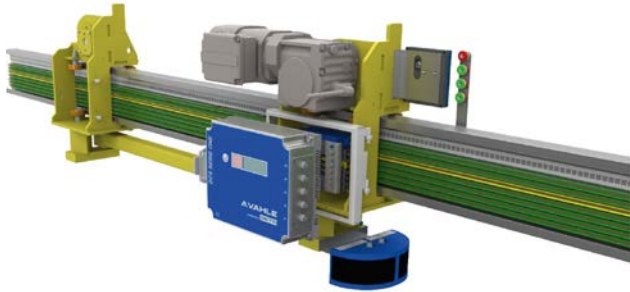




vDRIVE – CONTROL SYSTEMS DCS1



vDRIVE – KEY HIGHLIGHTS



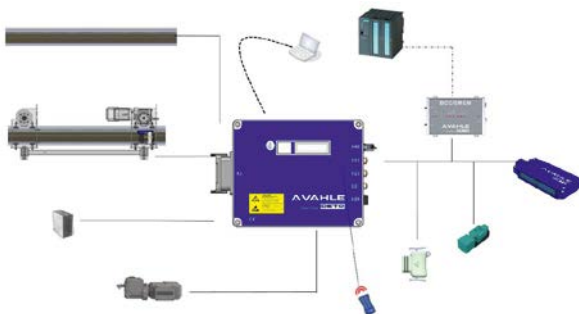
COMMUNICATION

Communication between stationary and mobile consumers becomes a more important role in automated processes. VAHLE vDRIVE systems provide many different communication systems to ensure the best solution for your application. The options include the half wave bus, rail bus and VAHLE SMGM – the exclusive slotted microwave guide mini solution.



SYSTEM

VAHLE vDRIVE system provides a wide range of power stages between 0.75 kW and 1.5kW which offers a perfect match up for any Electrified Monorail System (EMS). Additionally, a wide range of I/O allows a maximum flexibility in any application. The vDRIVE portfolio also includes equipments for positioning, distance control and communication.

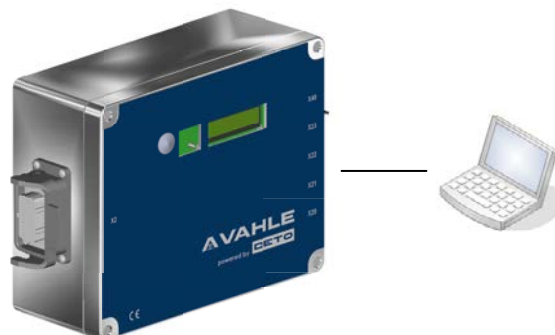


CERTIFICATIONS

VAHLE vDRIVE fulfills all required standards and conforms to the 'Low Voltage Directive', EMC requirements and specific test methods, and the Electromagnetic Compatibility Regulations.

STATUS INFORMATION

Every vDRIVE DCS system is delivered with a two row OLED display to offer an on demand status and further operational information. DC link voltage, actual current, temperature, frequency or communication stats can be called up at any time. For maintenance, a computer can be added via a USB connection to the control system. With the VAHLE vDRIVE EMS configurator, internal stored data and parameters can be read, rewritten or saved for monitoring.

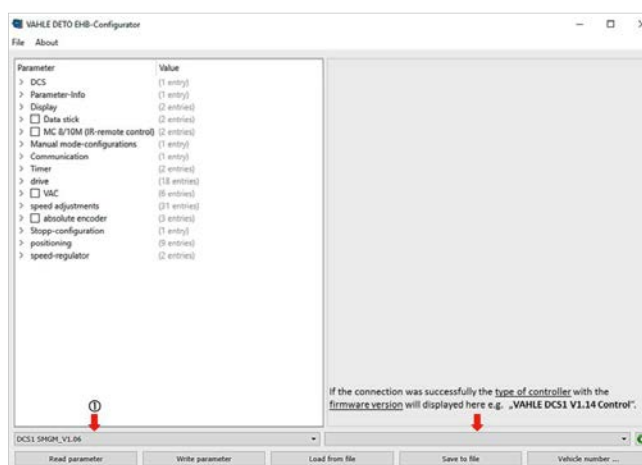


MANUAL SERVICE

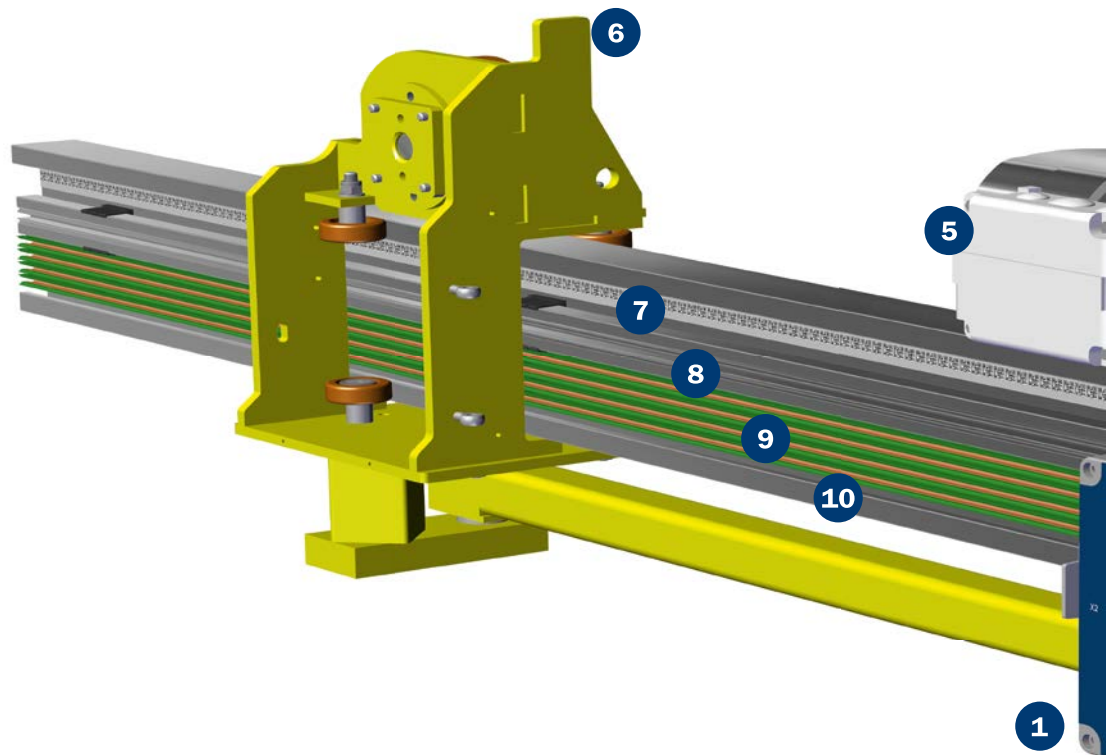
For convenient maintenance, VAHLE offers an exclusive infrared remote control. Developed for vDRIVE especially, the remote control enable a simple navigation to access any required internal information in a short amount of time.

CONFIGURATOR

VAHLE vDRIVE EMS configurator program allows control and monitoring for complete system performance. Important system parameter, such as electrical information, motor speed, and stop configuration, can be read and adapted. Faults and interferences can be recorded, allowing fast diagnostics and solutions.

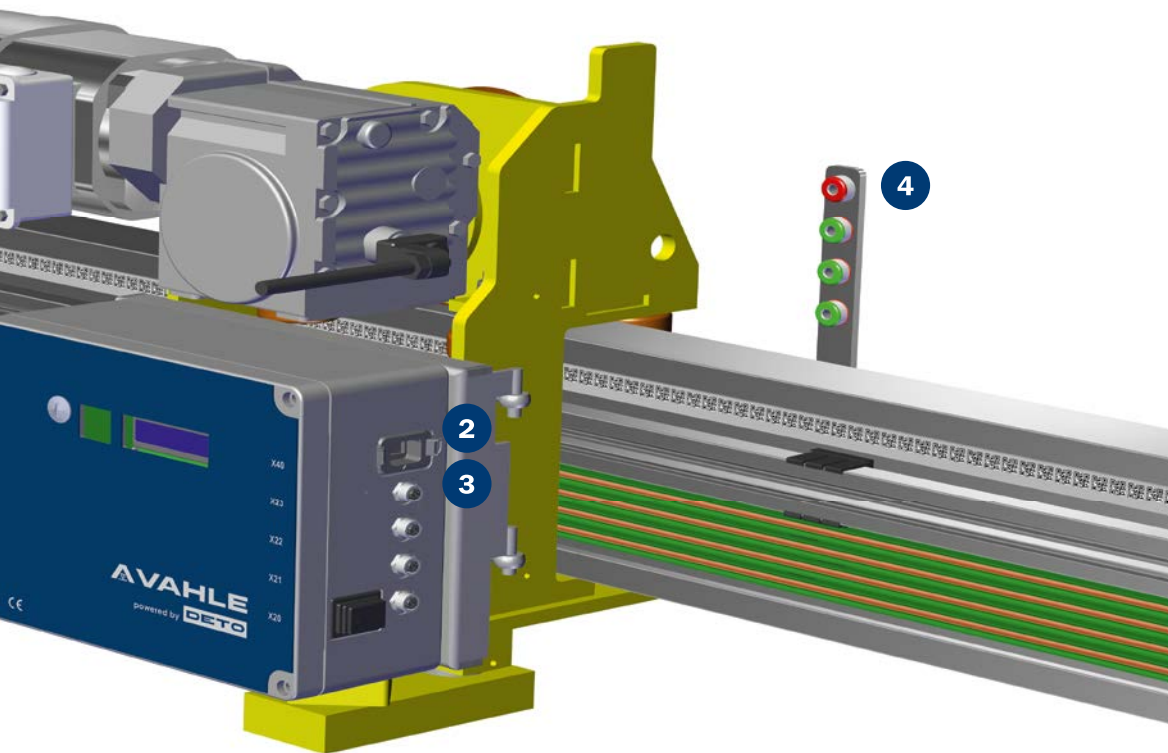


vDRIVE- SYSTEM OVERVIEW



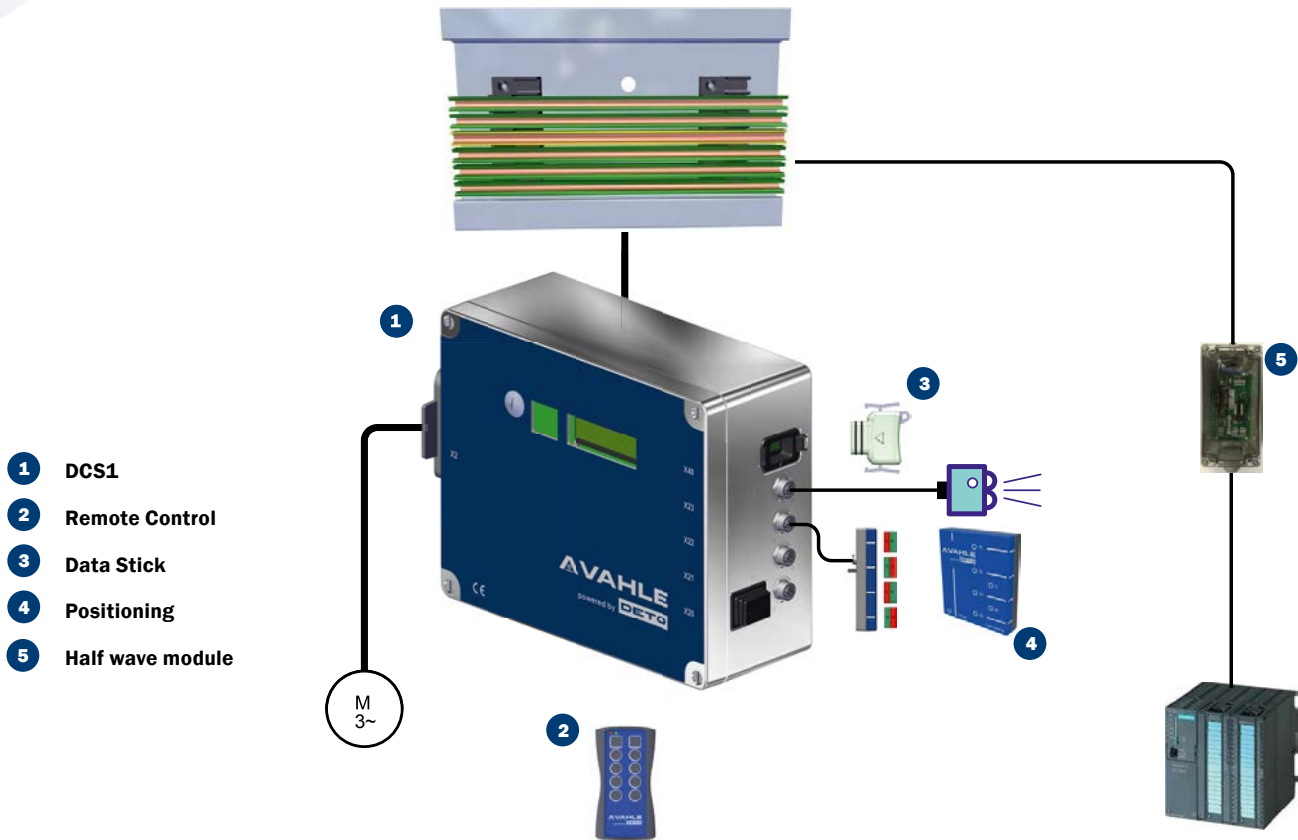
- | | |
|---|---|
| 1 DCS1 | 6 EMS Trolley* |
| 2 APOS Optic Reading Head (underlying) | 7 APOS Optic Codestrip |
| 3 Railbus Collector (underlying) | 8 SMGM Profile |
| 4 Positioning | 9 Electrical Monorail System U10 |
| 5 Motor* | 10 EMS Profile* |

* The EMS components are not part of VAHLE delivery scope.



DCS1

DCS1 - HW - HALF WAVE COMMUNICATION



RANGE OF PRODUCTS

Description		Order No.
vDRI_DCS1-075-HW-02	Control System with 0.75kW frequency inverter and half wave communication	10018098
vDRI_DCS1-110-HW-02	Control System with 1.1kW frequency inverter and half wave communication	10018099
vDRI_DCS1-150-HW-02	Control System with 1.5kW frequency inverter and half wave communication	10018100
vDRI_IC-CC-C V1.1	Curve Block Control System 400 VAC 1 x Input / 1 x Output	10011374
vDRI_IC-CC-C V1.2	Curve Block Control System 400 VAC 1 x Input / 2 x Output	10013168
vDRI_IC-SB-D V1.1 400	Separating block control system, Plug Configuration X1: Solid Shaft Malfunction 400 VAC	10013234
vDRI_IC-SB-D V1.2 400	Separating block control system, Plug Configuration X1: Negative Solid Shaft Malfunction 400 VAC	10011373
vDRI_IC-SB-D V1.1 480	Separating block control system, Plug Configuration X1: Solid Shaft Malfunction 480 VAC	10013169
vDRI_IC-SB-D V1.2 480	Separating block control system, Plug Configuration X1: Negative Solid Shaft Malfunction 480 VAC	10013357
vDRI_MC8/10M	Remote Control for DCS	0777006
vDRI_DS-VD	Data Stick for DCS	10010330
vDRI_EMD4P	Positioning	0777004
vDRI_IC-HW-1K	Half wave module stationary	10010345

TECHNICAL DATA

Power Specification

Nominal power.....	0.75kW/1.1kW/1.5kW
Supply voltage.....	400 ... 480VAC $\pm 10\%$ 3 phase symmetric
Supply net system	TT, TN (grounded neutral)
Inrush current peak.....	6A
Supply frequency.....	45 ... 65 Hz
Output current nominal	1.8A/2.6A/3.5A
Output current peak (60s).....	3.0A/4.0A/5.0A
Output frequency.....	0 ... 120 kHz
Power loss	22W/40W/60W
Auxiliary (external Sensors)	24VDC, $\pm 10\%$, 0.5A
Nominal voltage break.....	185VDC
Maximum current break.....	0.5ADC

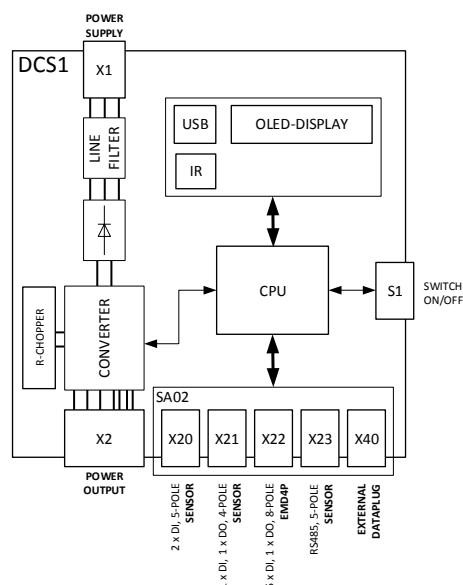
Mechanical Specification

Dimension*	280x230x110mm
Ambient temperature	0 ... + 40 °C non-condensing
Shock	3M4
Vibration	7M2
Environment.....	General industrial
Cooling.....	Convection
Protection rating.....	3K3 (-10...+45 °C) @ 100% duty 3K3 (-0...+50 °C) @ 70% duty
Connection Power X1	VAHLE connector
Connection Motor X2	Harting HAN10B, 10-pole+PE
Adapter for I/O	SA02

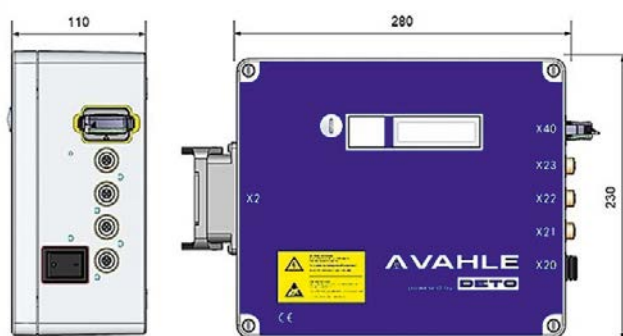
Communication

Broadcast.....	Conductor bar
Technology	Coil
Absolute address participant	n/a
Max. participants/segment.....	n/a
Data rate	n/a
Transmission.....	n/a
Fieldbus mobile	n/a
Equipment (stationery/mobile)....	Integrated in DCS
Positioning.....	EMD4P

BLOCK DIAGRAM



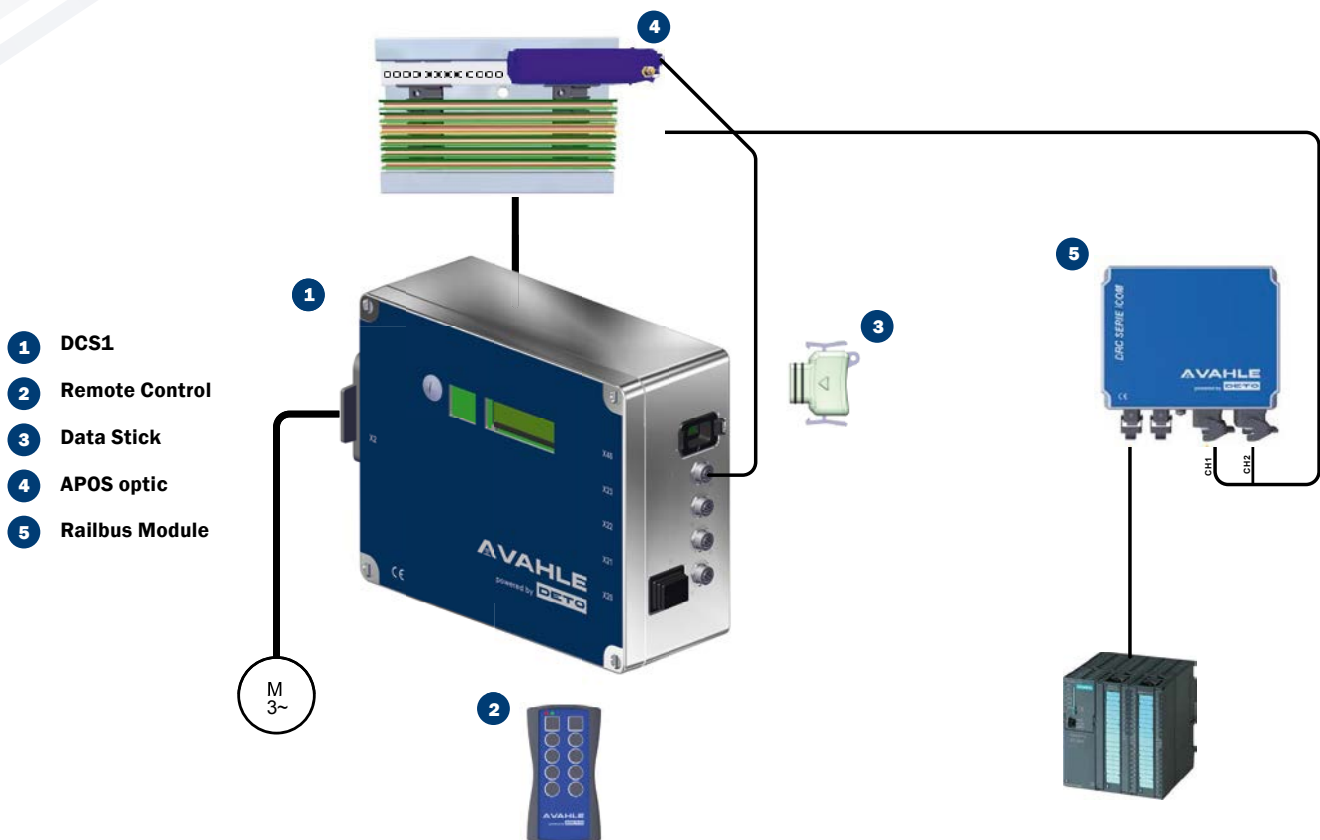
DIMENSIONS



* Please notice the different dimensions of DCS with 1.5kW nominal power: 280x230x140mm.

DCS1

DCS1 - RB - RAILBUS



RANGE OF PRODUCTS

Description		Order No.
vDRI_DCS1-075-RB-02	Control System with 0.75kW frequency inverter and half railbus communication	10018095
vDRI_DCS1-110-RB-02	Control System with 1.1kW frequency inverter and half railbus communication	10018096
vDRI_DCS1-150-RB-02	Control System with 1.5kW frequency inverter and half railbus communication	10018097
vDRI_IC-SB-D V1.3 400	Separating block control system, Plug Configuration X1: Malfunction signaling contact N.C. 24 VDC, 400 VAC	10013361
vDRI_IC-SB-D V1.2 480	Separating block control system, Plug Configuration X1: Malfunction signaling contact N.C. 24 VDC, 480 VAC	10013362
vDRI_MC8/10M	Remote Control	0777006
vDRI_DS-VD	Data Stick	10010330
APOS Optic	See vPOS catalogue	
vDRI_IC-PCB-2k-PN	Railbus Module Stationary	10011521
vDRI_Functionbloc/TIA_Portal	Option	

TECHNICAL DATA

Power Specification

Nominal power.....	0.75 kW/1.1 kW/1.5 kW
Supply voltage.....	400 ... 480VAC $\pm 10\%$ 3 phase symmetric
Supply net system	TT, TN (grounded neutral)
Inrush current peak.....	6A
Supply frequency.....	45 ... 65 Hz
Output current nominal	1.8A/2.6A/3.5 A
Output current peak (60s).....	3.0A/4.0A/5.0A
Output frequency.....	0 ... 120 kHz
Power loss	22W/40W/60W
Auxiliary (external Sensors)	24VDC, $\pm 10\%$, 0.5A
Nominal voltage break.....	185VDC
Maximum current break.....	0.5ADC

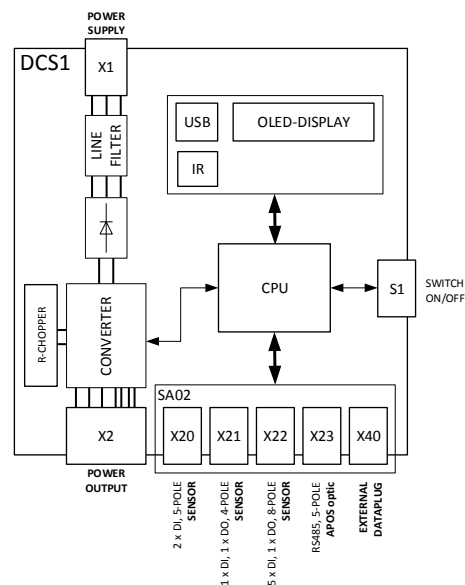
Mechanical Specification

Dimension*.....	280x230x110 mm
Ambient temperature	0 ... + 40 °C non-condensing
Shock	3M4
Vibration	7M2
Environment.....	General industrial
Cooling.....	Convection
Protection rating.....	3K3 (-10...+45 °C) @ 100 % duty 3K3 (-0...+50 °C) @ 70 % duty
Connection Power X1	VAHLE connector
Connection Motor X2	Harting HAN10B, 10-pole+PE
Adapter for I/O	SA02

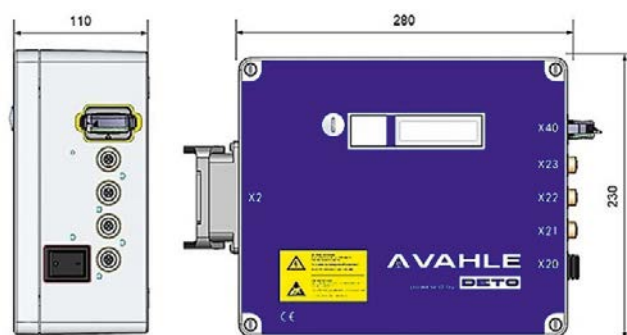
Communication

Broadcast.....	Conductor bar
Technology	Coil
Absolute address participant	n/a
Max. participants/segment.....	n/a
Data rate	n/a
Transmission.....	n/a
Fieldbus mobile	n/a
Equipment (stationery/mobile)....	Integrated in DCS
Positioning.....	APOS Optic

BLOCK DIAGRAM



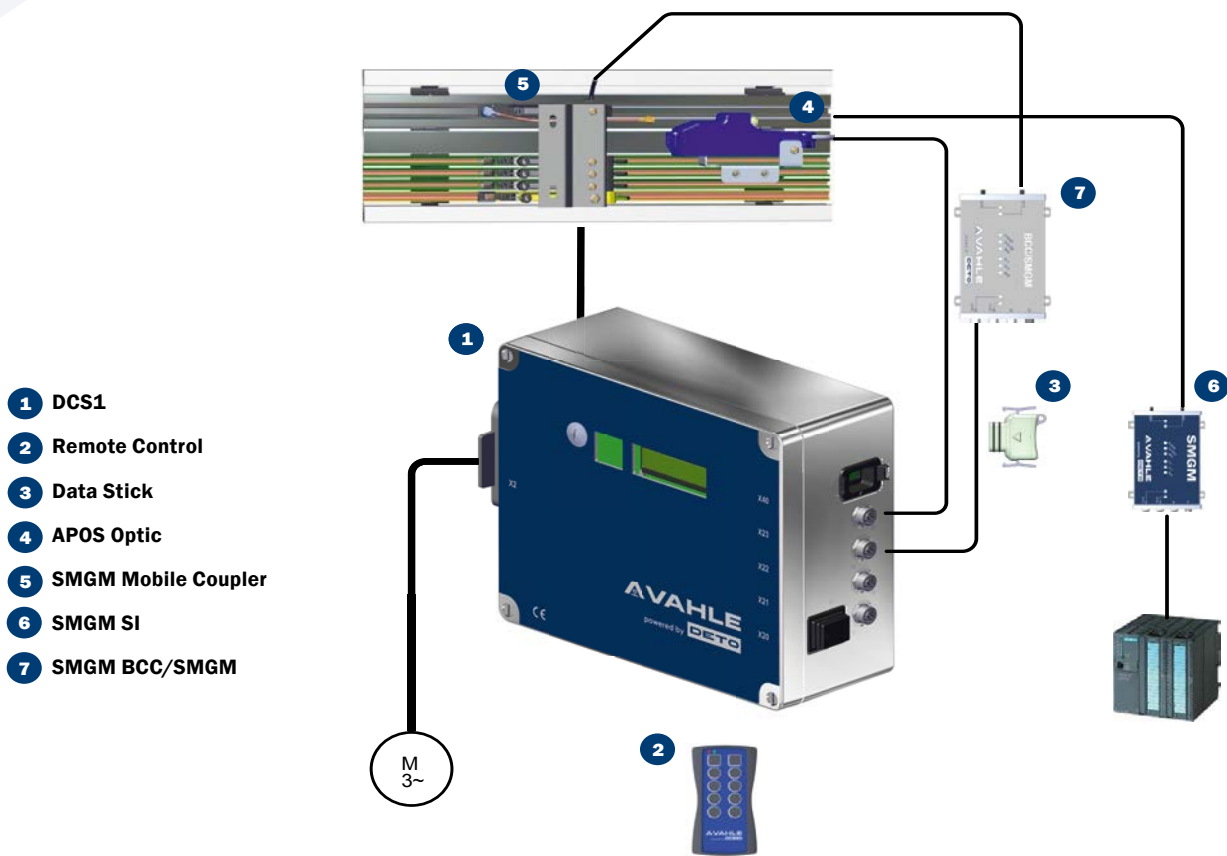
DIMENSIONS



* Please notice the different dimensions of DCS with 1.5 kW nominal power: 280x230x140 mm.

DCS1

DCS1 - SMGM - SLOTTED MICROWAVE GUIDE MINI



RANGE OF PRODUCTS

Description		Order No.
vDRI_DCS1-075-SMGM-06	Control System with 0.75kW frequency inverter and SMGM communication	10018101
vDRI_DCS1-110-SMGM-06	Control System with 1.1kW frequency inverter and SMGM communication	10018102
vDRI_DCS1-150-SMGM-06	Control System with 1.5kW frequency inverter and SMGM communication	10018103
vDRI_MC8/10M	Remote Control	0777006
vDRI_DS-VD	Data Stick	10010330
APOS Optic	See vPOS catalogue	
SMGM	See vCOM catalogue	

TECHNICAL DATA

Power Specification

Nominal power.....	0.75 kW/1.1 kW/1.5 kW
Supply voltage.....	400 ... 480 VAC \pm 10 % 3 phase symmetric
Supply net system	TT, TN (grounded neutral)
Inrush current peak.....	6 A
Supply frequency.....	45 ... 65 Hz
Output current nominal	1.8A/2.6A/3.5A
Output current peak (60s).....	3.0A/4.0A/5.0A
Output frequency.....	0 ... 120 kHz
Power loss	22 W/40 W/60 W
Auxiliary (external Sensors)	24 VDC, \pm 10%, 0.5 A
Nominal voltage break.....	185 VDC
Maximum current break.....	0.5 ADC

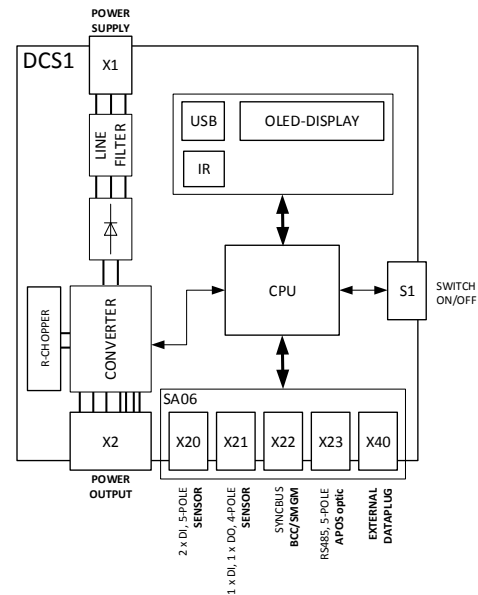
Mechanical Specification

Dimension*	280x230x110 mm
Ambient temperature	0 ... + 40 °C non-condensing
Shock	3M4
Vibration	7M2
Environment.....	General industrial
Cooling.....	Convection
Protection rating.....	3K3 (-10...+45°C) @ 100% duty 3K3 (-0...+50°C) @ 70% duty
Connection Power X1	VAHLE connector
Connection Motor X2	Harting HAN10B, 10-pole+PE
Adapter for I/O	SA06

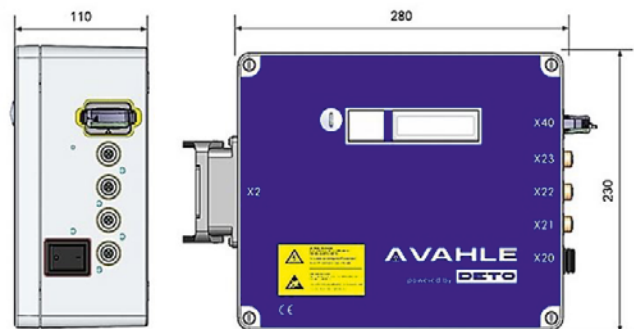
Communication

Broadcast.....	Slotted waveguide
Technology	Reading head
Absolute address participant	n/a
Max. participants/segment.....	n/a
Data rate	n/a
Transmission.....	n/a
Fieldbus mobile	n/a
Equipment (stationery/mobile)....	Integrated in DCS
Positioning.....	APOS Optic

BLOCK DIAGRAM



DIMENSIONS



* Please notice the different dimensions of DCS with 1.5 kW nominal power: 280x230x140 mm.



Paul Vahle GmbH & Co. KG

Westicker Str. 52
59174 Kamen
Germany

Tel.: +49 2307 704-0
Fax: +49 2307 704-444
automation@vahle.de

www.vahle.com