



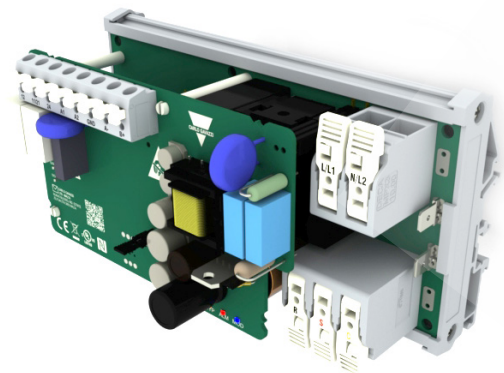
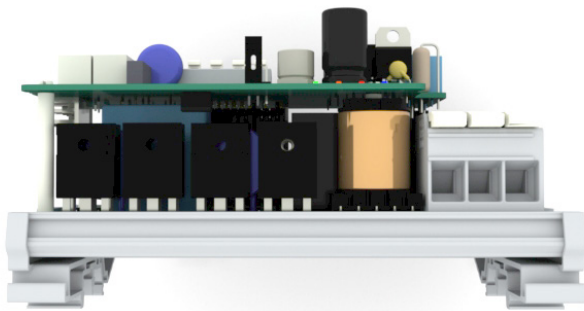
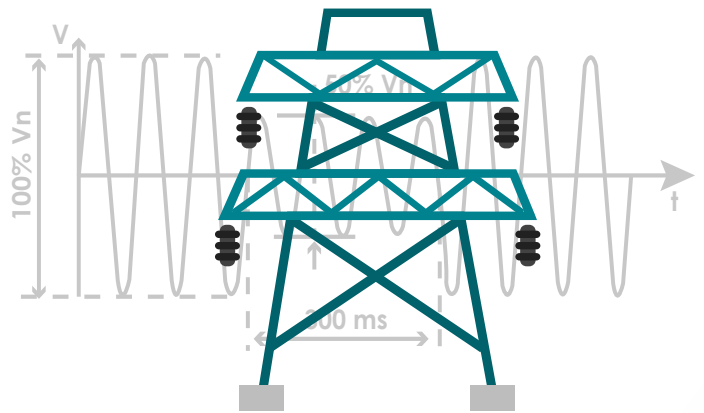
HDMS - Single phase dynamic motor starter

Switches

HDMS

IGBT based single phase motor starter

HDMS is a new category of motor starters designed for single phase (CSCR) capacitor start capacitor run motors, used on scroll compressors and submersible pumps. The HDMS is targeted for OEMs in the heat pump, refrigeration and water treatment sectors that would like to avoid issues related to weak grids. Unlike the present solutions offered on the market, HDMS can start single phase (CSCR) motors without the need of any start capacitors.



A breakthrough in single phase motor starting

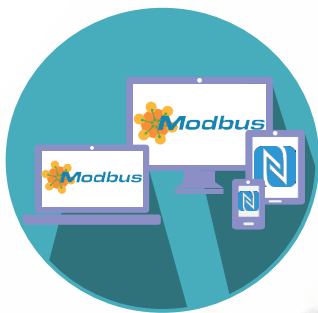
No more start capacitor

The HDMS features an innovative algorithm that allows it to generate sufficient torque to start a CSCR single phase motor without a start capacitor. Start capacitors are the weakest component in single phase motors. They are very susceptible to voltage fluctuations and temperature. With the HDMS this start capacitor can be eliminated from the circuit. This will result in a longer lifetime and fewer issues for your equipment.



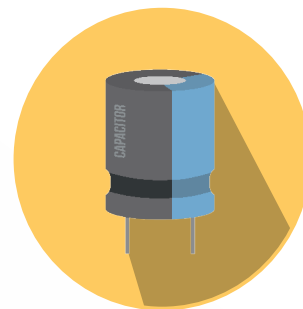
HDMS

An innovative product in multiple ways



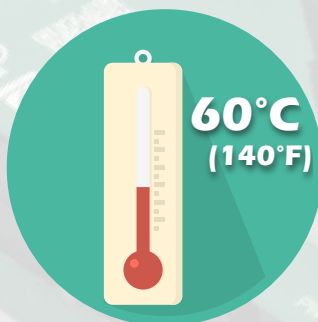
Facilitates troubleshooting

The onboard Modbus and NFC communication allow the user to download important information from the HDMS.



No start capacitor for higher reliability

Through an innovative (patent pending) algorithm, the HDMS can start high starting torque single phase motors without requiring a start capacitor. This results in higher reliability especially in applications with weak voltage grids.



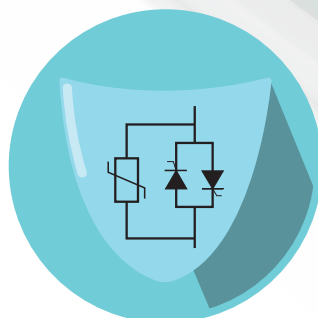
Designed for harsh environments

HDMS is designed to operate at 60°C (140°F) without derating.



Easy to install

The HDMS features a tool free design that makes your wiring very quick and easy. No tools are required ... just the power of your fingers!



Extensive motor protection

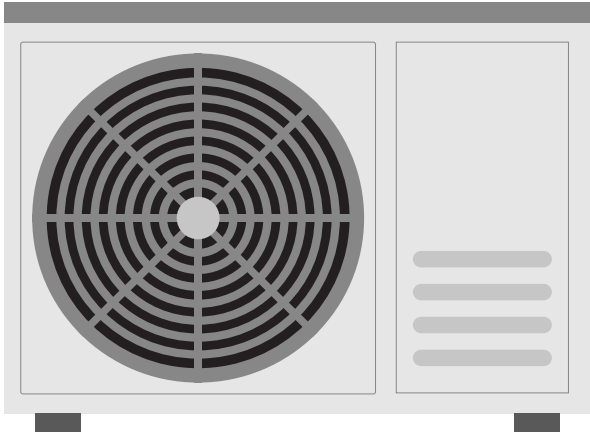
The HDMS is equipped with Class 10 overload protection to offer more protection for your motors. Additional monitoring features are also available to keep your motors protected in abnormal conditions.



Self-learning for optimised starts all the time

The HDMS features our 3rd generation of self-learning algorithms. This results in a product that is easy to use as it does not require any user adjustments. Through specific parameter measurements, the HDMS is able to improve the motor starts on every single start.

Benefits for different applications

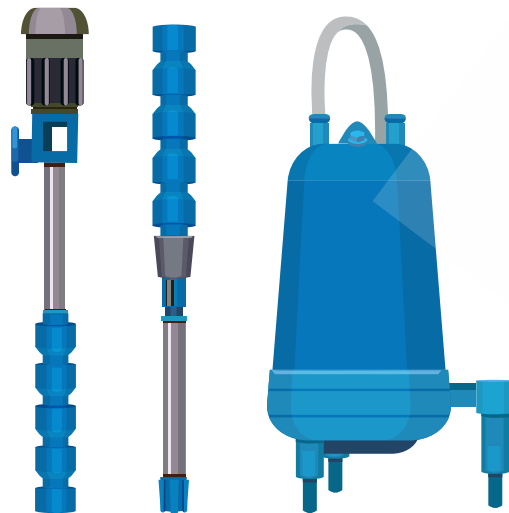


Heat Pumps

- HDMS starts the scroll compressor with < 1.5 times its nominal current
- Algorithm is optimised to start in < 1 sec
- No settings are required
- HDMS will automatically reduce the start current at every single start!

Deep well submersible pumps

- HDMS can start the submersible pumps with < 1.2 times the pump's nominal current
- Coated PCBs ensure high protection against humid environments
- Wide operational and control voltage range ensure higher reliability in installations with weak voltage grid
- Various application related faults are automatically detected by the HDMS for additional motor protection
- Most of the alarms follow a self-recovery routine to minimise machine downtime



Refrigeration compressors

- Start capacitors are used in hard start kits as well as traditional soft starters to start high starting torque motors such as scroll compressors
- With HDMS the start capacitor can be removed
- This results in higher reliability and performance, especially with unstable voltage networks

HDMS

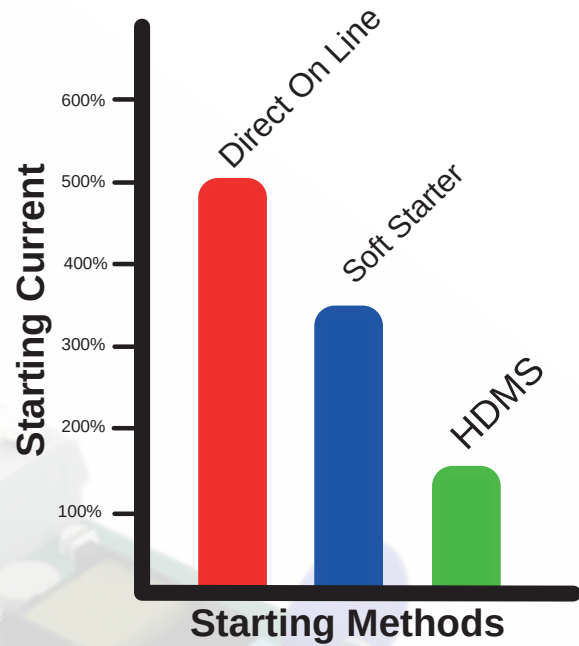
Unmatched performance

80%

Current reduction compared to DOL start

1.5

HDMS typically limits the start current to < 1.5 times the motor rated current.



No settings required

No settings are required for the HDMS

Self-learning

Algorithm allows HDMS to learn how to optimise internal parameters during every motor start.

60%

Time savings vs traditional wiring

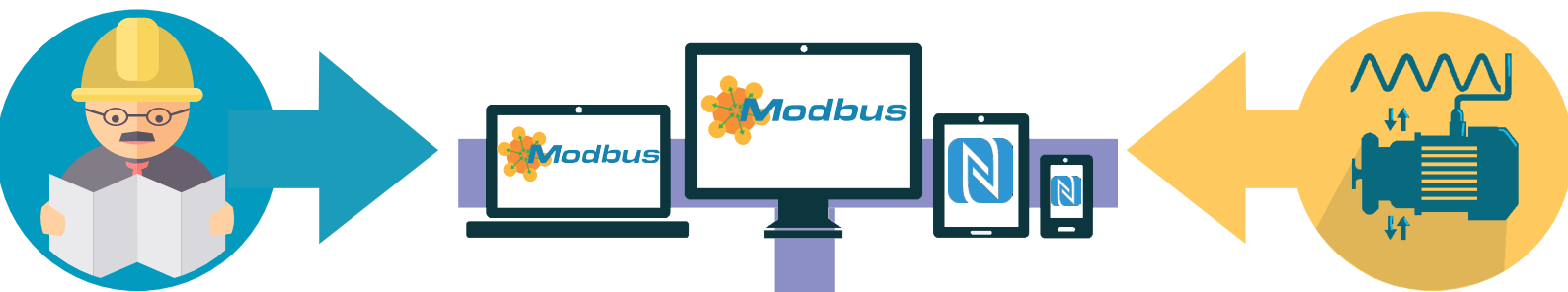
10mm² / 8 AWG

Maximum cable thickness results in easier cable insertion



HDMS

Troubleshooting and commissioning



Device History Download

Download information on:

First 8 starts

Last 24 starts

143 alarm events



Troubleshooting guide

Alarm counters are recorded in memory. Troubleshooting guide can be accessed for specific alarms through the app.

Data available in .csv

All the data can be downloaded in .csv format to your phone. Easily shared via email for faster resolution of problems.



Data download with device OFF

Thanks to NFC technology the data can be downloaded from a non-powered HDMS. This results in a safer work environment.



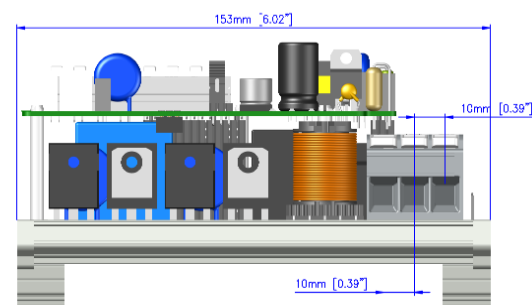
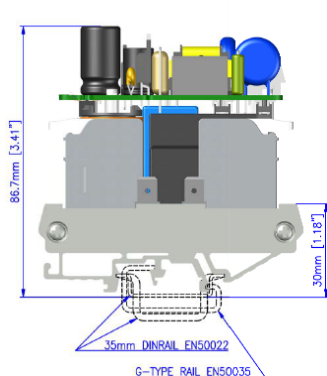
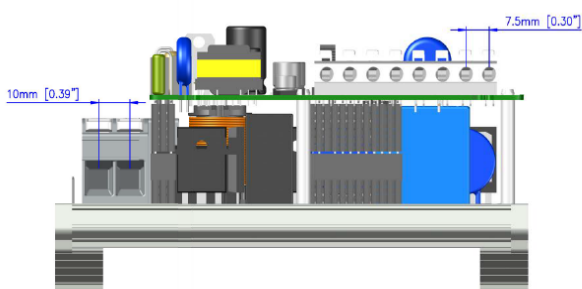
HDMS

Technical data

Operational voltage:	110 - 230 VAC (-15%, + 10%)
Operational frequency:	50 / 60 Hz
Operational current:	12/25/32/37 Arms
Start signal:	
Voltage control:	110 - 230 VAC
Modbus control:	Yes (optional)
Mounting:	DIN or Panel
Operating temperature	-20°C to + 65°C (-4°F to 149°F)
Overload cycle:	150% for 1 second*
Maximum Starts per hour:	10

Relay outputs	2
Function	Alarm, Top of ramp
Terminals	Push-in
Communication protocol	
Modbus	2-wire (over RS485)
Function	Configuration Real-time variable measurement Data download (32 starts) Start/Stop command
NFC	
Function	Data Download: Initial 8 starts Last 24 starts Alarm events download Alarm troubleshooting

* Model dependent



Selection guide

Rated operational current	Operational voltage	Versions	Ordering code	
			(Mounting: Panel)	(Mounting: DIN)
12 Arms 25 Arms 32 Arms 37 Arms	110 - 230 VAC	No Modbus	HDMS2312G0V20	HDMS2312G0V21
		Modbus	HDMS2312G0V20C	HDMS2312G0V21C
			HDMS2325G0V20C	HDMS2325G0V21C
			HDMS2332G0V20C	HDMS2332G0V21C
			HDMS2337G0V20C	HDMS2337G0V21C

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