

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





Layout	- · · ·				
LED	Function			6	
A B	Power Stat			A	В
Б	Error Stati	JS		⊗ ∎″	SinCos
					ncoder Module
Power S	Status LED A	(GREEN)			
State		Indicatio	on		
Off		No Pow	er		
On		Module	Powered u	р	
Error St	atus LED B (I	RED)			
State		Indicatio	on		
Off			Operation		
On			als connect		
Flash		Error (Se	e Fault me	ssages k	pelow)
Installa	tion				
opti Rem the Care into loca align forc Tigh secu Option M	oved prior to i on module nove the blanki option module sfully slide the the slot, ensur ting tabs are co- ned. Do not use e ten the 2 clam ure the module Module Slot	ng cover fi slot option mo ring that th prrectly e excessive ping screw	rom dule e		
14/:					
Wiring	Connections		Te	rminal 12 13	Simulated Encoder Output OV
Wiring			Te		OV A_P (Out)
Wiring			Te	12 13	0V
Wiring			Te	12 13 14	0V A_P (Out) A_N (Out)
Wiring				12 13 14 15	0V A_P (Out) A_N (Out) B_P (Out)
Wiring				12 13 14 15 16 17	0V A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen
Wiring				12 13 14 15 16 17 18	OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
	Connections	Connection		12 13 14 15 16 17	0V A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen
Wiring	Connections	Connection bly to Encode		12 13 14 15 16 17 18	OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termin 1 2	Connections	ly to Encode OV		12 13 14 15 16 17 18	OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termin 1 2 3	Connections	oly to Encode OV C+		12 13 14 15 16 17 18	OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termin 1 2 3 4	Connections	oly to Encode OV C+ C-		12 13 14 15 16 17 18	OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termin 1 2 3 4 5	Connections	oly to Encode OV C+ C- D+		12 13 14 15 16 17 18	OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termin 1 2 3 4	Connections	ly to Encode OV C+ C- D+ D-		12 13 14 15 16 17 18	OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termin 1 2 3 4 5 6	Connections	oly to Encode OV C+ C- D+		12 13 14 15 16 17 18	OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termin 1 2 3 4 5 6 6 *7	Connections	ly to Encode OV C+ C- D+ D- A+		12 13 14 15 16 17 18	OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termin 1 2 3 4 5 6 6 7 7 *8 8 *9 *10	Connections	Dy to Encode 0V C+ D- A+ A- B+ B-		12 13 14 15 16 17 18	OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termin 1 2 3 4 5 6 (*77 *88 *9	Connections	OV C+ C- D+ D+ A+ A+ A- B+ B+		12 13 14 15 16 17 18	OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termin 1 2 3 4 5 6 *7 *8 *9 *100 11 *Only co Optidri The Opti should b download Fault M	Connections	oly to Encode OV C+ C- D+ D- A+ A- B+ B- d/Screen ed Encoder arameter operating or parametric nvertek work oder Mo	er output fun- setup instruction er setup o ebsite www dule speci	12 13 14 15 16 17 17 18 19 19 ction (ter s (as pro- r alterna <i>x</i> .inverte	OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1 Brake 2 Brake 2 wided with the drive) tively it can be
Termin 1 3 4 5 6 *7 *8 *9 *100 111 *Only con Optidriu The Opti should b download	Connections	oly to Encode OV C+ C- D+ D- A+ A- B+ B- d/Screen ed Encoder arameter operating or parametric nvertek work oder Mo	er output function setup instruction cer setup of ebsite www	12 13 14 15 16 17 17 18 19 19 ction (ter s (as pro- r alterna <i>x</i> .inverte	OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1 Brake 2 Brake 2 wided with the drive) tively it can be
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Termin 1 2 3 4 5 6 6 77 *8 *9 *10 11 *Only con Optidri The Opti should b downloa Fault IM Enc - D	Connections	oly to Encode OV C+ C- D+ D- A+ B- d/Screen ed Encoder arameter operating or parame nvertek wo communic Speed Erro	er output fun setup instruction cer setup o ebsite www cule speci cation /data or. The error	12 13 14 15 16 17 18 19 ction (tell s (as proc r alterna <i>v</i> .inverted fic) a loss or between	OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1 Brake 2 Brake 2 brively is needed. brivided with the drive) httively it can be ekdrives.com.
Termin 1 2 3 4 5 6 7 *8 *9 *10 11 *Only cor Optidri The Opti should b downloa Fault M Enc - D	Connections	oly to Encode OV C+ C- D+ D- A+ A- B+ B- d/Screen ed Encoder arametel operating or parame: nvertek wo communic Speed Errr k speed an eed is grea	er output fun- setup instruction- cer setup o ebsite www dule speci cation /data or. The error d the Optic ter than th	12 13 14 15 16 17 18 19 ction (ten s (as pro- r alterna <i>y</i> .inverted fic) a loss or betwee rive P2 e pre-see	0V A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1 Brake 2
Termin 1 2 3 4 5 6 6 77 *8 *9 *10 11 *Only con Optidri The Opti should b downloa Fault IM Enc - D	Connections	oly to Encode OV C+ C- D+ D- A+ A- B+ B- d/Screen ed Encoder arametel operating or parame: nvertek wo communic Speed Errr k speed an eed is grea	er output fun- setup instruction- cer setup o ebsite www clule speci cation /data or. The error d the Optic	12 13 14 15 16 17 18 19 ction (ten s (as pro- r alterna <i>y</i> .inverted fic) a loss or betwee rive P2 e pre-see	0V A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1 Brake 2



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Layout					
LED	Functio				
A	Power Sta			•	
В	Error Stat	tus			
	Status LED A	1			
State Off		Indicat			
Off On		No Pov	-	dun	
-	tatus LED B (e Powere	u up	
Error S State		Indicat	ion		
Off			l Operatio	n	
On				ected/rece	eived
Flash				messages	
Installa	ation				
rem opt • Rer the • Car into loca alig forr • Tigl sec Option	ure the drive p noved prior to ion module move the blank option module efully slide the to the slot, ensu ating tabs are of ned. Do not us ce hten the 2 clan ure the module Module Slot	installing t king cover e slot e option m iring that t correctly se excessiv nping scre	from odule the re ws to		
					<u></u>
Wiring	Connections	;		Terminal	Simulated Encoder Output
Wiring	Connections			Terminal 12 13	
Wiring	Connections			12 13 14	Simulated Encoder Output OV A_P (Out) A_N (Out)
Wiring	Connections			12 13 14 15	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out)
Wiring	Connections			12 13 14 15 16	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out)
Wiring	Connections			12 13 14 15	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out)
Wiring	Connections			12 13 14 15 16	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out)
	Common Comm			12 13 14 15 16 17	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen
Termi	nal SinCos	Connection		12 13 14 15 16 17 18	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
	nal SinCos			12 13 14 15 16 17 18	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termi 1 2 3	nal SinCos	Connectic ply to Enco 0V C+		12 13 14 15 16 17 18	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termii 1 2 3 4	nal SinCos	Connection ply to Enco ov C+ C-		12 13 14 15 16 17 18	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termin 1 2 3 4 5	nal SinCos	Connectic ply to Enco OV C+ C- D+		12 13 14 15 16 17 18	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termii 1 2 3 4	nal SinCos	Connection ply to Enco ov C+ C-		12 13 14 15 16 17 18	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termi 1 2 3 4 5 6	nal SinCos	Connectic ply to Enco OV C+ C- D+ D-		12 13 14 15 16 17 18	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termit 1 2 3 4 5 6 6 6 77 *8 *9	nal SinCos +5V Sup	C+ C+ D- A+ A- B+		12 13 14 15 16 17 18	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termin 1 2 3 4 5 6 6 7 7 *8 8 *9 *10	A sinces +5V Sup 	Connectic ply to Enco OV C+ C- D+ D- A+ A- B+ B-		12 13 14 15 16 17 18	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termit 1 2 3 4 5 6 6 6 77 *8 *9	A sinces +5V Sup 	C+ C+ D- A+ A- B+		12 13 14 15 16 17 18	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termin 1 2 3 4 5 6 *77 *89 *90 *100 111	A SinCos +5V Sup 	Connection ply to Enco OV C+ C- D+ D- A+ A- B+ B- B- eld/Screen	der	12 13 14 15 16 17 18 19	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1
Termin 1 2 3 4 5 6 *77 *89 *99 *100 111 *Only ccc Optidri	nal SinCos +5V Sup	Connectic ply to Enco OV C+ C- D+ D- A+ A- B+ B- eld/Screen ted Encode Parameto	der	12 13 14 15 16 17 18 19	Simulated Encoder Outpu OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1 Brake 2 Brake 2
Termin 1 1 3 4 5 6 *77 *88 *99 *100 111 *Only cc Optidri The Opt	nal SinCos +5V Sup 	Connection ply to Enco OV C+ C- D+ D- A+ A- A- B+ B- eld/Screen ted Encode Parametor r operating	der	12 13 14 15 16 17 18 19	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1 Brake 2 Brake 2 erminals 13 - 16) is needed.
Termin 1 2 3 4 5 6 *77 *88 *99 *100 111 *Only cc Optidri The Opt should b	nal SinCos +5V Sup 	Connection ply to Enco OV C+ C- D+ D- A+ A- B+ B+ B- eld/Screen ted Encode Parameto r operating for param	der	12 13 14 15 16 17 18 19 19	Simulated Encoder Output OV A_P (Out) A_N (Out) B_P (Out) B_N (Out) Shield/Screen Brake 1 Brake 2 erminals 13 - 16) is needed. ovided with the drive) atively it can be
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