

DC 10

DATA SHEET

Description

The digital control DC 10, smallest member of the controller series ORION comprises a complete and efficient governor for speed and load control of small size combustion engines. It is able to drive HEINZMANN's direct working small range actuators in 2Q-operation. Power connection of an actuator is made up by a cable moulded with DC 10. Signal input and communication is done via a Tyco-type plug. DC 10 is designed and optimised to act in concert with high precision inductive feedback with PWM output. So it can serve as positioner control combined with appropriate actuators as well.

Small in size it is intended for direct engine mounting.

DC 10 offers two separate speed pickup inputs, inductive or Hall type.

External communication is possible via integrated CAN bus for configuration and parametrisation.

Additional inputs allow extended control features, e.g. limitation functions or monitoring of engine temperatures.



Features

Two separate speed pickups possible

Overspeed protection

Ensuring optimum engine behaviour and performance

Speed dependent monitoring functions with or without engine stop

Communication via CAN

2Q-operation

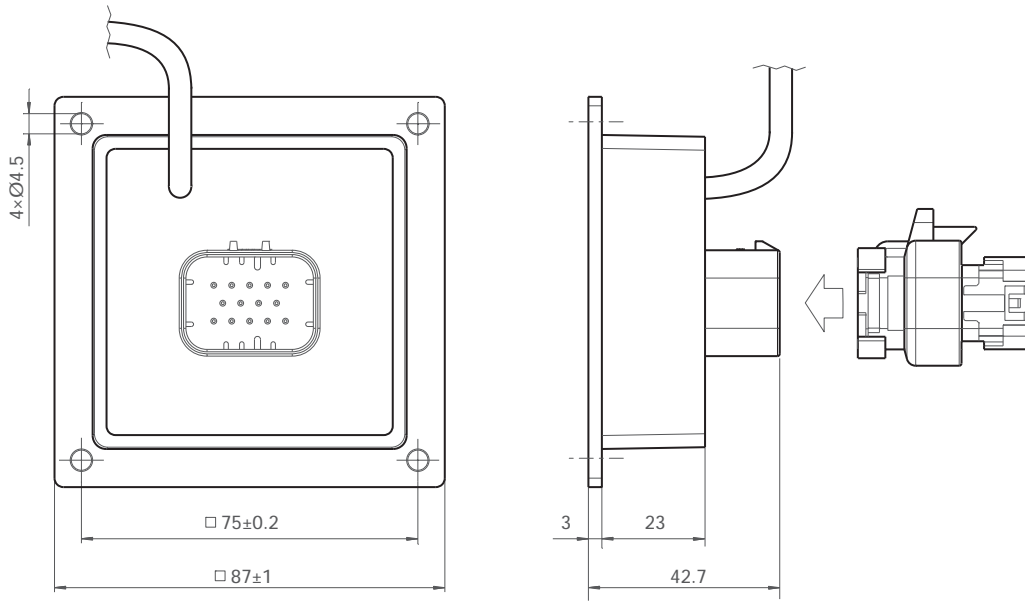
Actuators

- StG 3005/3010
- LA series

Applications

- Diesel engines
- Gas engines
- Genset applications
- Positioners

Dimensions



Technical data

General specification	
Supply voltage	7 ... 32 VDC (nom. 12 or 24 VDC)
Current consumption	up to applied actuator nom. < 3 A, max. 6 A for 60 s
Protection grade	IP6K9K / IP67, depending on version
Ambient temperature	-40 ... +105 °C
Storage temperature	-40 ... +125 °C
Permissible ambient humidity	< 98 % at 55 °C
Vibration	10 ... 20 Hz < 1.75 mm 21 ... 45 Hz < 0.24 m/s 46 ... 2000 < 7g
Shock	30g, 11 ms half sine

I/O specification	
Pickups	1× inductive, 0.3 ... 30 Vpp, 15 ... 9000 Hz 1× Hall type, $U_{low} < 1.2V$, $U_{high} > 5.5V$, 1 ... 9000 Hz
Sensor supplies	1× 5 V < 50 mA
Actuator output	2Q, 3.5 A continuous, 7 A for $t < 20$ s
Multifunktional ports (MFP)	
MFP 1	0 ... 5 V/4 ... 20 mA analogue input or binary input
MFP 2	0 ... 5 V/0 ... 10 V analogue input, binary input, 0 ... 5 V analogue output
MFP 5	0 ... 5 V analogue input, binary input, PWM input 50 ... 500 Hz, $U_{low} < 2V$, $U_{high} > 5V$ temperature input PT1000; NI1000; PT200; Bosch NTC DS-S2-TF; Jumo NTC 2K3A1-25, pickup 2 (Hall type)
MFP 6	0 ... 5 V analogue input, binary input, pickup 1 (inductive)
Only available in variants without CAN	
MFP 3	0 ... 5 V analogue input, binary input
MFP 4	0 ... 5 V analogue input, binary input
Communication	1× CAN not insulated, termination 120 Ω (not applied), CAN protocol: CAN 2.0B, ISO 11898, baudrate ≤ 1 Mbit/s
Configuration tool	HEINZMANN standard serial interface for HEINZMANN DcDesk
Wiring	Plug TYCO 14 pole

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