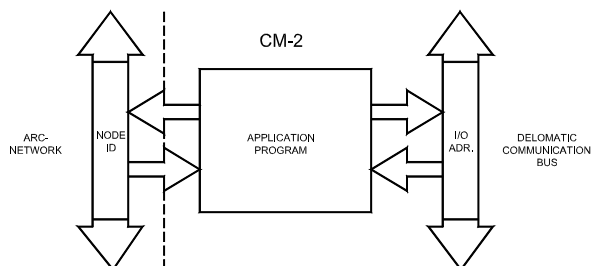


DELOMATIC MULTI-FUNCTION SYSTEM

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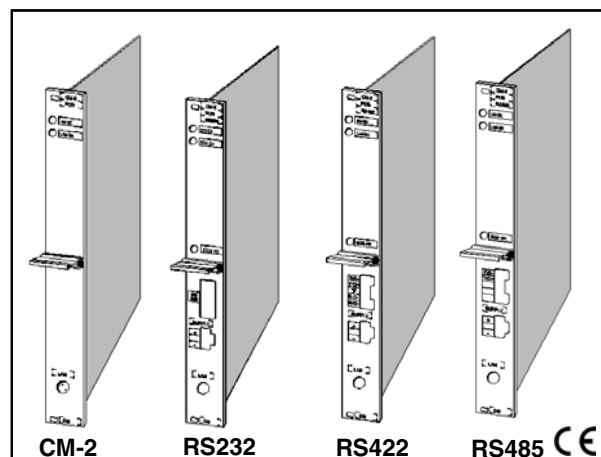
Control Module (CM-2)

The Control Module (CM) is the main controller module in the DELOMATIC system. Only one CM is used in each DGU. The CM operates according to the application program contained in two flashproms:



The CM also carries out mutual exchange of information and commands with the DELOMATIC modules installed in the DGU via the communication bus on the back plane.

Dimension:	Width 30.5 mm (6 TE).
Weight:	0.47 kg (1.0 lb).
Supply:	From the PSM via the back plane.
Power consumption:	Typ. 1.5W. Max. 3W.
LED:	"I/O OK"
	<u>Green</u> LED "I/O OK"; CM is able to communicate with all the DELOMATIC modules specified in the application program at the correct internal module address.
	If a DELOMATIC module is missing at the internal module address or is unable to carry out communication, the LED "I/O OK" is turned off.
	"LAN OK"
	<u>Green</u> LED "LAN OK"; The CM is able to communicate via the ARC-network.
Galvanic separation:	Test voltage: 1.0 kV – 50 Hz – 1 min. according to GL, LR and DNV.
Flammability:	All plastic parts are self-extinguishing according to UL94-VO.
Environment:	Temperature: Nominal: -10...+55°C. Operational: -25...+70°C. Storage: -40...+70°C. Climate: Class HSE, according to DIN 40040.
Protection:	IP20 when mounted in a DELOMATIC rack.
Approvals:	The DELOMATIC system is CE marked and type approved by LR, GL, DNV, ABS, BV, RINA and CNK.



Switch settings depend on protocol.

ARC-net node ID:	xx _H + hex-switch position where xx depends on the used protocol. Notice that max accepted hex-switch position is "C" meaning that hex-switch settings in the range from "C" to "F" all will give the ARC-net node ID xx _H + 0C _H .
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Note that communication module must be powered down and then powered up for changes of dip switch and hex-switch settings to take effect.

Screw terminals:	2.5 mm ² (single/multi-stranded). Terminal 6: 0V DC Terminal 7: 24V DC
Environment:	Temperature: Nominal: -10...+55°C. Operational: -25...+70°C. Storage: -40...+70°C.
Climate:	Class HSE, according to DIN 40040.
Protection:	IP20 when mounted onto a CM-2 module mounted in a DELOMATIC rack.

DELOMATIC

Communication module – RS232

The communication module enables a serial interface to the ARC-network. The serial interface is a RS232 line.

The communication module is made to fit onto the CM-2 module into the DELOMATIC rack, and still being able to communicate to all units on the ARC-network.

The communication module is supplied with screw terminals for supply and a 9-pins D-sub male connector for the serial interface. The ARC-network connection is made through the CM module's connector.

Weight:	0.5kg (1.1 lb).																				
Supply:	Nominal 24V DC, -25%...+25% (incl. Peak-peak ripple). Ripple < 10%																				
Power consumption:	Typical 3W Max. 5W																				
LED named "COM":	A green LED for status indication of the communication:																				
RS232 line failure:	Fast flash (approx. 6 Hz)																				
ARC-network failure:	Slow flash (approx. 1.5Hz)																				
Communication OK:	Steady light																				
Fatal error:	No light																				
Serial line:	Max. Load 100mA																				
Connections:	9-pins D-sub connector pin configuration: <table><tr><th>Pin</th><th>Signal</th></tr><tr><td>1</td><td>DCD (data carrier detect)</td></tr><tr><td>2</td><td>RxD (input to module)</td></tr><tr><td>3</td><td>TxD (output from module)</td></tr><tr><td>4</td><td>DTR (data terminal ready)</td></tr><tr><td>5</td><td>Signal GND</td></tr><tr><td>6</td><td>SR (Data set ready)</td></tr><tr><td>7</td><td>RTS (ready to send)</td></tr><tr><td>8</td><td>CTS (clear to send)</td></tr><tr><td>9</td><td>RI (ring indicator)</td></tr></table>	Pin	Signal	1	DCD (data carrier detect)	2	RxD (input to module)	3	TxD (output from module)	4	DTR (data terminal ready)	5	Signal GND	6	SR (Data set ready)	7	RTS (ready to send)	8	CTS (clear to send)	9	RI (ring indicator)
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9	RI (ring indicator)																				

Communication module – RS422

The communication module enables a serial interface to the ARC-network. The serial interface is a RS422 line.

The communication module is made to fit onto the CM-2 module into the DELOMATIC rack, and still being able to communicate to all units on the ARC-network.

The communication module is supplied with screw terminals for supply for the serial interface. The ARC-network connection is made through the CM module's connector.

Weight:	0.5 kg (1.1 lb).										
Supply:	Nominal 24V DC, -25%...+25% (incl. Peak-peak ripple). Ripple < 10%.										
Power consumption:	Typical 3W. Max. 5W.										
LED named "COM":	A green LED for status indication of the communication.										
RS422 line failure:	Fast flash (approx. 6 Hz).										
ARC-network failure:	Slow flash (approx. 1.5Hz).										
Communication OK:	Steady light.										
Fatal error:	No light.										
Serial line:	Max. load 60 mA.										
Connections:	Screw terminals: <table><tr><td>1.</td><td>TxD-</td></tr><tr><td>2.</td><td>TxD+</td></tr><tr><td>3.</td><td>GND</td></tr><tr><td>4.</td><td>RxD-</td></tr><tr><td>5.</td><td>RxD+</td></tr></table>	1.	TxD-	2.	TxD+	3.	GND	4.	RxD-	5.	RxD+
1.	TxD-										
2.	TxD+										
3.	GND										
4.	RxD-										
5.	RxD+										

Communication module – RS485

The communication module enables a serial interface to the ARC-network. The serial interface is a RS485 line.

The communication module is made to fit onto the CM-2 module into the DELOMATIC rack, and still being able to communicate to all units on the ARC-network.

The communication module is supplied with screw terminals for supply for the serial interface. The ARC-network connection is made through the CM module's connector.

Weight:	0.5 kg (1.1 lb).				
Supply:	Nominal 24V DC, -25%...+25% (incl. Peak-peak ripple). Ripple < 10%.				
Power consumption:	Typical 3W. Max. 5W.				
LED named "COM":	A green LED for status indication of the communication.				
RS485 line failure:	Fast flash (approx. 6 Hz).				
ARC-network failure:	Slow flash (approx. 1.5Hz).				
Communication OK:	Steady light.				
Fatal error:	No light.				
Serial line:	Max. load 60 mA.				
Connections:	Screw terminals: <table><tr><td>1.</td><td>D- (B)</td></tr><tr><td>2.</td><td>D+ (A)</td></tr></table> Impedance/termination: 120Ω required.	1.	D- (B)	2.	D+ (A)
1.	D- (B)				
2.	D+ (A)				

Due to our continuous development we reserve the right to supply equipment which may vary from the described.



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