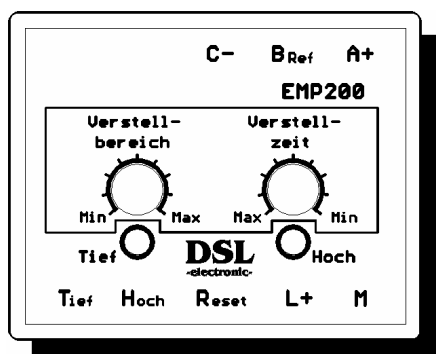


Electronic Potentiometer EMP200 with smaller steps (appr. 0,55mV / step)



Application

The Electronic Potentiometer EMP200 (also known as an electronic reference value potentiometer) is used for speed controls in the field of diesel generators in place of a so-called 'mechanical potentiometer'. The advantages of the unit are its high precision, the low wear and the large number of possible settings. With a wide voltage range from 12 to 24 VDC the unit delivers an output signal for many used motor control units. With new development the control steps could be reduced to 1 / 10 so the power adjustment is more accurate and no steps to be seen.

Function

After switch on of EMP200 an automatical reset is done and the output control voltage is set to reference value given by the type of motor control unit. This setting have to be made before working. The reference voltage is also be measured at the terminals B_{REF} to C (0V). A Reset can also be done with connecting terminals "Reset" and "M".

With "Tief" – "Hoch" inputs connected to "M" the output value moves either to Down (Tief) or Up(Hoch) voltage range. The ranges of voltage (Verstellbereich) or time (Verstellzeit) can be adjusted within wide ranges.

A steady signal on up or down inputs keeps a takt generator running who made small steps for change of output voltage which will be changing linear to time setting. For different types of control units a inverse setting is possible for voltage going up by input connecting to terminal Down (Tief) and vice versa for terminal Up (Hoch).

Types of Control Units

Internal Jumper Settings	SW1	SW2	SW3	Referenz C-..B _{Ref}
American Bosh ECD 67-5111 CU 671C	1000	0110	0010	6,0V
GAC ESD 5111 ESD 5131 ESD 5301	1000	0110	0010	6,0V
Volvo ESD 5131	1000	0110	0010	6,0V
Barbar Colman Serie 8000 DYN 1 10654-000-0-24	0010	1001	0000	4,0V

EFC Cummins					
30-62322	0010		1001	0000	4,0V
30-81313 (Digital)		0001	1001	0000	3,0V
Heinzmann					
KG6-04		0001	1001	0010	3,0V
Heinzmann (Delivery adjustment)					
E6+E10		0010	1001	0101	4,0V
Woodward Serie 1724/524					
8290-044		0000	1001	1001	7,5V
8290-038					
Woodward 2301					
Serie 8271 / 8272		0001	0110	0110	3,0V
Serie 9905					

Connecting Terminals

L+ : 12 - 24 V Auxiliary Voltage	Hoch : Input "Up"	A+ : Output Signal
M : Common Ground Potential für Aux., Up, Down and Reset	Tief : Input "Down"	C- : Output Ground
	Reset : Preset	

Technische Daten

Type	Electronic Potentiometer EMP200
Construction	Plastic housing on 35 mm hat rail as per DIN EN 50022
Material of housing	Bayblend FR 1439/0240 modified ABS with burning protection UL 94 VO
Dimensions, Weight	55x68x110mm (BxHxT), appr. 160 g
Auxiliary Voltage	12 - 24V – 32 VDC, + to L+, - to M
Potential Isolation	No potential separation between Aux.-Volage and Output
Power Consumption	< 1W
Running Time	150 sec. (Max)
Resolution of Reference	5%
Repeat Accuracy	1%
On Period	100 %
Connecting Terminals	Potentialfree, each Terminal 2 Wires up to 2,5 mm ²
Type of Protection	Housing IP 40 , Terminals IP 20 (VDE 0106T100/VBG4)
Environmentals	-10 °C bis +55°C, 95% Hum
General Regulations	EN 50 178 (Electrical Units in Power Current Installation)
Radio Interference	EN 55 022/B
EMV acc.	EN 61000 und EN V 50 140
Installation Position	beliebig
Maintenance	Maintenancefree

Example of connections

