

# EM-A1 OPTION CARD FOR SYMMETRIC CONTROL

EM-A1 is a small auxiliary PCB. It is designed to change control mode from unipolar to symmetric plus/minus control. This card makes it possible to use various Electromen driver cards with bipolar control. Card is only to be used with Electromen products which include the header socket for this EM-A1 option card.

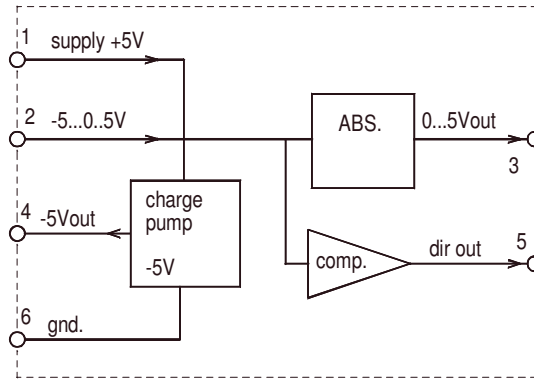
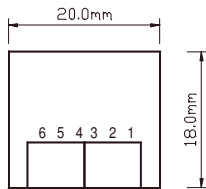
Also a symmetric potentiometer control is possible with EM-A1, as EM-A1 can supply negative voltage (-5V) for potentiometer. The negative voltage is usually made available from direction input terminal of the base card (option card EM-A1 plugged). Although EM-A1 option card uses +5V as full control scale, the different base cards can have possibilities for even wider control input ranges like +10V or even +30V. The base cards input scale adjustment trimmer (attenuation) can then be used for adjusting the control scale to be suitable for the application.

## Technical data

Supply 5-6Vdc  
 Current consumption max 10mA  
 Input impedance 1Mohm  
 Input voltage -5...0...5V  
 Dead zone  $\pm 20mV$  ( stop area )  
 Neg. supply output -5V ( 5mA max )  
 operating temp. -40...70°C

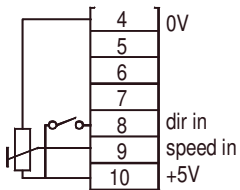
Can be used with products:

EM-151A  
 EM-176A  
 EM-206  
 EM-282

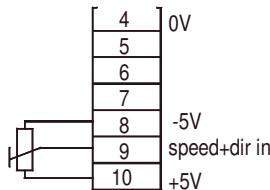


## Using examples

EM-176 "standard" no option card

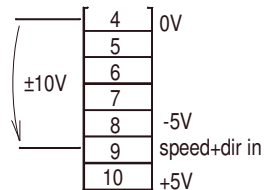


EM-176 "with EM-A1" and potentiometer control



"stop" in middle position

EM-176 "with EM-A1" symmetric voltage control



SPECIFICATIONS	CONTRACT NO.	DATE	COMPANY		
	DRAWN BY: K.M.K		9.10.13	ELECTROMEN OY	
	CHECKED BY: A.J.K	22.10.13	TITLE		
	DESIGNED BY:		EM-A1 option converter card		
	DESIGN ACTIVITY		SIZE	FSCM NO.	DWG NO. / FILE NAME
	CUSTOMER		A4		
			SCALE	DATE	SHEET
					1 of 1