



LON Module for Variable Speed Drive

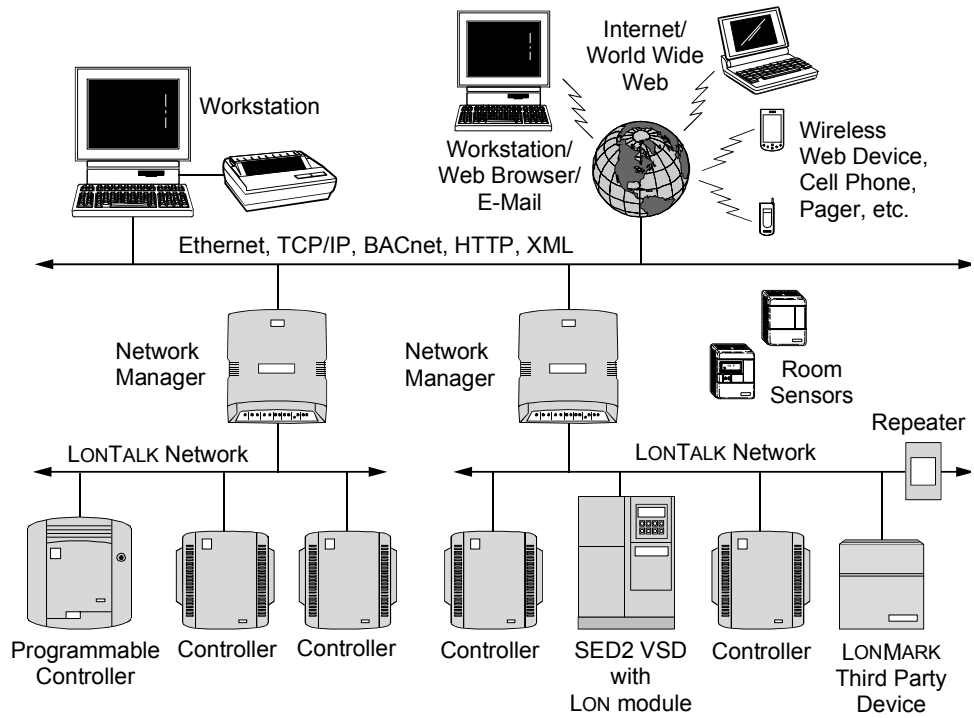
SED2

Conforms to and is certified to the LONMARK® Interoperability Guidelines enabling information sharing with other LONMARK products.
LONMARK-compliant with variable speed motor drive profile number 6010
Uses Standard Network Variable Types (SNVTs) for communication, allowing the SED2 VSD to be configured, controlled, and monitored via the LONTalk® network
48 SNVTs preconfigured for control/monitoring
Modular snap-on design for simple installation and easy control system integration to any existing or new SED2

Use

Direct digital control of fans and pumps in HVAC applications over a LONWorks® network
SED2 VSDs can be configured, controlled and monitored via the LONWorks network. The SED2 LON module enables the SED2 to share information and interact seamlessly with all other LONMark products from multiple vendors.

Typical system architecture



Application functions

The SED2 LON Module corresponds to 1 LON node that communicates with other LON-partners.

Ordering

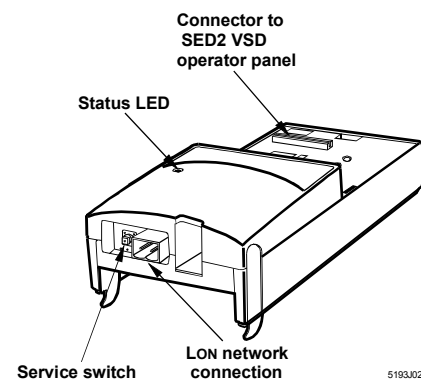
When ordering, please give type reference: **SED2-LONI/F**

Product documentations

- CE1B5193en** **SED2 LON Module Operating Instructions**
- CM1U5192en** **SED2 Variable Speed Drives Operating Instructions**
- CM1G5192en** **Variable Speed Drives Commissioning Guide**

Mechanical design

Modular snap-on design for simple installation and easy control system integration to any existing or new SED2 VFD

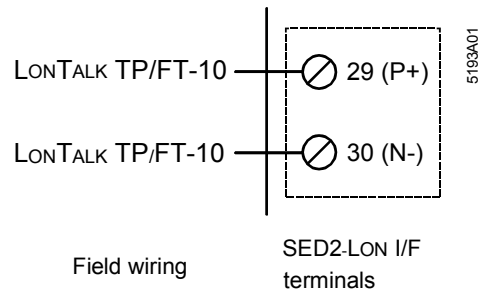


Technical data

Environmental conditions	Permissible ambient temperature	
	Transport and storage	-25 °C...+70 °C (13 ° F ...158 ° F)
	Operation	-10 °C...+50 °C (14 ° F ...122 ° F)
	Permissible air humidity	
General unit data	Transport and storage	≤ 95 % r.h.
	Operation	≤ 85 % r.h. (non-condensing)
	Operating voltage	the LON module receives power through its SED2 VSD connection
	Processor type	Neuron® 3120
	Processor clock speed	40 MHz
	Memory size	16 KB ROM, 2 KB RAM
	Status LED	tri-color (green, orange, red), LED provides indication of current operating state
	Service Pin	provides external activation of service pin message
	Physical Interface	free topology: FTT-10
	Connector	short-circuit proof, isolated, FTT-10 bus connector
	Network terminator	bus topology: 105 ohm at both ends free topology: 52.3 ohm close to the center of the network
	Network communication	78 Kbps (FTT-10)
	Output rates	bi-directional and configurable transmission rates for output network variables
	Dimensions	height: 161 mm (6-11/32 in.) width: 73 mm (2-7/8 in.) depth: 43.5 mm (1-23/32 in.)
	Interface	uses Standard Network Variable Types (SNVTs) exclusively
	Node identification	fixed, unique Neuron ID, software configurable node ID
	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
	Norms and standards	Conforms to and is certified to
LONMARK compliance		LONMARK-compliant with variable speed motor drive profile number 6010
Electromagnetic compatibility		
Emissions		EN 55011 1991 Class A
Immunity		IEC 801-3 and EN 61000-4-3
CE-conformity		
Electromagnetic compatibility	89/336/EEC	
Low-voltage guideline	73/23/EEC	

NOTE: For technical specifications on the SED2, see data sheet *Variable speed drives SED2*, Document No *CM1N5192en*.

Connection terminals



Cabling note

This connection supports twisted pair, unshielded, polarity-insensitive, peer-to-peer communications at 78 Kbps.

Recommended cable type

For the bus cables of the SED2 LON modules, we recommend the exclusive use of **shielded** twisted pair cables.

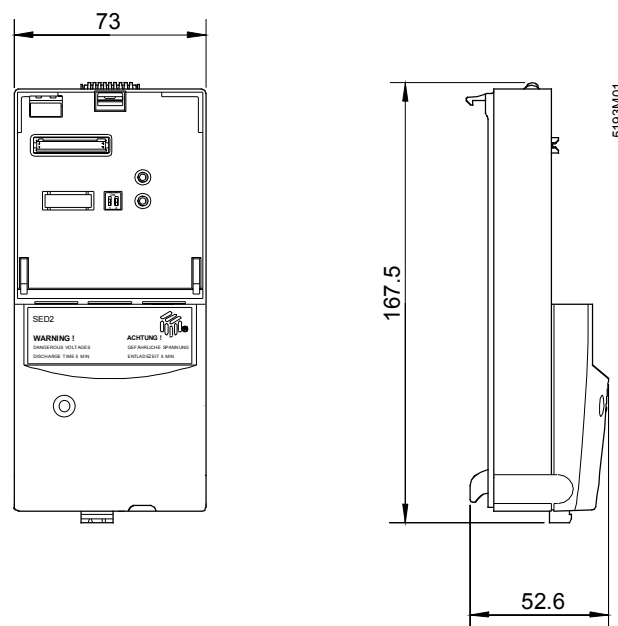
The following types of twisted pair cables have been tested and approved by Echelon:

Cable type	Wire diameter	AWG	Conductor cross section	R_{loop} Ω/km	nF/km
JY(St)Y 2x2x0.8	0.80 mm	20.4	0.503 mm ²	73	98
TIA 568A Category 5	0,51 mm	24	0.21 mm ²	28	48

Maximum bus length

The maximum transmission distances that can be covered depend on the selected bus topology and the type of cable used. For more detailed information, refer to LON Module Operating Instructions CE1B5193en

Dimensions



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Subject to change