

Xtravert – for all industrial applications



Process Control

- Web Speed Control
- Nip Roll Drives
- Tension Control (Via Dancing Arms)
- Surface Winders
- Printing Machinery



Conveying Systems

- Conveyor Speed Control
- Materials Handling
- Assembly Lines
- Inspection Lines
- Baggage Handling Systems



Heating Ventilating & Air Conditioning

- Extract Fan Control
- Airconditioning A.H.U's
- Constant Pressure Pump Control
- Fluid Level Control – Dosing Pumps
- Chicken and Piggery Ventilation Fan Control



Production Machinery

- Canning/Bottling Machinery
- Lathes and Machine Tools
- Packaging Machinery
- Textile Machinery



General Industrial Applications

- Food and Produce Processing Plants
- Fruit Grading Machinery
- Rotary Turnstiles
- Stirrers and Mixers
- Fluid Blending



PDL Electronics . . . Leaders in AC Motor Control

PDL Electronics Ltd has been an international leader in AC motor drive development for the past 25 years, providing a steady stream of advanced motor drives to handle every industrial application. The PDL Electronics team have the R&D expertise and the industrial and marketing strength to lead the drive industry into the 21st Century.

ISO 9001 quality

Our dedication to quality makes the PDL Electronics product, regardless of price, less expensive than other controllers in the long run.

Wide range of products

PDL Electronics design and manufacture products from 0.37kW to in excess of 1MW. These products are found in a diverse range of industries around the world.

PDL Electronics comprehensive support program

PDL Electronics Ltd customer support program demonstrates our confidence in our Quality Assurance system. We have total faith in our products and their reliability, and so provide a comprehensive three year warranty.

Fully trained **Application Engineers**, with a wealth of experience and easy access to information, can assist in solving any of your drive application projects.

Our **Service Engineers** are available for commissioning, after sales service, and repairs, 24 hours a day, seven days a week.

To further support our products and customers, we run a series of comprehensive training programs focusing on self maintenance and application advice. These are available on-site and at our Head Office.

World leading technology

PDL Electronics has pioneered a range of AC Motor Control technologies since its establishment in 1973. It continues to be a technology leader with its current products utilising state of the art electronic componentry.

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Distributors in most countries worldwide.



THE PDL GROUP OF COMPANIES



For over 60 years, the PDL Group of Companies has built an enviable international reputation founded on the concept that "continuous quality is quality you trust".

The PDL Group specialises in the design and manufacture of AC motor controllers, industrial switchgear, electrical accessories, portable fan heating, specialist cable management, data and communication products and plastic custom moulded products to the highest international standards. PDL products are now distributed to over 40 countries including New Zealand, Australia, the United Kingdom, Europe, Asia, North America, the Pacific and the Middle East.

Currently, the Group employs 1900 people over three continents - Australasia, Asia and Europe and has an annual turnover in excess of \$NZ330 million.



Distributed by:

XTRAVERT

Xtra Small
Xtra Smart
Xtra Performance



PDL ELECTRONICS LTD
LEADERS IN AC MOTOR CONTROL



Introducing the . . .

XTRAVERT

Extra Small

- 16 models
- Bookshelf style IP 20 enclosure
- IP54 remote display
- Plug-in control terminals
- Quick and simple installation
- Surface mount technology
- Optimum thermal design via high efficiency composite heatsink

Extra Smart

- Digital control
- Set up and operation via the display unit, computer or PLC
- Extensive and highly configurable control inputs and outputs
- 5 digital inputs, 2 analogue inputs, 2 relay outputs and 1 analogue output
- Comprehensive fault detection
- Adaptive motor protection (thermal model)
- PID Process Controller

Extra Performance

- Space vector modulation
- Trip free operation ensures service reliability
- Silent motor operation with PDL's Whisper Wave
- Provides unequalled motor speed regulation
- Dynaflux – PDL's exclusive flux optimisation technique ensures optimum motor efficiency
- Optimum control for all applications
- Short circuit proof
- High overload capacity
- 50°C operation capacity

Certified and Approved CE

- The Xtravert AS STANDARD is fully filtered and EMC compliant, ie. – no additional filters required
- Complies with major international standards including BS EN61010-1, AS/NZS4251-1, AS/NZS4252-1, BS EN50082-2, BS EN50081-1
- Designed and manufactured under AS/NZS (ISO) 9001 quality management standard

Extra Options

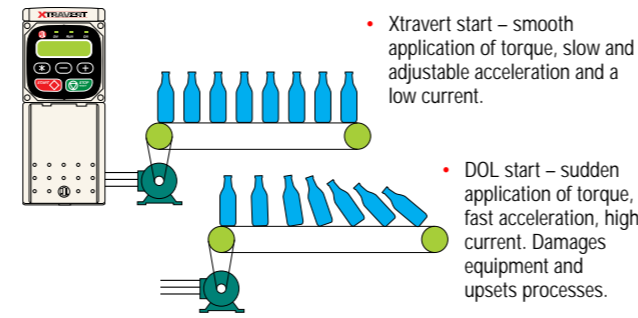
- Serial Communication options
 - RS232/RS485 interface - for direct connection to PC's/PLC's
 - XSBi serial bus interface for connection to industry standard PLC's
 - INTERBUS
 - DeviceNet
 - Profibus-DP
- Dynamic Brake - option available to assist with fast stopping
- IP54 Remote Control Station - for external start/stop speed reference



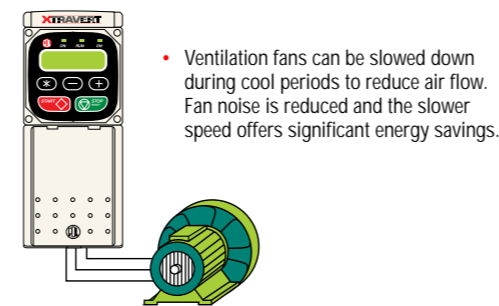
Applications



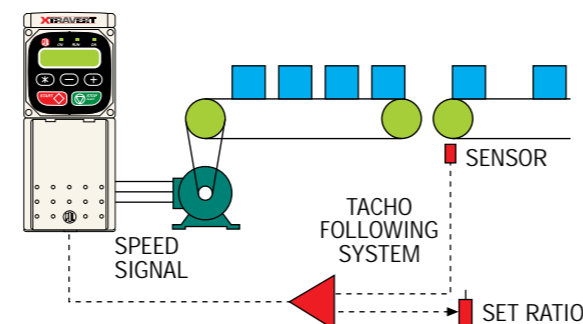
Soft Start



Speed Reduction (ENERGY SAVING)

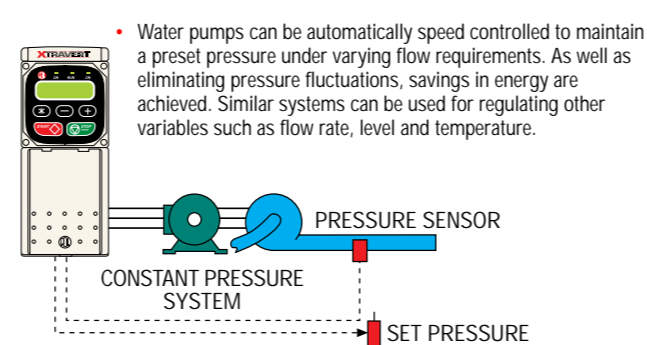


Speed Follower (PROCESS CONTROL)

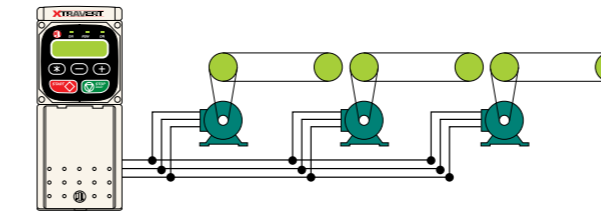
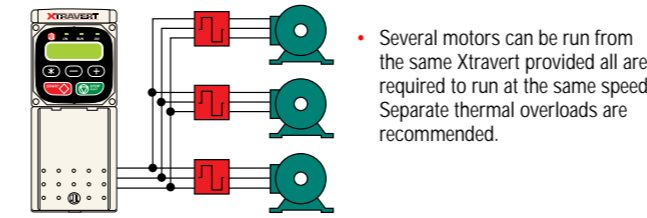


- A conveyor speed can be matched to the speed of another conveyor or it can be set at a higher or lower ratio to create larger or smaller gaps between products. Additional control electronics will be required.

Pressure Control

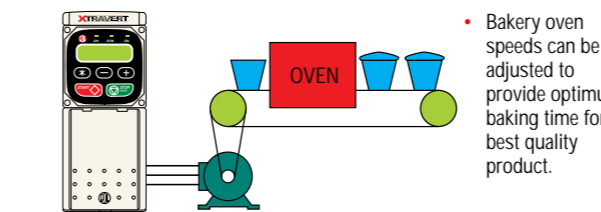


Multimotor

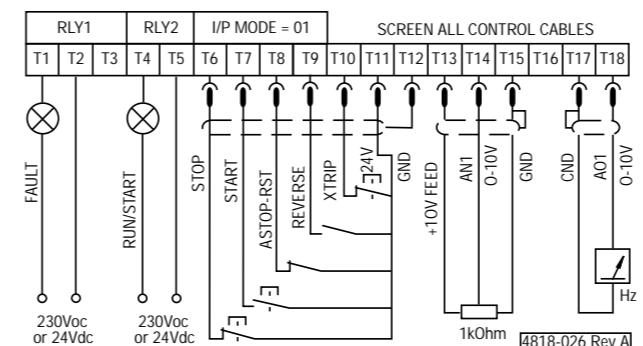
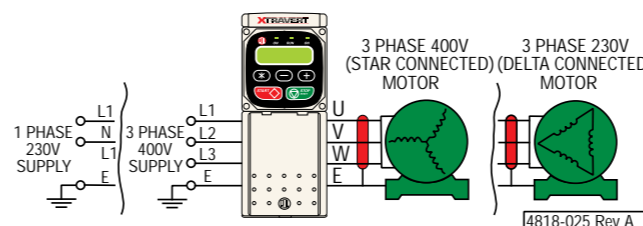


- An Xtravert can be connected to several motors which will all operate at the selected speed. Unequal loading can cause slight speed variations but if all conveyors are mechanically linked then equal load sharing will result.

Speed Adjust (QUALITY IMPROVEMENT)



Power & Control Connections



Specifications



INPUT

Input supply voltages	1- 200Vac – 260Vac 3- 200Vac – 260Vac 3- 200Vac – 460Vac (3-wire earthed neutral) 48 – 62Hz
Input frequency range	>0.99
Input displacement factor	>1 second
Power loss ride through	>1 second

OUTPUT

Output voltage to motor	<Vin
Electrical efficiency	>97% (full load, 50Hz)
Current overload capability	150% for 30 sec (when hot)
Frequency range	0 to ±120Hz
Modulation method	Space Vector Modulation
Modulation frequency	Up to 8kHz Whisper Wave or Narrow Band

ENVIRONMENTAL

Protection standard	IP20 Enclosure IP54 Display Unit
Operating temperature	0°C to 50°C
Storage temperature	-40°C to 80°C
Relative humidity	<90%, noncondensing
Altitude	1000m
Altitude derating (>1000m)	-1% per 100m; 3000m max

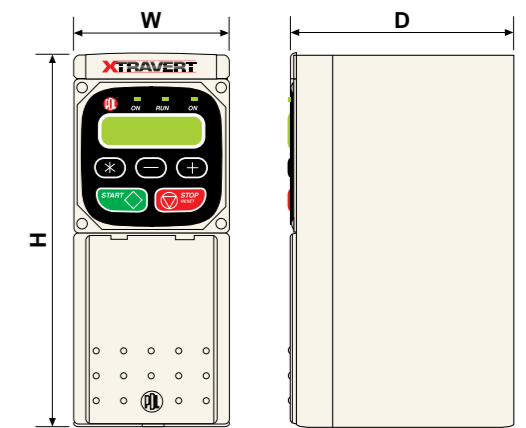
CONTROL

Control method	Dynaflux Scalar Control
Digital inputs	5 configurable inputs
Analogue inputs	2 inputs, 1 dedicated 4–20mA, 1 configurable as 0–10V, ±10V
Analogue outputs	1 output configurable as 4–20mA or 0–10V or ±10V

Relay outputs	1 changeover, 1 normally open, rated 230Vac or 30Vdc, 2A non-inductive
Comprehensive drive, motor, and thermal modelling	RS232/485 Serial Communications option

DIMENSIONS			
Current	H(mm)	W(mm)	D(mm)
2.5 / 4 / 7	235	97	215
9 / 12 / 16	235	140	215

Specifications are subject to change without notice.



Model	Input Volts (V)	Input Current (A)	Recommended Input Fuse (A)	Output Current @ 50°C (A)	Current Overload (A)	Normal Motor Size (kW)	Normal Motor Size (h.p)
X302 X304 X307 X309	230 1~	8	15	2.5	3.75	230 V	230 V
	230 1~	12	20	4	6	0.37	3/4
	230 1~	20	35	7	10.5	1.5	2
	230 1~	22	35	9	13.5	2.2	3
X502 X504 X507 X509 X512 X516	230 3~	4	10	2.5	3.75	230 V	230 V
	230 3~	7	15	4	6	0.37	3/4
	230 3~	12	20	7	10.5	0.75	1 1/2
	230 3~	9	15	9	13.5	1.5	2
	230 3~	12	20	12	18	2.2	3
	230 3~	16	30	16	24	3	3
X702 X704 X707 X709 X712 X716	400 3~	4	10	2.5	3.75	400 V	400 V
	400 3~	7	15	4	6	0.75	1
	400 3~	12	20	7	10.5	1.5	2
	400 3~	9	15	9	13.5	3	4
	400 3~	12	20	12	18	4	5 1/2
	400 3~	16	30	16	24	5.5	7 1/2

Note 1: Nominal power applies to 4-pole machines only. Check your motor specification before selecting.