ALFAZETA

Large 7 Bar Modules

General description

Alfa-Zeta Co. Ltd.
ul. Staroruzka 6a
93-418 Łódź, POLAND

tel. +48 42 689 12 00
tel. +48 42 689 12 01
tel. +48 42 689 12 02
fax: +48 42 689 12 03

info@alfazeta.pl
http://www.alfazeta.pl

For large numeric displays these modules offer the optimum in visibility, reliability, and economy. Consisting of 7 electromagnetic operated light reflecting segments, the module can display the digits 0-9, plus a limited selection of alpha characters. The character heights available are 100 mm—630 mm. Standard colors are white and yellow.

PRINCIPLE OF OPERATION

Electromagnetic displays work on a principle of reflected light. The selected flip element changes position according to the controlled change in the magnetic field of a closely coupled electromagnetic
coil. No energy is needed to keep this state. This state is kept by internal magnetic memory. The control signal simply reverses the direction of the current pulse through the coil that reverses the magnetic field of the coil.
The flip element remains in the position to which it was last turned until the coil field is reversed by another current pulse.

FEATURES and BENEFITS

VISIBILITY
The fluorescent, light-reflecting segments provide excellent visibility a wide range of ambient light conditions. Visibility increases with an increase in the ambient light level.

RELIABILITY
There are no lamps to burn out and no mechanical linkages to wear out. Each segment rotates on a stainless steel pivot for maximum reliability. The modules are highly resistant to shock and vibration which makes them also suitable for portable scoreboards and traffic control displays in high vibration environments.

ECONOMY
Power is only required to change the data displayed. Inherent magnetic memory in each segment retains the display indefinitely without power being applied.

Technical data

Supply voltage:	24V +50% -10% 36V +50% -10%
Power consumption:	approx. 0,5 A / segment / change
Working temperature:	-40° C do +75°C Ventilation required.
Relative humidity:	max 95% non-condensing
Srock resistance:	10g 50 MS
Vibration resistance:	amplitude ± 1 mm 5—13,3 Hz acceleration 6,8 m/s² 13,2—100 Hz
Impact resistance :	10g 6 ms, 1000 impacts

Average life expectancy:

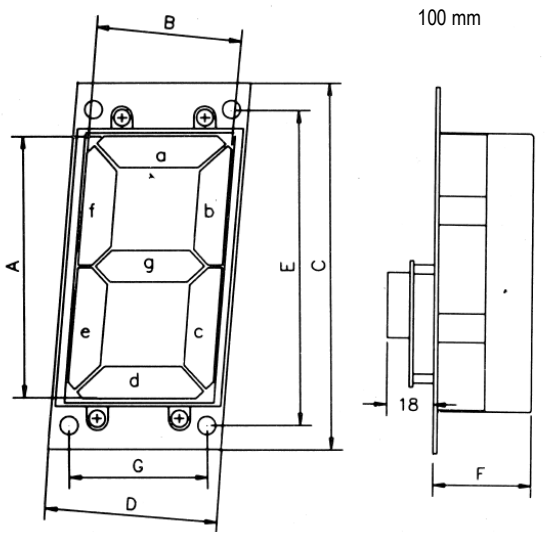
100 mm	30 mln operations
155 mm	30 mln operations
190 mm	30 mln operations
250 mm	30 mln operations
280 mm	30 mln operations
450 mm	20 mln operations
630 mm	20 mln operaions

Pulse length / coil resistance

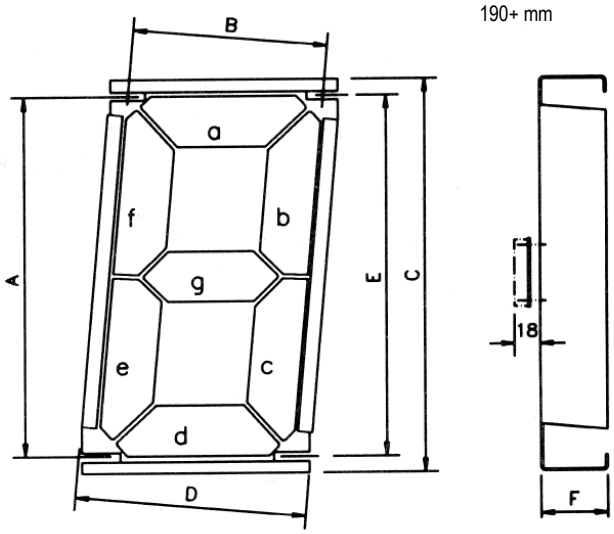
100 mm	50 ms / 56 Ω
155 mm	90 ms / 53 Ω
190 mm	90 ms / 53 Ω
250 mm	90 ms / 53 Ω
280 mm	90 ms / 53 Ω
450 mm	120 ms / 50 Ω
630 mm	250 ms / 26 Ω

Dimensions [mm]:

Module height	A	B	C	D	E	F	G	Weight
100 mm	100	56	140	65	120	38	50	0,13 kg
155 mm	155	100	178	119	155	50	-	0,50 kg
190 mm	190	105	215	130	195	50	-	0,65 kg
250 mm	250	140	270	161	250	50	-	0,7 kg
280 mm	280	150	305	175	280	50	-	0,85 kg
450 mm	450	250	473	273	450	56	-	1,25 kg
630 mm	630	350	654	374	630	76	70	3,1 kg



100 mm



190+ mm

100 mm—450 mm
Comon line

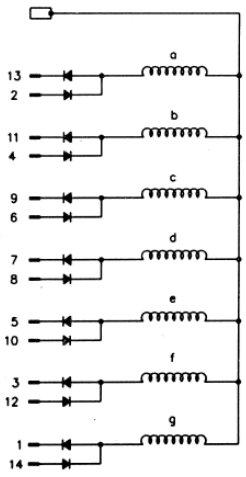
630 mm
Comon line

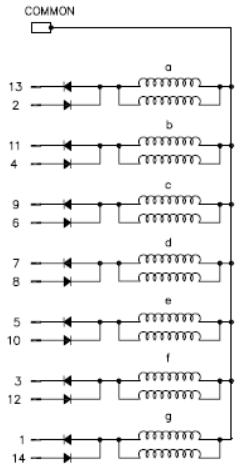
Connections

The display module has a 14-polar pin-connector for segments data. This polar pin connector is intended for flatcable plugs. A common line is used for the address lines.

Pin No.	Function	Polarity	Pin No.	Function	Polariza-tion
1	Segment g OFF	-	8	Segment d ON	+
2	Segment a ON	+	9	Segment c OFF	-
3	Segment f OFF	-	10	Segment e ON	+
4	Segment b ON	+	11	Segment b OFF	-
5	Segment e OFF	-	12	Segment f ON	+
6	Segment c ON	+	13	Segment a OFF	-
7	Segment d OFF	-	14	Segment g ON	+

The table show chich polarity the pin must hale to turn the segment ON or OFF.





The common line shall hale the follo-wing polarity:

Function	Polarity
ON	-
OFF	+