

## ES-M1

Amplifier Unit, Main Unit, NPN



## SPECIFICATIONS

Model	ES-M1 <sup>1</sup>	
Type	One-line expansion system	
Shape	Main unit	
Operation mode	N.O./N.C. (switch-selectable)	
Timer function	10-ms delay / timer OFF switchable <sup>2</sup>	
Output	NPN	
Output	Control output	NPN open collector 100 mA max. 40 V, residual voltage 1 V max.
Disconnection alarm output		NPN open collector 100 mA max. 40 V, residual voltage 1 V or less <sup>3</sup>
Response time	1 ms max.	
Temperature characteristics	Within $\pm 8\%$ of detecting distance at 23°C when within 0 to 50°C temperature range	
Sensitivity adjustment	25-turn trimmer	
Protection circuit	Reverse power connection protection, output overcurrent protection, output surge protection	
Rating	Power voltage	12 to 24 VDC, Ripple (P-P) 10 % or less
	Current/power consumption	25 mA max.
Environmental resistance	Ambient temperature	0 to +50 °C <sup>4</sup>
	Relative humidity	35 to 85 % RH (No condensation)
Weight	Approx. 65 g (including nuts and 2-m cable)	

<sup>1</sup> The ES-M1(P)/M2(P) cannot be connected to the EH-422, 430, 440 or 290.

<sup>2</sup> During N.O. operating configuration, the off delay timer is 10 ms. During N.C., the on delay timer is 10 ms.

<sup>3</sup> Broken connection warning output is not available on the ES-M2(P).

<sup>4</sup> The ambient temperature changes according to the following conditions when expansion units are added. When adding units, always attach them to a DIN rail (metal plate) and set the output current to 20 mA or less.

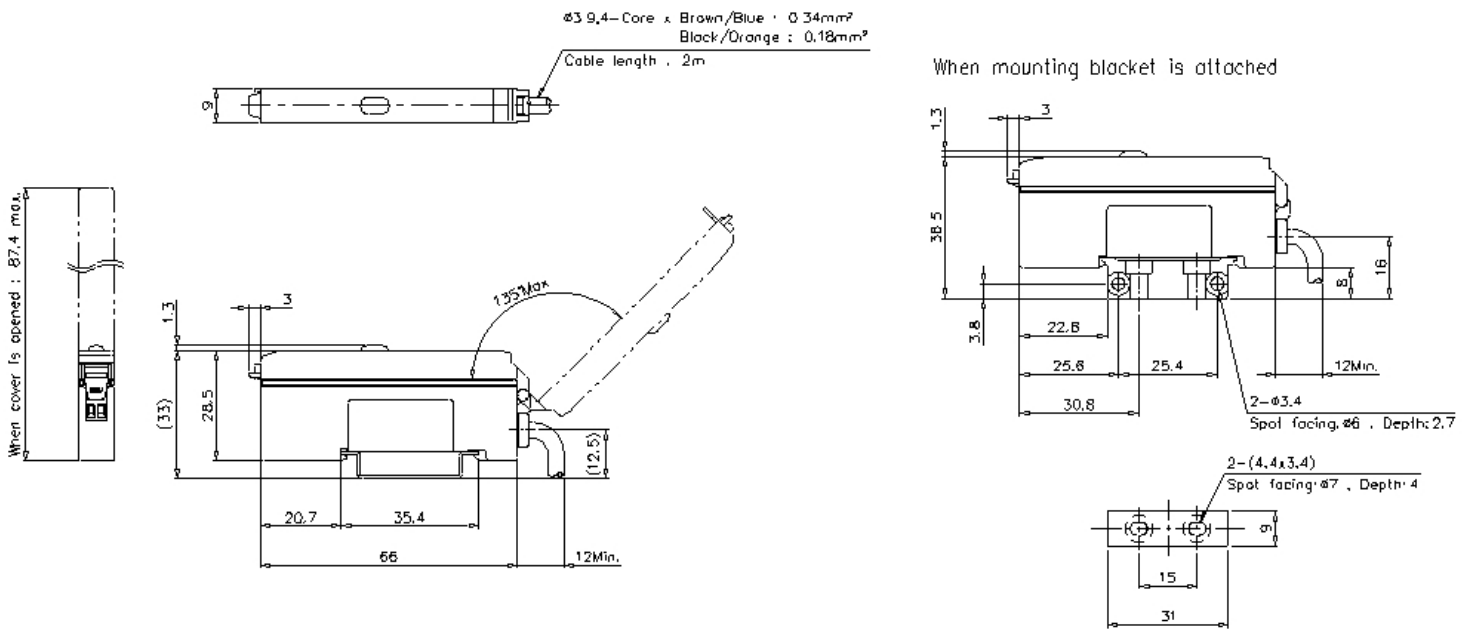
1 to 10 expansion units: 0 to +50 °C

11 to 16 expansion units: 0 to +45 °C

Dimensions

\* Download CAD file or product manual for larger image/text and more detail.

ES-M1



I/O Circuit Connection diagram

\* Download CAD file or product manual for larger image/text and more detail.

Input/Output Circuits  
NPN

