

OPTIDRIVE E1

Easy to use, low power, low cost
AC Variable Speed Drive 1/2HP - 1¹/2HP

Rich in features the Optidrive E1 is the most commercially competitive variable frequency drive in the Optidrive family. The product is dedicated to low power single phase applications where price is important.

Innovative and compact the Optidrive E1 range combines good looks with robustness, reliability and easy to use performance.

Optidrive E1 has largely the same unified control interface as the standard Optidrive range, but with the optical communication interface removed.

Optidrive E1 has 14 standard parameters to customize the control's performance, thus Optidrive's legendary ease of use could not be easier or quicker to get started with.

Optidrive E1 can be supplied with or without an internal rfi filter.

Key Benefits

- Small mechanical envelope
- Rugged industrial operation 50°C ambient rating
- Simple mechanical & electrical installation
- Simple operation, powerful features & easy to use
- Fast setup, factory default settings ok for most applications, 14 basic parameters (40 max)
- Motor current and rpm indication
- Debugging using troubleshooting & P-00
- 150% overload for 60 secs (175% for 2 secs)
- Keypad control
- Integral RFI filter option
- Variable torque or constant torque



Key Physical Features

- Easy access key slots for simple installation
- Easy access contactor style power terminals for intuitive easy wiring
- Help card for basic parameter description and terminal layout
- Easy to use keypad with bright LED display
- IP20
- 5mm pitch, rising clamp control terminals

Key Control I/O Features

- Programmable I/O for flexible control
- Analogue input 12 bit resolution for accuracy
- Positive logic digital inputs (active high)
- Galvanically isolated and short circuit proof

Key Programming Features

- Silent motor running with 32kHz ultra-quiet switching
- 4 preset speeds
- "DC Injection" braking on enable to stop free wheeling motors
- Mains dip ride through
- Skip frequencies
- Last 4 trips stored
- Parameter lock
- Hours run meter
- Speed scaling factor for master- slave arrangements
- Emergency (fast) stop function

ELECTRICAL DATA

OPTIDRIVE E1 SIZE 1

Model	ODE1-xxxxx-IN	-	12037	12075
Motor output rating	kW	-	0.37	0.75
Model	ODE1-xxxxx-USA	11050	12050	12100
Motor output rating	HP	0.5	0.5	1.0
Supply voltage/ phases	V +/- 10%	110-115/ 1Ø	220-240/ 1Ø	
Supply fuse or MCB rating	A	7.0	10.0	20
Output voltage/ phases	V	0-115/ 1Ø		0-240/ 1Ø
Output current	A	4.3	4.3	7.0
Max motor cable length	M	m	25	

OPTIDRIVE E1 SIZE 2 (INTEGRAL BRAKING TRANSISTOR)

Model	ODE1-xxxxx-IN	-	22110	
Motor output rating	kW	-	1.1	
Model	ODE1-xxxxx-USA	21075	22150	
Motor output rating	HP	0.75	1.5	
Supply voltage/ phases	V +/- 10%	110-115/ 1Ø	220-240/ 1Ø	
Supply fuse or MCB rating	A	20	20	
Output voltage/ phases	V +/-10%	0-115/ 1Ø	0-240/ 1Ø	
Output current	A	10.5	10.5	
Max motor cable length	m	100		
Min brake resistor	Ω	22	22	

OPTIDRIVE DIMENSIONS (mm)

	Size 1	Size 2
Length	155	260
Width	80	100
Depth	130	175
Weight (kg)	1.1	2.6
Fixings	2 * M4	
Power terminal torque settings	1 Nm	1 Nm

ENCLOSURE - NON VENTED DIMENSIONS (mm)

DRIVE RATING	SEALED UNIT		
	W	H	D
Size 1 All ratings	300	400	200
Size 2 All ratings	450	600	300

ENCLOSURE – VENTED DIMENSIONS (mm)

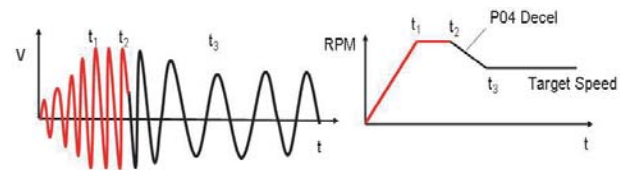
DRIVE RATING	VENTED UNIT			FORCE VENTED/ WITH FAN			
	W	H	D	W	H	D	Air Flow
Size 1 All ratings	300	400	150	200	300	150	>15m ³ /h
Size 2 All ratings	400	600	250	300	400	250	>45m ³ /h

SPECIFICATION

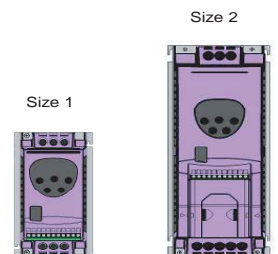
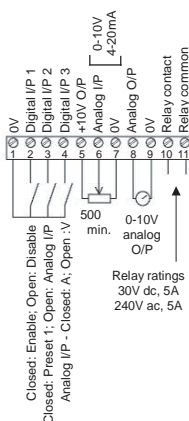
- Supply frequency 48 to 62 Hz
- Max. ambient temperature 50 °C
- Max. altitude 2000 m
- Derate above 1000 m, 1% / 100 m
- Derate output current 5%/°C above max. ambient temp up to 50°C
- I x t protection above 100% output current
- 150% overload protection for 60 sec
- 175% overload allowable for 2 sec
- Storage temperature -40 to +60 °C
- Options:
 - Optifilter
 - Input Chokes & Output Filters
 - 2ANIN
 - 2ROUT
 - PICON

SPECIAL BOOST PHASE OPERATION

To ensure reliable starting, the Optidrive E1 initially ramps the motor voltage up to rated frequency and voltage, before reducing the frequency and voltage to the desired operating point, see diagrams below.



Control Terminal Arrangement (default)



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