

drive/brake controller VNS0

Applications

- * human-electrical-interface for urban transportation vehicles, e.g. tram
- * setpoint master controller for railway applications:
locomotives, track construction machines, power units,...

Features

- * version for fitting in driver console
- * modular ergonomic construction for rough operating environment
- * long life design for high reliability, practically tested since years
- * resistant against ozone, UV-radiation
- * slotcover with or without brush

Options

- * series- and client-specific versions
- * special frontplates, e.g. with armrest
- * controller deliverable with momentary positions, notching positions or stepless, combinations also possible
- * contact sequences according to customer specifications
- * T-, ball-, knob- or mushroom-handles with additional functions for deadman, horn,...
- * possibility of driver monitoring by driver:
e.g., pushing or turning handle, activating pushbutton or sensor
- * mechanical interlock of lever
 - * different practically tested switching elements (cam operated):
 - * dependent positive action, forced brake
 - * independent positive (snap) action, forced brake
- * coupled potentiometer, transmitter for potentiometer
- * coupled optoelectronic encoder with code, voltage or current output
- * CAN-Bus-interface,
- * wiring acc. customer specification on terminals or connectors for quick installation

Technical data

- * rated insulation voltage $U_i = 400V$
- * electrical ratings with microswitches (S800 or S826):

voltage	current: S800	S826
* AC15: $U_e = 230 V-50/60 Hz$	- $I_e = 3 A$	$1 A$
* DC13: $U_e = 110 V$	- $I_e = 1 A$	$0,5 A$
- * contact elements IP40
- * mechanical life time up to 10 mio. cycles
- * rated insulation voltage: 4 kV
- * pollution degree 3
- * electrical ratings with double contact elements NS053KB:

rated operational voltage	rated operational current
* AC12: $U_e = 230 V-50/60 Hz$	- $I_e = 16 A$
* AC15: $U_e = 230 V-50/60 Hz$	- $I_e = 6 A$
* DC12: $U_e = 24 V$	- $I_e = 1,7 A$
* DC13: $U_e = 24 V$	- $I_e = 1,1 A$
- * mechanical life of drive up to 20 mio. cycles
- * protection on front (DIN EN 60529) IP40...IP54
- * maximum lever deflection $\pm 45^\circ$
- * maximum number of lever position 7-0-7
- * ambient temperature range $-20^\circ C \dots +60^\circ C$
- * regulations
 - * IEC60947-1, DIN EN 60947-1, VDE 0660 part 100
 - * IEC60947-5-1, DIN EN 60947-5-1, VDE 0660 part 200
 - * tested acc. to EN50155 10.2.3 (EN60068-2-1, Ad $-35^\circ C$) cold
 - * tested acc. to EN50155 10.2.4 (EN60068-2-2, $+70^\circ C$) dry heat
 - * tested acc. to EN50155 10.2.5 (EN60068-2-30) humid heat
 - * tested acc. to critical frequency, vibration, shock
 - * encoder acc. to EN50121-3
 - * EN50155

