IM.60

PRODUCT APPLICATION MANUAL

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Art. Nr. 35332021

Fancom®
forward thinking

Introduction

The Fancom iM.60 is used to control air inlet systems. In combination with a Fancom controller and the Fancom Fantura air inlets or Fancom Greenline inlets this actuator provides a perfect air intake system where you do not have to worry about. With a selection switch you can easily choose the type of the connected air inlets (Fantura air inlets or Fancom Greenline inlets).

Description	Article number
iM.60 24V	35332021
Cable reel Ø50 + 2.5 meter cable	5450050
Cable reel Ø65 + 2.5 meter cable	5450052
CE protection cover for cable reel	5459007
iM.60 belt drum 65 mm + belt 0.53 meter	5450101
Pipe / chain connection	5459011
Alarm power supply iM.60	5160009
Transformer 230 / 24V 100Va in box	35431003
Temperature sensor SF.7	5045011.01
Manual control box iM.60	35130150
FT single thermostat	3040012

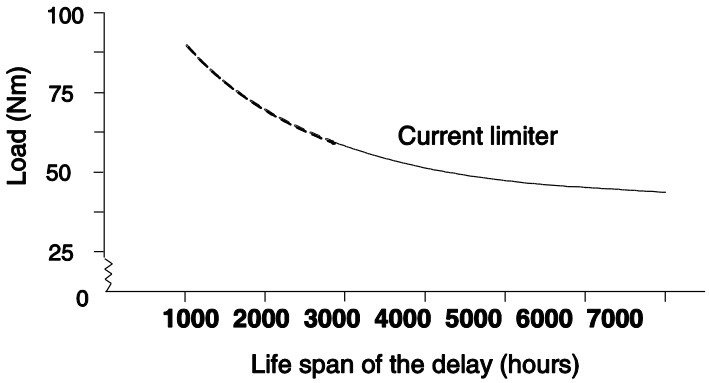
Features

- The iM.60 can be used for controlling the Fantura air intake system or a traditional air intake system.
- Brushless motor with a far longer service life due to the lack of a sensitive collector with carbon brushes.
- Single-driven shaft, to which a cable reel, belt drum or pipe/chain connection can be mounted.
- For motors, installed within reach (lower than 2.5 m above subsurface) of humans or animals a CE cover is available.
- The iM.60 can be controlled via a 0-10V/10-0V voltage input for an analogue control OR via a digital control via the I/O-Network*. No signal loss. Saves an analogue output on the controller.

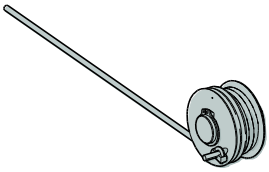
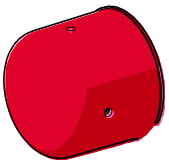
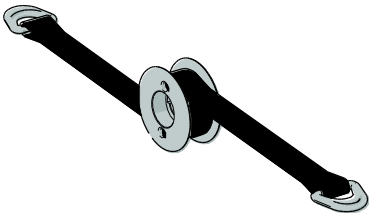
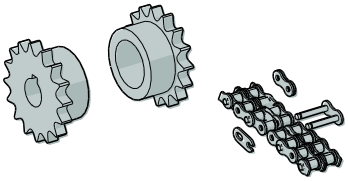
  * Maximum 31 network modules per I/O-Network
- Built-in digital feedback for position feedback. By the lack of a carbon track in a traditional feedback, the lifetime is far longer.
- Integrated mounting bracket and eye for double loop system.
- The iM.60 has a rotary switch with 5 positions (open – 0 – auto – 0 – closed). The position of the switch determines the functioning of the actuator.
- Alarm relay
- Extensive alarm via I/O-net and manual operations possibilities:
  - Via manual operation on the actuator.
  - Via external manual operation (with 10K potentiometer)

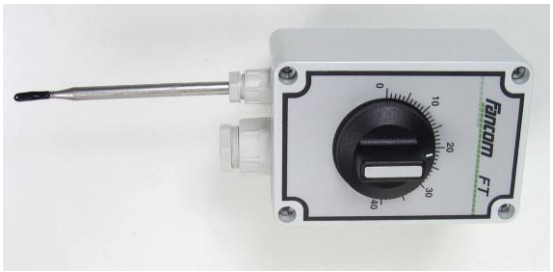
- For situations where the user want to read out the alarmstatus on the iM.60 a transparent cover is available as an optional feature.

- Built-in limit switches with easy adjustment of the end position without special tools.
- In the event of a power failure the control of the iM.60 can continue, depending on the method of controlling, using an optional emergency battery.
- In the event of a power failure the iM.60 opens to a predefined (adjustable) position using an optional emergency battery.
- Possibility to connect a maximum thermostat as an extra security. The air intake will open completely whenever the maximum thermostat is activated.
- Open and robust set up for the different components. Easy access and wiring.
- A temperature measurement that can also be used by a Fancom climate controller is available. This option is only available if the iM.60 is controlled via I/O-net.
- Internal 7-segment display that displays the status of the programme. This makes adjustment of the actuator a lot easier.
- Overload protection using a self-recovering current limiter. The length of the 24Vdc actuator's working life is influenced by the load and running time. This should be taken into account in situations where great tensile force and/or long running times are required.



Accessoires

Article	Image
5450050 Cable reel Ø50 + 2,5 meter cable 5450052 Cable reel Ø65 + 2,5 meter cable The iM.60 has a single-driven shaft, to which a cable reel to wind can be mounted.	
5459007 CE protection cover If the actuator is hung within reach of people or animals (less than 2.5 m / 8.2 ft above the floor) a CE protection cover must be mounted.	
5450101 iM.60 belt drum 65 mm + belt 0,53 m The iM.60 has a single-driven shaft to which a belt drum can be mounted. The beltdrum has a diameter of 65 mm	
5459011 Pipe/chain connection The iM.60 has a single-driven shaft to which a pipe/chain connection to drive a 1” pipe can be mounted.	
5160009 Alarm power supply iM.60 If the 24Vac power supply fails, the actuator can continue to run powered by a battery set (2x0,8Ah) Depending on the settings, the iM.60 can control towards a fixed, predefined position or independently continue the control based on the setting received last.	

5045011.01 Temperature sensor SF.7 As an I/O network module, the iM.60 can measure the temperature itself. This value can be used the control computer or for independent regulation in case of emergency.	
5130150 Manual control box iM.60 With this manual override kit, it is possible to control a iM.60 on distance.	
3040012 Single thermostat Above the preset temperature of the FT thermostat the iM.60 will be forced to open.	

Connection

◄——— 2 x 0,8 mm (0,5 mm ²)** ——— Operating voltage 24Vac

◄——— 2 x 0,8 mm (0,5 mm ²)** ——— Voltage input 0-10V / 10-0V or Temperature sensor (option)

◄——— 2 x 0,8 mm (0,5 mm ²)** ——— Ext. manual switch (10K)(option)

◄——— 2 x 0,8 mm (0,5 mm ²)** ——— Power failure signal (option)

◄——— 2 x 0,8 mm (0,5 mm ²)** ——— Alarm

*** Fancom's GreenLink 2 x 0,8 mm² twisted pair is recommended.*

I/O net* ———► I/O-network communication

** GreenLink: 2 x 0,8 mm ²twisted pair, unshielder*
Maximum 30 I/O-net modules and 1 controller in 1 network

Technical specifications

Mains power supply	
Mains voltage	24 V AC (± 10%)
Emergency power	24 V DC (± 10%)
Mains frequency	50/60 Hz
Max. Amperage	0.8 A
Power consumption	20 VA
Battery	2 x 12V DC
Inputs	
Analog in	Voltage- or temperature measuring Voltage 0-10V, 10-0V, temperature sensor type S7 (-50°C to 110°C)
I/O network	Digital
PF (PowerFail)	Normally open contact
Position feedback actuator	CPS (contactless position sensor)
Limit switches	30Vac / 60Vdc , max 1A
Outputs	
Alarm relay	30 V AC / 60 V DC, max. 2A
External alarm led	24 V DC
Actuator	
Torque	Max. 60 Nm
Holding torque	Max. 40 Nm
Tensile strength 50 mm	250 kg
Holding force 50 mm	167 kg
Tensile strength 65 mm	190 kg (For use with a Fanture inlet)
Holding force 65 mm	127 kg (For use with a Fanture inlet)
Min. number of revolutions	0.7
Max. number of revolutions	2.7
Speed	1.2 rpm
Min. -max. stroke length (ø50 mm) 4 mm cable or belt drum	11-40 cm
Min. -max. stroke length (ø65 mm) 4 mm cable or belt drum	15-53 cm
Manual control	
Rotary switch	Closed – 0 – A – 0 - Open
Potentiometer input (for remote manual operation) and/or	8kΩ - closed, 0kΩ - open
Max. thermostat	∞ - no manual operation
Housing	
Plastic housing with screw closure	IP54
Dimensions (lxwxh)	284 x 237 x 182 mm
Weight (unpackaged)	4.7 kg
Ambient climate	
Operating temperature range	0°C to +40°C
Storage temperature range	-10°C to +50°C
Relative humidity	< 95%, not condensing

I/O network				
Possibility of communication via the I/O-network. One control computer and a maximum of 31 network modules may be connected to the I/O network. Each connected network module has a unique address. After an address has been changed, the network module should always be restarted (power off-on).				
Output / input type				
Output type	**iM.60 address sequence number**			
Air inlet position	"iM.60 address".01			
Input type				
Analogue measurement (temp.)	"iM.60 address".01			
Air inlet position measurement	"iM.60 address".02			
Accessoires				
Battery pack	2 x 12 Vdc / 0.8Ah			
Cable reel / Belt drum	ø50 mm ø65 mm (For use with a Fantura inlet)			
CE Cover				
Controllable number of inlets*				
Type connection	**Inlet 1500 wall**	**Inlet 3500 wall**	**Fantura inlet >-5°C**	**Fantura inlet >-35°C**
Cable reel ø50mm	45	**	**	**
Cable reel ø65mm	35	20	20	20
Belt drum ø50mm	45	**	**	**
Belt drum ø65mm	35	20	20	20

* The number of intake valves is based on a system installed according to the manual using a 5mm main cable with one bend for the counter weight and no additional resistance.

** Inadequate stroke

Dimensions