The Motor Control Warehouse

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Product	Optidrive E2 IP20 & IP66 non-switched. Optidrive IP66 switched can be configured if the on-board switch connections are removed.

Title	E2 Parameter P-15 = 2 Set-up Guide

Summary	This document gives set-up information on the Optidrive E2 parameter P-15 = 2

NOTE: Please read in conjunction with the Optidrive E2 User Guide.

This set-up guide gives information on the easiest way to set up the E2 for basic motor control. This set up is from default settings - as the drive comes out of the box from the factory.
This assumes a standard 50Hz AC induction motor.

This set up uses 4 switches to:
Enable the drive and select between 4 preset speeds and maximum frequency.

Parameter settings
In most cases, the default maximum and minimum frequencies and motor rated voltage do not need adjusting because the default settings are OK for the majority of applications and motors.
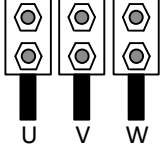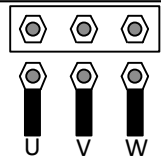
The acceleration and deceleration times may need some adjustment depending on the application and load type.

The motor rated current (P-08) must be set to the motor nameplate current to provide motor protection in case of motor overload.
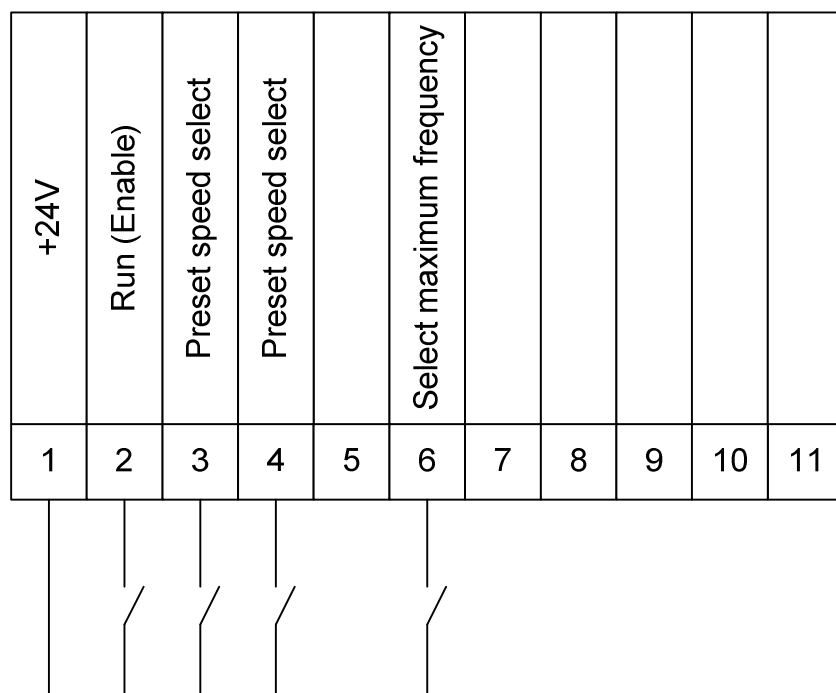
In the majority of applications, the motor rated speed (P-10) does not need setting.

Parameter	Description	Default setting	Description
P-01	Maximum frequency	50Hz	Maximum frequency/speed the motor will run at: 2 pole motor: 3000rpm 4 pole motor: 1500rpm 6 pole motor: 1000rpm 8 pole motor 750rpm
P-02	Minimum frequency	0Hz	Minimum frequency/speed the motor will run at (0 rpm)
P-03	Acceleration time	5 seconds	Acceleration time from 0Hz to 50Hz
P-04	Deceleration time	5 seconds	Deceleration time from 50Hz to 0Hz
P-07	Motor rated voltage	230V/400V	Set to the motor nameplate voltage
P-08	Motor rated current	Drive dependant	Set to the motor nameplate current
P-14	Extended parameter access	0	Set to 101 to allow extended parameter access
P-15	Digital input function select	0	Set to 2
P-20	Preset speed 1	0.0Hz	Set to the desired frequency/speed
P-21	Preset speed 2	0.0Hz	Set to the desired frequency/speed
P-22	Preset speed 3	0.0Hz	Set to the desired frequency/speed
P-23	Preset speed 4	0.0Hz	Set to the desired frequency/speed

NOTE: Please check that the motor terminal box connections are correct for the voltage you are applying to the motor:

Incoming Supply Voltage	Motor Nameplate Voltages	Connections	
230V	230V / 400V	Delta △	U V W
400V	400V / 690V		
400V	230V / 400V	Star 人	U V W

Basic control terminal connections

+24V	Run (Enable)	Preset speed select	Preset speed select		Select maximum frequency					
1	2	3	4	5	6	7	8	9	10	11

Terminal 1

+24VDC User supply

Terminal 2: Run (Enable)

Switch Open: Drive stopped

Switch Closed: Drive running / enabled

Terminal 3 & 4: Preset speed select

Terminal 3 Open & Terminal 4 Open: Preset speed 1 – Speed set in parameter P-20

Terminal 3 Closed & Terminal 4 Open: Preset speed 2 – Speed set in parameter P-21

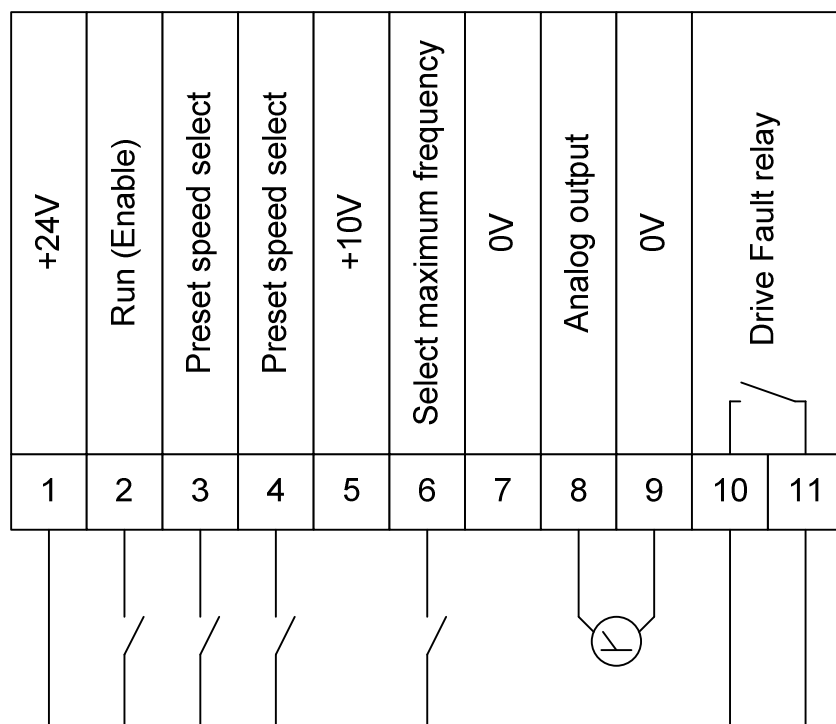Terminal 3 Open & Terminal 4 Closed: Preset speed 3 – Speed set in parameter P-22

Terminal 3 Closed & Terminal 4 Closed: Preset speed 4 – Speed set in parameter P-23

Terminal 6: Preset speed 1 to 4 or maximum frequency

Switch Open: Preset speed 1 to 4 selected by terminals 3 & 4

Switch Closed: Maximum frequency selected. Speed is set in parameter P-01 (maximum frequency)

Full control terminal connections

+24V	Run (Enable)	Preset speed select	Preset speed select	+10V	Select maximum frequency	0V	Analog output	0V	Drive Fault relay	
1	2	3	4	5	6	7	8	9	10	11

Terminal 1

+24VDC User supply

Terminal 2: Run (Enable)

Switch Open: Drive stopped

Switch Closed: Drive running/enabled

Terminal 3 & 4: Preset speed select

Terminal 3 Open & Terminal 4 Open: Preset speed 1 – Speed set in parameter P-20

Terminal 3 Closed & Terminal 4 Open: Preset speed 2 – Speed set in parameter P-21

Terminal 3 Open & Terminal 4 Closed: Preset speed 3 – Speed set in parameter P-22

Terminal 3 Closed & Terminal 4 Closed: Preset speed 4 – Speed set in parameter P-23

Terminal 6: Preset speed 1 to 4 or maximum frequency

Switch Open: Preset speed 1 to 4 selected by terminals 3 & 4

Switch Closed: Maximum frequency selected. Speed is set in parameter P-01 (maximum frequency)

Terminal 8: Analog output - speed

0 to +10VDC output proportional to motor speed (0 to 50Hz = 0 to +10V)

Terminals 10 & 11: Drive Healthy relay

Relay Open: Drive fault

Relay closed: Drive healthy