

SOLUTION FOR NEW-GENERATION LOCOMOTIVES

COUPLER UNIT ZW-4LOK

GSN-4Lok RECEPTACLE + ASWP-4Lok DOUBLE-PLUG CABLE

The **GSN-4Lok** receptacle and the associated **ASWP-4Lok** double-plug cable represent a variant of **ZW-2** train heating coupler unit dedicated to new-generation locomotives where now, instead of the former distribution box with a cable and plug and an ASO Dummy Receptacle, only the second identical socket is used at the face of the locomotive, to its left-hand side, and the auxiliary equipment is a double-plug cable to be used when there is a need for emergency connection between the locomotive and a carriage. As the solution used so far has a significant fault related to the electric shock hazard in the event when the double-plug cable insulation gets damaged, FAE FANINA S.A. has developed a solution consisting of **GSN-4Lok** Receptacle and **ASWP-4Lok** cable, which completely eliminates the electric shock hazard, as it makes the earthing circuits be connected before the current circuits during the operation of joining the coupler.

The **GSN-4Lok** receptacle is fitted with a double earth contact, and its earth contacts are connected with earthed socket housing.

The **GSN-4Lok** receptacle does not receive a typical ASWP plug compliant with UIC 552 standard; only the special plug with a double earth contact that the cable's earthing wire and plug handle are joined to can be connected. This imposes proper connection and correct sequence of connecting the coupler.

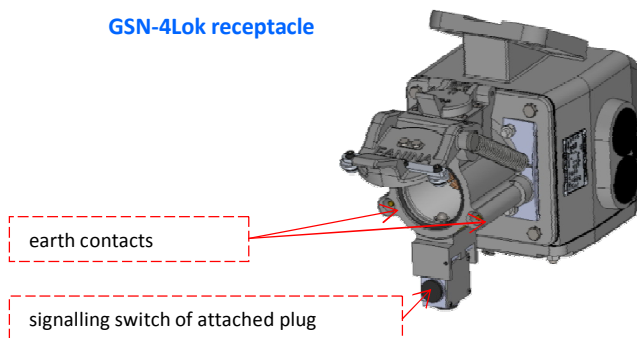
Such a connection is used in case of an emergency when there is no possibility to connect heating circuits using the right (typical) locomotive socket that the cable with plug is connected to during normal operation.

The **GSN-4Lok** receptacle also fulfils all functions of a typical GSN Receptacle with signalling switch of attached plug.



GSN-4Lok receptacle	
Permissible permanent current load	
Range of ambient temperature:	Current „I” (A)
below -10°C	800
-10°C ÷ 15°C	600
15°C ÷ 30°C	500
30°C ÷ 50°C	400
Other technical data	
Rated voltage	3kV for direct or alternate current
Test voltage	12kV for 1 minute
Protection class	IP55
Weight	11,5 kg

GSN-4Lok receptacle



ASWP-4Lok is a special double-plug version of the heating coupler connector where one plug is dedicated to connection with **GSN-4Lok** receptacle mounted on the left-hand side of locomotive (with earth contacts) and the other one is a standard plug in compliance with UIC 552 card. The connector consists of HV cable with the main conductor of 1 x 185mm² and the earth conductor of min. 25mm², which prevents from electric shock if voltage appears in the handle.

When connecting the heating circuits with this set, first should be connected plug to the receptacle GSN-4Lok. The imposed sequence of connecting the earthing circuits before the current ones ensures safety to the operator. In case of a damage to the cable or plug insulation. The second (typical) plug of the cable should be connected to the receptacle of the second (supplied) vehicle.

ASWP-4Lok cable

