



## FCR3

### 400 Vac phase-cutting speed controllers with Modbus RTU RS485 serial connection

The FCR3 devices are slave microprocessor controllers that manage three-phase asynchronous motors. They are mainly used to control condenser fan motors on refrigeration units.

The control signal may be analogue 0 to 10 V, PWM, 0 to 20 mA or Modbus RTU over RS485 serial; the devices also feature a digital input and a digital output for alarm management.

The serial port is used for remote supervision of all the parameters in the controlled system. Up to 255 addresses can be set on the Modbus network.

The parameters can be configured via the serial connection or using a programming key.

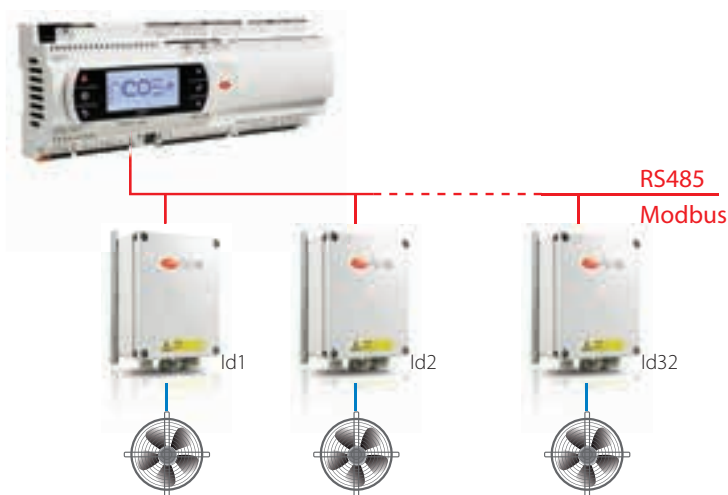
The main parameters are:

- select Min/Cut-off speed;
- set delay at start-up;
- select minimum and maximum speed;
- set linear or quadratic function;
- directly manage output speed (override);
- select output speed when an alarm is active (0%, 50%, 100%);
- read internal operating temperature.

- RS485 serial connection;
- upload/download parameters with programming key;
- models: 6, 9, 12, 20, 40 A; 400 V.



## Example of control via RS485 serial



## Example of supervisor connection



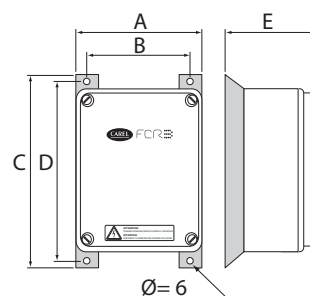
## Models available

Code	Features
FCR3064020	6 A, 400 V, 50/60 Hz, IP55
FCR3094040	9 A, 400 V, 50/60 Hz, IP55;
FCR3124020	12 A, 400 V, 50/60 Hz, IP55
FCR3204020	20 A, 400 V, 50/60 Hz, IP55
FCR3404020	40 A, 400 V, 50/60 Hz, IP55

### Options available

PSOPZKEY00	battery-powered programming key
PSOPZKEYA0	mains-powered programming key

## Physical dimensions (mm)



modello	A	B	C	D	E
FCR3064020	153	133	225	200	115
FCR3094040	205	180	280	255	130
FCR3124020	205	180	280	255	130
FCR3204020	198	174	280	255	158
FCR3404020	245	219	340	315	200



### Integration

Fully integrated into the 1tool development environment, and CAREL PlantVisorPRO, PlantWatchPRO supervisory systems



### Connectivity

Modbus communication standard over RS485  
Can be used with third party BMS



### Range

Models available for an operating range from 6 to 40 A

### Headquarters ITALY

CAREL INDUSTRIES HQs  
Via dell'Industria, 11  
35020 Brugine - Padova (Italy)  
Tel. (+39) 0499 716611  
Fax (+39) 0499 716600  
carel@carel.com

### Sales organization

CAREL Asia - [www.carel.com](http://www.carel.com)  
CAREL Australia - [www.carel.com.au](http://www.carel.com.au)  
CAREL China - [www.carel-china.com](http://www.carel-china.com)  
CAREL Deutschland - [www.carel.de](http://www.carel.de)  
CAREL France - [www.carelfrence.fr](http://www.carelfrence.fr)  
CAREL HVAC&R Korea - [www.carel.com](http://www.carel.com)  
CAREL Iberica - [www.carel.es](http://www.carel.es)

CAREL India - [www.carel.in](http://www.carel.in)  
CAREL Nordic AB - [www.carel.com](http://www.carel.com)  
CAREL Russia - [www.carelrussia.com](http://www.carelrussia.com)  
CAREL South Africa - [www.carelcontrols.co.za](http://www.carelcontrols.co.za)  
CAREL Sud America - [www.carel.com.br](http://www.carel.com.br)  
CAREL U.K. - [www.careluke.co.uk](http://www.careluke.co.uk)  
CAREL U.S.A. - [www.carelnusa.com](http://www.carelnusa.com)

### Affiliates

CAREL Czech & Slovakia - [www.carel-cz.cz](http://www.carel-cz.cz)  
CAREL Ireland - [www.carel.com](http://www.carel.com)  
CAREL Japan Co., Ltd. - [www.carel-japan.com](http://www.carel-japan.com)  
CAREL Korea (for retail market) - [www.carel.co.kr](http://www.carel.co.kr)  
CAREL Mexicana S de RL de CV - [www.carel.mx](http://www.carel.mx)  
CAREL Thailand - [www.carel.co.th](http://www.carel.co.th)  
CAREL Turkey - [www.carel.com.tr](http://www.carel.com.tr)