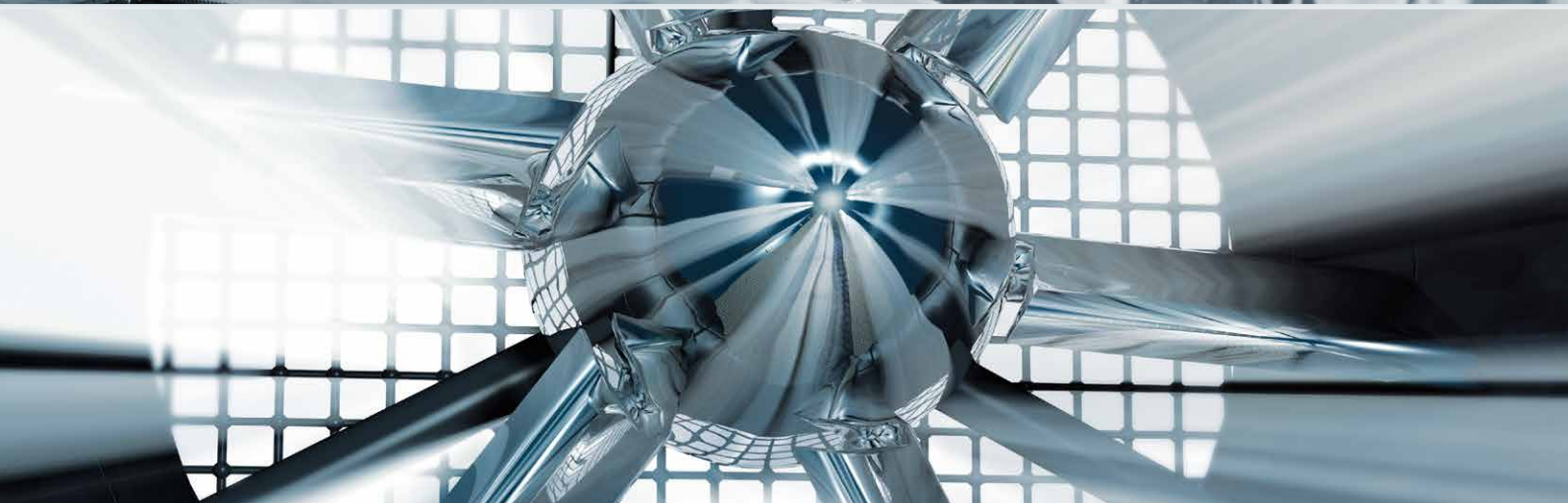




KOSTAL

## INVEOR – line of drive controllers

The efficient solution for pumps, fans and compressors



Smart  
connections.





# INVEOR – pumps, fans and compressors

## Efficient, durable and flexible ...



### Product benefits at a glance

#### 1 Efficient, slender intermediate circuit concept

- Use of film capacitors means long product lifetime and suitability for long-term storage
- IE2 class in accordance with ecodesign guideline EN 50598-2
- Support for IE4 synchronous motors
- Support for IE4 asynchronous motors
- Maintenance-free up to 7.5 kW due to fan-free design

#### 2 Adaption and housing concept integrated on the motor

- Universal motor adapter concept compatible with all commercially available motors
- High protection class: IP65
- Suited to outdoor use
- Can be motor- and wall-mounted
- All common field buses available

#### 3 Intuitive operating concept

- Simple, clear PC software
- Automatic, rapid motor identification
- Integrated plain text display
- Display rotation dependent on installation position

#### 4 Special industry functions

- Blockage detection
- Dry run protection
- PID controller with stand-by function
- Multiple pump operation\*
- Quadratic characteristic curve
- Low-noise function

#### 5 Customised adaptations

- Individual programming of integrated soft PLC
- Extensive I/O-interfaces
- Customer branding possible
- Variant without housing for complete system integration
- Technical support from KOSTAL application team

#### 6 Grid friendly input with broad voltage range

- Flexible use in single- and 3-phase power grids as well as DC grids
- Low system perturbation (THD) thanks to integrated mains choke, no external filters required
- Low discharge and touch currents

\* In combination with touch operating terminal.

This document does not replace the data sheet.

# KOSTAL competence – smart connections



## **The KOSTAL brand promise – “Smart connections.”**

The “Smart connections.” philosophy is the KOSTAL brand promise and is based on the KOSTAL Group’s vast experience.

KOSTAL is a global family-owned company, now in the fourth generation, with over 100 years of experience and comprehensive know-how in the development of high-quality electronic, electromechanical and mechatronic solutions for a wide range of automotive and industrial applications. Leading automotive manufacturers and numerous major industrial companies all over the world rely on the KOSTAL Group with its global workforce of close to 17,000 people.

For all KOSTAL partners, “Smart connections.” means a partnership with a down-to-earth and sound company, guaranteeing long-term trusting business relationships at all levels.

## **INVEOR – “Smart connections.” on all levels**

The “Smart connections.” claim is not only the brand claim of KOSTAL Industrie Elektrik. It also stands for the philosophy behind the development of the INVEOR line of drive controllers.

With its modular structure, the INVEOR is designed to allow custom requirements to be easily met even with small or medium-sized quantities – without sacrificing the advantages of volume production. The principle we apply is “as much customisation as necessary, as much standardisation as possible”.

As a result, the INVEOR is universally usable and offers numerous ways of increasing efficiency in a wide range of industries.

At a more detailed level, it enables ideal adaptation to all interfaces in the application environment. In the areas of communication, operation and observation, motor adaptation, and control process, the KOSTAL drive controller can be customised to suit virtually all requirements. That’s what we call “Smart connections.”





# INVEOR – “Smart connections.” on five levels

1

The INVEOR

IP65 protection class


Integrated soft PLC

Pre-fitted cable glands

Fan-free design up to 7.5 kW

Robust and vibration-resistant housing concept


STO functional safety






Pump- and fan-specific functions

2

Communication



3

Operation and observation

Potentiometer

M12 RS485 service interface

Integrated foil keypad

MMI handheld controller

MMI cover option

Touch operating terminal

INVEOR PC software

4

Motor adaptations

Robust and vibration-resistant adapter concept






Motor adapter concept compatible with all commercially available motors

5

Control process

IE1, IE2, IE3, IE4: for asynchronous motors and synchronous motors

## Overview of INVEOR M sizes

				
α	A	B	C	D
Recommended motor rating <sup>1)</sup> (kW)				
0.25 – 0.75 kW	0.37 – 1.5 kW	2.2 – 4.0 kW	5.5 – 7.5 kW	11 – 22 kW

<sup>1)</sup> Recommended motor rating (4-pole asynchr. motor) for single-phase and three-phase devices is given based on the 230 VAC and 400 VAC supply voltage.



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