MAKING MODERN LIVING POSSIBLE

Danfoss Electronics spa

CSTFR1 electronic control

CSTFR1 is an electronic programmable controller especially dedicated to refrigeration market and that allows full multiplexed cabinet management. Thanks to the software customisation possibility, it can be used in several types of application.
It's also available with optoinsulated Modbus RS485 serial communication interface

Programmable PRG | Protection degree IP40 | CAN bus CAN | MYK connection | Modbus RS485 485

REFRIGERATION &
AIR CONDITIONING DIVISION

Data sheet

General features

CSTFR1	
Features	Value
ANALOG INPUTS	
NTC	4
NTC, 0/5V, 4/20mA selectable via software	1
Total number	5
DIGITAL INPUTS	
Voltage free contact	4
Total number	4
ANALOG OUTPUTS	
PWM, PPM selectable via software	1
Total number	1
DIGITAL OUTPUTS	
SPST relay 16A	1
SPDT relay 8A	1
SPST relay 8A	2
SSR 230Vac	1
Total number	5
OTHERS	
Insulated power supply 110-230Vac, 50-60Hz	•
Connection for programming key	•
Connection for remote user interface	•
Buzzer	
CANbus	•
RTC clock	
Modbus RS485 serial interface	•
Dimensions (DIN module)	8
Mounting	DIN bar

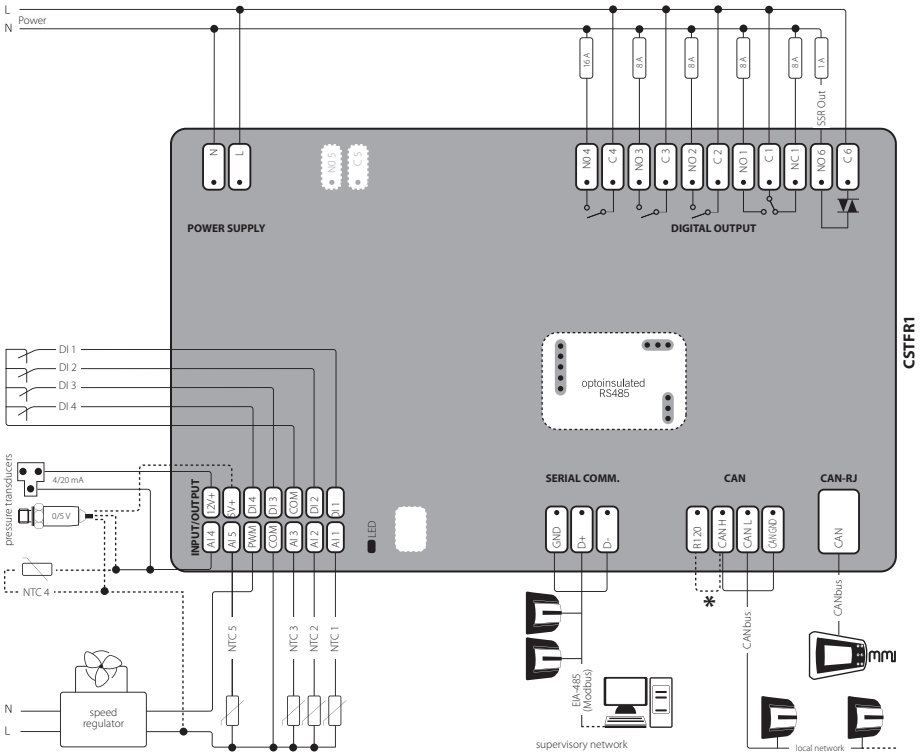
Technical specifications

POWER SUPPLY:

- 20/60Vdc and 24Vac ±15% 50/60Hz. Maximum power consumption: 6W, 9VA
- Insulation between power supply and the extra-low voltage: functional

CSTFR1			
I/O	Type	Number	Specifications
Digital outputs	Relay	4	Insulation between relays: functional Insulation between relays and the extra-low voltage parts: reinforced **C2-NO2, C3-NO3** Normally open contact relays 8A: - characteristics of each relay: *6A 250Vac for resistive load - 100.000 cycles* *4A 250Vac for inductive loads - 100.000 cycles with cos(phi) = 0.6* **C1-NO1-NC1** Changeover contacts relay 8A: - characteristics of each relay: *6A 250Vac for resistive load - 100.000 cycles* *4A 250Vac for inductive loads - 100.000 cycles with cos(phi) = 0.6* **C4-NO4** High inrush current normally open contact relays 16A: - characteristics of each relay: *1000W incandescent lamp, 250Vac, NO contact: 80.000 cycles* *10A, 240Vac, NO contact, 85°C, VDE/UL508: 50.000 cycles* *21/3,5A, 230Vac, compressor, cos(phi) = 0,5, NO contact: 230.000*
	Solid state relay	1	Insulation between SSR and relays: functional Insulation between SSR and the extra-low voltage parts: reinforced Type of SSR action: 1C (micro-interruption) **C6-NO6** SSR, with output AC Zero-crossing: - load current: 1A - load voltage: from 75 to 250Vac
Digital inputs	Voltage free contact	4	**DI1, DI2, DI3, DI4** Current consumption: 5mA
Analog outputs	PWM-PPM	1	Analog outputs selectable via software between: - pulsing output, synchronous with the line, at modulation of impulse position (PPM) or modulation of impulse with (PWM) - pulsing output, at modulation of impulse position (PPM) with range 20Hz ÷ 1KHz: *5V open circuit* *voltage (1kΩ minimum load)*
Analog inputs	Passive	4	**AI1, AI2, AI3, AI5** NTC temperature probes, 10kΩ at 25°C
	Active/passive	1	**AI4** Pressure transducer with 4/20mA or 0/5V output or for NTC temperature probe, default: 10kΩ at 25°C The input type is selectable via software between 12V+ power supply for 4/20mA transducers: 12Vdc, 120mA max 5V+ power supply for 0/5V transducers: 5Vdc, 100mA max Accuracy of measure: 3% f.s. - resolution: ±50µA

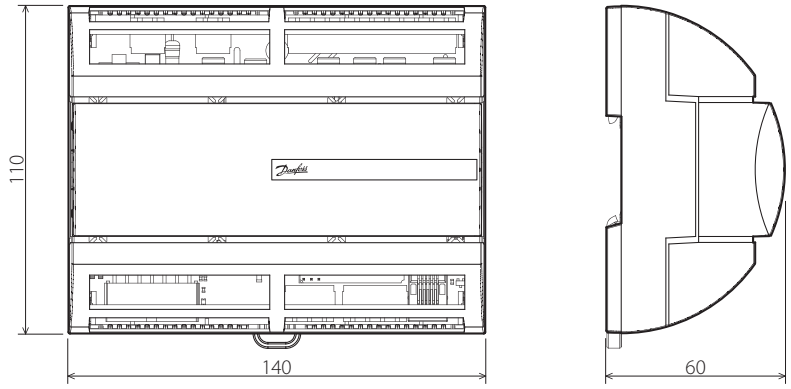
Connection diagram



*NOTE: connection has to be made on the first and last local network units, make the connection as close as possible to the connector

Dimensions

NO DISPLAY



Product part numbers

CSTFR1	
CODE **	DESCRIPTION
080G0155	CSTFR1, 230V, I
080G0156	CSTFR1, 230V, RS485, I

**NOTE: industrial pack codes (I) don't include standard kit connectors

Note

Note

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