

SinCos Encoder Module User Guide

Overview

This option module is specifically designed to be used with the Optidrive P2 Elevator variable speed drive product and is intended for professional incorporation into complete equipment or systems. If installed incorrectly it may present a safety hazard. Before commencing installation and commissioning, the user should ensure they are fully familiar with the Optidrive Elevator, and in particular have read the important safety information and warnings contained in the Optidrive Elevator User Guide.

Note

This User Guide is intended to be used with Optidrive Elevator firmware version 2.10 or later. The firmware version of the drive can be displayed in parameter P0-28. Previous versions of firmware can be upgraded using Optitools Studio PC software. Contact your local Invertek Sales Partner for further Information.

Available Functions

The SinCos Encoder Module Interface is intended to be installed in the Optidrive option slot, and allows the Optidrive to be connected to a SinCos Encoder of the following types :-

ERN 1387

Compatibility

This Option is suitable for use on the following product ranges:

Optidrive Elevator "ODL-2-...."

Model Code

OPT-2-SINCOS2-IN Invertek Drives Ltd Offa's Dyke Business Park Welshpool Powys, UK SY21 8JF





| | Function | | | |
|---|---|---|--|--|
| | Powor State | 10 | 6 | |
| A D | Fower Statu | 15 | A V | B |
| B Error Status | | | | SinCos |
| | | | | Encoder Module |
| | | | | |
| Power St | atus LED A | GREEN) | | |
| State | | Indicatio | n | |
| Off No Power | | | r | |
| Un Error Stol | | | rowered up | |
| Error Status LED B (RED) | | | | |
| Off Normal Operation | | | | |
| On No Signals con | | | s connected/rece | ived |
| Flash Error (Se | | e Fault messages l | below) | |
| Installatio | on | | | |
| remov option • Remov the op • Carefu into th locatir aligned force • Tighte secure Option Mo | red prior to in module ve the blankin ition module illy slide the c ne slot, ensuring tabs are co d. Do not use in the 2 clamp the module dule Slot | stalling the ng cover fro slot option mod ng that the rrectly excessive ning screws in place. | e om ule e | |
| | - Street | 6 | Terminal 12 13 14 | Simulated Encoder Output OV A_P (Out) A_N (Out) |
| | 6 | | 15 | B_P (Out) |
| | Sec. 1 | | 16 | B_N (Out) Shield/Screen |
| | | | | Shieldy Sci een |
| | | | 18 | Brake 1 |
| | | | 19 | Brake 2 |
| Terminal | SinCos (| Connection | | |
| 2 | +5V Suppi | y to Encoder | | |
| 3 | | C+ | | |
| 4 | | C- | | |
| 5 | | D+ | | |
| 6 | | D- | _ | |
| *7 * <u>0</u> | | A+ Δ- | | |
| *9 | + | в+ | | |
| *10 | | B- | | |
| 11 | Shield | l/Screen | | |
| *Only conn | ect if Simulate | d Encoder (| output function (te | rminals 13 - 16) is needed |
| *Only conn | ect if Simulate | d Encoder o | output function (te | rminals 13 - 16) is needed. |
| Optidrive | Elevator Pa | arameter | setup | |
| ine Optidr | ive Elevator (| perating ir | nstructions (as pro | ovided with the drive) |
| | referred to to | r paramete | er setup or alterna | acively it can be |
| | eu from the ir | ivertek wel | usite <u>www.inverte</u> | ekurives.com. |
| uownioade | | | | |
| uownioade | · · · · · · · · · · · · · · · · · · · | oder Mod | ule specific) | |
| Fault Me | ssages (Enco | - | 2201 ctch/ norte | |
| Fault Mes | Encoder | communica | | |
| Fault Mes Enc-01 Enc-02 | Encoder Encoder | communica Speed Erro | r. The error betwe | een the measured encoder |
| Fault Mes Enc-01 Enc-02 5P-Fcc | Encoder Encoder Encoder feedback | communica Speed Erro speed and | r. The error betwe the Optidrive P2 | een the measured encoder Elevator drive estimated |
| Fault Mes Enc-01 Enc-02 SP-Err | Encoder Encoder feedback | communica Speed Erro speed and ed is great | r. The error betwe hthe Optidrive P2 er than the pre-se | een the measured encoder Elevator drive estimated et limit allowed. |
| Fault Mes Enc-D I Enc-D2 SP-Err Enc-D3 | Ssages (Encoder Encoder feedback rotor spe Incorrect | communica Speed Erro speed and ed is greate Encoder P | r. The error between the Optidrive P2 er than the pre-se PR count set in pa | een the measured encoder Elevator drive estimated et limit allowed. arameters |
| Fault Mes Enc-01 Enc-02 SP-Err Enc-03 Enc-03 | Ssages (Enco Encoder Encoder feedback rotor spe Incorrect Encoder | communica Speed Erro speed and ed is greate Encoder P Communica | r. The error betwee the Optidrive P2 er than the pre-se PR count set in pa ation loss (check B | een the measured encoder Elevator drive estimated et limit allowed. arameters Encoder wiring Connections |



SinCos Encoder Module User Guide

Overview

This option module is specifically designed to be used with the Optidrive P2 Elevator variable speed drive product and is intended for professional incorporation into complete equipment or systems. If installed incorrectly it may present a safety hazard. Before commencing installation and commissioning, the user should ensure they are fully familiar with the Optidrive Elevator, and in particular have read the important safety information and warnings contained in the Optidrive Elevator User Guide.

Note

This User Guide is intended to be used with Optidrive Elevator firmware version 2.10 or later. The firmware version of the drive can be displayed in parameter P0-28. Previous versions of firmware can be upgraded using Optitools Studio PC software. Contact your local Invertek Sales Partner for further Information.

Available Functions

The SinCos Encoder Module Interface is intended to be installed in the Optidrive option slot, and allows the Optidrive to be connected to a SinCos Encoder of the following types :-

ERN 1387

Compatibility

This Option is suitable for use on the following product ranges:

Optidrive Elevator "ODL-2-...."

Model Code

OPT-2-SINCOS2-IN Invertek Drives Ltd Offa's Dyke Business Park Welshpool Powys, UK SY21 8JF





| LED | Function | | | | |
|--|---|--|---|--|--|
| Δ | Power State | IS | 6 | | |
| B | Frror Statu | s | A | В | |
| - | EITOF SLATUS | | | SinCos | |
| | | | | ncoder Module | |
| Power Ct | atus LED A-I | | | | |
| Power St State | alus LED A | Indication | | | |
| Off No Power | | | | | |
| On | | ered up | | | |
| Error Stat | tus LED B (R | ED) | | | |
| Off Normal Operation | | | | | |
| On No Signals connected/re | | | | ived | |
| Flash Error (Se | | | See Fault messages below) | | |
| Installatio | on | | | | |
| remov optior • Remo the op • Carefu into th locatir aligne force • Tighte secure | red prior to in module ve the blankin ition module s illy slide the o ne slot, ensuri ng tabs are co d. Do not use an the 2 clamp the module i dule Slot | stalling the ag cover from slot uption module ng that the rrectly excessive ning screws to in place. | | | |
| | Connections | | Terminal 12 13 | Simulated Encoder Output OV A_P (Out) | |
| 110 | | | 14 15 | A_N (Out) B_P (Out) | |
| | | | 16 | B_N (Out) | |
| | | | 17 | Shield/Screen | |
| | | | 18 | Brake 1 | |
| | | | 19 | Brake 2 | |
| Terminal | +5V Suppl | onnection v to Encoder | | | |
| 2 | | 0V | | | |
| 3 | | C+ | | | |
| 4 | - | с- D+ | | | |
| 6 | | D- | | | |
| *7 | | A+ | | | |
| *8 *9 | - | а- В+ | | | |
| *10 | | B- | | | |
| 11 | Shield | /Screen | | | |
| *Only conn | ect if Simulate | d Encoder out | out function (te | rminals 13 - 16) is needed. | |
| Optidrive | Elevator Pa | rameter set | up | | |
| The Optid | ive Elevator o | perating instr | uctions (as pro | ovided with the drive) | |
| | elerred to fo ed from the ir | i parameter s ivertek wehsit | ecup or alterna | ekdrives.com. | |
| download | | | <u></u> | | |
| downloade | | | specific) | | |
| downloade | ssages (Enco | oder <u>Module</u> | | | |
| Fault Me | ssages (Enco Encoder o | oder Module communicatio | n /data loss | | |
| Fault Me Enc-01 | Encoder S | oder Module communicatio Speed Error. T | n /data loss he error betwe | een the measured encoder | |
| Fault Mer Enc-01 Enc-02 5P-Ecc | Encoder of | oder Module communicatio Speed Error. T speed and th | n /data loss he error betwe e Optidrive P2 | een the measured encoder Elevator drive estimated | |
| Fault Me Enc-01 Enc-02 SP-Err | Encoder of Encoder of feedback rotor spe | oder Module communicatio Speed Error. T speed and the ed is greater t | n /data loss he error betwe e Optidrive P2 han the pre-se | een the measured encoder Elevator drive estimated t limit allowed. | |
| Fault Me Enc-01 Enc-02 SP-Err Enc-03 | ssages (Enco Encoder o Encoder s feedback rotor spe Incorrect | oder Module communicatio Speed Error. T speed and th ed is greater t Encoder PPR | n /data loss he error betwe e Optidrive P2 han the pre-se count set in pa | een the measured encoder Elevator drive estimated t limit allowed. rameters | |