HUMAN-MACHINE INTERFACE

■ SPECIFICATION

Model Type	HM-680		HM-650		HM-651	
	HM-680S	HM-680A	HM-650S	HM-650A	HM-680S	HM-680A
Picture						
Operating Power	DC24 V (±20%)					
Power Consumption	20W (Max.)		15W (Max.)			
Noise Immunity	IEC 1000-4-4 (4KV.100KHz)					
Voltage Endurance	AC 2000V 10mA / 1Minute					
Insulation Resistance	50MΩ (DC500V)					
Vibration Resistance	10 ～ 50 Hz (X,Y,Z direction; 2G; 30 minutes)					
Ratings	IP 65, Dust-proof & Drip-proof Design (Waterproof O-ring)					
Certification	CE					
Operating Temp.	0℃ ～ +60℃ (32℉ ～ 140℉)					
Storage Temp.	-10℃ ～ +60℃ (14℉ ～ 140℉)					
Relative Humidity	10 ～ 90% RH, Non-condensing					
Cooling Method	Natural Cooling					
External Dimension	294(W)X222(H)×54(D) mm		200(W) × 150(H) × 52(D) mm			
Cut-out Dimension	283.0±0.5(W)×211.0 ±0.5(H)mm		186.0±0.5(W) × 136.0±0.5(H) mm			
Weight	Approx. 1,820g		Approx. 850g			
**COM3 will be enabled only when RTS/CTS handshaking at COM2 is set at Disabled.						

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Model Type	HM-680		HM-650		HM-651	
	HM-680S	HM-680A	HM-650S	HM-650A	HM-651S	HM-651A
Picture						
System	Embedded Real Time OS					
CPU	32-bit RISC Microcontroller / 200MHZ					
DRAM	32 M Bytes SDRAM		16 M Bytes SDRAM		8 M Bytes SDRAM	
Flash Memory	7M Bytes ROM		3M Bytes ROM		3M Bytes ROM	
Power Failure Memory	512K Bytes (Rechargeable Lithium Battery)		256K Bytes (Rechargeable Lithium Battery)			
LCD Type	10.4 "TFT		5.7"TFT		5.7"STN	
LCD Color	65,536 colors		65,536 colors		16 Grayscale	
LCD Resolution	640×480 pixels / 8×10 ; Text Number: 80×48		320×240 pixels / 8×10; Text Number: 40×24			
LCD Backlight	CCFL with 50,000 hour minimum life span		LED with 50,000 hour minimum life span		CCFL with 50,000 hour minimum life span	
Display Range	211.4mm (W)×158.4mm(H)		115.2mm (W) ×86.4mm(H)			
Touch Panel/ Resolution	Analog/256(W)×83(H) grids		Analog / 140(W) ×100(H) grids			
Real-time Clock	Built-in					
Function Key	8 Keys (1 System Key and 7 User-defining Keys)		6 Keys (1 System Key and 5 User-defining Key)			
Serial Com. Port	COM1 (RS232 /RS485), COM2 ／COM3* (RS232 /RS485/RS422)					
USB Client	1 Client Ver. 1.1 Download					
USB Host	Developing					
Ethernet	—	Developing	—	Developing	—	Developing
Sound Output	—	Developing	—	Developing	—	Developing
SD Card	Developing	Developing	Developing	Developing	—	Developing