



# Compact, capable crane and lift drive

*New!*

Emotron DSV15 / DSV35



**emotron**

DEDICATED DRIVE

 | A CG Product



# High functionality with compact size

Although small in size, our new Emotron DSV15 and DSV35 drive is equipped with high functionality and wide range of options. It offers great flexibility in all senses.

Functionality is easily adapted to your specific application requirements. The compact format offers flexible installation and the user-friendly set-up will have your system up and running in no time.

Emotron DSV15 and DSV35 offers reliable and cost-efficient operation of your demanding crane and lift applications.

The complete series covers motors in the power range of 0.25 - 7.5 kW.

# Smooth and efficient operation



- 1. Power module
- 2. Control module
- 3. Key hole mounting
- 4. Main power supply / DC+, DC -  
removable connector ( $\leq 2.2$  kW)
- 5. Motor power terminal / Brake resistor terminal  
removable connector ( $\leq 2.2$  kW)
- 6. Relay output
- 7. Memory module (for backup)
- 8. Communication interface (option)  
with shield plate fixation
- 9. HMI interface:  
Control panel hot-pluggable (option)
- 10. I/O Terminal with shield plate
- 11. PTC-input



# Technical data

## Emotron DSV15 1-phase supply 230V

| Model           | Nominal rating |      | Rated output current (A) @230V | Unit size | Dim            |
|-----------------|----------------|------|--------------------------------|-----------|----------------|
|                 | kW             | hp   |                                |           | W x H x D (mm) |
| DSV15-23-1P7-20 | 0.25           | 0.33 | 1.7                            | 1         | 60 x 155 x 130 |
| DSV15-23-2P4-20 | 0.37           | 0.5  | 2.4                            |           |                |
| DSV15-23-3P2-20 | 0.55           | 0.75 | 3.2                            | 2         | 60 x 180 x 130 |
| DSV15-23-4P2-20 | 0.75           | 1.0  | 4.2                            |           |                |
| DSV15-23-6P0-20 | 1.1            | 1.5  | 6.0                            | 3         | 60 x 250 x 130 |
| DSV15-23-7P0-20 | 1.5            | 2.0  | 7.0                            |           |                |
| DSV15-23-9P6-20 | 2.2            | 3.0  | 9.6                            |           |                |

## Emotron DSV35, 3-phase supply 380-480V

| Model           | Nominal power |      | Rated output current (A) @400/480V | Unit size | Dim             |
|-----------------|---------------|------|------------------------------------|-----------|-----------------|
|                 | kW            | hp   |                                    |           | W x H x D (mm)  |
| DSV35-40-1P3-20 | 0.37          | 0.5  | 1.3/1.1                            | 1         | 60 x 155 x 130  |
| DSV35-40-1P8-20 | 0.55          | 0.75 | 1.8/1.6                            | 2         | 60 x 180 x 130  |
| DSV35-40-2P4-20 | 0.75          | 1.0  | 2.4/2.1                            |           |                 |
| DSV35-40-3P2-20 | 1.1           | 1.5  | 3.2/3.0                            | 3         | 60 x 250 x 130  |
| DSV35-40-3P9-20 | 1.5           | 2.0  | 3.9/3.5                            |           |                 |
| DSV35-40-5P6-20 | 2.2           | 3.0  | 5.6/4.8                            |           |                 |
| DSV35-40-7P3-20 | 3.0           | 4.0  | 7.3/6.3                            | 4         | 90 x 250 x 130  |
| DSV35-40-9P5-20 | 4.0           | 5.0  | 9.5/8.2                            |           |                 |
| DSV35-40-013-20 | 5.5           | 7.5  | 13/11                              |           |                 |
| DSV35-40-016-20 | 7.5           | 10   | 16.5/14                            | 5         | 120 x 275 x 130 |



## General specifications

|                      |  |
|----------------------|--|
| Mains voltage        | DSV15: 1-phase, 190–240V +/-10%<br>DSV35: 3 phase, 380–480V +/-10%   |
| Mains frequency      | 45Hz...65Hz  |
| Output voltage       | 3-phase, 0-Mains supply voltage level                                |
| Output frequency     | 0–599 Hz   |
| Degree of Protection | IP20 / NEMA250   |
| Mounting             | Zero clearance side by side upright mounting, without derating       |
| Cooling              | Direct Air cooling (>= Unit size 3 with fan)                         |
| Connections          | Spring loaded control terminals<br>Removable power terminals <=2.2kW |
| Approvals            | CE, UL, cUL, RoHS2   |
| EMC compliance       | IEC 61800-3:2004 – C1/C2 depending on length of motor cable          |
| Overload capacity    | 200% rated current for 3s<br>150% rated current for 60s              |
| Switching frequency  | 2,4,8,16 kHz   |
| Temperature          | -10°C – 55°C /4kHz (>45°C/ reduce rated output current by 2.5 %/°C)  |
| Brake chopper        | Built-in standard  |
| DC bus connection    | Standard   |

| Process Interface                      | Standard I/O (Qty)                                     | Application I/O (Qty)                                  |
|--|--|--|
| Digital input                          | 5: (24VDC)   | 7: (24VDC)   |
| Digital output                         | 1: (10..30V/50mA)                                      | 2: (10..30V/50mA)                                      |
| Analog input                           | 1: (0..+10V, 0/4..+20mA)<br>1: (10V) control supply    | 2: (-10V..+10V, 0/4..+20mA)<br>2: (10V) control supply |
| Analog output                          | 1: (0..10V/max.5mA, 0...20mA)<br>1: (+10VDC Reference) | 2: (0..10V/max.5mA, 0...20mA)<br>2: (+10VDC Reference) |
| Relay                                  | 1: (NO/NC)<br>AC 250V, 3A / DC 24V, 2A                 | 1: (NO/NC)<br>AC 250V, 3A / DC 24V, 2A                 |
| Encoder, HTL 100 kHz                   | YES (DI 3/4)   | YES (DI 3/4)   |
| PTC                                    | 1 (T1/T2)  | 1 (T1/T2)  |
| Integrated motor holding brake control | YES  | YES  |
| <b>Fieldbus communication optional</b> |  |  |
| CAN open                               | YES  | YES  |
| Modbus RS485                           | YES  | YES  |
| Profibus                               | YES  | YES  |
| ProfiNet                               | YES  | YES  |
| EtherCAT                               | YES  | YES  |
| Ethernet-IP                            | YES  | YES  |

# Standard functions and features

|   |   |
|---|---|
| <b>Control types, motor control</b>               | VFC control plus (linear or square-law V/Hz)<br>Sensor less vector control (speed)<br>Closed loop vector control<br>Fixed / Auto-Boost<br>DC Brake / Brake control<br>Flying restart  |
| <b>Basic functions</b>                            | Freely assignable user menu<br>S-shaped ramps for smooth acceleration<br>PID controller<br>Sequencer<br>Parameter set change-over<br>Sleep / rinse function<br>Memory module for parameter backup   |
| <b>Monitoring and protective measures</b>         | Short circuit<br>Earth fault<br>I <sup>2</sup> x t monitoring<br>Motor phase failure<br>Mains phase failure<br>Motor over temperature/heat sink (de-rating)<br>Motor maximum speed detection<br>Motor maximum torque detection<br>Motor maximum current detection<br>Load loss monitoring |
| <b>Diagnostics</b><br><b>Diagnostic interface</b> | Error management via LED,<br>Failure history, Log (Control panel)   |
| <b>Efficiency class</b>                           | Fulfills class IE2 in accordance with EN 50598-2 (from Ecodesign Directive)   |

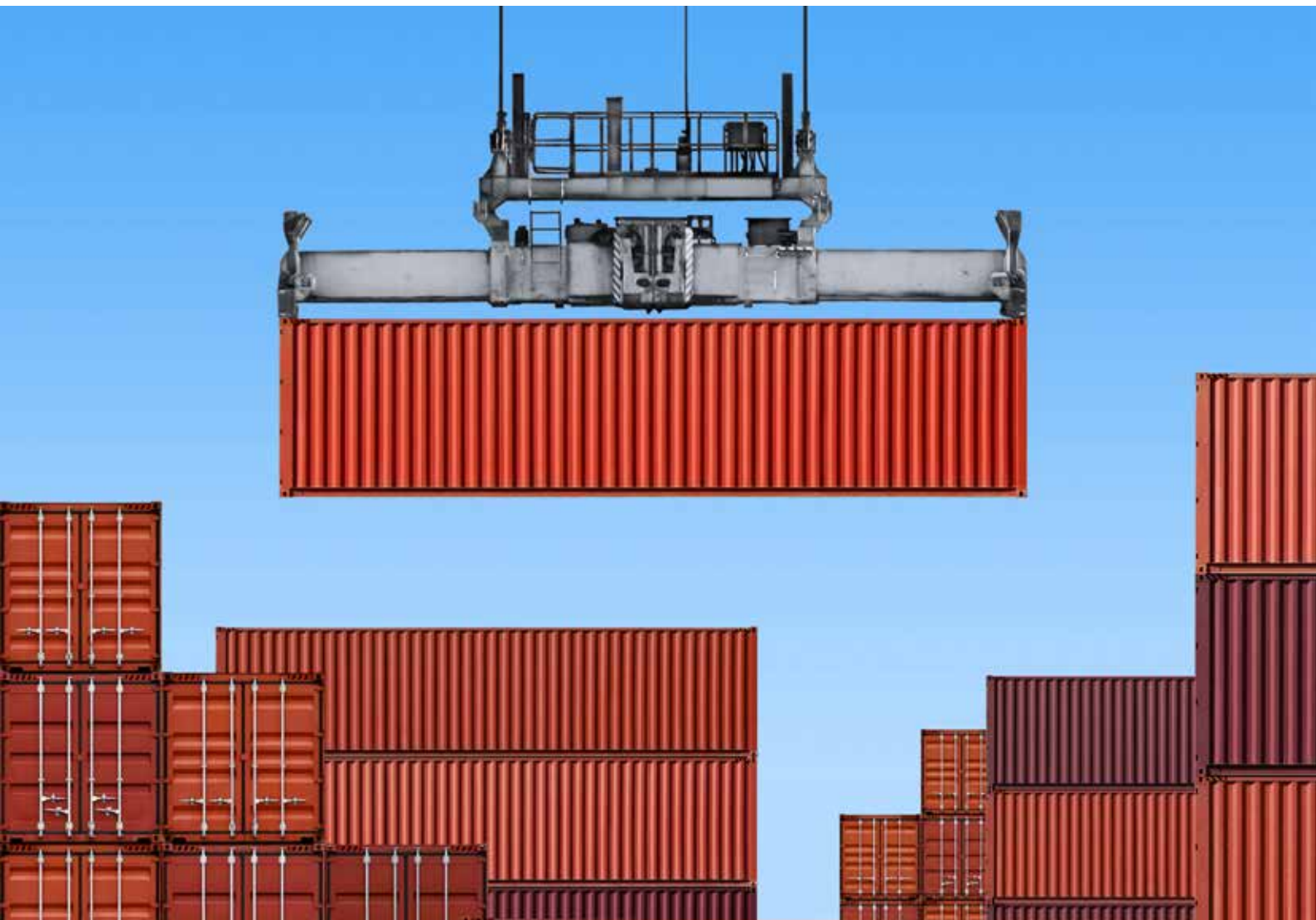
# Options

|                     |  |
|---------------------|--|
| CAN Open            | Fieldbus communication interface                           |
| Modbus-RTU          | RS485 Serial communication interface                       |
| USB                 | Diagnostic communication module                            |
| WiFi                | Diagnostic communication module (available later)          |
| Safe stop           | STO (Safe Torque Off) module                               |
| Crane I/O interface | For crane retrofit (12 dig. inputs 230V / 2 relay outputs) |

## Control panel/ USB/ WiFi

A detachable control panel is optional.  
Languages supported: English, German





CG Drives & Automation  
Mörsaregatan 12  
Box 222 25  
SE-250 24 Helsingborg  
T + 46 42 16 99 00  
F +46 42 16 99 49  
info.se@cglobal.com  
www.cglobal.com / www.emotron.com