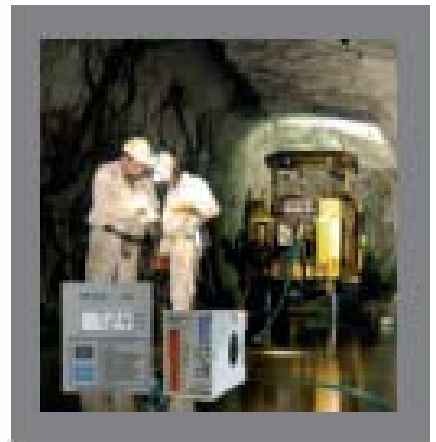
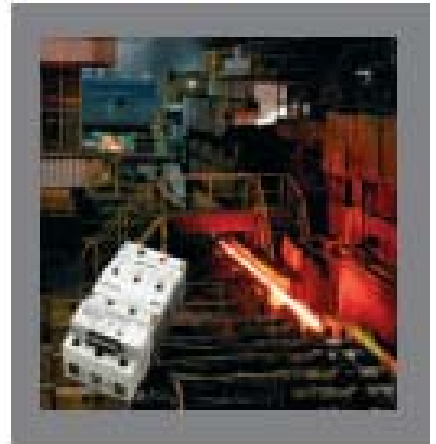
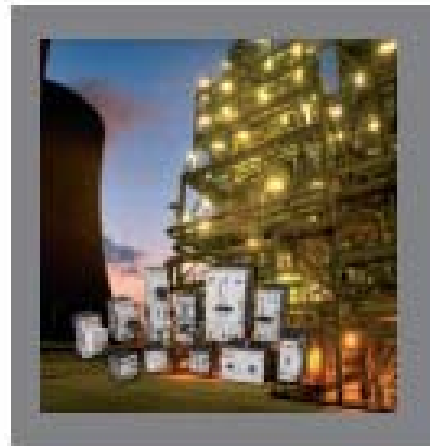


# Training 2009

## CHI Control Components



  
**CHI** control  
components

# Table of Contents



• About Us.....	Pg 4	• Basic Variable Speed Drives.....	Pg 42
• Training Codes Cross Reference.....	Pg 5	• VSD Applications.....	Pg 44
• Training Schedule for 2009.....	Pg 6	• EZ Relays Basic.....	Pg 46
• Fundamentals of Electricity.....	Pg 10	• EZ Relays Advanced.....	Pg 48
• Fundamentals of Motors.....	Pg 12	• Basic DirectLogic PLCs.....	Pg 50
• Fundamentals of Circuit Protection.....	Pg 14	• Advanced DirectLogic PLCs.....	Pg 52
• Contactors, Overloads & Starters.....	Pg 16	• PIDs.....	Pg 54
• Control & Indication Products.....	Pg 18	• DirectLogic Basic Networking.....	Pg 56
• Audible & Visual Alarm Products.....	Pg 20	• Human Machine Interfaces (HIM).....	Pg 58
• Sensors.....	Pg 22	• Training & Presentations.....	Pg 60
• Miniature Circuit Breakers (MCB).....	Pg 24	• General Information.....	Pg 62
• Molded Case Circuit Breakers (MCCB) Pg	26	• Tech Evenings.....	Pg 63
• Air Circuit Breakers (ACB).....	Pg 28	• Map to CHI Training Venue (GP).....	Pg 64
• Ring Main Units.....	Pg 30	• Map to CHI Training Venue (CT).....	Pg 65
• Earth Fault Protection.....	Pg 32	• Map to CHI Training Venue (Dbn).....	Pg 66
• Power Metering & Monitoring.....	Pg 34	• Contact Us.....	Pg 67
• Soft Starters.....	Pg 36	• Addendum (Additional Training).....	Pg 68
• Basic Networks and Protocols.....	Pg 38	• Booking Form.....	Pg 69
• Snaps & IT.....	Pg 40		

CHI Control has been active in South Africa since 1927. Along with our partners under the ALVE umbrella, we have an annual turnover in excess of R460 million, and a growth of more than 10% per annum.

We employ around 600 people, 71% which are from designated groups. We have 7 production facilities, 11 distribution centres and 4 operating units.

As far back as 1959, Peter Drucker put forward that we are in the process of moving from a society where wealth is based upon capital, land and labour, to a society whose primary source of wealth is knowledge (the Knowledge Worker).

What does this mean?

Companies in our industry have identified this “New Age”, the Knowledge Age. An analysis of their mission statements, vision, policies, etc. will allow us to see that they are moving into this new era.

To maintain status and competitive edge within its industry, our organizations will eventually be faced with two choices; Acquire individuals who are recognized as competent knowledge workers, or create an environment to empower existing employees to raise themselves into knowledge worker positions.

We see the latter as the more positive of the two options. The employee who is empowered by the organization will have a greater buy-in to the goals and ethics of the company.

Training has been run successfully on a continuous basis at CHI Control for the past few years. “Training is the backbone of every organization. It portrays the professional front on the customer base”, that is what Craig Brown, Managing Director of CHI Control Division of Alstom Electrical Industries (Pty) Ltd strongly believes.

In keeping with this philosophy, we offer this training programme.

*where your training comes ALNE...*

# Course Codes Cross Reference



Our cross-reference chart lists the Bin number (our internal reference number), the Code course description and price per person per day.

Bin No	Code	Description	Price
99960	CF001	FUNDAMENTALS OF ELECTRICITY	450.00
99961	CF002	FUNDAMENTALS OF MOTORS	450.00
99962	CF003	FUNDAMENTALS OF CIRCUIT PROTECTION	450.00
99963	CX001	CONTACTORS, OVERLOADS & STARTERS	450.00
99964	CC001	CONTROL AND INDICATION PRODUCTS	450.00
99965	CK001	AUDIBLE/VISUAL NOTIFICATION PRODUCTS	450.00
99966	CL001	SENSORS	1220.00
99967	CB001	MCBS (Miniature Circuit Breakers)	1220.00
99968	CB002	MCCBS (Molded Case Circuit Breakers)	1220.00
99969	CB003	ACBS (Air Circuit Breakers)	1220.00
99970	CB004	RING MAIN UNITS	1220.00
99971	CB005	EARTH FAULT PROTECTION	1220.00
99972	CD001	POWER METERING AND MONITORING	1220.00
99973	CS001	SOFT STARTERS	1220.00
99974	CN001	BASIC NETWORK PROTOCOLS	1220.00
99975	CI001	SNAPS (Starter Network Adaptor Products) & IT	1220.00
99976	CV001	BASIC VARIABLE SPEED DRIVES	1220.00
99977	CV002	VARIABLE SPEED DRIVE APPLICATIONS	1220.00
99978	CZ001	EZ RELAYS BASIC	1220.00
99979	CZ002	EZ RELAYS ADVANCED	1220.00
99980	CP001	BASIC PLC (Programmable Logic Controller) COURSE	1220.00
99981	CP002	ADVANCED PLC COURSE	1220.00
99982	CP003	PID (Proportional, Integral and Derivative Algorithms)	1220.00
99983	CP004	DIRECTLOGIC BASIC NETWORKING	1220.00
99984	CP005	HMI (Human Machine Interface)	1220.00
99985	CT001	TRAINING AND PRESENTATIONS	1220.00

# Training Schedule '09



ALVE Training First Period - 2009								Key		Duration	Lev.
										(Days)	
JAN	Mon	Tue	Wed	Thu	Fri	Sat	Sun				
	26	27	28	29	30						
	CZ001	CZ001	CZ002	CZ002							
FEB	Mon	Tue	Wed	Thu	Fri	Sat	Sun				
	2	3	4	5	6						
	CF001	CF003	CC001	CL001							
	CF002	CX001	CK001								
	9	10	11	12	13						
	CB001	CB002	CB003	CB004							
	16	17	18	19	20						
	CB005	CD001	CN001	CI001							
	23	24	25	26	27						
	CP001	CP001	CP002	CP002	CP002						
MAR	Mon	Tue	Wed	Thu	Fri	Sat	Sun				
	2	3	4	5	6						
	CZ001	CZ001	CZ002	CZ002							
	9	10	11	12	13						
	CS001	CV001	CV002	CV002							
	16	17	18	19	20						
	CF003	CP004	CP005	CP005							
	23	24	25	26	27						
	CP001	CP001	CP002	CP002	CP002						
	30	31									

<span style="background-color: #cccccc; border: 1px solid black; padding: 2px;"> </span>	= Public Holidays / Not Available		
<span style="background-color: #800000; color: white; padding: 2px;">CF001</span>	= Fundamentals of Electricity	0.5	1
<span style="background-color: #ff0000; color: white; padding: 2px;">CF002</span>	= Fundamentals of Motors	0.5	1
<span style="background-color: #00ff00; color: white; padding: 2px;">CF003</span>	= Fundamentals of Circuit Protection	0.5	1
<span style="background-color: #ffccff; padding: 2px;">CX001</span>	= Contactors, Overloads & Starters	0.5	2
<span style="background-color: #993300; padding: 2px;">CC001</span>	= Control and Indication Products	0.5	2
<span style="background-color: #ff9900; padding: 2px;">CK001</span>	= Audible/Visual Products	0.5	2
<span style="background-color: #ffcc00; padding: 2px;">CL001</span>	= Sensors	1	2
<span style="background-color: #ffff00; padding: 2px;">CB001</span>	= MCBs	1	3
<span style="background-color: #cccccc; padding: 2px;">CB002</span>	= MCCBs	1	3
<span style="background-color: #ff9900; padding: 2px;">CB003</span>	= ACBs	1	3
<span style="background-color: #993300; padding: 2px;">CB004</span>	= Ring Main Units	1	4
<span style="background-color: #99cc33; padding: 2px;">CB005</span>	= Earth Fault Protection	1	3
<span style="background-color: #ffff00; padding: 2px;">CD001</span>	= Power Metering and Monitoring	1	3
<span style="background-color: #009966; padding: 2px;">CS001</span>	= Soft Starters	1	3
<span style="background-color: #00ff00; padding: 2px;">CN001</span>	= Basic Network Protocols	1	4
<span style="background-color: #99cc99; padding: 2px;">CI001</span>	= SNAPS & IT	2	4
<span style="background-color: #0099cc; padding: 2px;">CV001</span>	= Basic Variable Speed Drives	1	3
<span style="background-color: #0000ff; padding: 2px;">CV002</span>	= VSD Applications	2	4
<span style="background-color: #0000ff; padding: 2px;">CZ001</span>	= EZ Relays Basic	2	3
<span style="background-color: #0000ff; padding: 2px;">CZ002</span>	= EZ Relays Advanced	2	4
<span style="background-color: #990099; padding: 2px;">CP001</span>	= Basic PLC Course	2	3
<span style="background-color: #990099; padding: 2px;">CP002</span>	= Advanced PLC Course	3	4
<span style="background-color: #990099; padding: 2px;">CP003</span>	= PID	1	4
<span style="background-color: #ff0000; padding: 2px;">CP004</span>	= DirectLogic Basic Networking	1	4
<span style="background-color: #ff00ff; padding: 2px;">CP005</span>	= HMI	2	4
<span style="background-color: #ff00ff; padding: 2px;">CT001</span>	= Training & Presentations	2	1

Level 1	= Some fundamental knowledge of electrical/electronic concepts required
Level 2	= Good basic knowledge of electrical/electronic concepts required
Level 3	= Comprehensive foundation in electrical/electronic concepts
Level 4	= Comprehensive knowledge of electrical/electronic concepts

# Training Schedule '09



								Key	Duration (Days)	Lev.
APR	Mon	Tue	Wed	Thu	Fri	Sat	Sun			
			1	2	3					
	6	7	8	9						
	CF001	CF003	CC001	CL001						
	CF002	CX001	CK001							
		14	15	16	17					
		CZ001	CZ001	CZ002	CZ002					
	20	21	22	23	24					
	CP001	CP001	CP002	CP002	CP002					
		28	29	30						
		CB005	CD001	CN001						
MAY	Mon	Tue	Wed	Thu	Fri	Sat	Sun			
	4	5	6	7	8					
	CZ001	CZ001	CZ002	CZ002						
	11	12	13	14	15					
	CB001	CB002	CB003	CB004						
	18	19	20	21	22					
	CS001	CV001	CV002	CV002						
	25	26	27	28	29					
	CP001	CP001	CP002	CP002	CP002					
JUN	Mon	Tue	Wed	Thu	Fri	Sat	Sun			
	1	2	3	4	5					
	CI001									
	8	9	10	11	12					
			17	18	19					
	22	23	24	25	26					
	CP001	CP001	CP002	CP002	CP002					
	29	30								
	CZ001	CZ001								

<p><b>Key</b></p> <ul style="list-style-type: none"> <li><span style="background-color: #cccccc; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> = Public Holidays / Not Available</li> <li><span style="background-color: #ff0000; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CF001 = Fundamentals of Electricity</li> <li><span style="background-color: #ff0000; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CF002 = Fundamentals of Motors</li> <li><span style="background-color: #ff00ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CF003 = Fundamentals of Circuit Protection</li> <li><span style="background-color: #ff00ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CX001 = Contactors, Overloads &amp; Starters</li> <li><span style="background-color: #ff0000; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CC001 = Control and Indication Products</li> <li><span style="background-color: #ff0000; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CK001 = Audible/Visual Products</li> <li><span style="background-color: #ff00ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CL001 = Sensors</li> <li><span style="background-color: #ffff00; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CB001 = MCBs</li> <li><span style="background-color: #ffff00; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CB002 = MCCBs</li> <li><span style="background-color: #ff0000; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CB003 = ACBs</li> <li><span style="background-color: #0000ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CB004 = Ring Main Units</li> <li><span style="background-color: #0000ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CB005 = Earth Fault Protection</li> <li><span style="background-color: #ffff00; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CD001 = Power Metering and Monitoring</li> <li><span style="background-color: #0000ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CS001 = Soft Starters</li> <li><span style="background-color: #00ff00; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CN001 = Basic Network Protocols</li> <li><span style="background-color: #00ff00; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CI001 = SNAPs &amp; IT</li> <li><span style="background-color: #0000ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CV001 = Basic Variable Speed Drives</li> <li><span style="background-color: #0000ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CV002 = VSD Applications</li> <li><span style="background-color: #0000ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CZ001 = EZ Relays Basic</li> <li><span style="background-color: #0000ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CZ002 = EZ Relays Advanced</li> <li><span style="background-color: #ff00ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CP001 = Basic PLC Course</li> <li><span style="background-color: #ff00ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CP002 = Advanced PLC Course</li> <li><span style="background-color: #ff00ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CP003 = PID</li> <li><span style="background-color: #ff00ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CP004 = DirectLogic Basic Networking</li> <li><span style="background-color: #ff00ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CP005 = HMI</li> <li><span style="background-color: #ff00ff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> CT001 = Training &amp; Presentations</li> </ul>	<p>Duration (Days)</p> <p>Lev.</p> <p>Level 1 = Some fundamental knowledge of electrical/electronic concepts required</p> <p>Level 2 = Good basic knowledge of electrical/electronic concepts required</p> <p>Level 3 = Comprehensive foundation in electrical/electronic concepts</p> <p>Level 4 = Comprehensive knowledge of electrical/electronic concepts</p>
---	---

# Training Schedule '09



Second Period - 2009								Key	Duration (Days)	Lev.
JUL	Mon	Tue	Wed	Thu	Fri	Sat	Sun			
			1	2	3					
			CZ002	CZ002						
	6	7	8	9	10					
	CF001	CF003	CC001	CL001						
	CF002	CX001	CK001							
	13	14	15	16	17					
	CB001	CB002	CB003	CB004						
	20	21	22	23	24					
	CB005	CD001	CN001	CI001						
	27	28	29	30	31					
	CP001	CP001	CP002	CP002	CP002					
AUG	Mon	Tue	Wed	Thu	Fri	Sat	Sun			
	3	4	5	6	7					
	CZ001	CZ001	CZ002	CZ002						
		11	12	13	14					
		CV001	CV002	CV002						
	17	18	19	20	21					
	CS001	CP004	CP005	CP005						
	24	25	26	27	28					
	CP001	CP001	CP002	CP002	CP002					
	31									
SEP	Mon	Tue	Wed	Thu	Fri	Sat	Sun			
		1	2	3	4					
	7	8	9	10	11					
	CZ001	CZ001	CZ002	CZ002						
	14	15	16	17	18					
	CP001	CP001	CP002	CP002	CP002					
	21	22	23		25					
	28	29	30							

<p><b>Key</b></p> <ul style="list-style-type: none"> <li><span style="background-color: #cccccc; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> = Public Holidays / Not Available</li> <li><span style="background-color: #ff0000; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CF001 = Fundamentals of Electricity</li> <li><span style="background-color: #ff0000; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CF002 = Fundamentals of Motors</li> <li><span style="background-color: #ff00ff; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CF003 = Fundamentals of Circuit Protection</li> <li><span style="background-color: #ff00ff; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CX001 = Contactors, Overloads &amp; Starters</li> <li><span style="background-color: #ff0000; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CC001 = Control and Indication Products</li> <li><span style="background-color: #ff0000; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CK001 = Audible/Visual Products</li> <li><span style="background-color: #ff00ff; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CL001 = Sensors</li> <li><span style="background-color: #ffff00; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CB001 = MCBs</li> <li><span style="background-color: #ffff00; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CB002 = MCCBs</li> <li><span style="background-color: #ff0000; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CB003 = ACBs</li> <li><span style="background-color: #ff0000; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CB004 = Ring Main Units</li> <li><span style="background-color: #ffff00; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CB005 = Earth Fault Protection</li> <li><span style="background-color: #ffff00; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CD001 = Power Metering and Monitoring</li> <li><span style="background-color: #00ff00; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CS001 = Soft Starters</li> <li><span style="background-color: #00ff00; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CN001 = Basic Network Protocols</li> <li><span style="background-color: #00ff00; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CI001 = SNAPs &amp; IT</li> <li><span style="background-color: #00ffff; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CV001 = Basic Variable Speed Drives</li> <li><span style="background-color: #00ffff; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CV002 = VSD Applications</li> <li><span style="background-color: #0000ff; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CZ001 = EZ Relays Basic</li> <li><span style="background-color: #0000ff; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CZ002 = EZ Relays Advanced</li> <li><span style="background-color: #800080; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CP001 = Basic PLC Course</li> <li><span style="background-color: #800080; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CP002 = Advanced PLC Course</li> <li><span style="background-color: #800080; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CP003 = PID</li> <li><span style="background-color: #ff0000; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CP004 = DirectLogic Basic Networking</li> <li><span style="background-color: #ff00ff; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CP005 = HMI</li> <li><span style="background-color: #ff00ff; border: 1px solid black; display: inline-block; width: 15px; height: 15px; margin-right: 5px;"></span> CT001 = Training &amp; Presentations</li> </ul>	<p>Level 1 = Some fundamental knowledge of electrical/electronic concepts required</p> <p>Level 2 = Good basic knowledge of electrical/electronic concepts required</p> <p>Level 3 = Comprehensive foundation in electrical/electronic concepts</p> <p>Level 4 = Comprehensive knowledge of electrical/electronic concepts</p>
--	--



## What Is This?

This course introduces attendees to some of the basic concepts we generally use. We investigate the manner in which we make use of electricity by examining the relationship between electricity and magnetism.

## What Do We Cover?

- Introduction To Electricity
- Characteristics
- Ohm's Law
- Series Circuits
- Parallel Circuits
- Electricity And Magnetism
- Alternating Current
- Electric Power
- Using Electromagnetism

## How long? How Much? And What Is Required?

- |  |                       |
|--|-----------------------|
| • Course Duration                      | ½ Day                 |
| • Requirements                         | Some basic experience |
| • Course Cost<br>(per person, per day) | R 450.00 excl VAT     |

## Course Dates?

- 2 February
- 6 April
- 6 July
- 5 October

## What Is This?

This course covers some basic motor principles, including the construction of squirrel-cage motors, how motors work and how we are able to use and protect them.

## What Do We Cover?

- Basic motor principles
- Construction of an AC motor
- Magnetism in AC motors
- Motor data/specifications
- When to de-rate motors
- The right motor for your load

## How long? How Much? And What Is Required?

- |                                      |                       |
|--------------------------------------|-----------------------|
| • Course Duration                    | ½ Day                 |
| • Requirements                       | Some basic experience |
| Course Cost<br>(per person, per day) | R 450.00 excl VAT     |

## Course Dates?

- 2 February
- 6 April
- 6 July
- 5 October

## What Is This?

We cover the concepts of protecting your electrical circuits with circuit breaker protection, as well as looking at the various types of protection provided by circuit breakers.

## What Do We Cover?

- Introduction to Circuit Breakers
- Circuit Protection Technologies
- Standards
- Circuit Breaker “types”
- Trip Curves
- Accessories
- Breaker Selection

## How long? How Much? And What Is Required?

- |  |                       |
|--|-----------------------|
| • Course Duration                      | ½ Day                 |
| • Requirements                         | Some basic experience |
| • Course Cost<br>(per person, per day) | R 450.00 excl VAT     |

## Course Dates?

- 3 February
- 7 April
- 7 July
- 6 October

## What Is This?

Introduction to the concept of motor switching and protection. We also cover the components that CHI Control Components use to control and protect motors.

## What Do We Cover?

- Building Blocks Of Starters
- Contactors
- Overload Protection
- The XT product range
- Soft Starters
- Variable Speed Drives

## How long? How Much? And What Is Required?

- |                                      |                      |
|--------------------------------------|----------------------|
| • Course Duration                    | ½ Day                |
| • Requirements                       | Good basic knowledge |
| Course Cost<br>(per person, per day) | R 450.00 excl VAT    |

## Course Dates?

- 3 February
- 7 April
- 7 July
- 6 October

## What Is This?

Introduction to CHI Control Components range of Pushbuttons, Indicator Lights, Selector Switches, Foot Switches and related components.

## What Do We Cover?

- 22,5mm range
- 30.5mm range
- Foot Switches
- Joystick Controllers
- Pendant Controllers

## How long? How Much? And What Is Required?

- |                                      |                      |
|--------------------------------------|----------------------|
| • Course Duration                    | ½ Day                |
| • Requirements                       | Good basic knowledge |
| Course Cost<br>(per person, per day) | R 450.00 excl VAT    |

## Course Dates?

- 4 February
- 8 April
- 8 July
- 7 October

## What Is This?

We introduce the attendees to the range of audible and visual warning products. We cover sirens, bells, beacons and tower lights.

## What Do We Cover?

- Sizing of Audible Alarms
- Klaxon
- Moflash
- Sirena

## How long? How Much? And What Is Required?

- |  |                      |
|--|----------------------|
| • Course Duration                      | ½ Day                |
| • Requirements                         | Good basic knowledge |
| • Course Cost<br>(per person, per day) | R 450.00 excl VAT    |

## Course Dates?

- 4 February
- 8 April
- 8 July
- 7 October

## What Is This?

We investigate CHI Control Component's range of sensors and limit switches, used for field control and protection of automated systems.

## What Do We Cover?

- Choosing The Right Sensor
- Types of Proximity Sensors
- Inductive Sensors
- Capacitive Sensors
- Photoelectric Sensors
- Limit Switches
- Belt Trip Switches

## How long? How Much? And What Is Required?

- |                                      |                          |
|--------------------------------------|--------------------------|
| • Course Duration                    | 1 Day                    |
| • Requirements                       | Good basic knowledge     |
| Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 5 February
- 9 April
- 9 July
- 8 October

## What Is This?

This course offers an in-depth look at our range of Miniature Circuit Breakers.

## What Do We Cover?

- Features
- Selection
- RCCB
- Accessories
- Load Break Switches

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 1 Day                    |
| • Requirements                         | Comprehensive knowledge  |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 9 February
- 11 May
- 13 July
- 19 October

## What Is This?

This course offers an in-depth look at our range of Moulded Case Circuit Breakers.

## What Do We Cover?

- Features
- Selection
- Earth Leakage Modules
- Handle Mechanisms
- Electronic Trip Units
- Accessories
- HMCP Motor Circuit Protectors

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 1 Day                    |
| • Requirements                         | Comprehensive knowledge  |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 10 February
- 12 May
- 14 July
- 20 October

## What Is This?

This course offers an in-depth look at our range of Air Circuit Breakers, the Magnum Breaker.

## What Do We Cover?

- Features
- Selection
- Digitrip Units
- Accessories

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 1 Day                    |
| • Requirements                         | Comprehensive knowledge  |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 11 February
- 13 May
- 15 July
- 21 October

## What Is This?

This course offers an in-depth look at our range of Ring Main Units; the Holec Xiria

## What Do We Cover?

- Features
- System Design
- Product Selection
- Configuration

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 1 Day                    |
| • Requirements                         | Comprehensive knowledge  |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 12 February
- 14 May
- 16 July
- 22 October

## What Is This?

This course investigates the JCB Earth Leakage relay we use to protect your installation and motors.

## What Do We Cover?

- Features
- Selection
- Set-up

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 1 Day                    |
| • Requirements                         | Comprehensive knowledge  |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 16 February
- 28 April
- 20 July
- 2 November

## What Is This?

We take a look at CHI Control Component's range of hardware and software products designed to give you maximum management of your distribution and control systems.

## What Do We Cover?

- IQ Range
- Powernet Software
- Diris

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 1 Day                    |
| • Requirements                         | Comprehensive knowledge  |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 17 February
- 29 April
- 21 July
- 3 November

## What Is This?

This course covers CHI Control Component's range of soft starters for improved motor control.

## What Do We Cover?

- Basic Soft Starter concepts
- Soft Starter Theory
- CSXi Soft Starters
- EMX3 Soft Starters
- MVS Introduction

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 1 Day                    |
| • Requirements                         | Comprehensive knowledge  |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 9 March
- 18 May
- 17 August
- 9 November

## What Is This?

We investigate basic concepts behind some of the more common industrial networks used today.

## What Do We Cover?

- Network basics
- DeviceNet
- Profibus
- Modbus
- Ethernet

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 1 Day                    |
| • Requirements                         | Comprehensive knowledge  |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 18 February
- 30 April
- 22 July
- 4 November

## What Is This?

CHI Control Components has a range of intelligent motor control and protection equipment. We introduce you to the amazing possibilities of intelligent field devices.

## What Do We Cover?

- Features
- Selection
- Spares
- Accessories

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 1 Day                    |
| • Requirements                         | Comprehensive knowledge  |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 19 February
- 1 June
- 23 July
- 5 November

# Basic Variable Speed Drives



## What Is This?

We cover the theory of variable speed drives. How do they work? And what can we do with them. Practical hands-on exercises will give attendees a good grounding in the installation and use of variable speed drives.

## What Do We Cover?

- VSD Theory
- Features
- Selection
- Installation and Application

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 1 Day                    |
| • Requirements                         | Comprehensive knowledge  |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 10 March
- 19 May
- 11 August
- 10 Nov

## What Is This?

Once the attendees have completed our Basic VSD course, they will be prepared to investigate the programmable applications contained in the Vacon VSD.

## What Do We Cover?

- Revision of Basics
- Applications

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 2 Days                   |
| • Requirements                         | Extensive knowledge      |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 11 March
- 20 May
- 12 August
- 11 Nov

## What Is This?

This course covers the basic knowledge required to make use of our intelligent EZ Relays. Software, software components and circuit construction are covered by this course.

## What Do We Cover?

- Introduction to intelligent relays
- The EZ Relay
- Software
- Basic Programming

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 2 Days                   |
| • Requirements                         | Comprehensive knowledge  |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 26 January
- 2 February
- 14 April
- 4 May
- 29 June
- 3 August
- 7 September
- 12 October
- 16 November

## What Is This?

Once attendees have completed the EZ Relay Basic course, they can continue to the advanced course, covering higher level programming and the EZ display unit.

## What Do We Cover?

- Revision of Basics
- Advanced Programming
- Extended I/O
- EZ Display unit

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 2 Days                   |
| • Requirements                         | Extensive knowledge      |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 28 January
- 4 February
- 16 April
- 6 May
- 1 July
- 5 August
- 9 September
- 14 October
- 18 November

## What Is This?

This course covers the basic knowledge required to make use of our DirectLogic PLCs. Software, software components and circuit construction are covered by this course.

## What Do We Cover?

- Introduction to PLCs
- The DirectLogic PLCs
- Software
- Basic Programming

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 2 Days                   |
| • Requirements                         | Comprehensive Knowledge  |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 23 February
- 23 March
- 20 April
- 25 May
- 22 June
- 27 July
- 24 August
- 14 September
- 26 October
- 23 November

## What Is This?

Once attendees have completed the Basic DirectLogic PLC course, they can continue to the advanced course, covering higher level programming, basic PIDs, basic networking and RLL Plus programming.

## What Do We Cover?

- Revision of Basics
- Advanced Programming
- Analog Signals
- PIDs
- Networking
- RLL Plus Programming

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 3 Days                   |
| • Requirements                         | Extensive knowledge      |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 25 February
- 25 March
- 22 April
- 27 May
- 24 June
- 29 July
- 26 August
- 16 September
- 28 October
- 25 November

## What Is This?

We investigate PID loops and how to set them up in our PLCs. Learn how to adjust the parameters to see how they affect the loop.

## What Do We Cover?

- PID Tools
- Setup
- PID Parameters
- Tuning
- Debugging and Troubleshooting

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 1 Day                    |
| • Requirements                         | Extensive knowledge      |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 16 March

## What Is This?

We investigate the basic networking functions contained, as a standard on the DirectLogic PLC range.

## What Do We Cover?

- K-Sequence
- DirectNet
- Modbus

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 1 Day                    |
| • Requirements                         | Extensive knowledge      |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 17 March
- 18 August
- 1 December

## What Is This?

This course offers the attendees the opportunity to learn how to program the C-More HMI, and interface the unit to a PLC.

## What Do We Cover?

- Features
- Software
- Programming
- Interface to PLC

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 1 Day                    |
| • Requirements                         | Extensive knowledge      |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- 18 March
- 19 August
- 2 December

## What Is This?

Learn how to present your information to your audience. Basic training principles are also covered by this course.

## What Do We Cover?

- Preparation
- Adult Learning
- Presentation Skills
- Presentation Management
- Evaluation

## How long? How Much? And What Is Required?

- |  |                          |
|--|--------------------------|
| • Course Duration                      | 1 Day                    |
| • Requirements                         | Some basic experience    |
| • Course Cost<br>(per person, per day) | R 1 220.00 excluding VAT |

## Course Dates?

- To Be Confirmed

# General Information & Tech Evenings



## Terms & Conditions

Course Costs are listed on a “per person, per day” basis. In other words, where the costs are listed as R 1 220.00, this means that two people on a two day course would pay a total of R 4 880.00 excl VAT.

CHI Control’s Standard Terms and Conditions of Payment apply, a copy of which is available on request. Confirmed proof of payment or a copy of the official order is required prior to confirmation. We reserve the right to reschedule courses and change course details, if necessary.

A 20% administration fee will be levied by CHI in the event of a cancellation of a customer’s booking within 48 hours of the course.

Please note that most level 3 and all level 4 courses require that the learner have a working knowledge of computers, especially Microsoft Windows and Office.

Normal commencement time for all our training courses is 08:30am.

## Tech Evenings - What is this?

Our Tech Evenings are informal gatherings where we invite you, our valued customers, to join us for an evening of discussion centered around a product or topic that will be of interest and benefit to you.

Topics vary from circuit breaker selection and alarm configuration to VSD sizing and PLC control.

Tech evenings are held on the last Wednesday of every month. We meet at the Wadeville offices at 17h30 for 18h00. Snacks are provided.

Please contact Bessie Landman on (011) 824 7400 or [elizabethl@chicontrol.co.za](mailto:elizabethl@chicontrol.co.za) for additional information and more details on upcoming Tech Evenings

# Contact Us



## For Technical and Training Enquiries

CHI Control Components  
Technical Support Division

Cnr. Osborne & Esandar Road  
Wadeville  
Private Bag X019  
Wadeville, 1422

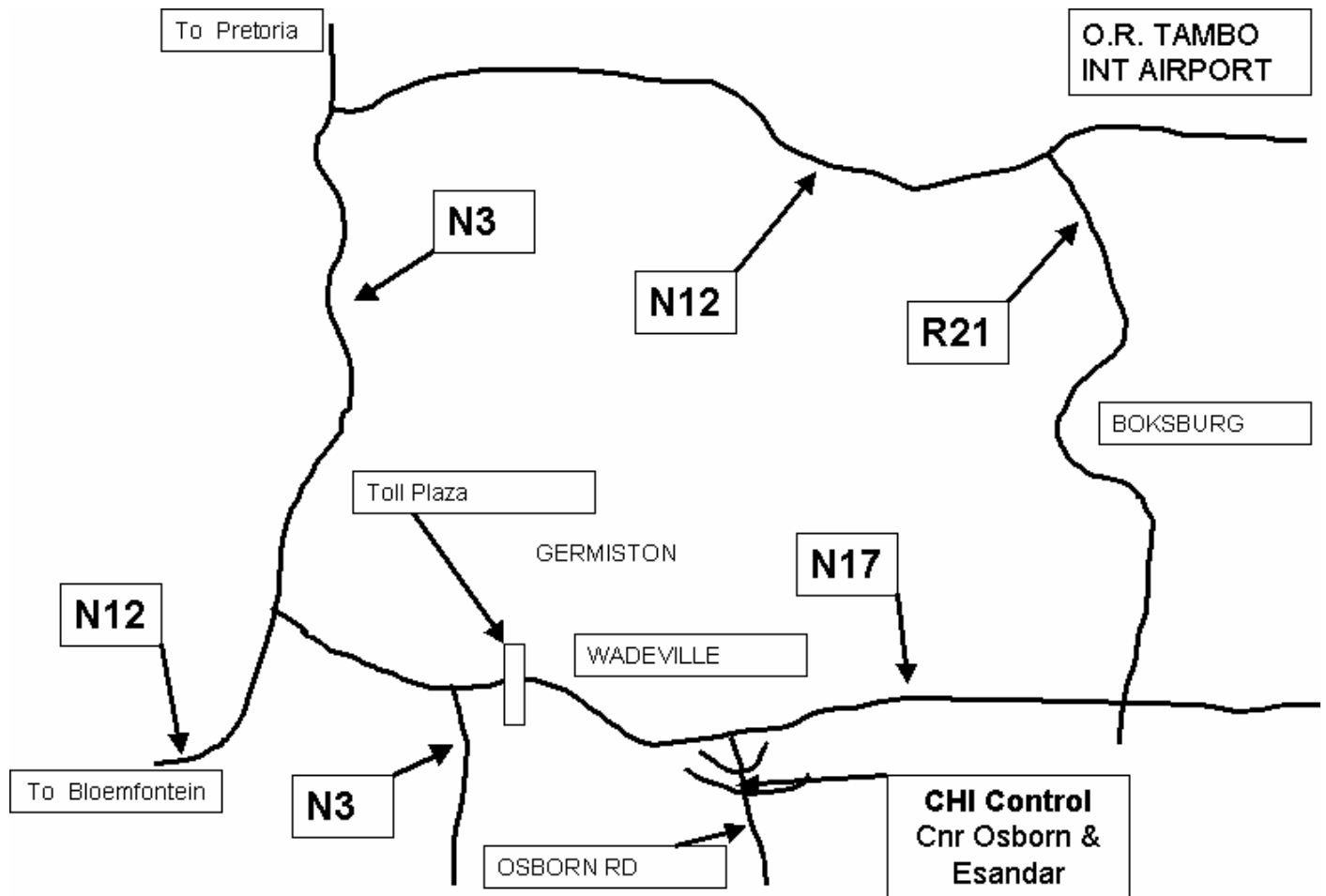
Tel: +27 11 824 7400

Fax: +27 86 681 9302

e-Mail: [gertj@chicontrol.co.za](mailto:gertj@chicontrol.co.za)  
[stephene@chicontrol.co.za](mailto:stephene@chicontrol.co.za)

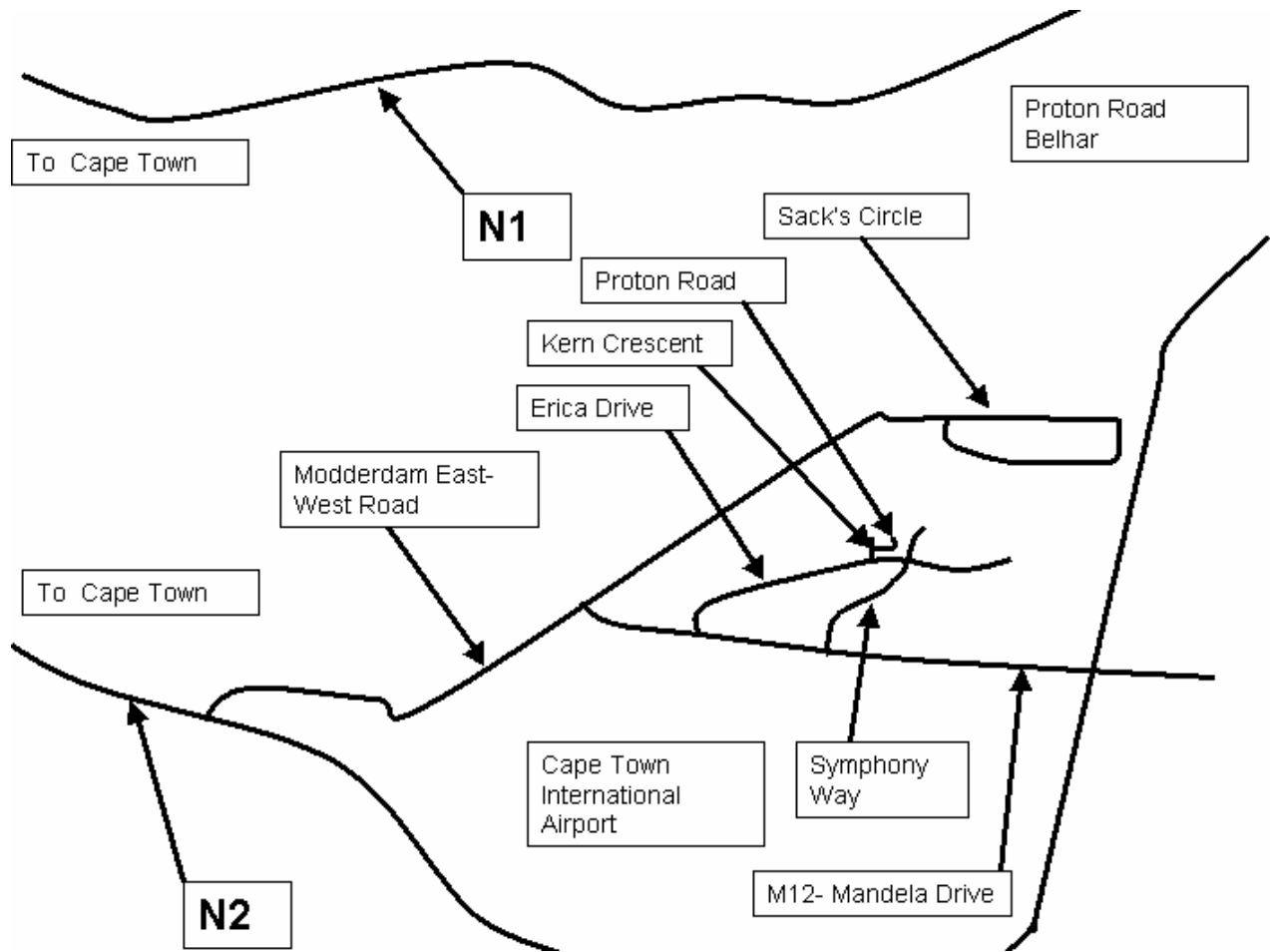
web: [www.chicontrol.co.za](http://www.chicontrol.co.za)

# Map To CHI Training Venue (Gauteng Province)



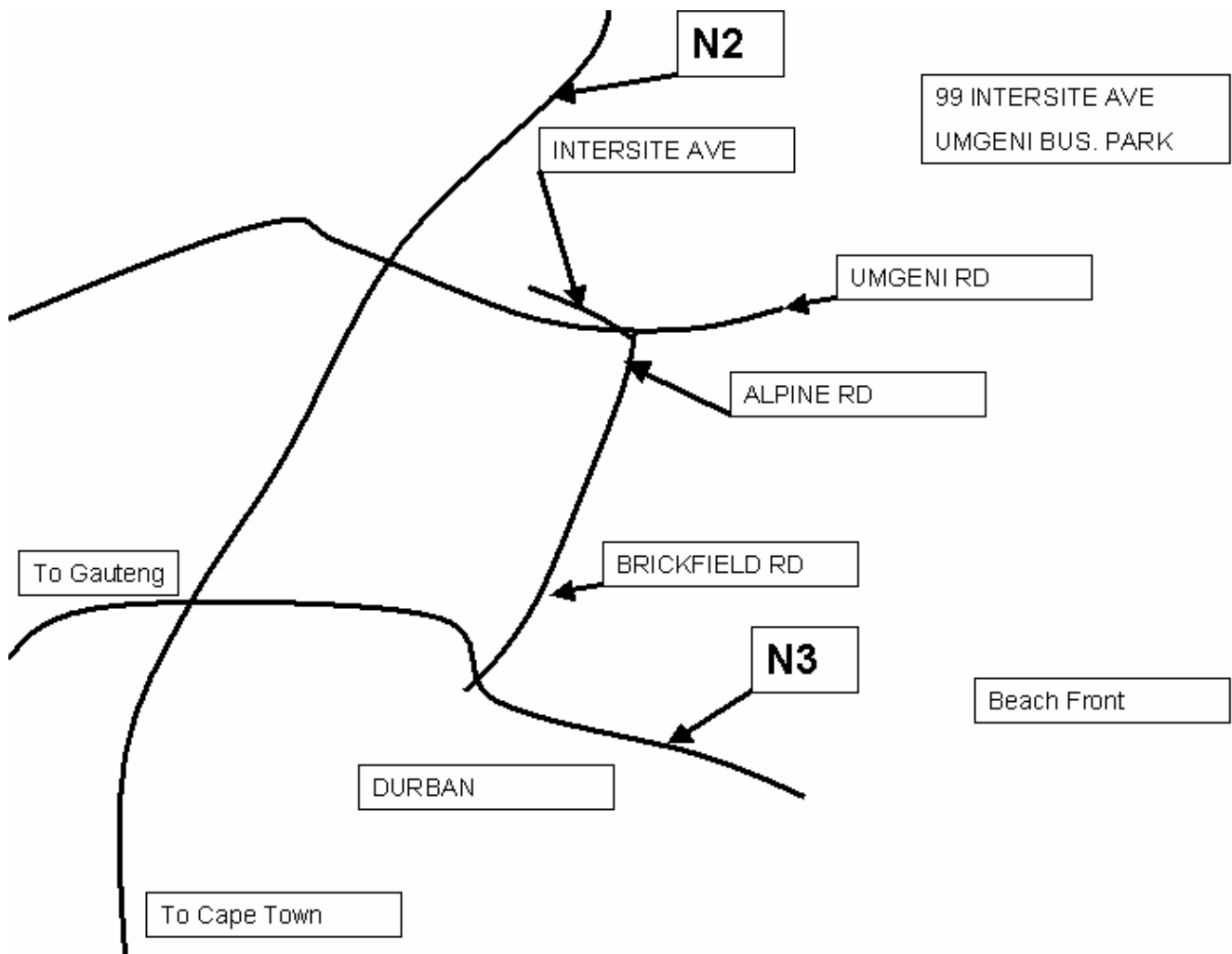
CHI Control  
Corner Osborne & Esandar Road  
Wadeville

# Map To CHI Training Venue (Cape Town)



Northlink College  
Proton Road  
Belhar

# Map To CHI Training Venue (Durban)



CHI Control  
99 Intersite Avenue  
Umgeni Business Park

## MEISSNER UNINTERRUPTIBLE POWER

### Meissner Uninterruptible Power

Meissner offers comprehensive training on their UPS ranges, including installation, and commissioning.

For more information on the courses offered, please contact Mark Gatlik on 011 824 0202



### Static Power

Static offers comprehensive training on their battery ranges, including selection, installation and maintenance.

For more information, on the training offered, please contact Elsabe Swart on 011 397 5316



Tel: +27 824 7400 Fax: +27 86 681 9302  
 Co reg no: 2008/001863/07 Vat: 4160247682  
 Cnr Osborne & Esandar Road, Wadeville, 1407  
 Private Bag X019, Wadeville, 1422  
 www.chicontrol.co.za

**For Att: Stephen Eltze**

Training Request Form

Attendee Details			
Name:			
Company Name:			
Office Number:		Fax Number:	
Job Title:			
Division:			
ID/Passport Number:			
Male:		Female:	
Mobile Number:		eMail:	
Special Requirments (Dietary/Other):			
Course Details			
Course Code	Course Name	Date	Price (excl VAT)
Invoicing Details			
Company Name:			
VAT Number:			
Training & Development Contact Person:			
Office Number:		Fax Number:	
eMail:			
Person Responsible for Payment:			
Office Number:		Fax Number:	
eMail:			
Company Postal Address:	Company Physical Address:		
Payment Method:	Cash <input type="checkbox"/>	Direct Deposit <input type="checkbox"/>	Cheque <input type="checkbox"/>
Purchase Order <input type="checkbox"/>		PO Number <input type="checkbox"/>	
Terms And Conditions			

CHI Controls Standard Terms and Conditions of Payment apply.  
 A copy of which is available on request.  
 Confirmed proof of payment or a copy of the official order is required prior to confirmation.  
 Venue details, etc will be supplied before commencement of the course(s).