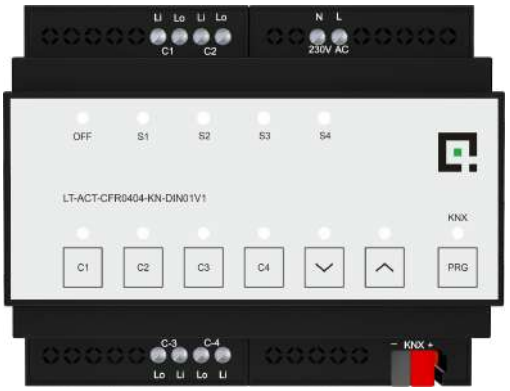
LEBENOR
evolving dimensions

KNX

Ceiling Fan Speed Actuator



Main Features of the product:

- Control 4 Ceiling Fans.
- Supports 4 Speed Steps Fan Control.
- Control of Fan using 1-bit, 1-byte or 4-bit object.
- Supports “Co-ordinate with AC” function.
- Support 8 Scenes for each individual Fan, each scene supports execution of any of the assigned KNX scene (1-64).
- On-board push buttons for manual operation of all Fans.

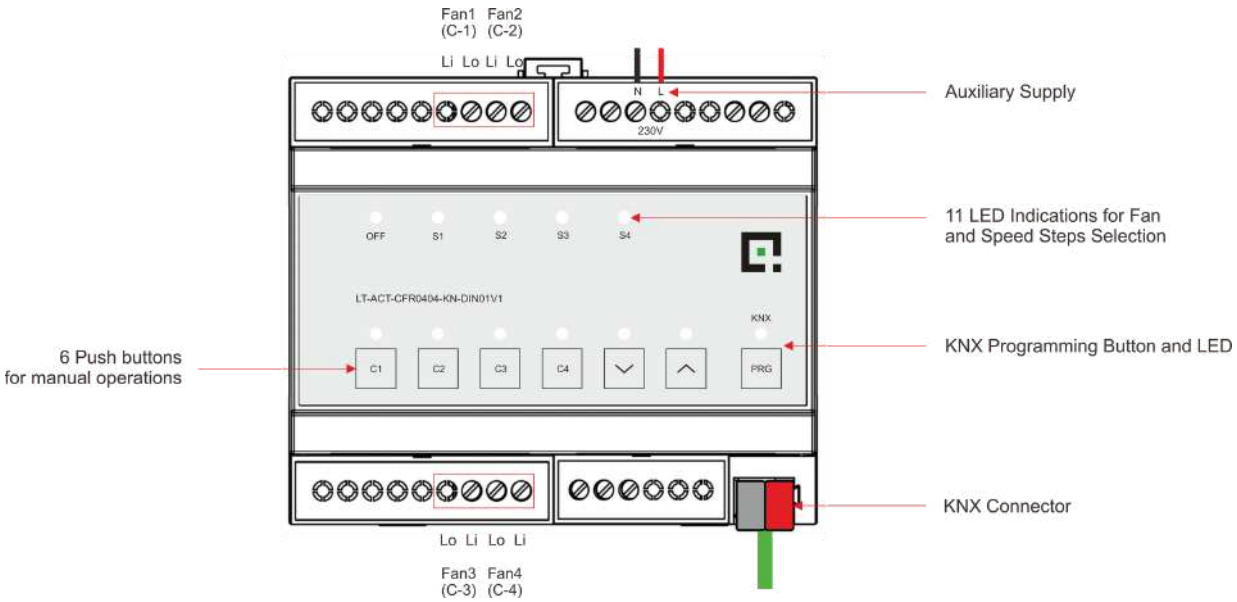
Ceiling fans are an imperative part of every Indian home and in many parts of the world. In India, fans are one of the most common electrical appliances. .

Control of ceiling fans in KNX Automated homes was always a challenge and this device is designed to make it convenient for the homeowners to control the Fan using KNX keypad or any of the visualization App. The device gives absolutely zero humming noise.

Areas of Application:

- Private residences
- Hotel rooms
- Hospital rooms
- Office cabins
- Conference rooms

Terminal Details



Technical Specifications

Parameter	Description
Number of Channels	4 Channels
Number of Speed Steps Supported	4 Speed Steps
Fan Load	90 W @230 V AC for an individual Fan
System Voltage	30VDC SELV, KNX
Typical consumption on KNX bus	15mA
Standby consumption on KNX bus	7.5mA
Connection Type, Power	Screw Connection with tension sleeve
Cable Cross-Section	0.75-2.5mm²
Connection Type, KNX	Typical TP1 bus connector for 0.80mm Ø rigid cable
External power supply	230V AC
Max. Avg. Operating Current: @230V	500mA
Operation temperature	-5°C ... +45°C
Storage temperature	-20°C ... +70°C
Degree of protection	IP20
Installation	DIN-rail
Housing material	ABS
Enclosure dimension (l x w x h)	106 x 90 x 58 mm

Order Reference:

Standard Stock items:

- KNX Ceiling Fan Speed Actuator, 4 Channel with 4 Speed steps, DIN. Manual override with 230V AC Auxiliary supply.
  Order Ref No. LT-ACT-CFR0404-KN-DIN01V1

The Information in this document is subject to change without any notice and should be confirmed with the OEM.

Function Module

Function	Configurable Parameters	Description
General Settings	Status after KNX Bus return	All Fans should remain in configured state at bus return (After KNX power is back). The available states are “Maintain Status (default)” and “OFF”.
		The Fan will work as per last status before changing to off state when the setting is OFF.
	Status after ETS Download	All Fans should remain in configured state after ETS program download. The available states are “Maintain Status (default)” and “OFF”.
	Status after Mains return	All channel relays should remain in configured state after Mains return. The available states are “Maintain Status” and “OFF/Close”
Fan Configuration	Starting Characteristics	Speed Steps: This setting allows user to select Steps for control of Fan. Available options are OFF, Speed 1 to Speed 4. In Manual Operations, ON/OFF and 4 steps control are always active irrespective of "Starting Characteristics" Configuration. Speed at Fan ON: This setting allows configuration of Speed at which Fan to start using Toggle ON Operation. Available options are: Speed 1, Speed 2, Speed 3, Speed 4 and Last Speed. If “Last Speed” option is selected, whenever Fan is set to OFF using Direct Speed Step, Fan Speed Decrease using 4-bit or 1-bit/1-byte object, then on receipt of Fan ON command Fan will operate at Speed 1. If Fan is turned OFF at particular speed via OFF command, then on receipt of ON command Fan will operate at last operating speed.
	Status Indication	After activating this function, Status objects for Fan State (ON/OFF) and Fan Speed are generated. 1. 1-bit ON/OFF Status Indication 2. 1-byte Speed Status Indication
	ON/OFF Control	Operates Fan with toggle operation using 1-bit switching object. 0 = OFF, 1 = ON

Fan Configuration	Control using 4-bit Object (Single Button Control)	Fan ON/OFF and Speed control by a single button using 4-bit Relative Dimming function. Increase or Decrease speed of the FAN in steps of 1, based on the value of the object. Object value = 9, continue increment from current Speed at interval of "Time interval between speeds". Object value = 1, continue decrement from current Speed at interval of "Time interval between speeds". Object value =8, interrupt the increment operation. Object value = 0, interrupt the decrement operation. Available Fan Speeds = depends on Fan Speed Steps Selection in “Starting Characteristics”. Available options in “Time Interval between Speeds” are 1 sec to 5 secs. Object for “Control using 4-bit Object: 1. 1-bit ON/OFF control 2. 4-bit Speed Up/Speed Down control
	Control using 1-bit/1-byte Object (Two Button Control)	Fan Speed Increase and Decrease control by using two separate buttons. Speed can be control either via 1-bit or 1-byte object. Available Fan Speeds = depends on Fan Speed Steps Selection in “Starting Characteristics”
	Direct Speed Step	Fan Speed control by sending step value directly on 1- byte object. Value = 0, Turn OFF and set fan speed = 0 Value = 1, Turn ON fan and set fan speed =1 Value = 2, Turn ON fan and set fan speed =2 Value = 3, Turn ON fan and set fan speed =3 Value = 4, Turn ON fan and set fan speed =4 This will overwrite Speed defined in the running Sequence of the Profile under execution. “Starting Characteristic” is not applicable with this function.
	Scene	Scene function is used to control Fan in a configurable action. A scene is activated by receipt of a scene value <1-64> on 1-byte scene object. Each Fan having 8 scenes; each scenes support execution of any of the assigned KNX scenes (1-64) or it can be configured as Not Assigned. Scene memorisation by long key press for saving the current state or user can change and save the state. Available output state for Scene: OFF, Speed-1, Speed-2, Speed-3, Speed-4.
	Lock/Unlock	The Lock function is used to lock the particular Fan in the current state. Lock/Unlock function can be triggered via a 1-bit object or via 1-byte scene object (scene number = 1-64). Value = 1, Lock the FAN operation in the last operation stage , no further change to be allowed via any other object/ command. Value = 0, release LOCK, Allow the channel to respond to any command from the bus. Manual Operation is highest in priority and overwrites any other command and aborts any on-going process/command. If new configuration of ETS is uploaded in the device, the device should work as per new configuration

Fan Configuration	Coordinate with AC	Fan will operate at speed configured in this parameter while AC ON status received on 1-bit object “co- ordinate with AC” If selected as a "Set Internal", Provision of manual entry of “Fan Speed When AC is Turned ON” is available to set a Fan Speed. If selected as "Set External", 1-byte object will generate to receive Fan Speed value, which will stored in memory and whenever AC ON status is received on 1- bit object, Fan will operate at Speed which is received on 1-byte object.

Application Schematic:

Common Neutral Connection to FAN only