DriveSWing AVV-10

ATO over ETCS – onboard

- **Highly effective automatic system for railway vehicle operation in GoA2**
- **Interoperable solution meeting UNISIG / Shift2Rail specifications for GoA2 automation level**
- **Suitable for passenger trains (high speed, long-distance, intercity, suburban and regional)**
- **Suitable for freight trains**
- **Increased safety and traffic flow**
- **Traction energy and CO2 emissions savings**
- **Modular structure for different automation degrees up to GoA4**
- **Compatibility with ERTMS / ETCS**
- **Decreased demand on train driver – less stress, less faults**
- **Diagnostics of train set facilities**
- **Proven solution**

GENERAL DESCRIPTION

Automatic train operation DriveSWing AVV-10 (further AVV-10) is the system designed for automation of railway vehicle operation.

AVV-10 has been proven by commercial operation for more than 30 years on main and regional lines and in more than 300 railway vehicles.

AVV-10 is used for automatic target braking and energy optimization.

The optional part of AVV-10 is central vehicle regulator CRV providing automatic regulation of speed, traction control, brake control, interaction of dynamic brake with the automatic brake and multiple control of train vehicles.

DPV is designed for diagnostic of respective train vehicle and other vehicles / carriages of train set.

BASIC TECHNICAL DESCRIPTION

AVV-10:

- respecting of line, scheduled and signalised speed
- automatic braking to restricted speed sections and to stopping points
- automatic stopping with high accuracy at platforms of relevant stations and stops
- high level of time keeping and energetically optimum driving to target
- traction energy saving
- compatibility with ETCS according to TSI specifications (2022) for „ATO over ETCS“
- compatibility with national ATP (Automatic Train Protection) of class B
- variant for regional lines - completely without trackside part (GPS location)

CRV:

- aperiodic achieving of required speed in the earliest possible time
- very precise keeping of required speed (± 1 kmph)
- priority use of dynamic brake, automatic air brake control
- delayed selection of higher speed by set length of train set (train leaving restrictive speed section)
- keyboard for speed selection

DPV:

- collection, evaluation and display of data from AVV-10 and other systems

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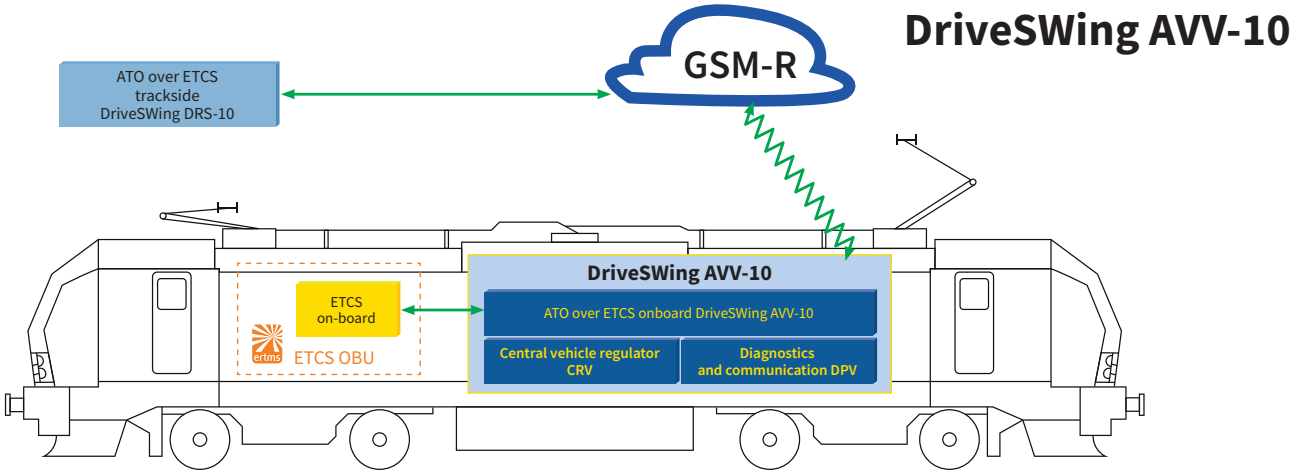
(drive, auxiliary drives, door computers, heating, WC, fire alarm, etc.)
- transmission of signals to / from other train set carriages / vehicles
- vehicle / carriage facility control (interior lighting, information system, doors, etc.)
- detection and display of train set, calculation of length, weight and train set braking percentage
- black box for storage of failure messages and selected operating data
- retroactive data record
- Possibility of wireless transmission of data to remote server for further analysis
- interface for service PC
- multilingual design of HMI

BASIC TECHNICAL PARAMETERS

Power supply	according to vehicle power network
Temperature range	OT4
Climatic resistivity	EN 50 155
Speed maintaining accuracy	± 1 kmph
Stopping accuracy at station	typically ± 0,5 m
Arrival time accuracy	typically ± 5 s
Traction energy saving	typically 10 % to 30 %
Service life	minimum 25 years



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