



MACHINERY DRIVE

Emotron DSV15 / DSV35



emotron

DEDICATED DRIVE



A CG Product



High functionality with compact size

*Less space
Less wiring
Less total cost*

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

The complete series covers motors in the power range of 0.25 - 30 kW.

Although small in size, our Emotron DSV15 and DSV35 drive is equipped with high functionality and wide range of options. It offers great flexibility. Due to its compact size and advanced features, it is suitable for a wide range of applications, including for example:

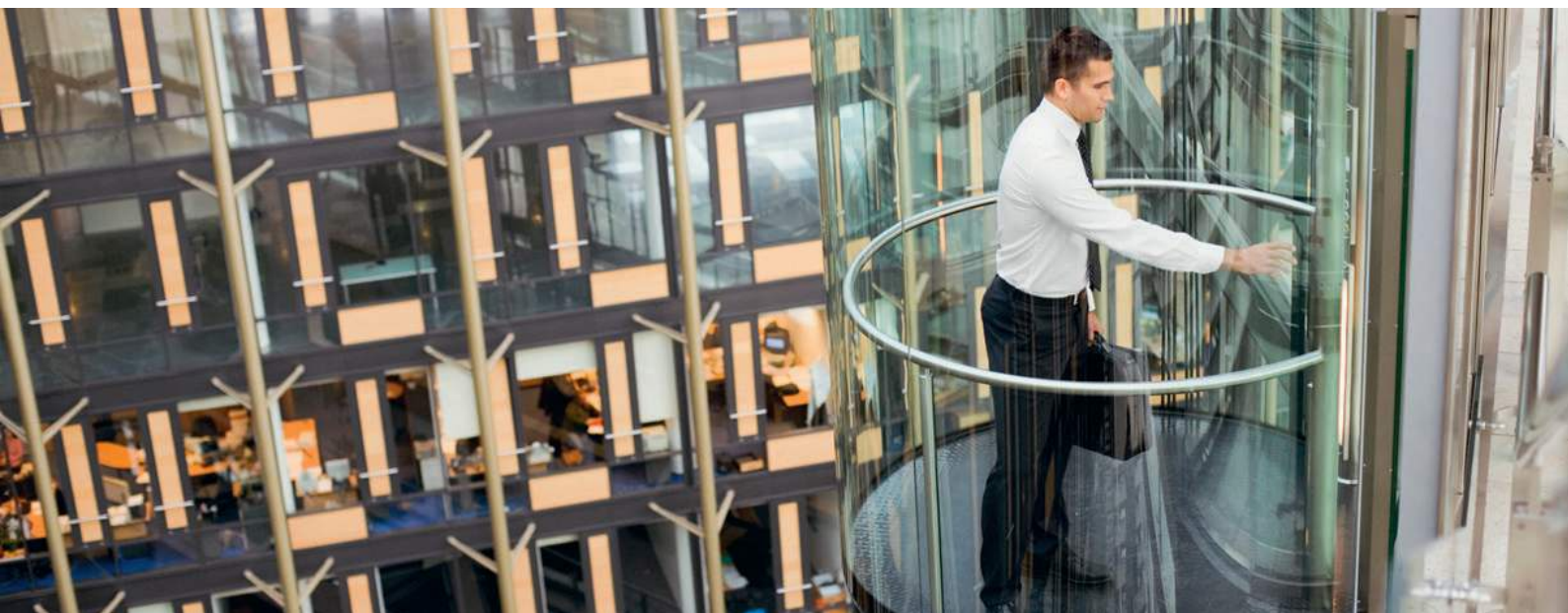
- Cranes
- Hoists
- Lifts
- Conveyors
- Packaging machinery
- Food & beverage machinery
- Pumps
- Fans
- Compressors

Smooth and efficient operation

With advanced features such as safe torque off (STO) and integrated ethernet communication, the drive is easy and economical to setup into any system or application. Functionality is easily adapted to your specific application requirements. The compact format offers flexible installation and a user-friendly set-up.



- 1. Power module
- 2. Control module
- 3. Key hole mounting
- 4. Main power supply / DC+, DC -
removable connector (≤ 2.2 kW)
- 5. Motor power terminal / Brake resistor terminal
removable connector (≤ 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
- 12. STO safe stop module (option)



Technical data

Emotron DSV15 1-phase supply 230V

Model	Heavy duty 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	Heavy duty rating		HD Rated output current (A) @400/480V	Normal duty rating		ND Rated output current (A) @400/480V	Unit size	Dim
	kW	hp		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					
DSV35-40-7P2-20	3.0	4.0	7.3/6.3	4.0	5.0	8.8/7.6		
DSV35-40-9P4-20	4.0	5.0	9.5/8.2	5.5	7.5	11.9/9.8	4	90 x 250 x 130
DSV35-40-013-20	5.5	7.5	13/11	7.5	10	15.6/13.2		
DSV35-40-016-20	7.5	10	16.5/14	11	15	23/18.3	5	120 x 275 x 130
DSV35-40-023-20	11	15	23.5/21	15	20	28.2*/25.2*		
DSV35-40-032-20	15	20	32.0/27	18.5	25	38.4/32.4	6	205 x 366 x 222
DSV35-40-040-20	18.5	25	40.0/34	22	30	48.0*/40.8*		
DSV35-40-047-20	22	30	47.0*/40.4*	30	40	56.4*/48.5*		

* only with external mains choke



General specifications

Mains voltage	DSV15: 1-phase, 190–240V +/-10% 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 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 (% of heavy duty rating) 150% rated current for 60s (% of heavy duty rating)
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) 1: (0..10V) 1: (10V) control supply	1: (0..+10V, 0/4..+20mA) 1: (0..10V) 1: (10V) control supply
Analog output	1: (0..10V/max.5mA) 1: (+10VDC Reference)	2: (0..10V/max.5mA) 1: (+10VDC Reference)
Relay	1: (NO/NC) AC 250V, 3A / DC 24V, 2A	1: (NO/NC) 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
Fieldbus communication optional		
CAN open	YES	
Modbus RS485	YES	
Profibus	YES	
ProfiNet	YES	
EtherCAT	YES	
Modbus/TCP	YES	
Powerlink	YES	

Note: Fieldbus communication is factory mounted option (see price list, select the suitable Control Unit).

Standard functions and features

Control types, motor control	VFC control plus (linear or square-law V/Hz) Sensor less vector control (speed) Closed loop vector control Fixed / Auto-Boost DC Brake / Brake control Flying restart
Basic functions	Freely assignable user menu S-shaped ramps for smooth acceleration PID controller Sequencer Parameter set change-over Sleep / rinse function Memory module for parameter backup
Monitoring and protective measures	Short circuit Earth fault I ² x t monitoring Motor phase failure Mains phase failure Motor over temperature/heat sink (de-rating) Motor maximum speed detection Motor maximum torque detection Motor maximum current detection Load loss monitoring
Diagnostics Diagnostic interface	Error management via LED, Failure history, Log (Control panel)
PC Tool Emotron Easy Starter	Free of charge commissioning & maintenance PC-tool (parameters/diagnostics/trending). Requires USB or WiFi module for connection (optional).
Efficiency class	Fulfills class IE2 in accordance with EN 50598-2 (from Ecodesign Directive)

Options

Control panel	HMI interface (keypad)
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)
Door mounted control panel	Keypad kit for cabinet door mounting, IP65, incl. 3m cable
Mains choke	External 3-phase mains choke, IP20

Control panel/ USB/ WiFi

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





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