



ŠKODA ELECTRIC s.r.o.



SKODA 25Tr IRISBUS is a new high-capacity low-floor trolleybus using the advantages of progressive electrical equipment SKODA and a body of an 18-metre articulated bus AGORA City Bus from the production of the IRISBUS Group.

The long-term operation-verified asynchronous traction motor SKODA 18ML 3550 K/4 with rated output 240 kW, used in SKODA trolleybuses and also in vehicles of many other world producers, it is equipped with a gearbox with constant gear ratio and it is supplied from a regulated inverter on the basis of IGBT transistors. This inverter also provides the function of an electro-dynamic brake so that the braking energy is primarily recuperated back into the trolley and if the trolley conditions do not allow that, it is wasted in the brake resistor. The sufficient braking moment is meanwhile secured during the entire time of braking down to the zero speed of the vehicle.

A significant reserve of the traction motor power gives the vehicle excellent travel dynamics even up the hill, while the principle of regulation of the traction drive allows for achieving a high level of travel comfort.

Supply of the asynchronous auxiliary drives (compressor, auxiliary pump etc.) and charging of the on-board battery 24V is secured by static semiconductor converters, whose outputs are galvanically separated from the trolley voltage.

The electric equipment is mostly placed in a container on the roof. In the rear motor space there can be a supply source of an auxiliary trolleybus drive placed upon the customer's request (diesel-generator or traction accumulator battery) that allows for travel of the vehicle during an outage of trolley voltage or in sections without trolley line.

The trolleybus is standard-equipped with semiautomatic trolley collectors; cheaper manually controlled collectors can be used on the customer's request (only with the version without an auxiliary drive). Also on the customer's request the trolleybus can be equipped with switch resistor or controller of radio-controlled switches.

The trolleybus is fitted with hot-water heating with electric flow water heater, supplied by trolley voltage 600 / 750 V DC. The heating elements of the heater have double electrical insulation.

The electric equipment of the trolleybus SKODA 25Tr IRISBUS is unified in the maximum possible rate with the electric equipment of the 12-m trolleybus SKODA 24Tr.

A significant advantage of the trolleybus SKODA 25Tr IRISBUS is maintaining a very high level of unification with buses AGORA City Bus, which will be appreciated especially by transport companies operating trolleybus and bus transport while using the stated type of vehicle. This unification allows for using widely distributed servicing network of IRISBUS or Karosa.

SKODA 25 Tr IRISBUS



Traction motor 18 ML 3550 K/4



Roof unit (container)

Technical data

Trolleybus

Length/width/height	17 800/2 500/3 580 mm
Length with collectors pulled down	18 400 mm
Outer turning circle diameter	23,4 m
Ramp clearance front / rear	7° / 7°
Curb weight (basic)	17 700 kg
Total weight	28 000 kg
- on the front axle	6 500 kg
- on the middle axle	10 000 kg
- on the rear axle	11 500 kg
Passenger capacity sitting (without driver)	
standing	40 / 110
Maximum speed (setting limit)	65 km/h
Height of the passenger entrance	
- in the both front doors	320 mm
- step in the both rear doors	330 mm

Chassis

Front axle	RENAULT E 70 XH
Middle axle	RENAULT EM 10 A
Rear axle	ZF AV 132.80, portal type
- rear axle total gear ratio	5,74
Suspension	air type
Power steering	ZF Servocom 80/98

Traction motor

- asynchronous, type	SKODA 18 ML 3550 K/4
- nominal power	240 kW
- cooling	forced air – external fan
- insulation class	200

Trolley collectors

- standard	TSS 2.1, semi automatic
- on request	TSS 1.1, manual

Roof unit (container)

- type	SJ 2.1
- nominal voltage	600 / 750 V DC

Traction drive inverter

- nominal power	225 kVA
- output voltage	3AC 0 – 420 V
- nominal output current	310 A
- maximum output current	500 A
- output frequency	0 – 150 Hz

Auxiliary drives converter

- nominal power	10 kVA
- maximum power	12,5 kVA / 30 min
- output voltage	3AC 400 V
- nominal output frequency	50 Hz ± 1%

Battery charger

- nominal output voltage	27,5 V DC
- nominal output current	220 A DC
- maximum output current	300 A / 1 min

Brake resistor

- nominal resistance	2 x 1,3 Ω
- nominal current	2 x 400 A DC
- maximum current	2 x 500 A DC

Auxiliary devices

Air compressor	5,5 C OPEN DD
- producer	Worthington – Creyssensac / Orlik

Power steering hydraulic pumps

- main	ZF, piston type
- auxiliary	BOSCH- REXROTH, tooth type

Diesel-generator (on request)

- type	APU 100 DIPME
- producer	Kirsch, GmbH
- nominal power	100 kW
- diesel engine	IVECO DIESEL K13NEF
- fuel tank capacity	240 l

Traction battery (on request)

- cell type	NiCd - sintrované
	STH600RC
- producer	Saft Bordeaux
- total number of cells	132
- battery nominal voltage	158 V
- nominal capacity	60 Ah
- minimal range	1 km
(speed 15 km/h, level surface)	



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