Fiber optics sensors

**V**<sub>5</sub> Group

# High precision sensor amplifier V5FM-E21/E21M/E25

### Highlights

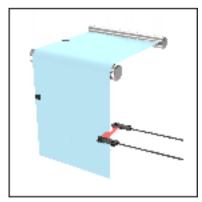
- One key setting MEGA mode, The ultimate goal is to reduce the user's manual time in maintenance and setup.
- Super functional combination; Automatic optical gain, count, zero shift, percentage, anti-interference, zone DTM, NO/NC interchange, time delay and other functions.
- Four application modes can be selected flexibly; (MEGA\SUPER\FINE\HIGH SPEED);
- Max. 100µs high speed; Reverse electrode, over-voltage and over-current protection.
- Stable performance, super cost performance.



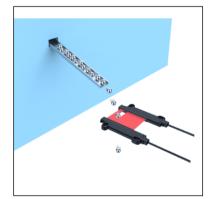
#### Applications



Detect the front and back of LED



Detect the offset of packaging materials



Accurate detection and counting detection of small objects in 40mm detection area

### Product parameters

Туре		Single outpu	Dual switching output	Analog output			
Model	NPN	V5FM-E21N	V5FM-E25N	V5FM-E21MN			
	PNP	V5FM-E21P	V5FM-E25P	V5FM-E21MP			
Light source		Red LED					
Reaction time		Anti oFF: 100μs(HIGH SPEED) / 250μs(FINE) / 1ms(SUPER) / 8ms(MEGA) Anti on: 300μs(HIGH SPEED) / 500μs(FINE) / 2ms(SUPER) / 16ms(MEGA) Anti stAG: (S1, S2, S3, S4) 1ms					
Output selection		LIGHT-ON/DARK-ON					
Detection mode		Light intensity (area detection, automatic sensitivity tracking function)					
Delay function		Off delay timer / on delay timer / single time timer					
Control output		Open collector: 24 VDC, maximur	Open collector circuit: 24 VDC, maximum output value: 100 Ma, residual voltage: 1.5 V maximum				
Power		Between 12 and 24VDC ± 10%, the fluctuation ratio (P-P): max.10%.					
Current	NPN	Normal: max.900mW(when 24V, max.20mA;when 12V:max.40mA) Energy saving mode: max.800mW(when 24V, max.18mA;when 12V:max.36mA)					
consumption	PNP	Normal: max.950mW(when 24V, max.20mA;when 12V:max.40mA) Energy saving mode: max.850mW(when 24V, max.18mA;when 12V:max.36mA)					
Ambient temperature/humidity		-20 to +55℃ (no freezing) / 35 to 85%RH (no condensing)					
Vibration resistance		10 to 55Hz, complex amplitude 1.5mm, each 2 hours for X/Y/Z axis					
Impact resistance		500 m/s², each 3 times for X/Y/Z axis					
Material		Polycarbonate					
Dimensions		30.3mm(H)X9.8mm(W)X71.8mm(D)					
Weight		Approx. 85g					

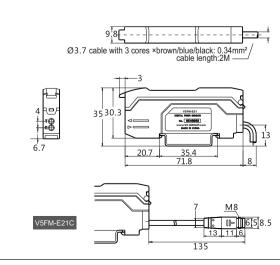
### ■ Product functionality

T	appearance	Specification and model			
Туре	appearance	NPN	PNP	switching output	Analog output
single switching output		V5FM-E21	V5FM-E21P	1	0
Dual switching output		V5FM-E25	V5FM-E25P	2	0
Analog and switching output		V5FM-E2MN	V5FM-E21MP	1	1

### One key setting



## ■ Product size



·External connect M8 connector V5FM-E21C/E31C

