



LonWorks® Serial Communication Interface for Danfoss VLT® Series AC Drives



Drives and Controls

LonWorks utilizes Standard Network Variable Types (SNVT's) for communication, allowing VLT® adjustable frequency drives to be configured, controlled and monitored remotely.

The LonWorks Serial Communication Interface permits easy connection to control systems and operator interface devices from multiple vendors, thus offering reduced system installation cost and allowing direct integration to all automation products supporting the LonWorks network.

The LonWorks option card supports four transmission media with three versions: 78 kbps transformer coupled twisted pair; 1.25 Mbps transformer coupled twisted pair; and free topology. The free topology node will also operate on a link power network.

The VLT LonWorks option card can be used with any size VLT 5000 Series for process applications or VLT 6000 Series for HVAC. Both series of drives can be used with any 1-300 horsepower AC induction motor.



The LonWorks option is offered as a factory installed or user installed option card that connects to the VLT® Series control card.

VLT Series drives employ a microprocessor-based digital design for converting three-phase AC line power into variable frequency/variable voltage power for operating standard three-phase inverter duty AC asynchronous motors. An advanced form of Pulse Width Modulation (PWM), Voltage Vector Control Plus (VVC^{PLUS}), is used and allows motor operation without derating due to current waveform distortion.

The VLT 5000 Series and VLT 6000 Series are designed, assembled and tested in accordance with the applicable standards of ISO 9001, NEMA and NEC; are UL, cUL (CSA) certified; and CE labeled according to the applicable EU standards and directives. Danfoss drives meet over 50 national and international quality control and performance standards required in more than 100 countries.



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Features

Node Identification	Service switch for extracting the NEURON I.D. 12 Digit hexadecimal NEURON I.D. is labeled on each option card. Full support of network management query command
Status LED	Network management wink command and communication status are displayed by a green LED
Service LED	Red LED to indicate the status of the service switch and node configuration/application status
Network Terminator	Each option card includes a network terminator which can be activated/deactivated by a DIP switch
Output Rates	Bi-directional heartbeat function, and configurable transmission rates for output network variables
Protocol	ECHELON LonTalk
Physical Interface	Isolated twisted pair 78 kbps transformer coupled or Isolated twisted pair 1.25 Mbps transformer coupled or Free topology/Link power 78 kbps transformer coupled
Cabling	Twisted shielded pair cable
Interface	Uses Standard Network Variable Types (SNVT's) exclusively
Connector	Screw-in terminal block for easier drive service without network interruption
Multidrop	LonWorks supports daisy chained bus architecture
Configuration	All drive parameters can be updated through network variables
Feedback	Monitor actual values, and drive status on output network variables
Control	Drive control and frequency references are available through input network variables

For Water, Refrigeration and Industrial Applications, contact Danfoss Electronic Drives for VLT 5000 Series specifications and pricing

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For HVAC Applications, contact Graham Division for VLT 6000 Series specifications and pricing



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Danfoss has been a LonMark Partner for four years and was the first drive manufacturer to offer a LonMark certified option for adjustable frequency drives worldwide.