

MB 105

Optoelectronic coupler consisting of an infrared emitter diode in the input circuit and a planar npn-Si phototransistor in the output circuit.

Type 4

For pin assignment see MB 104

Limit values at $\bar{u}$ from -55 to 85 °C

Input temperature

		min.	max.	
Passage current ¹⁾ Peak flow current ¹⁾ per iodine	I_F		60	mA
1 Es, 2 min POuse)	I_{FSM}		3	A
	I_{FRFt}	-	120	mA
Blocking voltage	U_R	-	6	V
Peak blocking voltage	U_{GRM}	-	6	V

On request, the coupler can also be supplied with $U_{CG} = 35$ V (MB 105/5) and without base flange (MB 105/6).

Output circuit

Collector emitter voltage MB 105/4	CEM		70	V
MB j 03/5			35	V
MB 105/d			70	V
Emitter-Bos ¹⁾ voltage ¹⁾ Emitter-BoSiS-5 peak voltage ¹⁾	U_{EBO}		6	V
	U_{EB1-4}	"	6	V
Power dissipation ¹⁾ (transistor) Coupler	P_{tot}	-	150	mW
5peak insulation voltage ¹⁾ f s0 to 60 Hz sine Operating temperature Logger temperature	U_{IORM}		5,3	kV
	θ_{stg}	-55	85	°C
	θ_{stg}	-55	125	°C

Characteristic values bel $\bar{u}$ - 25 °C

Breakdown voltage at $I_F = 60$ mA	U_F	min	max	
			1,65	V
Blocking voltage be' U_R 6 V	I_R		10	μ A
Collector emitter dark current				
bei $U_{CE} = 10$ V $I_F = 0$	I_{CEO}		50	nA
$U_{CE} = 35$ V $I_F = 0$			10	μ A
$U_{CE} = 70$ V t MB j g3 '4			50	μ A
$I_F = 0$ T MB 105,6			100	μ A
Collector base dark current ¹⁾	I_{CBO}		100	μ A
ben $I_F = 0$, $U_{CB} = 70$ V			10	μ A
Emitter-collector dark(current)	I_{geo}		10	μ A
bel $I_F = 0$, $U_{EC} = 6$ V				
Collector-em itter current	$I_{CE(H)}$			
bel Ty 10 mA, $U_{CE} = -5$ V				
A		4,0	8,0	mA
B		6,3	12,5	mA
C		0,8	qo,0	mA
D		16,0	32,0	mA
E quf		24,0	49,0	mA
F / request		40,0	aT0	mA
for $O_F = 10$ MA, $U_{KE} = 0,3$				
A-F		2,3		mA
D and F on request				
Insulation resistance for $U_{FO} = 0,5$ kV	$\bar{U}_O$	100		GO
Insulation current with $U_{jprM} = 5,3$ kV	I_{IO}		103	μ A
Delay time	t_d			
Impulse rise time	t_r		5	μ s
Storage time	t_s		10	μ s
			1,5	μ s
Impu] so bla l/ze it	t_f		4,0 ²⁾	μ s
			10	μ s

¹⁾ only for coupler MB 105,4 and MB 105/5

²⁾ only for coupler group E and F

³⁾ at a temperature up to 25 °C, for 2s °C $\bar{U}$ 85 °C Redu'ction by 0.8 mA/K

⁴⁾ at a temperature up to 25 °C, for 25 °C t_{Tp} 85 °C Red u ction by 1.0 mA/K, $t_p = 30$ 'ts, $t_p r$ 1 :2

⁵⁾ for $q = 23$ °C, for 23 °C 1 85 °C reduction by 2.0 mW/(K °) within

2.5 s 0.5 s ; standard bc tensile atmosphere TGL 206s 8 02