unit via data communication.

Alarm limits for high and low temperatures can be adjusted. If the alarm setting is activated, the LED lights will flash and an alarm signal will be sent to the system unit via data communication.

Design, fitting and operation are the same as controllers in the Danfoss EKC 202 series.

Mounting and dimension



Technical data

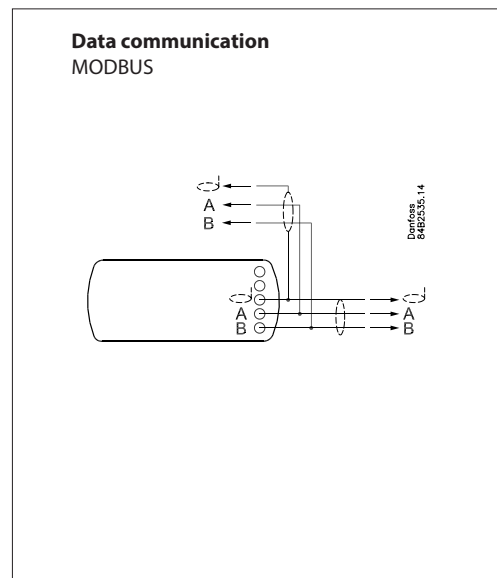
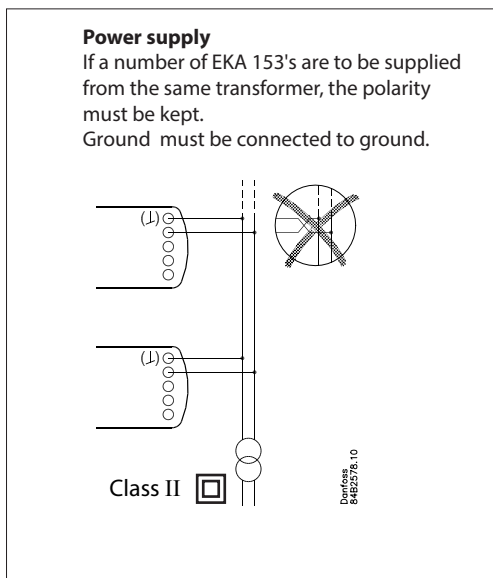
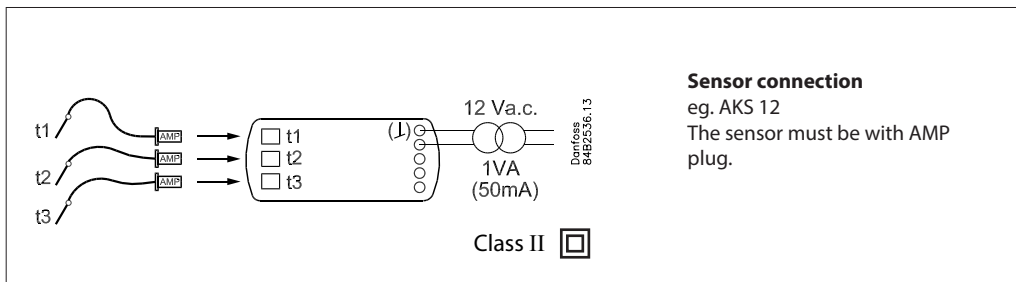
Supply voltage	12 V a.c. ±15%, 1 VA / 12 V d.c. ±15%, 50 mA	
Sensor connection	Up to 3 identical sensors of type either Pt 1000 ohm at 0 °C, PTC 1000 ohm at 25°C Sensors with AMP plug has to be used	
Sensor cable	Max. 10 m	
Display	LED, 3 digits with 1 decimal	
Measurement range	-60 to +120°C	
Degree of accuracy	Controller	±1 K below -35°C ±0.5 K between -35 to +25°C ±1 K over +25°C
	Pt 1000 sensor	±0.3 K at 0°C ±0.005 K per degree
Data communication	MODBUS	
Enclosure	IP 10 IP 65 from front Buttons and gaskets are imbedded in the front.	
Environments	0 to 55°C, during operation (-20 to 55°C by placement in the return air to evaporator) -40 to +70°C, during transport	
	20 - 80% Rh, not condensed	
	No shock influence / vibrations	
Approvals	EU Low Voltage Directive and EMC demands re CE-marking complied with LVD tested acc. EN 60730-1 and EN 60730-2-9, A1, A2 EMC tested acc. EN 61000-6-3 and EN 61000-6-2	

Ordering

	Type	Description	Code no.
	EKA 153	Thermometer with MODBUS	<b>084B8561</b>
	-	Display consol (to be used only with forward mounting)	<b>084B8584</b>

AKS 11 or AKS 12 temperature sensors are recommended when taking reading for the food safety log. The sensor must have an AMP plug.  
See RK0YG catalogue.

Connection



Settings

SW = 1.1x

Parameters		Codes	Min. value	Max. value	Factory setting	Actual setting
<b>Functions</b>						
<b>Normal operation</b>						
Display of the selected temperature sensor		---	t1	t3	t1	
<b>Thermostat</b>						
Adjustment of temperature indication (the setting applies to all measurements)		r04	-20 K	20 K	0.0 K	
Temperature unit(°C/°F)		r05	°C	°F	°C	
Correction of the signal from sensor 1 (t1)		r41	-10 K	10 K	0 K	
Correction of the signal from sensor 2 (t2)		r42	-10 K	10 K	0 K	
Correction of the signal from sensor 3 (t3)		r43	-10 K	10 K	0 K	
<b>Alarm</b>						
Delay for temperature alarm		A03	0 min	240 min	30 min	
Alarm limit for t1- high temperature	An "A" alarm or an "E" error can only appear if the setting in A38, A40 and A42, respectively, is set at a lower value than 50°C.	A38	-50°C	50°C	50°C	
Alarm limit for t1- low temperature		A39	-50°C	50°C	-50°C	
Alarm limit for t2- high temperature		A40	-50°C	50°C	50°C	
Alarm limit for t2- low temperature		A41	-50°C	50°C	-50°C	
Alarm limit for t3- high temperature		A42	-50°C	50°C	50°C	
Alarm limit for t3- low temperature		A43	-50°C	50°C	-50°C	
<b>Miscellaneous</b>						
Network address		o03	0	240	0	
Access code (all settings)		o05	0	100	0	
Used sensor type (Pt /PTC)		o06	Pt	PTC	Pt	
Display step = 0.5 (normal 0.1 at Pt sensor)		o15	no	yes	no	
<b>Service</b>						
Temperature measured with t1 sensor		u72				
Temperature measured with t2 sensor		u73				
Temperature measured with t3 sensor		u74				

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