BASIC UNIT, PS4-100...

Part no. PS4-141-MM1
Article no. 081871

Powering Business Worldwide™

Delivery programme

			Integrated setpoint potentiometer 3 kHz counter Networking via Suconet K RS232 C programming interface
Rated voltage	U_e	V	24 DC
Inputs			
Digital 24 V DC		Number	16
Analog		Number	2 10-bit
Outputs			
Digital 24 V DC		Amount	14
Analog		Amount	1 12-bit
Expandable by			
Suconet K/K1 slaves		Number	8
Digital I/O		Number	Total of 680 I/O

Notes

Device for world markets, IEC/EN UL/CSA

General

Standards			IEC/EN 61131-2, EN 50178
Ambient temperature		°C	- 0 - 55
Ambient temperature, storage		°C	- 25 - 70
Vibration resistance		g	Constant 1 g, f = 10 to 150 Hz
Mechanical shock resistance, shock duration 11 ms		g	> 15
Control mode			Master/slave
Protection type			IP20
Rated insulation voltage	U_i	V AC	
Rated insulation voltage	U_i	V AC	600
Real time clock			Yes
Accuracy of the real-time clock			6.1 min/year (battery-backed)
Battery (service life)			typ. 5 Jahre
Programming interface			RS232 C
Memory			
Program and data memory (internal)/back-up memory			32 KByte RAM (battery-backed)
Memory expansion (external)			32 KByte RAM
Memory for backup and recipe data			128 Kbyte Flash
Memory expansion and memory for backup and recipe data (external)			32 KByte RAM and 128 KByte Flash
Write cycles (flash memory)			10000
Cycle time for 1 k of instructions (Bit, Byte)		ms	< 5
Max. number of inputs (local)			16 digital/2 analog inputs
Max. number of outputs (local)			14 digital outputs/1 analog output
Max. number of inputs/outputs (local)			30
Max. number of inputs/outputs (remote)			680 can be addressed through Suconet K line
Weight		kg	0.7
Power supply			
Terminals			Screw terminals
Terminal capacities		mm^2	
Solid		mm^2	0.22 - 2.5

Flexible with ferrule		mm^2	0.22 - 2.5
Inputs/outputs			
Terminals			Plug-in screw terminals
Terminal capacity			
Solid		mm^2	0.22 - 2.5
Flexible with ferrule		mm^2	0.22 - 1.5

Networking

Expandable (remotely)			Max. 8 stations
Programming with Suconet K network			RS485
Interface			RS485
Bus			Suconet K
Data cable length		m	600/300
Data transfer rate		kbit/s	187.5/375

Power supply

Rated voltage	U_e	V	24 DC
Admissible range		V	20.4 - 28.8 DC
Residual ripple on the input voltage		%	≤ 5
Protection against polarity reversal			Yes
Rated current	I_e	mA	Normally 300
Inrush current and duration		A	4 < 5 ms
Power consumption		W	Approx. 6.5
Bridging of voltage dips			
Duration of dip		ms	10
Repetition rate		s	1
Fault indication			LED
Protection class			1
Potential isolation			Yes

Digital inputs

Quantity			16
Rated voltage			
Rated voltage	U_e	V DC	24
On 0 signal	U_e	V DC	≤ 5, limit value type 1
On 1 signal	U_e	V DC	≥ 15, limit value type 1
Max. ripple		%	≤ 5
Rated current	I_e	A	
On 1 signal	I_e	mA	Normally 6 at 24 V DC
Delay time			
for "0" to "1"		ms	max. 0.1
for "1" to "0"		ms	max. 0.1
Potential isolation			
Potential isolation			Yes
between the inputs			No
Status indication of inputs			LED

"High-speed counter"input

Input			I 0.0
Number			1 up counter
Switching frequency		kHz	3
Pulse shape			Square
Pulse duration		%	50
Edge duration		%	≤ 3
Alarm input			I1.0

Setpoint potentiometers

Quantity			2
Value range			10-bit (1024 units)
Setting			With screwdriver

Analog inputs

Number			2
Signal range		V DC	0 - 10
Total error		%	Typically 0.8 % of full scale
Conversions			1 x per cycle
Input impedance		kΩ	20
Connection type of signal encoder			Two-wire connection to transducer
Resolution		Bit	10 (1024 increments)

Digital outputs

Quantity			14
Contacts			Semiconductor
Rated voltage			
Rated voltage	U_e	V DC	24
Admissible range		V DC	20.4 - 28.8
Max. ripple		%	≤ 5
Protection against polarity reversal			Yes
Potential isolation			Yes
Rated current	I_e	A	
at state "1"	I_e	A	0.5 at 24 V DC
Lamp load	R_{LL}	W	≤ 4 W without series resistor
Utilization factor	g	%	1
Duty factor		% DF	100
Parallel connection of outputs			
Parallel switching of outputs for increased output			Max. 4
Total max. current		A	2
Total minimum current		mA	250
Residual current at state "0"		µA	Approx. 140
Short-circuit protection			Yes, without manual reset
Short-circuit tripping current		A	max. 2.5 over 3 ms per output
Off-delay		µs	Normally 100
Limitation of disconnect voltage with inductive loads			Yes, 21 V (at U_N = 24 V DC)
Maximum operating frequency		Ops./h	
With time constant L/R max. 72 ms		Ops./h	4800
With time constant L/R max. 15 ms		Ops./h	18000
Status indication of outputs			LED

Analog outputs

Number			1
Total error		%	Normally 0.4 of full scale
Output voltage		V DC	0…10/2 mA
Connection type			Two-wire connection
Resolution		Bit	12 (4096 units)