

# iM.60 + CPS



## PRODUCT APPLICATION MANUAL

**GB161102**

**Art. Nr. 35332021**

## 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. 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 (manual control box)
  - Optional transparent cover to enable the readout of the alarmstatus on the iM.60.
- 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 the optional alarm power supply.
- In the event of a power failure the iM.60 opens to a predefined (adjustable) position using the optional alarm power supply.
- 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.
- Tensile force depends on cable type, cable length and power supply. Below a chart is shown from two cable types and an exact 24Vac power supply:

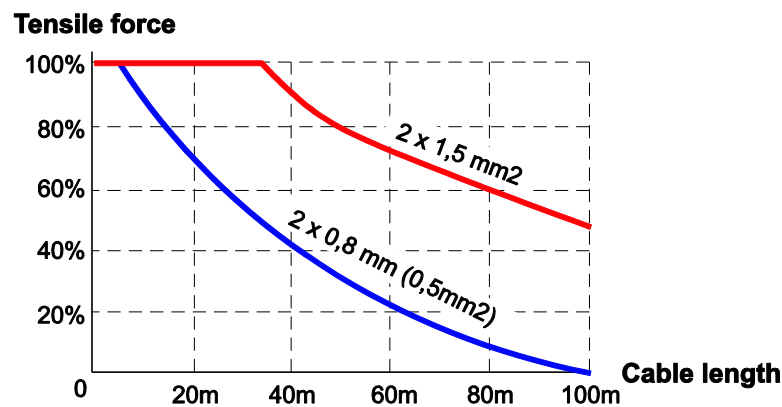
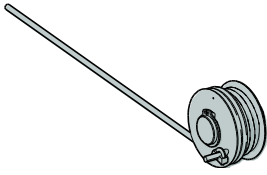
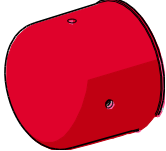
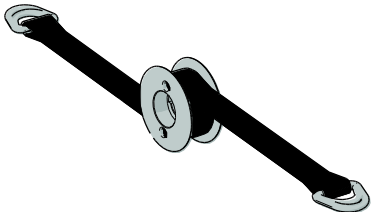
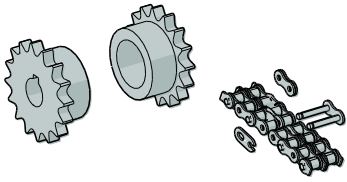

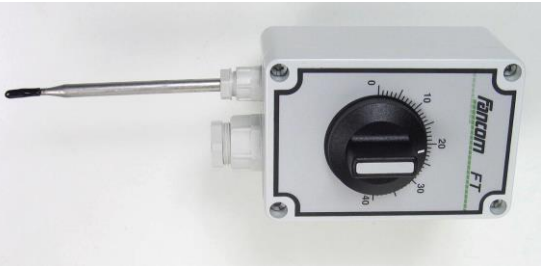


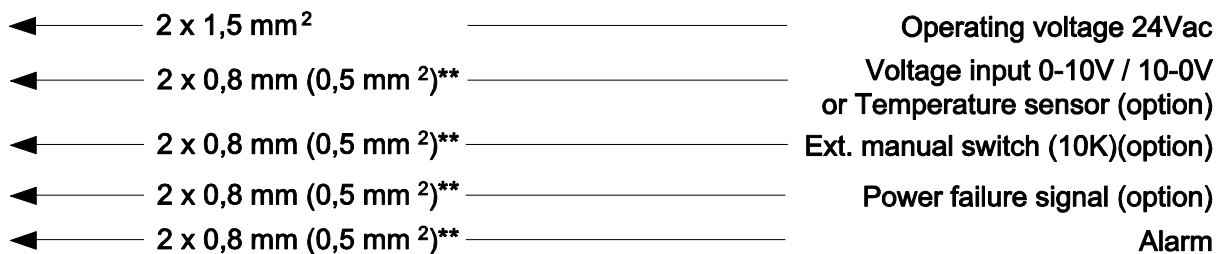
Figure 1: Tensile force vs cable length (24Vac power)

## Accessoires

Article	Image
<p>5450050 Cable reel Ø50 + 2,5 meter cable</p> <p>5450052 Cable reel Ø65 + 2,5 meter cable</p> <p>The iM.60 has a single-driven shaft, to which a cable reel to wind can be mounted.</p>	
<p>5459007 CE protection cover</p> <p>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.</p>	
<p>5450101 iM.60 belt drum 65 mm + belt 0,53 m</p> <p>The iM.60 has a single-driven shaft to which a belt drum can be mounted. The beltdrum has a diameter of 65 mm</p>	
<p>5459011 Pipe/chain connection</p> <p>The iM.60 has a single-driven shaft to which a pipe/chain connection to drive a 1" pipe can be mounted.</p>	
<p>5160009 Alarm power supply iM.60</p> <p>If the 24Vac power supply fails, the actuator can continue to run powered by a battery set (2x0,8Ah)</p> <p>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.</p>	

<p>5045011.01 Temperature sensor SF.7</p> <p>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.</p>	
<p>5130150 Manual control box iM.60</p> <p>With this manual override kit, it is possible to control a iM.60 on distance.</p>	
<p>3040012 Single thermostat</p> <p>Above the preset temperature of the FT thermostat the iM.60 will be forced to open.</p>	

## Connection



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



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

## Technical specifications

<b>Mains power supply</b>	
Mains voltage	24 V AC ( $\pm 10\%$ )
Emergency power	24 V DC ( $\pm 10\%$ )
Mains frequency	50/60 Hz
Max. Amperage	1.8 A
Power consumption	45W
Battery	2 x 12V DC
<b>Inputs</b>	
Analog in	Voltage- or temperature measuring Voltage 0-10V, 10-0V, temperature sensor type SF.7 (-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
<b>Outputs</b>	
Alarm relay	30 V AC / 60 V DC, max. 2A
External alarm led	24 V DC
<b>Actuator</b>	
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	0.95 rpm
Min. -max. stroke length ( $\varnothing 50$ mm) 4 mm cable or belt drum	11-40 cm
Min. -max. stroke length ( $\varnothing 65$ mm) 4 mm cable or belt drum	15-53 cm
<b>Manual control</b>	
Rotary switch	Closed – 0 – A – 0 - Open
Potentiometer input (for remote manual operation) and/or	8k $\Omega$ - closed, 0k $\Omega$ - open
Max. thermostat	$\infty$ - no manual operation
<b>Housing</b>	
Plastic housing with screw closure	IP54
Dimensions (l $\times$ w $\times$ h)	284 x 237 x 182 mm
Weight (unpackaged)	4.7 kg
<b>Ambient climate</b>	
Operating temperature range	0°C to +40°C
Storage temperature range	-10°C to +50°C
Relative humidity	< 95%, not condensing

<b>I/O network</b>				
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).				
<b>Output / input type</b>				
<b>Output type</b>		<b>iM.60 address sequence number</b>		
Air inlet position		"iM.60 address".01		
<b>Input type</b>				
Analogue measurement (temp.)		"iM.60 address".01		
Air inlet position measurement		"iM.60 address".02		
<b>Accessoires</b>				
Battery pack		2 x 12 Vdc / 0.8Ah		
Cable reel / Belt drum		ø50 mm ø65 mm (For use with a Fantura inlet)		
CE Cover				
<b>Controllable number of inlets*</b>				
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

