LEROY SOMER

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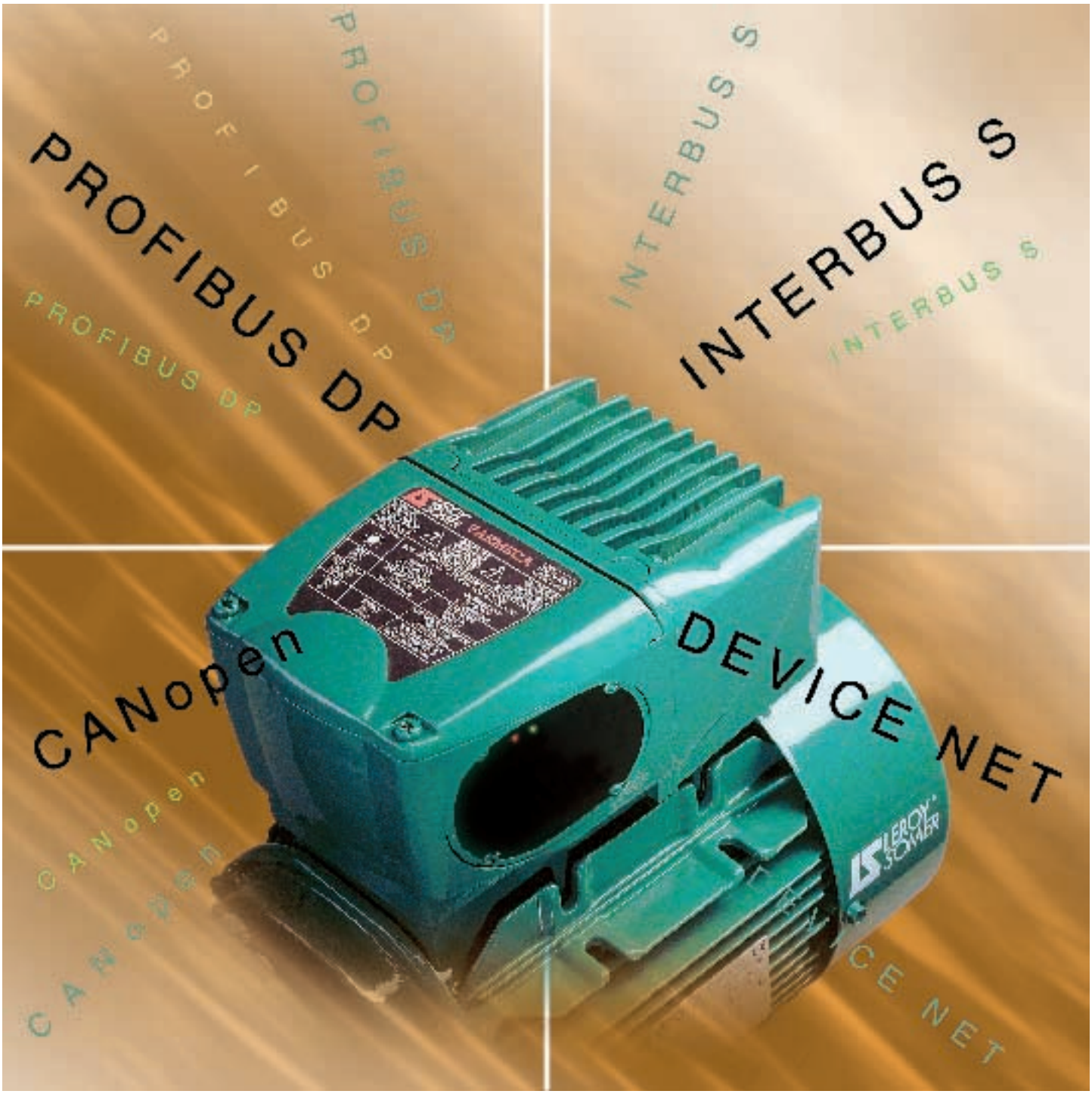

VARMECA

Data communication systems

VARMECA

The communication maestro

A new networking solution

VARMECA motors and geared motors, with integrated frequency inverter, offer a very wide range of communication interfaces:
PROFIBUS DP, INTERBUS S, DEVICE NET, CANopen, etc.
Due to the modular design of the interfaces, VARMECA can adapt to any fieldbus upgrading, regardless of its complexity.

An integrated communication interface

The fieldbus module is installed directly in the VARMECA casing. It can therefore be added at any time, even on the user's premises.
The module is connected with two removable connectors:

- The first, dedicated to messages, enables simple daisy-chaining of VARMECAs with one wire per connection point.
- The second, for an optional 24V DC uninterruptible power supply, provides protection against power cuts.

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VARMECA

Real-time process management

Ever faster communication speeds

With its compact design combining a motherboard and daughterboard, the fieldbus option enables communication at up to 12 Mbps depending on the selected protocol and length of connections.

Two RS 232 serial links are integrated in the product as standard:
- The first provides the connection between the fieldbus interface and the VARMECA.
- The second is used to adjust the parameters via a console or PC.

Communication is via an RS 485 link (PROFIBUS DP, INTERBUS S) or a CAN link (DEVICE NET, CANopen).

Control of the simplest or most complex systems

A network of 32 VARMECAs, depending on the protocol, can be controlled from a master station by means of a single cable linking the VARMECAs together. This network can be extended to 122 VARMECAs by using up to 4 repeaters. The length between stations can exceed 1000 metres and makes it possible to mount the VARMECAs next to the components in the process to be controlled.

Process optimisation

With the fieldbus interface, VARMECA can meet the demands of processes where communication brings numerous advantages in data processing speed and user-friendliness:
- start-up
- real-time control
- status display and measurement during operation
- error messages and suggested remedies

User-friendly operation

- Automatic recognition of the fieldbus option once connected, only the customisation parameters (address, speed, etc) need to be set via the CDC VMA20 console or the PEGASE VMA20 software.
- Possibility of data transmission in different formats.
- Speed reference via analogue potentiometer even with a fieldbus configuration.
- Signalling of operating states and diagnostic help via LEDs.

Safety of operation

The fieldbus ensures total control of the installation, since all messages pass through the same cable. If the signal is lost, there is an option to set the system to safety mode which can be enabled or disabled. The process is then protected from uncontrolled operation.

The construction of the VARMECA casing (IP65 aluminium, with the electronics moulded in resin) enables networking even in the most severe conditions, such as high ambient temperatures or very humid environments.
Since the cables are connected inside the casing, the VARMECA can be mounted on any type of machine without risk.

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VARMECA

Technical data

A Worldwide Product

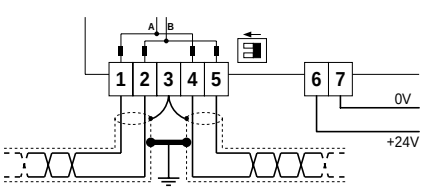
50/60 Hz mains supply

• Single-phase	200 V to 240 V ± 10%	0.25 to 1.5 kW
• 3-phase	200 V to 240 V ± 10%	0.25 to 2.2 kW
• 3-phase	380 V to 480 V ± 10%	0.25 to 4 kW

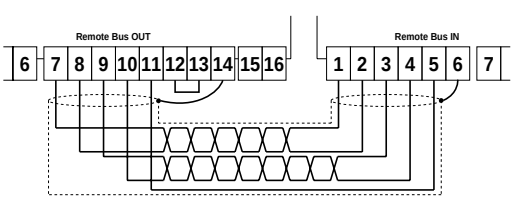
Approvals CE c UL us

	PROFIBUS DP	INTERBUS S	DEVICE NET	CANopen
Access to medium	Token from master	Cyclic scanning and scanning on request	Cyclic scanning and scanning on request	Cyclic scanning and scanning on request
Line protocol	RS 485	RS 485	CAN	CAN
Data medium	1 screened twisted pair	2 screened twisted pairs	2 screened twisted pairs	2 screened twisted pairs
Maximum transfer speed	Max 12 Mbps	500 Kbps	Max 500 Kbps	Max 1 Mbps
Number of connection points	32 per segment and 122 max if 4 repeaters	31 slaves and 1 master	64	32 per segment and 122 max if 4 repeaters
Maximum possible length between stations	100 m (12 Mbps) 1 km (187.5 Kbps)	400 m	500 m	1 km (50 Kbps)
Total extension length	9.6 km	13 km (copper)	500 m	1 km at 50 Kbps
Load resistances	135 Ohms, integrated, can be disabled	Automatic termination with Interbus	120 Ohms, not integrated	120 Ohms, not integrated
Internal or external backup power supply	24 VDC	24 VDC	24 VDC of the DEVICE NET bus	24 VDC of the CAN bus
Comment	Limited access time	Deterministic access time	Deterministic access time	Deterministic access time

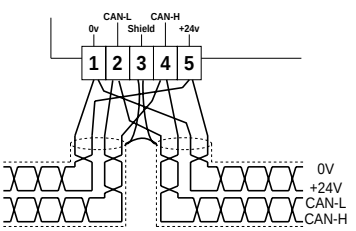
Deterministic access time: For example, if the cycle time = 5 ms, then the data will be updated every 5 ms.
Limited access time: For example, if the response time = 5 ms, then in the worst case, the data will be refreshed every 5 ms.



PROFIBUS DP connection



INTERBUS S connection



DEVICE NET / CANopen connection

For detailed information on the entire VARMECA range, please ask for the general brochure.

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